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Collaborating for Effective P-E Interventions: Dan Whyner, APPROPOP/PF/Madagascar, shares the lessons he and his organization learned providing pilot grants to environmental organizations to offer health and family planning services in buffer-zone communities.

PEFP Workshop: The fifth annual workshop was held in Ann Arbor in June. It brought fellows together with selected experts to discuss organizational effectiveness, program sustainability, and gender issues.

PECS Symposium: The Population Fellows Programs host the first of three symposia addressing migration, environmental change, and security.

Recent Fellows: Since the last newsletter, four fellows have been placed – with Conservation International, the CDC, the World Wildlife Fund, and World Neighbors.

Summer Course in International Population: The Fellows Program offers a two-week “crash course” to prepare specialists from other disciplines to enter the field.

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POPULATION-ENVIRONMENT FELLOWS

N e w s l e t t e r



Collaborating for More Effective Population-Environment Interventions:

The Experience of the APPROPOP Project and its Environmental Partners in Madagascar

by Dan Whyner, APPROPOP/PF/Madagascar

I arrived in Madagascar in early 1997 as a Population-Environment Fellow¹ with the USAID-funded project APPROPOP/PF. APPROPOP was a five-year project administered by Management Sciences for Health (MSH) that aimed to increase the number of Malagasy practicing modern family planning. Among other things, my role would include co-supervising three pilot grants awarded by APPROPOP to environmental organizations to provide health and family planning services in remote buffer-zone communities. All of these grants had been functioning for more than two years and were preparing for completion in early 1998. My role with these partners was principally one of providing periodic supervision and advice, diffusing our experience to a wider audience encompassing both the health and environmental sectors, and using the lessons learned from these grants to propose ways to improve this type of collaboration in the future.

In this article, I describe these three grants and how they were implemented, but more importantly I feel, provide some analysis of the factors of success and propose some ways to develop more effective programs of this type in the future. This is particularly pertinent because Jereo Salama Isika, the follow-on USAID-funded health project to APPROPOP/PF, which is being managed by John Snow Inc., is preparing to begin new grants of this nature in Madagascar. In addition, a number of changes have occurred in the country with regard to environmental management approaches that present further opportunities for collaboration between the family planning/health and environmental sectors.

Above. Dan conducts a participatory rural appraisal session with Tsimelamy villagers in which they create a historical matrix of population growth and changes in agricultural production and forest cover.

Family Planning in Madagascar

To increase family planning acceptance in Madagascar, the APPROPOP project focused on four important goal areas: increased access, improved quality of care, demand creation, and institutional strengthening of organizations offering family planning services. In order to meet these goals, the project worked with its partners to increase the number of service delivery sites, to provide a range of modern contraceptive methods, to introduce quality of care practices, to implement outreach programs to boost demand, to augment the capacity of its partners to manage financial resources and contraceptive supplies, and to establish MIS systems to provide better monitoring and evaluation of program effectiveness.

When the project began in late 1993, contraceptive prevalence in the country for women in union was only 5%. This situation was not surprising given the fact that Madagascar's government had only recently reversed, in 1989, its pro-natalist stance on population growth. In 1991, the country adopted a National Population Policy that sought to reduce population growth rates in order to ensure better health conditions and a brighter economic future for its inhabitants. USAID, UNFPA, the German development agency (GTZ), and other donors and local health organizations worked with the government of Madagascar to develop this policy and committed their resources to increasing the number and quality of family planning services in the country. USAID's contribution was the creation of the APPROPOP project, operated by Management Sciences for Health. At the end of this project, national-level contraceptive prevalence had increased to nearly 10% for women in union, still low relative to many countries, but a marked improvement in just five years.

