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A healthy environment determines their livelihood: children in Antandrokumby II, a PHE intervention site supported by the NGO SAF/FJKM in Madagascar (PHOTO: ECKHARD KLEINAU, 2001-02)

contents

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When the Whole is Greater than the Sum of its Parts: Integrated Indicators for Population-Environment Programs

By Eckhard Kleinau and Jennifer Talbot

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The Rio Declaration on Environment and Development of 1992 identified the nexus between population and environment as a crucial element for achieving sustainable development—a linkage that was reinforced at the International Conference on Population and Development in Cairo in 1994. Both Rio and Cairo also unequivocally voiced the need for integrated environment and development programs that take into account demographic trends. In addition, Rio and Cairo were equally persistent in calling both for strengthened research into and for the development of information about population, environment, and sustainable-development interactions.

But success in implementing these goals on international, national, and local levels has been modest. While nations at the 2002

(continued on page 10)

Conservation, Population, and Health: A Conversation with Jane Goodall

April 3, 2003

By Robert Lalasz

Jane Goodall, one of the world's leading primatologists and conservationists, told an audience of Wilson Center staff members that conservation efforts cannot succeed without also ensuring the sustainable livelihoods of those living around protected areas.

Goodall, whose renowned research on wild chimpanzees in Tanzania has made her an international environmental figure, said that she has been shocked at by the rampant and unsustainable deforestation around African chimpanzee habitats. "How can we save the chimps if the people outside the forest are struggling to survive?" she asked.

Humanity's Connection to Nature

Goodall has studied and worked with chimpanzees for over 40 years, breaking gender barriers throughout her career. Her Jane Goodall Institute for Wildlife Research, Education, and Conservation provides ongoing support for wild chimpanzee and primate field research, increases primate habitat conservation, and builds awareness of the ties between humanity and the environment.

Goodall, who began her Wilson Center appearance by imitating a chimpanzee greeting, said that the chimpanzee—more than any other creature—has helped us humans to understand that we are part of the animal kingdom.

Linking Health, Environment and Community Development: Lessons from the Thai Experience

December 11, 2002

By Robert Lalasz

The driving force behind Thailand's remarkably successful family planning movement detailed for a Wilson Center audience how his NGO has broadened its mission to encompass health, development, and the environment while also becoming more self-sufficient.

Mechai Viravaidya said that his Population and Community Development Association (PDA) has succeeded through persistence, creativity, integrated programs, and entrepreneurism. "The only way to take poor people out of poverty is to the marketplace," Viravaidya said.

Cabbages and Condoms

Duff Gillespie, senior deputy assistant administrator of USAID's Bureau for Global Health, introduced Viravaidya by praising the Thai activist's energy and risk-taking.

"He thinks big thoughts and then goes the next step and does big things," said Gillespie. "There are literally tens of thousands of people alive today who wouldn't be were it not for Mechai. And because of him, many thousands more have much richer lives, figuratively and literally, than they would have had."

Viravaidya, who is also a UNAIDS ambassador as well as a senator in Thailand's parliament, next detailed how PDA grew from a family-planning NGO to a provider of integrated development and environment programs. When PDA initiated community-based family planning services in 1974, Thailand was an explicitly pro-natalist country, with an annual population growth rate of 3.2 percent and seven children per family on average. Today, those figures have declined to less than one percent and two children per family.

Viravaidya detailed how PDA spearheaded Thailand's national effort to reduce its birth rate through (a) increasing accessibility to contraceptives (especially in rural regions) and (b) making contraceptives acceptable to the public at-large, often through colorful public information campaigns that featured condom-blowing contests, free vasectomies, and primary school educational programs.

"Cabbages and condoms," said Viravaidya, repeating PDA's famous slogan. "Contraceptives have to be found as easily as vegetables in villages." PDA, he said, involved everyone from taxi drivers to the police, Avon salespeople, and Buddhist monks in the effort.

The campaign has been so successful, Viravaidya said, that PDA now spends only 10 percent of its efforts on family planning. "Everybody [in Thailand] accepts it," he said. Indeed, "Mechai" is now a Thai nickname for "condom."

Expanding Its Portfolio

In the 1980s and 90s, PDA expanded its portfolio to include health (particularly HIV/AIDS) and rural development, poverty reduction, and environmental conservation. For HIV/AIDS, Viravaidya said that PDA worked to get even more widespread distribution of condoms throughout Thailand as well as continuous public service announcements on television—an effort that has helped to reduce the country's HIV infection rates by 77 percent.

Viravaidya stressed the importance of visible high political support for such efforts. "The next World AIDS Conference [set for Bangkok in 2004] should have a leadership track," he argued. "Without political commitment at the top, it will be very difficult to make inroads against the global AIDS problem."

PDA has also developed a for-profit arm, running its own handicraft shops, resort, and restaurant (the famous "Cabbages and Condoms" in Bangkok) as well as brokering deals between rural Thai villages and corporations such as Volvo and Nike. Other rural efforts have involved collective rural microcredit and programs to empower women.

"You begin to see the wealth, the strength, the power of the village," Viravaidya said. "And it's all sustainable."

Water from Johannesburg to Kyoto and Beyond: Workshop on the Kyoto Third World Water Forum

February 12, 2003

By Robert Lalasz

Significant new freshwater agreements and initiatives were one of the highlights of last August's World Summit on Sustainable Development in Johannesburg, South Africa—a momentum upon which many policymakers and nongovernmental organization representatives sought to build as they headed to the March 2003 Third World Water Forum in Kyoto, Japan.

In this meeting, ECSP brought together a broad range of officials, researchers, and activists to discuss how Kyoto should begin to implement the efforts begun at Johannesburg.

The Challenges at Kyoto

Mutsuyoshi Nishimura, the Japanese government's Ambassador for Global Environment, reminded participants that global water supplies had not kept up with 20th century global development and population increases, precipitating a widespread water crisis.

"Water tables are declining," the ambassador said. "Many rivers now do not reach the sea. Biodiversity is imperiled, and for billions, clean water and sanitation are unavailable. Yet access to these things is an inalienable human right."

Ambassador Nishimura praised the United States for announcing a renewed commitment to global aid at Monterrey last year, but he said that overseas development assistance continues to decline and that donor activities tend to overlook the countries and groups most in need of basic water services.

"For the Millennium Development Goals [which call for cutting in half by 2015 the number of people without access to clean drinking water or adequate sanitation] to be met," the ambassador said, "we must double our total global investment beginning today."

And while the private sector is becoming more involved in providing such services to developing countries, Ambassador Nishimura said that these efforts often are either too expensive for or never reach the poor. "A new mechanism must be introduced to reduce risks and insure equitable safe water resources for the poor," he said.

"Even if titanic action is taken and the [Millennium Goals] are met," Ambassador Nishimura added, "half of our intended beneficiaries will still be without clean water and sanitation. We will one day win this battle, but the winning strategy remains elusive.

"The road ahead is by no means bright," he concluded, "but individual efforts are yielding tangible results. Yet I cannot help but wonder if victory can only be achieved by a decline in world population."

The U.S. View

Anthony F. "Bud" Rock, the Principal Deputy Assistant Secretary in the U.S. State Department's Bureau of Oceans and International Environmental and Scientific Affairs, followed by telling participants that the United States considered global water an issue of national as well as global security.