At the time that the APPROPOP project was conceived, there were few sites outside the larger urban areas that were offering family planning services, and there was limited experience in outreach programs to actively build demand for these services. Therefore, the design team for the APPROPOP project elected to develop a grants program that fostered innovation in the design and implementation of family planning programs. This program enabled organizations working in both urban and rural areas of the country to test and identify viable approaches to increasing contraceptive prevalence rates (CPRs) by providing grants to an array of partner organizations including the Ministry of Health, health NGOs, several church-affiliated health care NGOs, the National Water and Power Authority, the national-level International Planned Parenthood Federation affiliate, numerous health management organizations (HMOs), and, additionally, the three integrated conservation and development projects that form the focus of this article.

Biodiversity Conservation in Madagascar

Like the family planning field, the conservation movement in Madagascar was also emerging in the early 1990s. During the previous decade, the government began working with the donor community and interested international environmental organizations to develop a means to better address the acute environmental problems besetting the country. This process resulted in Africa's first National Environmental Action Plan, or NEAP, which was promulgated in 1990 as a 15-year process to be undertaken in three five-year programs. An important goal of the NEAP was to reverse the alarming rate of deforestation in Madagascar, which threatens with extinction the last remaining habitats

of the island's biodiversity. A key principle espoused by the NEAP was the need to improve the economic livelihoods of the Malagasy people while also preserving the country's unique biological heritage through an economic development program based on the sustainable use of natural resources.

The first phase of the NEAP, Environment Program (or EP) I, began in 1991 and was completed in 1996. Under this program, the international donors, with USAID taking a leading role, gave considerable support to the development of a viable National Park Service and the creation of enabling legislation to allow better environmental management practices to be introduced in Madagascar. Most of the concrete actions were taken in the immediate vicinities of a number of priority protected areas and took the form of Integrated Conservation and Development Projects (or ICDPs). These were managed primarily by international NGOs such as the World Wide Fund for Nature, Conservation International, the State University of New York (SUNY) at Stonybrook, VITA, CARE, and the Wildlife Conservation Society.

The ICDPs attempted to reconcile two competing needs. They worked to conserve the nation's unique biological heritage so that it would offer long-term economic and social benefits to the country as a whole while, at the same time, meeting the need of residents living adjacent to these areas to derive short-term benefits from this biodiversity that would ensure their immediate survival. A typical ICDP executed a variety of conservation activities such as programs to foster environmental education in local schools and communities, park infrastructure development, implementation of ecological surveys, and training of conservation professionals. These projects also undertook development programs, which included activities

focused on increased access to credit, diffusion of improved agricultural practices, enhanced livestock production, small income-generating projects, child and adult literacy programs, and increased access to health services.

ICDPs Use APPROPOP Grants to Offer Family Planning

Three ICDPs operating in Madagascar during this period were awarded grants by the APPROPOP project to implement family planning programs in the buffer-zone communities around their respective protected areas. One partner, Conservation International (CI), was operating an

ICDP in and around the Zahamena Reserve in northeastern Madagascar, which arguably harbors the greatest diversity of lemur species on the island. Another was the Ranomafana National Park Project (PPNR), followed by the NGO MICET (Madagascar Institute for the Conservation of Tropical Environments) after the completion of the ICDP in 1997. These organizations worked in and around Ranomafana National Park, which is located in the southeastern part of the island and is home to the rare Golden Bamboo Lemur that was discovered only recently in 1986. The third partner, World Wide Fund for Nature (WWF), collaborated with a health NGO, Association Santé Organisation Secours (ASOS), to start health programs near the Andohahela

Reserve, an extremely biodiverse region in the extreme southeast of Madagascar that contains rainforest, dry forest, and spiny forest biomes.

The core of each ICDP's health work was the deployment of



APPROPOP made grants to ICDPs to provide family planning and reproductive health services in buffer zones around three protected areas. These areas are home to tremendous biodiversity, including several species of lemur, and were threatened by the high rates of deforestation that have besieged the country.



mobile health teams to implement its programs in the field. These teams were composed of doctors, nurses, and trained midwives who made regular visits to remote peripheral zone villages of these protected areas in order to provide preventative and curative health care as well as health education to populations who would otherwise not have had access to these services. The mobile health teams also collaborated with other health providers in their vicinity, primarily the public health sites, to increase the acceptance of family planning and improve overall health in target communities.

Both MSH and its environmental partners had their own expectations of these family planning programs.

For MSH, these programs were seen as experimental approaches to learn how to best reach remote rural

populations, most of whom live far from existing health services. Given the fact that Madagascar is an overwhelmingly rural country (>80%), a strategy to increase CPRs in these areas was perceived as a means to help the APPROPOP project attain

its objectives and also to provide ideas and feedback for other projects of this sort in the future. For the environmental partners, these family planning programs were originally undertaken with the aim of contributing to human development and to biodiversity conservation in their zones of interest (see text box on page 4).

Implementation of the APPROPOP Grants with the ICDPs

Not unexpectedly, these grants did not result in huge numbers of new family planning clients for the country (only 0.5% of national contraceptive coverage). The target populations were small, difficult to reach, and arguably harder to recruit than urban clients. Despite these circumstances, however, the three partners were able to produce 1,141 regular users by the end of their grants – WWF/ASOS with 582, MICET with 438, and CI with 121 clients, respectively. Oral contraceptives and Depo-Provera were by far the preferred methods with 48% of



Key Assumptions about the Importance of Linking Family Planning and Conservation

The environmental partners made three initial assumptions about the value of family planning to the well-being of the target populations living in the buffer zones and to the protection of biodiversity in the protected areas. The first assumption was that implementing a family planning program in the context of an overall health program could increase the trust of the target populations in the ICDP by addressing their often-pressing needs for contraceptives, vaccines, health care, and health education. The ICDP then could capitalize on the goodwill engendered through the implementation of these health programs to begin other programs such as resource management and conservation activities in these communities with a greater hope of acceptance and success.

"The environmental partners made three initial assumptions about the value of family planning to the well-being of the target populations ... and to the protection of biodiversity ... I worked ... to focus specifically on the first two assumptions only!"

The second assumption was that family planning services in the context of health programs were in and of themselves important development activities for these remote rural populations. Maternal and child health statistics for Madagascar are worse than the average for sub-Saharan Africa. For example, Madagascar has the highest percentage of children who are stunted or underweight of 20 sub-Saharan African countries being tracked by USAID-financed Demographic and Health Surveys. Maternal malnutrition is also the highest of the twenty countries surveyed. Statistics for the rural areas, where these ICDPs are to be found, are even more sobering. Family planning can help prevent unwanted births and increase birth spacings, both of which can help improve health and nutritional conditions for mothers and children. Therefore, family planning and human health are clearly critical components for human development in any ICDP operating in Madagascar.

The third assumption was that family planning programs in the buffer zones of parks and reserves could be part of a long-term strategy to decrease demographic pressures on protected areas. The idea here is that reduced population growth due to natural increase would have a beneficial impact on the long-term sustainable use of natural resources. This assumption could prove to be correct but only if a number of conditions were met. First, family planning must be perceived to be beneficial by the local populations themselves, and they must practice contraception. Secondly, the rate of in-migration must be balanced by the rate of out-migration in these areas. Thirdly, human use of natural resources must not increase over time or must become more sustainable.

Of the three assumptions, the last was the most problematic, and upon my arrival in Madagascar in 1997, I worked with the ICDPs and MSH-APPROPOP/PF to focus specifically on the first two assumptions only. There are two main reasons for this. The first is the difficulty of controlling for other variables when trying to measure the effect of contraception on the quality of natural resources in and around protected areas. Variables such as resource utilization practices, economic status, educational level, access to markets and social services, rights of exclusion and control of access by local communities, cultural attitudes, and natural disasters intervene between those populations practicing family planning and the state of the biological resources around them, thereby rendering any impact measurement highly questionable and making this assumption extremely difficult to validate.