"There are those who will say this is a developing-world issue," Rock said. "But water is important to sustainable economic growth, the health of populations, and agricultural productivity. The lack of those things creates instability in regions of the world that in turn creates rising tensions."

Rock called the Johannesburg Summit a "landmark event" and a "turning point" in the struggle against global poverty and dispossession.

"Johannesburg emphasized that all governments have to take a responsibility in the development process," he said. "It also recognized that there is no way to address these issues without new partnerships—especially public/private partnerships."

And he argued that Kyoto would be crucial in the maturation of those partnerships. "The World Water Forum will be less about negotiating an agenda and more about implementation," he said. "Every aspect of the population to deal

Good Water Makes Good Neighbors: A Middle East Pilot Project in Conflict Resolution

January 22, 2003

By Robert Lalasz

Can environmental problems be used to promote international cooperation—even in the world's most contentious areas?

Friends of the Earth Middle East (FOEME) is an NGO committed to dialogue and working exclusively on transboundary environmental issues involving Jordanian, Israeli, and Palestinian communities, with a staff drawn equally from those communities. In this meeting, co-sponsored by the Wilson Center's Environmental Change and Security Project (ECSP) and its Middle East Project as well as FOEME and the Heinrich Böll Foundation, Gidon Bromberg and Abdel-Rahman Sultan detailed FOEME's efforts to foster cooperation on water among some of the region's border municipalities.

Inclusiveness the Key to Success

FOEME, which was established in 1994 under the name EcoPeace, was the first regional environmental organization to include Jordanian, Israeli, and Palestinian environmental groups and actors. Bromberg said that FOEME practices strict inclusiveness: not only does it have offices in all three of the countries in which it works, but each of its projects (working to save the shrinking Dead Sea; trade and the environment; renewables; and water) must have coordinators from each country.

"The success of the organization is that it together decides on a single agenda, and then the staff from each country dialogues with that country's press and policymakers," Bromberg explained. "It's a single effort to promote regional peace and environmental cooperation."

The Middle East: An Impending Water Disaster

Sultan followed by outlining the dire water situation in the Middle East, where population growth, unsustainable agricultural practices, and pollution are stretching this arid region's scarce water to the point of disaster.

Sultan said that, while Middle East rivers such as the Jordan and Yarmouk are being tapped beyond capacity, untreated sewage is ruining both the region's surface water and its crucial aquifers (which are generally shared among many or all of the region's countries).

According to Sultan, inequitable water distribution also marks regional water management: while Israelis use an average of 300 cubic liters per capita per day, Palestinians receive merely 60—barely above the generally-agreed upon minimum for human sustainability.

"Jordan receives water for 12 hours daily," Sultan said, "and most Palestinian villages don't have continuous water flows." He added that, since the Palestinian national workforce is more dependent on water-intensive agriculture than those of surrounding countries, such shortfalls are particularly dangerous for Palestinian economic sustainability.

Sultan also noted that high national population growth rates will continue to widen an already large gap between the region's demand for water and its supply. Palestinian annual population growth rates average about 4 percent, and Israeli rates are about 3.5 percent. By 2040, Sultan said, the water demands of these burgeoning populations will outstrip a water supply that will increase only slightly despite a major drive to build desalination plants.

The region's water mismanagement, he added, also plays a crucial role: policies neglect adequate sanitation and wastewater treatment, and they allow agriculture and domestic demand to oversubscribe water sources (leading to widespread salination, contamination, and evaporation).

The level of the Dead Sea, for example, is dropping by a meter a year. Infants in the Gaza Strip are already afflicted with "blue baby" syndrome, attributable to high levels of nitrates in their water. Sultan also said that most cities in the West Bank depend solely on cesspools for their wastewater treatment.

"In eight to 10 years," he said, "the ground water there won't be suitable for drinking."

Sultan advocated for Jordan, Israel, and the

Palestinians to look in a comprehensive way at pollution prevention to avoid the systematic contamination of whole aquifers. "The three nations meet regularly on water division and distribution," he said, "but there is no discussion concerning pollution prevention. But this problem affects water supplies for the whole area."

Good Neighbors Make for Good Water

Bromberg then detailed FOEME's year-old Good Water Neighbors Project, which focuses on sensitizing neighboring border communities in the region to their shared water problems and then encourages sustainable solutions to those problems. "The focus on community is crucial," Bromberg said. "We hope to use them as leverage for regional change."

The Project is working with five transboundary pairs of Israeli and Jordanian or Israeli and Palestinian municipalities. A typical project involves a Palestinian community with a water shortage and an Israeli neighboring community that suffers from the Palestinian town's untreated sewage.

Bromberg explained that the Project's staff members come from the affected communities; these staff members educate their neighbors and elected officials about shared water realities between the paired communities and then work with these groups toward effective solutions. Between 20 to 50 "water trustees" from each town also commit to the effort.

"So much depends on the personal contact, on the dialogue we can develop between decision-makers," said Bromberg. "We cannot provide more water for any community or state—we can only raise awareness in each community about water realities. When neighbors can lobby for neighbors and be advocates, that's where we become effective."

He added that FOEME hopes to use concrete results from the Good Neighbors Project to launch a region-wide media campaign to show that the commitment for shared water decision-making is there if opportunities are created. FOEME also hopes to foster regional water solutions based on these pilot efforts.

In addition, FOEME also engages in ad hoc drives—such as its campaign to raise money to replace water storage tanks damaged or destroyed in the Israeli military incursion into the West Bank last year.

Politics, Agriculture, and Behavior

In response to audience questions, Bromberg said that FOEME has often found the Middle East political landscape less than cooperative with its efforts. "Different ministries and authorities at times have seen the diffusion of power as a threat," he said.

"But municipalities have lost faith in their central governments recently, which helps us," added Bromberg. "They're willing to take initiatives on their own that they wouldn't have three years ago."

> *"We can't make the desert bloom, and if we try we pay an incredible price. We need to focus on sustainable water use and enjoying the sun, not being the breadbasket for the rest of the world."*
>
> —Gidon Bromberg, FOEME

In addition, he said, Jordan has facilitated good movement toward regional cooperation on water issues since it signed its peace treaty with Israel.

Both speakers and audience members agreed that agriculture is a major obstacle toward more efficient water use in the region, using 50 percent of the region's water supply.

"We are still planting bananas, citrus, and flowers, which are all highly demanding of fresh water," said Sultan. "We would like to have farmers pay for real water costs and treatment of agricultural wastes, and we need to change the crop patterns. But no one farmer will be willing to change his water usage, so it needs to be a communal decision."

Bromberg added that the Middle East behaves "not as if we live in a desert, but as if we live in Europe. We can't make the desert bloom, and if we try we pay an incredible price. We need to focus on sustainable water use and enjoying the sun, not being the breadbasket for the rest of the world."