Secondly, the use of family planning as a tool of the conservation community often makes it suspect to local populations who feel that their fertility is being controlled. The message that family planning is needed to ease pressures on natural resources by reducing or controlling human populations can lead to a lack of trust on the part of the beneficiaries of the ICDPs and could harm the health and conservation programs being implemented by the project. Clearly, family planning can only be a sustainable intervention in these regions if the local populations feel that it is a resource for them to improve the health and economic well-being of their families and not the tool of the conservation community.

clients choosing oral contraceptives, 45% choosing injectables, and the remainder choosing barrier methods or IUD insertion. Overall, approximately 50% of the objective for continuing clients for these three grants was met. However, WWF/ASOS was far more successful and met 69% of its objective, with MICET reaching 46%, and CI attaining only 28% of its continuing client goal. While contraceptive coverage in these three target zones was low at ~5%, it was nevertheless a significant improvement, basically a quintupling, over the baseline of ~1% coverage at the beginning of these grants. By comparison, figures for rural contraception between the Demographic and Health Surveys of 1992 and 1997 show that rural contraceptive coverage only slightly more than doubled over that period going from 2.9% to 7.1%.

In carrying out its work, each ICDP used a variety of techniques. Some were common to all three ICDPs; others were tried by only one or two of the projects. These approaches and the lessons learned from them are described below.

COMMON ELEMENTS

The three grants which APPROPOP made to ICDPs included a number of standard elements such as close collaboration with Ministry of Health personnel, training of conservation and development agents working for the ICDPs in family planning outreach, community mobilization for family planning outreach, a rigorous schedule of visits to peripheral-zone communities by the mobile health teams, and regular reporting through quarterly monitoring and evaluation updates to MSH and the Ministry of Health.

The collaboration between the ICDPs and the public health service included site rehabilitation of a few health posts including the donation of furniture and equipment; staff

training in family planning methods and stock management; the provision of contraceptives, essential medicines, and supplies; and the community outreach campaigns described below. The family planning officers for the District Health Offices collaborating with the ICDPs also accompanied the health teams occasionally on supervisory visits to fixed sites in their districts. The relationship of each grantee to the health districts located near them evolved in a very positive manner throughout the life of these grants such that all six health districts involved in the three projects expressed a strong interest in continuing activities with these organizations in the future.

In addition, APPROPOP trained 93 conservation and development field workers working for the three ICDPs in family planning outreach techniques. A special training was developed for these workers that instructed them about the linkages among the well-being of the family, family size, resource use patterns, and ecosystem services such as watershed and soil erosion protection, in addition to the standard family planning information normally provided. This training stressed the need to help families maintain a household size that can permit them to meet all their basic survival needs. These conservation and development agents were then tasked with providing interested people in the buffer-zone communities with information about family planning during their regular visits for other development actions such as agricultural development, conservation, or rural credit. However, no monitoring and evaluation program was devel-

oped to effectively measure the impact of their work, so it is difficult to ascertain their contribution to the success of these grants.

The grant recipients also worked extensively to mobilize community-based organizations to increase knowledge of family planning in their respective regions. Normally, the ICDP worked through existing groups such as women's nutritional education groups, community granary associations, beekeeping associations, and village credit organizations. The public health post family planning service providers were included in the outreach campaigns to increase their involvement with the program and to introduce them to potential clients. While records were maintained of the number of outreach sessions held, there is no measure of the impact of these interventions on the number of new family planning clients visiting the local health post or community-based distribution (CBD) agent.

For each of the grants, the mobile health teams were responsible for a large geographical area, which required frequent travel to ensure that each village or hamlet was visited at least every three months for the provision of injectable contraceptives, three-month supplies of



The APPROPOP-ICDP efforts were conceived as a way to reach Madagascar's most remote settlements with reproductive health information and services. APPROPOP sought to increase CPRs, while the ICDPs hoped to improve community health and gain local trust and goodwill.

oral contraceptives, or barrier methods to each family planning client. The difficulty of access to some of these areas resulted occasionally in tardiness in the arrival of the health teams in certain communities. However, these visits did enable the teams to address other critical health problems facing these populations and may have increased the trust that existed between the ICDP and the buffer-zone communities.