He ended by calling for more regional eco-

An Ominous Flip Side: Population Dynamics in an Environmental Disaster Zone

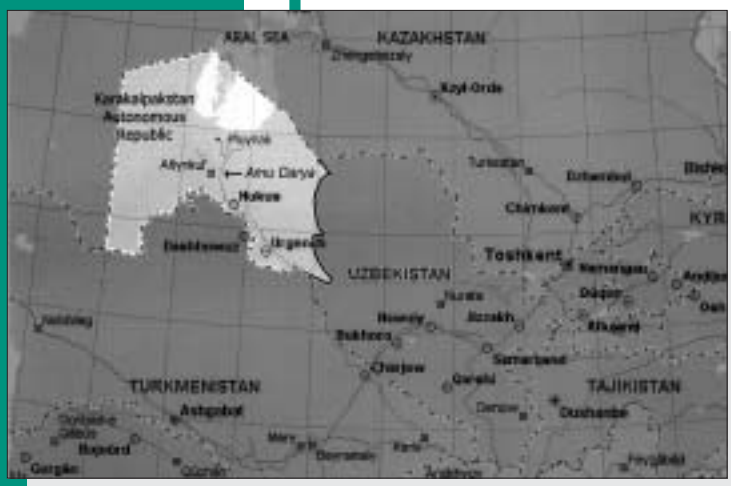
By Anthony Kolb

Anthony Kolb is a Michigan International Development Associate working in the Aral Sea Area Programme of Médecins Sans Frontières (Doctors without Borders)-Holland (MSF). His work there builds on his experience working for the UN Environment Programme throughout Asia in the early 1990s, his graduate studies in environmental engineering and policy, and his research in the United States, Senegal, Niger, Rwanda, and Armenia on environmental and health policy.

A Manmade Disaster

The typical population-environment linkage—population growth threatening ecosystems and those that depend on them—has been turned on its head in the Aral Sea region. Here, rather than population increases driving environmental decline, ecological degradation is spurring human out-migration and threatening a people's very existence.

The Aral has been shrinking for over 20 years because of Soviet-era policies that promoted regional cotton cultivation and massive irrigation of the sea. Residents of the region's few seaside communities have lost their livelihoods and been forced to abandon their homes. In recent years, however, far larger numbers of the region's population have also been faced with the decision to leave. Unreliable irrigation water flows, increasing soil salinization, declining river-delta fish stocks and the resulting economic collapse are now threatening almost four million people living in areas near the Aral.



On the front line of these threats is Uzbekistan's semi-autonomous region of Karakalpakstan, the homeland of the culturally and ethnically distinct Karakalpak people. The 1.5 million people in this downstream area of the Amu Darya River are bearing the brunt of the man-made Aral disaster.

If nothing is done to help Karakalpakstan adjust to its new environmental realities, a unique culture will be threatened, and regional health and social problems are likely to spread with dangerous consequences.

But little research has been done on migration in the Aral region or the implications of large-scale relocation of its population—particularly the health implications of population displacements in the area. My work with MSF has aimed to shed some light on the complexities of the migration situation and to help move discussion of this issue beyond both sensational regional press articles speaking of mass movements and off-the-cuff international donor discussion of "evacuation." Through extensive surveys and interviews, I have generated a detailed picture of Aral migration that will be the basis of focused advocacy and policy recommendations to the region's governments and donors.

Only So Much Water

Two rivers—the Syr Darya in the north and the Amu Darya in the south—flow from the mountains of Kyrgyzstan and Tajikistan to create the Aral Sea. Without them, the area would be a vast desert. For hundreds of years, the Amu Darya River has also sustained the traditional homeland of the Karakalpak people—a large river delta and downstream irrigated area dotted with ancient Silk Road settlements. The Karakalpaks developed a semi-nomadic lifestyle in this area, prospering in the rich delta lands through a fish-based economy unique for this arid region.

Russian and then Soviet modernization schemes retooled this economy along with those

of the rest of the Aral Sea basin. Cotton cultivation was the goal, and vast expansion of irrigation infrastructure the means. Unfortunately for the downstream Karakalpaks, these unlined, uncovered, and poorly maintained irrigation systems bled away an increasing amount of water to meet upstream production quotas.

The first casualty of the resultant downstream water scarcity was the Aral Sea. In less than 30 years, the Aral shrunk from the world's fourth largest inland water body to the tenth largest, with its water levels dropping over 16 meters. Meanwhile, salinity of the Aral increased three-fold—from slightly brackish to a salt content higher than the North Sea's. Virtually all the sea's flora and fauna died.

And the impacts of irrigation keep spreading. Loss of the Aral's moderating effect on the surrounding desert climate has produced hotter summers and colder winters for the region. Increasingly frequent and severe dust storms have widely dispersed salt and toxic agricultural chemical residue from the exposed seabed. As these environmental impacts have worsened and spread, so have their economic and health impacts.

Living With The Results

In the 1960s, over 160 tons of fish were caught daily from the Aral. But in recent years, the only fish processed by the Muynak canning factory are small amounts from the shrinking delta swamps or token rail shipments from the Baltic or Caspian Sea—as much as 2,000 kilometers away. Regional agricultural output has also suffered severely from creeping soil salinization and increasingly dire water shortages exacerbated by a recent record drought. And drought has further threatened already-fragile drinking water supplies, with many wells drying up or becoming too salty even for local palates.

"Little research has been done on migration in the Aral region or the implications of large-scale relocation of its population—particularly the health implications."

These deteriorating conditions and crop failures have further stressed an already unhealthy population living in an unhealthy environment. In recent years, Karakalpak residents have suffered disproportionately from a litany of diseases. Virtually all pregnant women in the Aral Sea area suffer from anemia. Rates of kidney disease, various cancers, and tuberculosis (including an alarming rise in multi-drug resistant TB) are among the highest in all the former Soviet Union. Infant mortality rates have risen from 50 to 100 per 1000, with typhoid and hepatitis the leading causes. Birth defects are reported to be increasingly common.

Ships transformed into scrap metal at the abandoned Muynak docks. (PHOTO: MSF Staff Photos)

Poverty, poor nutrition, and a deteriorating health care infrastructure—all partial by-products of the environmental disaster—contribute to poor health among the Karakalpak. In addition, environmental conditions are also likely to be directly affecting health—generating increasingly salty drinking water (leading to hypertension and kidney disease), dust storms (acute respiratory infection), and agricultural chemical residues (birth defects and cancers). A recent study that I am co-authoring has estimated that contamination—probably from historic use of an Agent Orange-like defoliant in cotton harvesting—now results in a typical Karakalpak diet with three times more dioxins than the level considered safe by the World Health Organization.

Driven Out

Many of the region's residents have responded to the challenges of living in this environment by simply moving out. However, quantifying these movements is difficult, as official data is closely guarded and of suspect quality. Estimates of the number displaced by the Aral Sea disaster vary widely, from 1/2 million in the entire region since the 1960's to about 50,000 from Karakalpakstan in the 1990's.

As part of its Operational Research (OR) activ-

(continued from page 7)

ities in the Aral region, MSF recruited me to help the organization (a) better understand current Aral migration patterns and the prospects for future movements, (b) explore the implications of these movements, and (c) develop policy recommendations that MSF can use in its advocacy activities. (Other MSF OR foci include environmental health and some regional nutrition/food security concerns.)

Since my arrival in August 2002, I have cooperated with colleagues at the Karakalpak Branch of the Uzbekistan Academy of Sciences on a series of focus group and key informant interviews as well as several large household surveys in source and destination communities. Some key initial findings have emerged:

• The recent drought likely doubled net out-migration from a minimum of about 3,000 to over 6,000 persons per year. About 80 percent of migrants have left for Kazakhstan. Temporary labor out-migration has recently also become very common, with about seven percent of both urban and rural working-age persons leaving home to work each year.

Sea breezes have been replaced by salt-laden dust storms in Muynak. (PHOTO: MSF Staff Photo)

• Many more Karakalpaks are thinking about moving. Even after the drought abated in 2002, about a quarter of households in two rural districts report that they are considering a move, although few had specific plans.

• Families with higher education are almost two times more likely to be considering a move.

• In migrant destinations for Karakalpaks, living conditions are of great concern. Migrants tend to live in cramped or poorly-serviced housing, be hassled by unfriendly local officials, and have limitations imposed on their access to essential services like health care. They are also disproportionably threatened by crime and vulnerable to the allure of the sex and drug trades and to HIV infection.

Implications

There are many important policy implications from these and other findings for the Karakalpaks as well as the Aral Sea region as a whole. I am encouraging MSF to focus on the following points in their advocacy activities.

Talk of the need for large-scale relocation of the Karakalpak population appears premature. Even if only minimal water flows are provided to the region, most Karakalpaks are currently unready to give up on their homeland. Given no dramatic change, the Karakalpak population is likely to continue to grow in the next few years, with natural increase (~20,000/year) remaining higher than net out-migration.

"Out-migration from Karakalpakstan also poses a situation of great concern regarding the spread of TB…If spread by an increasingly mobile population, it could have global health implications."

Regardless, existing population movements are creating challenges. First, out-migration "brain-drain" is threatening efforts to respond to local problems. Loss of medical personnel is likely to jeopardize an already poorly-funded healthcare system. Other professionals that might contribute to regional revitalization are also increasingly drawn to better salaries and opportunities outside Karakalpakstan. Treatment of Karakalpak migrants in Kazakhstan and elsewhere is likely to be increasingly unfriendly in coming years.

Out-migration from Karakalpakstan also poses a situation of great concern regarding the spread of TB. Living conditions for migrant laborers are perfect incubators for this disease, and residents of Karakalpakstan have been shown to have one of the highest rates of multi-drug resistant tuberculosis infection in the world. This form of the disease—only treatable with a cocktail of expensive, hard-to-obtain drugs—is being referred to as a "ticking time-bomb." If spread by an increasingly mobile population, it could have global health implications.

Facing The Challenges

Based on these research findings and through consultations with MSF staff members in Uzbekistan and the Amsterdam MSF head office, I have begun to develop policy recommendations for inclusion in MSF advocacy activities regarding out-migration in the Aral region. Overall, I am pushing MSF to advocate that governments and NGOs take a multi-pronged approach toward reducing pressures for future Aral population movements and avoiding the problems associated with current and future mass out-migration. Such an approach

A CONVERSATION WITH JANE GOODALL

(continued from page 1)

"Chimpanzees show us that the line dividing humanity from animals is very blurry," Goodall said. "We differ in DNA from them by just over one percent. They use objects as tools in a very imaginative way, they show immense skill in social manipulation, and they are quite political creatures."

She added that, like humans, chimpanzees use different strategies to achieve social status. "Some use brute force, but they don't last very long," Goodall joked. "Those who use their brains last longer."

Humanity's Threat to Nature

Goodall said that warfare and unsustainable human economic development now threaten to ruin conservation efforts in Africa and worldwide.

"When I arrived in Tanzania," she said, "there was chimpanzee habitat stretching 30 miles inland from the Gombi shoreline. Now, outside the coastal area, those forests are gone." Goodall added that streams of refugees from wars in the Great Lakes region of Africa have placed enormous pressures on the Tanzanian environment.

To address these issues, the Jane Goodall Institute developed its TACARE (Lake Tanganyika Catchment Reforestation and Education Project) Program—a reforestation project in western Tanzania that focuses on improving residents' standards of living while promoting reforestation, curbing soil erosion, and expanding conservation education of the local population. Goodall said that TACARE has educated villagers on sustainable vegetable growing, cultivation of woodlots, and other sustainable practices while itself becoming self-sustaining, expanding from 12 to 33 villages and run by teams of Tanzanians trained in agroforestry and health care.

"It's a very poor area," said Goodall. "TACARE helps them get the support of local people not only for chimps conservation but also for a more sustainable survival strategy."

TACARE has also focused on improving the self-esteem and earning potential of women through nine microcredit banks based on the Grameen Bank system. Goodall explained that the program funds general education for women as well as specific education in family-planning, HIV/AIDS prevention, and conservation. "We concentrate on education because as education rises, family size drops," said Goodall.

Goodall noted that growing populations are destroying habitat and creating deserts in parts of Africa. And in Central Africa, where the last significant populations of chimpanzees reside, logging conglomerates are making deep roads into forests, opening them up for migrants and commercial hunters who are feeding an increasing developed-country appetite for bushmeat.

"The situation across Africa is really grim, and the bushmeat trade is a very major problem," said Goodall. Her Institute's Congo Basin Project addresses the trade through public education and conservation, and Goodall applauded the United States-led coalition that announced at the Johannesburg World Summit on Sustainable Development a $60 million fund to stop the trade. Groups such as the Institute also continue to promote sustainability in Central Africa by working with governments, the private sector, and international financial organizations.

Jane Goodall Today

Goodall said that she is now devoting most of her energies "to raising generations of young people to be better stewards of the environment"—especially through her Institute's Roots and Shoots Program, which educates schoolchildren on the interrelationships between animals, people, and the environment.

Such programs give Goodall hope, as does the resilience of both nature and humanity. She reminded Wilson Center staffers that tree saplings sprung up at Nagasaki soon after the atomic bomb was dropped there, and she displayed talismans that she carries with her everywhere: a feather from a whooping crane, a species that came back from the brink of extinction; a bit of limestone from Robbin Island Prison, where Nelson Mandela was incarcerated for decades; and a surgical glove from a surgeon who had his hand blown off as a child.

> *"How can we save the chimps if the people outside the forest are struggling to survive?"*
>
> —JANE GOODALL

"I was in New York on September 11," Goodall said, "and on the same day we saw the ultimate evil, using innocent people to kill innocent people, we also saw incredible heroism and generosity of spirit." She concluded that September 11 should boost

P-E INDICATORS

(continued from page 1)

World Summit on Sustainable Development in Johannesburg reaffirmed their commitment to the Rio Declaration and the global program entitled Agenda 21, the Summit's agenda and discussions remained all but silent about the role of population and reproductive health in addressing unsustainable patterns of consumption and conserving the environment. Over a decade after Rio, organizations are still struggling to make truly integrated population and environment P-E programs effective and to develop indicators that bridge the sectoral divide. Demonstrating the enhanced value of P-E programs has become more important than ever, especially given that several foundations have had to cut back funding for this type of program.

Ring-tailed Lemur in Anja Park. Conserving Madagascar's unique biodiversity is a centerpiece of PHE interventions. The park is community-managed and generates revenue through eco-tourism. (PHOTO: ECKHARD KLEINAU, 2001-02)

This article describes state-of-the-art monitoring and evaluation approaches that are now being applied in a community-centered integrated population, health, and environment program in Madagascar. Identifying comprehensive and accurate indicators and measurements for the effectiveness of integrated P-E interventions is the next critical step in convincing policymakers and organizations about the benefit of such integration. A new generation of integrated P-E programs is being implemented in Ecuador, Guatemala, Belize, Madagascar, Tanzania, and the Philippines; and program managers, donors, and foundations stand to benefit directly from quantifiable evidence.

The article also proposes promising paths and models toward measuring the impact of integrated programs in general. While both population and environment are, of course, intimately linked to sustainable development, sophisticated P-E program indicators should also include measures of livelihood and quality of life. In addition, these indicators also need to target several audiences—not only program managers, but also government agencies and foundations that are making funding decisions.