Finally, MSH required all its grant recipients, including the ICDP partners, to collect data on their programs on a quarterly basis using standardized report forms, which the Ministry of Health, MSH, and other donor partners had developed. There were forms for both fixed sites and for CBD agents. These forms provided numerical data on continuing users, new users, drop-outs, method choice of new and continuing clients, stock alert calculations to prevent stock outages, types of training received by service providers, supervisory visits made, new sites opened, and outreach meetings held. This information was critical in enabling the ICDPs to track the evolution of family planning acceptance in their target areas. However, the information recorded was not effective in soliciting qualitative information on such topics as local attitudes about family planning, rumors about particular methods, evolution in outreach meeting attendance, and complications with methods.

UNIQUE APPROACHES

Some notable differences in the approaches of the three grantees were the use of paid rural outreach workers based in the field, the implementation of CBD programs for contraceptives, and the creation of family planning users associations.

For WWF/ASOS at Andohahela, WWF employed local rural outreach workers who were trained in broad-

based development, which included outreach techniques as well as technical training in conservation, agriculture, animal husbandry, and health. These workers had more responsibilities than the conservation and development agents of other ICDPs in that their work involved management responsibilities that helped to ensure that project goals were accomplished. For example, they helped guarantee that contraceptive supplies were available at both CBD and fixed sites; that reports on project activities were submitted on time from CBD agents and fixed sites; and that outreach activities undertaken with the target group, i.e., women of reproductive age, were implemented successfully by the CBD agents, the conservation and development agents of the ICDP, or the community-based organizations involved in their program. In addition, these workers were responsible for other sector-specific programs such as agriculture, livestock, and conservation, which gave them a more global vision of the goals of the ICDP.

In addition, the grantees took different approaches to CBD programs in their target areas. The WWF/ASOS grant involved a CBD program from near the beginning of its grant, MICET began its CBD program after the PPNR grant had been functioning for more than two years, while Conservation International never began a program of this type. For WWF/ASOS, the CBD approach resulted in a larger number of family planning clients and was a viable alternative to distant health posts. In fact, this CBD program was responsible for 60% of all new clients. The MICET CBD program was identified by the new NGO in 1997 as a priority for its family planning program and, while implemented near the end of its grant, resulted in a 14% increase in family planning clients in just three months. CI realized the value of this approach through exchanges with

the other two grantees, but there was insufficient time for a CBD program to be implemented with CI/Zahamena before the end of its grant in March 1998.

Finally, MICET took a different approach with regard to demand creation for family planning through the establishment of contraceptive users associations near the fixed public family planning sites. These associations were able to generate their own revenues through the donation of small livestock, a small membership fee, and the organization of an annual fund-raising party. With these revenues, the cost of each family planning client's annual supply of contraceptives was covered. In addition, association funds were also available to send members to other health referral sites in the event of complications with a family planning method or the need for a method not available at the rural site such as IUD, Norplant, or minilaparotomy.

Lessons Learned

These three grants provided APPROPOP and its partners with an opportunity to test new approaches to providing family planning services and to assess how to best respond to rural community needs. The challenges of reaching these remote populations would be daunting for any type of assistance program and can provide insights to development organizations working in Madagascar. The socio-economic context of these isolated communities plays a critical role in the evolution of any development project undertaken in these areas. These populations are isolated and far from services and do not feel their lack as much as more urban populations who know such services exist. Thus, education and demand creation activities should be factored into the design of any program. In addition, these communities are more illiterate than others and require special

training for CBD or outreach programs. Their remoteness has also engendered more distrust of outsiders than is often encountered with other groups. Therefore, development programs must accept that greater lead time is needed for these projects before success can be achieved and measured.



Based on the APPROPOP-ICDP experience, elements such as CBD programs, family planning users associations, rural outreach workers, and an appropriate ICDP structure seem to be important in increasing usage of family planning services among rural Malagasies.

In the final analysis, there are a few critical elements that seem to favor the success of these types of programs:

1. The value of a CBD program cannot be underestimated. Due to trust issues, these populations are more responsive in general to their peers than to public health workers or ICDP health teams who may not be from their area or ethnic group;
2. Family planning users associations provide an excellent means to increase the number of users and to reduce drop-outs through peer counseling and group assistance to generate the revenue needed to keep all members supplied with contraceptives; and
3. While perhaps unsustainable in the long-term, the use of field-based rural outreach workers is an effective way of ensuring that reporting is done and that contraceptive stocks

remain available to actual and potential clients. The key here would be to ensure that the outreach worker could effectively train and support the public health providers, CBD workers, or community outreach groups to assume these responsibilities once the project has been completed.

Arguably more important than any of these elements, however, is the organizational structure of the ICDP implementing the program. Each of the three grants had its own unique institutional characteristics. The WWF grant, which was managed in partnership with an effective local health NGO, was by far the most effective of the three grants in

terms of continuing clients. The technical management of the grant by the health partner allowed for a more egalitarian relationship to exist between the two institutions. Decisions regarding the health programs of the buffer-zone communities of Andohahela National Park were made on the basis of the sound medical experience of an independent NGO and not by the Development Program Officer for a traditional ICDP attempting to balance numerous needs for program funding. The health teams of PPNR and CI were submerged in an organizational structure composed of medical personnel, rural credit experts, agronomists, livestock breeders, and education specialists competing for limited funds, a structure that inhibited independent thinking and planning of program interventions in spite of the fact that there were some fine medical professionals working for these two projects. The evidence becomes

even stronger given the fact that the entire health team for PPNR was recruited by MICET after the end of the ICDP and that this same set of health professionals reacted much more effectively within a different institutional structure which gave them more autonomy.

In reviewing the experience of APPROPOP and its environmental partners, I would make the following three recommendations for increasing the success of future programs of this type:

1. Given the experimental nature of these interventions and the need to document success, it is essential to develop better monitoring and evaluation strategies for outreach programs in order to understand the knowledge and attitudes of the target population about family planning and to identify which outreach messages, approaches, and messengers are the most effective in increasing demand;
2. Mobile health teams need to reconsider the demands placed on them by onerous and often unrealistic schedules of regular visits to remote sites not served by local health posts and develop strategies to reduce these demands through staff recruitment, partnership with other health service providers to offer services, and/or basic training of village-based health workers who could provide injectable contraceptives in concert with CBD agents who provide oral contraceptives and barrier methods; and
3. Given that family planning is often neither the first developmental nor the first health need identified as a priority by rural communities, these projects should always embrace family planning as an important means to improve maternal and child health and family well-being and not as a means of population control for better conservation of natural resources.

Next Steps

The stage is now set for a second wave of population-environment grants in Madagascar. The new USAID-funded health project, Jereo Salama Isika (JSI), managed by John Snow Incorporated, will utilize a grants program similar to that of the APPROPOP project. JSI is different from APPROPOP, however, in that it is an integrated health project that combines reproductive health (including family planning), child survival, and nutrition. This new integrated approach more closely matches the approach of APPROPOP's former population-environment partners, thereby increasing areas for effective collaboration between JSI and these organizations. In addition, the implementation of family planning activities within the context of a comprehensive health program is more acceptable, in general, to the target populations who prefer to accept family planning in order to increase birth spacing for improved maternal and child health rather than for limiting the number of births.

In addition, the experience of Environment Program (EP) I has led planners for the EP II of the National Environmental Action Plan to rethink the ICDP approach due to two important factors: 1) significant pressures are being exerted due to the demand for natural resources emanating far from these protected areas by interests as diverse as commercial timber operations, small-scale charcoal producers, and migrants looking for new lands to cultivate; and 2) there are a large number of areas harboring biodiversity that enjoy no protected status at all and were not included in programs implemented during EP I. Consequently, these planners opted to expand the priority zones to encompass the broader ecoregions that contain protected areas and

other areas of high biodiversity as well as the principal actors who place demands on the use of these resources.