The Evolution of Integrated Programs

The expectation that integrated programs have a value that exceeds the sum of their parts is not new. The central hypothesis for integrating family-planning and natural-resource-conservation activities into community-based projects is that the synergies produced from integration will make these interventions more effective and sustainable than if they had been pursued in a vertical, sector-specific fashion.

How does integration generate these synergies? First, they result from a better understanding of how interactions between population growth, human health, and the environment impact communities located near regions that are heavily dependent on natural-resource use and where biodiversity is threatened. Indeed, environmental factors and health consequences overlap directly: poor environmental quality and high fertility adversely affect people's ability to lead productive lives and to use natural resources in a more sustainable way. Existing community population and health programs also provide an entry point for protecting both the environment and health—resulting in programmatic synergies that provide economies of scale and scope.

Rural development programs in the 1970s and 80s as well as more recent Integrated Conservation and Development Projects (ICDP) were the first to attempt integration on a large scale—with mixed results that may have lead donors to hesitate about funding other integrated programs. The early attempts at integration were overly ambitious, complex, and expensive. Moreover, these programs (with a few notable exceptions[1]) only produced anecdotal evidence about their impact.

"Over a decade after Rio, organizations are still struggling to make truly integrated population and environment programs effective and to develop indicators that bridge the sectoral divide."

The CEMOPLAF project in Ecuador; the Maya Biosphere Reserve project in the Petén in

Guatemala; the Integrated Population and Coastal Resource Management Initiative in the Philippines; and the community-centered Integrated Population, Health and Environment Program in Madagascar are good examples of how the "integration" paradigm has shifted over recent years. These projects are much smaller than ICDP, and they build on partnerships between sectors instead of incorporating all functions into a single project. However, this new generation of integrated P-E projects still relies mainly on already established specific sectoral indicators instead of integrated ones.

New Measurements in Madagascar

Since 1999, USAID has supported a program in Madagascar that tests and documents the effectiveness of various integrated population, health, and environment interventions. The Association Voahary Salama, a Malagasy umbrella organization, assists NGOs there in the implementation of integrated programs around several biologically diverse forest corridors. These fragile ecosystems are under severe threat from human activities attributable in part to an ever-increasing population, which will double in about 20 years at current growth rates.

However, to lower fertility rates and increase the sustainable use of natural resources, interventions to reduce population growth need to combine with interventions that improve families' health and livelihoods. Poverty and hunger, a daily reality in many households in developing countries, are especially acute in remote rural areas of Madagascar and are a major obstacle to smaller family size and development there. Evidence from Demographic and Health Surveys (DHS) shows clearly the link between an increased demand for family-planning services and reduced poverty as well as healthier women and families. Other studies (including surveys carried out in Madagascar) suggest that healthier and more affluent households participate in and benefit more from community activities related to family planning, health, and development.

In addition, women are likely to benefit proportionally more from interventions that enhance health and reduce daily chores—for example, time saved because of improved community water supplies and healthier children who require less medical attention. Lastly, since environmental impact from reduced population growth due to a higher contraceptive prevalence can be expected only in the long-run, family planning, health and nutrition interventions, and income generation need to be combined with immediate efforts to conserve the environment. Policymakers and program implementers need to act quickly, because forest and biodiversity loss is already increasing exponentially.

The Environmental Health Project II (EHP), part of the USAID Madagascar effort, plays an important role in ensuring the rigorous evaluation of these integrated programs. It uses a quasi-experimental design with pre- and post-intervention surveys and a comparison group without interventions. Qualitative and participatory assessments complement these quantitative studies, which NGOs implement in close collaboration with the University of Michigan Population-Environment Fellows Program.

A baseline survey in March/April 2001 conducted in three regions of Madagascar adjacent to biologically-diverse forest corridors documented very low levels of contraceptive use and poor health status as well as certain household practices that threaten natural resources. The average modern-method contraceptive prevalence rate in these regions is only 9 percent—and only 2 percent along several of the region's corridors. Over half of all regional households admit to using destructive slash-and-burn agricultural practices; the vast majority of households do not have access to safe water and appropriate sanitation; only one in seven households produces sufficient food; almost half of all children under five are chronically malnourished; and less than 40 percent of children under five years old are fully vaccinated.

Safe water in Fiherenana. The community and SAF/FJKM worked together to implement this inexpensive gravity-feed system. It is maintained by the community. The custodians rotate on a regular basis. (PHOTO: ECKHARD KLEINAU, 2001-02)

A major gap also exists between knowledge about less destructive agricultural methods and actual practice, with barriers to appropriate behaviors apparently related to household income, access to essential products, and technical competency. These difficulties affect interventions in all areas, including population and environment. A post-intervention survey is planned for later in 2003-04.

Preliminary Lessons

Preliminary lessons from the USAID population-environment program in Madagascar include:

- Monitoring and evaluation should be part of program design instead of an "afterthought"; and we need to divorce ourselves from a vertical technical context and adopt an integrated programmatic approach.
- The definition and selection of indicators need to be guided by the conceptual framework of

P-E INDICATORS

(continued from page 11)

the program. For example, the Household Livelihood and Food Security Framework used by the program in Madagascar acknowledges that, in order to achieve maximum impact, integrated population and environment programs must consider the importance of social and economic determinants and their associated inequities. Social and economic conditions at household and community levels determine what families can do to reduce family size, to improve nutritional and health status, and to conserve natural resources through improved natural-resource management. How much family planning, health, or conservation a set of households can "afford" is largely determined by the income they generate—income that is, of course, influenced by external factors.[2] People's behavior and involvement in community activities are also important factors.

"To lower fertility rates and increase the sustainable use of natural resources, interventions to reduce population growth need to combine with interventions that improve families' health and livelihoods."

The Framework provided an analytic structure for program evaluation and monitoring and served as a roadmap for the design of program interventions. Elements of the Framework correspond to specific indicators, especially as relates to four essential outcomes: contraceptive prevalence rates, nutritional status, health status, and the use of natural resources.

• Donors expect the reporting of "classic" or "sector-specific" indicators such as contraceptive prevalence rates to account for successful investments. Although Voahary Salama partners work together to deliver a multi-sectoral "package" of services, each P-E partner in a given region implements their specific sectoral activities and monitors the corresponding specific sectoral indicators.

One example of this approach is the Champion Community Voahary Salama competition, where participating communities work to improve a package of specific sectoral health, population, and environment indicators such as vaccination coverage, number of family-planning users, and the adoption of agricultural techniques.

• Different regions face different issues, and the challenge for integrated programs is to put together an indicator package that measures progress across a diverse set of interventions.

For example, indicators could measure ginger production and the prevalence of febrile illnesses in humid lowland regions of Madagascar, but focus on potato production and respiratory disease prevalence in highland regions. In this example, both crops generate revenue—which can be aggregated into general household income. Disease prevalence for malaria and pneumonia can be converted into Disability Adjusted Life Years (DALYS) lost, which provides a summative measure of disease burden.

• The measurement of sector-specific indicators for a given program and region needs to be coordinated in space and time to reflect the integrated nature of programs (e.g., measurement of parallel trends in contraceptive prevalence rate and the rate of the loss of forest coverage in the same communities and during the same period). Integrated monitoring as well as indicators require cross-sectoral collaboration—as does integrating these findings into program implementation.