As a result, the opportunities for collaboration between environmental and health organizations are greater than before and the relationship between the two sectors will hopefully be more one of collaboration and partnership and less that of the ICDP approach wherein health needs were often given less priority than conservation goals. I have been working to bring the health and environmental sectors together in the Fianarantsoa region to investigate ways for each sector to benefit from and contribute to the other. For example, I am working with JSI and MICET to begin a health program in the ecoregion linking Ranomafana and Andringitra National Parks that will work alongside new agricultural and environmental programs also being undertaken in the region.

In addition, during the transition phase between the APPROPOP and JSI projects, I have been working with JSI and potential partners to further the integration of population, health, and environment activities through the use of these new grants. As a result, these grants will add environmental health as an experimental component, which will help local communities improve the management of village sanitation, waste disposal, and potable water supplies with the aim of also protecting watersheds and stream ecology. In addition, these grantees will investigate ways to link with other partners to address common health-environment issues such as the promotion of village gardening for revenue generation combined with improved household nutrition. Family planning in these programs will assume a role as a critical component in overall family well-being and as a means to better plan the births of children to

improve and maintain maternal health, the health of younger dependent children, and overall household food security.



Dan has spent his placement in Madagascar working with USAID-funded projects and partner organizations to build interest in population-environment linkages at the programmatic level. In addition to his work with the MSH-APPROPOP/PF small grants recipients and the JSI Project, he also collaborated with several other organizations including Landscape Development Interventions (LDI), a USAID-funded environmental project, and the World Wide Fund for Nature (WWF International). With LDI, Dan worked to gather data on demographic and health conditions in LDI's target intervention zones and to identify potential partner health organizations for future collaboration. In addition, Dan helped LDI implement a series of rapid rural appraisal (RRA) studies to better understand household- and community-level decisions regarding the use of natural resources, including the role of family planning and health in the household economy. With WWF, Dan helped develop the methodology for a study to investigate the relationships between human migration patterns and the natural resource use in the Dry Forest Ecoregion of southwestern Madagascar. He trained a group of researchers in RRA techniques, led them into the field for their first RRA exercise, and is helping to write the final report for the study.



PEFP WORKSHOP

ENDNOTE

¹Population-Environment Fellows not based at USAID are now referred to as Michigan International Development Associates or MIDAs.

RESOURCES

Institut National de la Statistique de Madagascar. 1995. Résultats du Recensement Général et de la Population et de l'Habitat (National Census) de 1993.

Macro International, Inc. and the Institut National de la Statistique de Madagascar. 1998. Enquête Démographique et de Santé de 1997 (Demographic and Health Survey).

Macro International, Inc. and the Centre National de Recherches sur l'Environnement de Madagascar. 1994. Enquête Nationale Démographique et Sanitaire de 1992 (Demographic and Health Survey).

Management Sciences for Health. January 1999. Final Report for USAID of the MSH-APPROPOP/PF Project - 1993-1998.

Rabelahasa, Eléonore and Whyner, Daniel. 1998. Evaluation Finale des AAPS Environnementaux du Projet MSH-APPROPOP/PF (Final Evaluation of MSH-APPROPOP/PF's Grants to Environmental Organizations). Management Sciences for Health.

USAID/Madagascar. 1997. USAID/Madagascar Country Strategic Plan, FY 1998-2002.

USAID/Madagascar. 1997. USAID/Madagascar's Environment Program for Environmental Phase II of the National Environment Action Plan for Madagascar 1997-2002.

Whyner, Daniel. 1999. An Analysis of Social Indicators of Interest to LDI/Fianarantsoa. Landscape Development Interventions Program, Madagascar. Chemonics International.

Whyner, Daniel et al. 1997. Rapport de l'Atelier sur la Planification Familiale et l'Environnement (Workshop on Family Planning and the Environment). MSH-APPROPOP/PF.