• Cross-sectoral coordination of monitoring and evaluation efforts is essential for establishing that integrated P-E interventions really do make an impact.

Progress and Challenges

The case of Madagascar both illustrates the progress towards integrated indicators and highlights the challenges that remain. On the one hand, integrated programs vary widely in their objectives, design, and indicators. Efforts to conserve natural resources in Madagascar and programs to protect marine ecosystems in the Philippines are both part of the integrated-program family. On the other hand, these programs also share common elements such as family planning, which is measured through a set of standard indicators regardless of the specific local context. The population and public-health sectors have shown that indicators need to have broad consensus in order to be of value to national decision-makers, donors, and foundations.

Experiences in Madagascar and elsewhere provide a guide for the development and use of common integrated P-E indicators. We propose the following important steps toward such a goal:

• First, before reaching agreement about integrated indicators, researchers and activists need to

State of World Population 2002:

People, Poverty, and Possibilities

New York: UNFPA, 2003. 80 pages.

Reviewed by Jennifer W. Kaczor

Jennifer W. Kaczor is a project associate with the Environmental Change and Security Project.

At the Millennium Development Summit in September 2000, world leaders agreed to a set of goals that would reduce poverty and foster sustainable development worldwide. The first of these Millennium Development Goals is to cut in half by 2015 the number of people who have an income of less than $1 a day. In fact, the first seven Goals—addressing hunger; improving access to primary education; promoting gender equality; reducing child mortality; improving maternal health; combating HIV/AIDS, malaria, and other diseases; and ensuring environmental sustainability—are all generally recognized as directly addressing global poverty.

This year's issue of UNFPA's *State of World Population* (subtitled *People, Poverty, and Possibilities*) explores the link that the Goals recognize between reproductive health, population, and poverty. To halve global poverty, the UNFPA authors argue, policymakers must improve access to reproductive health, help women avoid unwanted pregnancies, and eliminate illiteracy and gender discrimination. As the report notes, though the lives of many women have significantly improved, 31 percent of women worldwide still have no formal education, and poor reproductive health accounts for one-fifth of women's "burden of disease" (loss because of disease of healthy life-years).

How Far has the World Come?

State of World Population 2002 notes that many developing countries have made significant strides since the 1960s in improving crucial quality-of-life factors such as life expectancy, education attainment, and nutrition. It provides convincing evidence that progress has been made fastest in countries where governments have:

- Made available the information and means for women to space and time births and to avoid pregnancy if they wish to do so;
- Provided services for healthy pregnancies and safe deliveries;
- Increased the coverage and quality of education systems;
- Advanced gender equality and equity in other ways, such as protecting women's legal and customary rights;
- Adopted population policies based on human rights;
- Developed responsible and accountable systems of governance and popular participation.

But *State of World Population 2002* also suggests that countries need to commit to higher levels of social investment to improve the health of their citizens. The report also points out the failure to date of the developed world to live up to the commitments made at the ICPD Conference in 1994: developed countries have contributed less than half of their ICPD commitment of $5.7 billion for basic reproductive-health and population programs.

The report's short discussion of private-sector and market-based approaches to providing health care for the poor is particularly timely, given the Bush administration's focus on public-private partnerships. The UNFPA authors conclude that market-based approaches should balance the drive for revenue with the needs of service users; they also argue that those surviving on less than $1 a day cannot afford to pay fees for health care. But a longer treatment of the topic would have been most useful. There is relatively little information on how effective public-private partnerships would be in delivering health care to the world's impoverished—this, despite the emphasis on these partnerships placed by discussions at the Johannesburg World Summit on Sustainable Development.

STATE OF WORLD POPULATION 2002

(continued from page 11)

State of World Population also synthesizes the state of research on (a) macroeconomics, population, and development as well as (b) poverty and gender and (c) poverty and health. For example, the authors cite the economic benefits of investments the Asian Tigers made in health and reproductive health. They also note that higher adult-survival rates have been responsible for about 8 percent of total economic growth in 53 countries. While the information is not new, it is excellent to have it synthesized in one place. In addition, the report provides useful graphics and boxes that help to elucidate these complicated linkages.

The Many Dimensions of Poverty

Indeed, *State of World Population* serves as an easily digestible summary of the many dimensions and consequences of global poverty. Of particular interest is a discussion on the strengths and weaknesses of *participatory vs. income-based* measures of poverty. Because income-based approaches use actual household-income measures, they are thus easily used in quantitative analysis. But the income-based approach fails to capture non-income factors in poverty such as health and education.

On the other hand, while participatory approaches emphasize empowering local communities by involving them in the poverty assessment, results from these surveys tend to be overtly subjective and are not easy to compare across communities. *State of World Population* argues that "a judicious combination of income-based, indicator-based, and participatory-based information should be used to assess poverty and derive implications for policy. And institutions should have incentives to use this information for planning purposes." The section concludes with a very useful box laying out the benefits and limitations of using the typical income-based measure for poverty.

Chapters of the report also address the connections between poverty and demographic trends, gender, health, HIV/AIDS, and education. The poverty and gender chapter features an interesting discussion on the limitations of using income poverty to measure well-being in women. Research now suggests that nutrition, health, time allocation, and power may actually be more important than income in determining the difference in well-being between men and women. While women work longer hours than men in almost every country of the world, they spend at least one-half of their time on unpaid work and receive fewer entitlements. Longer working hours also mean lower nutrition and worse health.

As with each volume of this series, *State of World Population* ends with a list of recommendations targeted to policymakers around the world. One take-home message from the report is that poverty is not just a matter of income, but also a matter of opportunity, freedom, participation, and choice. The authors also draw attention to the large gap in health indicators between the wealthy and poor worldwide. For example, within the poorest countries, a poor woman is 600 times more likely to die in childbirth than her wealthier countrywoman. But gaps in health care between rich and poor exist even in wealthy countries such as the United States, and the authors cite Vietnam as an example of a system where health differentials between the rich and poor are very low.

"Research now suggests that nutrition, health, time allocation, and power may actually be more important than income in determining the difference in well-being between men and women."

Given the current uncertainty over the ICPD process, *State of World Population* does an admirable job tying the goals reached at the ICPD Cairo 1994 conference to the Millennium Development Goals—advocating the relevance and importance of the ICPD goals in improving the livelihoods of billions around the world. The report is useful to those (especially in population organizations) who are looking for a summary of the most up-to-date literature and research on the relationship between microeconomics, macroeconomics, and reproductive-healthcare and demographic trends. ■

P-E INDICATORS

(continued from page 12)

settle on at least a few commonly accepted indicators for each sector involved in integrated efforts. The public-health and population fields seem to have consensus about indicators and methods of data collection—but there seems to be less consensus in the environment sector about what and how to measure. For example, while many conservation programs seek to slow the loss of forest coverage, programs often use very different methods for collecting indicator information.[3] Other programs do not even use forest-loss indicators.

• Second, integrated indicators also need to measure a generic dimension of integration that is not context-specific in order to allow comparability across programs and countries. For example, an indicator that defined as a measure of integration "collaboration between different NGOs engaged in family planning or environmental activities" would only reflect a specific local solution. It would not capture the broad possibilities of partnerships in an integrated program—which may involve government, the private commercial sector, and universities and other research institutions. Examples of generic indicators of integration might be "the existence of strategic partnerships to implement a P-E program," "the number of partners implementing integrated programs," or the "amount of funds available for integrated programs."

Population Action International (PAI) is a leader in advocating programs that address the links between population and environment and that include a systematic and consistent measurement of integrated indicators. Its last annual "Planting Seeds, Meeting Needs" meeting in November 2002 was dedicated to "Measuring Progress in Community-Based Conservation and Reproductive Health." When participants were asked to define "integrated" indicators, the ensuing discussion addressed many of the same issues that are raised in field programming. A few useful indicators were proposed:

• *Gender roles in decision-making and women in leadership positions at all levels, especially women's role in the environment and men's role in reproductive health;*

• *Organizational capacity for implementing integrated programs, including criteria such as cross-cutting technical competencies, community management, social marketing, and multi-sectoral collaboration and partnerships;*

• *Community empowerment to design and implement essential population and environment activities, including community participation and participatory monitoring;*

• *Quality-of-life indicators that not only measure income and poverty but also valorize intact ecosystems and biodiversity; and*

• *An indicator that measures the existence and implementation of policies promoting the integration of population and environment actions at national and local levels and that set forth measurable outcomes.*

These proposed integrated indicators could serve as models for others. Standards, benchmarks, and targets should be developed as appropriate by considering regional or local conditions. Population Action International and a partnership such as the Washington-based Community Conservation Coalition (CCC) could play a leading role in moving this discussion forward. Existing integrated P-E programs provide an ideal environment for testing and refining these new integrated indicators. Foundations and donors would also play a key role in supporting these efforts of integration, a role that would be similar to their present one in advancing state-of-the art programming in specific sectors.

• Lastly, while cross-sectoral collaboration on the local level is essential for integrated P-E programs to succeed, it is equally vital on an international level and within donors and foundations. Much closer cross-sectoral collaboration will provide programs with the incentive to integrate activities and to measure integrated indicators. Multi-sector representation and events involving various sectors at international meetings that traditionally attract population, health, agriculture, or environment specialists are another way to increase interdisciplinary discussions. Within donor agencies and foundations, interdisciplinary teams have been instrumental in promoting the integration of population and environment. In the case of USAID Madagascar, they have guided the development of integrated indicators and data-collection efforts. ■

Author's Note: The authors would like to acknowledge the Association Voahary Salama, all its NGO members and supporting partners, and the participating communities for their dedication and hard work, which provided some important findings and lessons presented in this commentary.

[1] For example, findings from the Calakmul Biosphere Reserve in the Yucatan Peninsula of Mexico showed that access to government reproductive-health services had improved under an integrated program there. For more, see "Population Dynamics, Migration, and the Future of the Calakamul Biosphere Reserve," *PECS News 1* (Spring 1999), 1. [On-line]. Available: http://wwics.si.edu/topics/pubs/PECS_news-all.pdf.

[2] These external factors include transfer payments, public- and private-sector institutions, political situations, and other environmental conditions.

[3] This may be due in part to the broad scale of conservation interventions, ranging from protected ecosystems to natural- resource management through improved agriculture.

Project News

➨ Project Assistant Dina Abbas has left ECSP to become a management analyst for the Barents Group of BearingPoint (formerly KMPG Consulting, Inc.) at its Tysons Corner, VA office. We wish Dina all the best in her new position!

➨ ECSP Director Geoffrey D. Dabelko contributed chapters to two recently-published edited volumes. In *Encountering Global Environmental Politics: Teaching, Learning, and Empowering Knowledge* (Rowman & Littlefield, 2003), Dabelko and Richard Matthew argue in their chapter "The Last Pocket of Resistance: Environment and Security in the Classroom" that environmental security should be a key organizing concept in the study of global environmental politics.

And in *International Environmental Policymaking: Transatlantic Cooperation and the World Summit on Sustainable Development* (ökom verlag/Ecologic, 2002), Dabelko explores in "Environment and Security: Moving from Conflict to Peace" how environmental security thinking and research has evolved over the last decade from an emphasis on environment and conflict linkages to an interest in the possibilities of environmental peacemaking.

For more information on these volumes, please contact ECSP at ecsp@wilsoncenter.org.

➨ *Environmental Peacemaking* is now for sale! Edited by ECSP Director Geoffrey D. Dabelko and Ken Conca of the University of Maryland, *Environmental Peacemaking* explores case studies from around the world that suggest environmental cooperation in regions with highly fluid security situations might galvanize peacemaking in those areas. To purchase *Environmental Peacemaking*, visit the Johns Hopkins University Press Web site at http://www.press.jhu.edu/press/books/titles/f02/f02coen.htm.

➨ ECSP staff members have made a number of presentations to government officials and international conferences in recent months.

ECSP Director Geoffrey D. Dabelko was one of four Wilson Center staff members who made short presentations to UN Secretary-General Kofi Annan as part of Annan's December visit to the Wilson Center. Dabelko spoke to the Secretary-General about global fresh-water resources

and their links to conflict and cooperation among states.

Dabelko traveled in January to Wilton Park, the historic manor house in southern England used for meetings by the UK Foreign Commonwealth Office, to address a gathering of British scientists, military officers, and foreign and security officials on "Knowledge, Security, and the Environment." The conference was organized by the Centre for Ecology & Hydrology and the Met Office of the UK Ministry of Defence. Dabelko also made presentations on ECSP activities in recent months to the Community Conservation Coalition, the U.S. Agency for International Development Office of Population and Reproductive Health, and a group of Palestinian journalists.

Jennifer Turner, ECSP senior project associate and coordinator of ECSP's China Environment Forum, addressed the Congressional/Executive Commission on China Issues Roundtable on the growing importance of environmental NGOs and environmental journalists in the development of China's civil society. Read her address by going to www.wilsoncenter.org/ecsp and clicking on the "China Environment Forum" link in the right column.

On March 19th at the Third World Water Forum in Kyoto, Japan, ECSP hosted the premiere screening of ***Running Dry***, a new documentary video that focuses on water problems in the Jordan River Basin of the Middle East. A roundtable discussion on water cooperation and conflict followed the screening, featuring Aaron Wolf, Oregon State University; Fida Hajeer, Friends of the Earth Middle East (Amman); Anthony Turton, University of Pretoria; and Jim Thebaut, director, writer and producer, ***Running Dry***. ECSP's Geoffrey D. Dabelko moderated.

Dabelko also took news of ECSP's *Navigating Peace* to the Forum as well as policy conclusions from recent Wilson Center meetings on global freshwater issues held under the ECSP *Navigating Peace* initiative.

➨ ECSP's initiative *Navigating Peace: Forging New Water Network*s now has a dedicated Web site. Funded by the Carnegie Corporation, *Navigating Peace* is bringing together diverse sets of individuals into working groups to generate new thinking on the world's freshwater issues. One working group is exploring water as a social and economic good; another is looking at conflict and cooperation over water; and a third is comparing water-conflict resolution practices in the United States and China.

The *Navigating Peace* Web site features publications, papers, and findings from the initiative as well as links to working group members and news about water. To learn more about *Navigating Peace*, go to the ECSP Web site at www.wilsoncenter.org/ecsp and click on the "Navigating Peace" link in the right column.

➨ Did you know that 40 million workdays are lost in Uganda annually because of sanitation-related illnesses? That 500,000 women worldwide die every year during childbirth? Or that some experts estimate it will take the global HIV/AIDS pandemic 40 to 50 years to peak?

These and other surprising statistics are part of the ECSP Index, a new feature on the ECSP Web site that highlights dramatic and little-known facts about population growth, environmental change, global health, and human security. The Index also features quotes from public officials highlighting the crucial human security issues that face the 21st century. See the ECSP Index at www.wilsoncenter.org/ecsp.

➨ Could rivers, forests, and farm fields become weapons of terrorism? In an January 8th ECSP meeting at the Wilson Center, Elizabeth Chalecki of the Pacific Institute discussed with an audience of military, intelligence, and diplomatic experts how terrorists could target or even use the environment and natural resources to wreak much more extensive destruction than conventional terrorism.

Chalecki also argued that terrorists are more likely to launch such attacks than use weapons of mass destruction. "Resources are easy to access and vulnerable," she said. "Taking out a dam or poisoning a water supply would have far more consequences than a suicide bomber."

➨ In a March 4th ECSP meeting, political scientist Erika Weinthal of Tel Aviv University and geologist Avner Vengosh of Ben-Gurion University of the Negev detailed new research projects in the Jordan Valley and Gaza Strip that use integrated teams of Israeli and Palestinian scientists to pinpoint the causes of freshwater degradation and scarcity in these water-stressed and conflict-ridden areas.

Vengosh said that some Middle East water resources are so fragile and imminently threatened by salination that their increased use under sharing arrangements agreed to (but never implemented) under the Oslo Accords would actually be catastrophic. Weinthal said that, while cooperation over water continues in the region despite the high levels of tension there, a strong third party is needed in negotiations to develop Middle East regional water management.

Summaries from these and other ECSP meetings can be found on our Web site at www.wilsoncenter.org/ecsp.

Now Accepting Applications for 2004-2005 Fellowships

The Woodrow Wilson Center is accepting applications for the 2004-2005 Fellowship competition.

The Center awards academic-year residential fellowships to individuals from any country with outstanding project proposals on national and/or international issues. Projects should have relevance to the world of public policy or provide the historical and/or cultural framework to illumine policy issues of contemporary importance. Fellows are provided stipends, which include round-trip travel, private offices, access to the Library of Congress, Windows-based personal computers, and a research assistant.

Deadline: October 1, 2003. For more information call (202) 691-4170 or e-mail fellowships@wwic.si.edu. The application can be downloaded from the Center's website at http://www.wilsoncenter.org.

WORLD WATER FORUM

(continued from page 3)

with water issues will be there. My hopes are high."

Rock also said that the United States would continue to push efforts at Kyoto such as the West Africa Water Initiative (a $40 million public-private partnership to provide potable water and sanitation to rural villages in Ghana, Mali and Niger) as well as stress the need to establish "enabling environments"—a supportive climate for good water management that involves social education, legislative and regulatory frameworks, investment and financing opportunities, and transparency.

In addition, Rock touted point-of-use sanitization programs as an underutilized but necessary complement to simply increasing clean water supplies to the underserved. "They do not answer the questions of access, but we need to address these efforts with equal enthusiasm to laying pipe," he said. "They provide great health benefits for low investments and technology."

Rock concluded, however, by cautioning that partnerships were not the sole answer to the world's enormous water problems. "Pooling funding mechanisms with a revolving-fund-guarantee approach is needed because of the lack of credit-worthiness of some developing countries," he said.

Breakout Sessions

Following the keynote addresses, participants gathered in breakout sessions that discussed how Kyoto should approach water vis-à-vis (a) sanitation/health, (b) food security, and (c) the better coordination of institutions.

UNICEF's Vanessa Tobin, who chaired the sanitation/health session, reported that participants wanted Kyoto to focus on implementation, partnerships, and affordability—not new technologies—in meeting basic needs. Tobin also said the group stressed prioritizing water issues at the highest political levels.

Adela Backiel of USDA and Alfred Duda Global Environment Facility, co-chairs of the food security group, said that their session's difficulty in agreeing on one or two foci for Kyoto reflected what would be the conflicting cross-sectoral issues at Kyoto. Backiel and Duda reported their group's emphasis on the importance of integrated water-resource management (involving both land use and watersheds) as a way to get to the issues of hunger and sustainable agriculture.

Henry "Hank" Habicht of the Global Environment and Technology Foundation and USAID's Franklin Moore reported that the water and institutions group focused on how water has become both a regional issue (typically within international river basins) and a local issue (as provincial and urban authorities assume responsibility for delivering water services). Habicht and Moore's group concluded that the solution to global water problems lies not in new institutions but in (a) new mechanisms and frameworks to better align existing institutions, and (b) media campaigns that create the political will to address water issues. ■

For more on this meeting, visit our Web site at www.wilsoncenter.org/ecsp.

LESSONS FROM THAILAND

(continued from page 2)

He concluded by chastising donor countries and foundations for relying too heavily on grants. "You have to help us be viable through training and resource allocation," Viravaidya said. "NGOs are expecting to live off the generosity of donors forever, and it can't work." ■

For more on this meeting, visit our Web site at www.wilsoncenter.org/ecsp.

JANE GOODALL

(continued from page 9)

efforts to conserve the environment, not defund them.

"If we stop caring about the environment now, then terrorism will win, because what will we be leaving our children?" Goodall said.

Goodall followed her Wilson Center visit by meeting privately with officials from the U.S. Department of State and USAID. Both her conversation with staffers and the private meeting were sponsored by ECSP ■

For more on this meeting, visit our Web site at www.wilsoncenter.org/ecsp.

Woodrow Wilson International Center for Scholars

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 nonpartisan 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 B. Gildenhorn. 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.

PECS News

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FROM THE FIELD

(continued from page 8)

would include the following aspects:

• *A sustained commitment to assist the population in adapting to new environmental constraints.* Local government—in cooperation with international donors—should honestly and openly recognize existing challenges and respond with a realistic and clearly laid-out vision. No such vision currently exists.

• *Short-term benefits to stabilize the situation,* including: special incentives to healthcare and other professionals working in stricken areas, and guaranteed minimum water deliveries and financial incentives that would give farmers the confidence to invest in agricultural improvements.

• *Assistance and support to those that move,* including: dismantling official barriers to medicalcare access for both labor and other migrants; support for expanding affordable housing and public services in urban areas; and facilitating repatriation of monies earned by labor migrants.

Thus far I have begun posing some of these ideas during interviews with visiting journalists and several bilateral donors. In the coming months, I will be working with MSF to develop a more systematic advocacy strategy that incorporates these recommendations.

MSF's primary medical intervention in the Aral Sea area has been working to improve tuberculosis control. Although MSF will finish handover of these activities to the Uzbekistan Ministry of Health in early 2004, the organization has committed to help the Ministry begin treating multi-drug resistant tuberculosis over the next few years. Given concerns over transport of these strains out of the region by migrants, MSF is likely to increasingly focus on out-migration in the organization's advocacy work. ■

GOOD WATER MAKES GOOD NEIGHBORS

(continued from page 5)

tourism instead of agriculture as well as for attention to population issues as crucial steps toward addressing water scarcity there. "There simply is not room for everyone if we continue to behave in a water-rich fashion," he said. "The region's environmental community is only now aware of reducing population growth and immigration." ■

For more on this meeting, visit our Web site at www.wilsoncenter.org/ecsp.

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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PENALTY FOR PRIVATE USE, $300

ADDRESS CORRECTION REQUESTED

PRESORTED FIRST CLASS MAIL
POSTAGE AND FEES PAID
SMITHSONIAN INSTITUTION
G-94