ADDRESSING:

**GENDER,
SUSTAINABILITY,
AND
ORGANIZATIONAL
EFFECTIVENESS**



by Laura Benson

The fifth annual Population-Environment Fellows Program (PEFP) Workshop was held in Ann Arbor, Michigan, June 14-18, 1999. The workshop brought together P-E Fellows from all over the world as well as representatives from USAID, World Neighbors, and John Snow, Inc. The workshop focused on several issues: gender, sustainability, and organizational effectiveness with regard to P-E interventions.

A unique feature of this summer's workshop is that it overlapped with several program-wide workshops and trainings. These included the first annual Population Fellows Workshop, which gave Population and P-E Fellows an important opportunity to network, learn about each other's work, and share insights from the field. In addition, these workshops coincided with two pilot programs – the Summer Certificate Course in International Population (see page 18) and the Minority-Serving

Institutions Faculty Seminar. Participants in these two programs had the chance to hear fellows' firsthand project reports and to interact with them informally throughout the week.

The PEPF workshop was divided into morning sessions during which the fellows presented their work, and afternoon technical training sessions.

The Population-Environment Fellows Program hosts annual workshops for current fellows and a select group of invitees from USAID, NGOs involved in population-environment activities, and Fellows Program staff. The purpose of the workshops is to:

- 1) provide fellows and their host agency colleagues an opportunity to learn from each other and to discuss issues they have encountered in the field;
- 2) provide technical assistance to fellows through guest lectures and panel discussions; and
- 3) draw upon the experiences of Population-Environment Fellows and host organizations to increase participants' understanding of the linkages among population, health, and environment issues.

FELLOWS' PRESENTATIONS

Each fellow presented an overview of the ways in which gender, sustainability, and organizational effectiveness were defined and applied in the context of his or her placement. **Barbara Rawlins** began by describing her work with

Development Alternatives (DA) in India. DA is dedicated to creating sustainable livelihoods through the design and distribution of appropriate technologies to disadvantaged segments of society, particularly women. Barbara's work with DA falls into three main categories: research, creating partnerships, and capacity-building. The focus of her research has been creating a methodology to study sustainable development projects, which will become the model for evaluating all of DA's sustainable livelihood projects. She recently completed a study designed to determine the socio-demographic and environmental impacts of DA's check dam projects on local communities. By using a gender approach with focus groups divided by sex, Barbara was able to identify important gender roles that are played out in the communities and their relationship to health, resource use, and family planning decisions. In an effort to help DA's staff become more effective in gathering information about the impact of their work, Barbara has organized several trainings on participatory rural appraisal (PRA) techniques, specifically as they apply to population-environment issues.

P-E fellow **Martha Decker** has been working with Conservation International (CI) in rural Bolivia. CI has placed Martha in Madidi National Park, an area of tremendous biodiversity and isolated indigenous communities. Martha is most directly involved in the Healthy Communities Initiative, which adopts an integrated and participatory conservation, health, and social development approach. In particular, Martha has

been working to complete a water and sanitation system that includes watershed management and education of the linkages between clean water and health. She has also developed a relationship between CI and Population Services International that led to contraceptive distribution services for the community. Martha has also been actively involved in promoting gender issues within CI, particularly working with women's groups to foster empowerment, joint decision-making, and more equitable gender roles.



Population Fellow Michal Avni (left) and P-E Fellow Martha Decker take the opportunity to make cross-program connections.

Richard Cain presented his work with Grupo PESACRE in Brazil. PESACRE is a small, relatively young NGO that works to raise local quality of life while diminishing pressure on woodlands. Richard has worked primarily in three rural rubber-tapping communities to develop an integrated, participatory research and extension methodology in agroforestry systems, natural resource management, and preventative and women's health. The Project for the Sustainable Management of Natural Resources and the Development of Agro-Extractivist Communities has used this approach to improve the living conditions in the communities; to advocate for increased government support for voluntary, affordable reproductive health services; and to increase the level of empowerment and organization within the communities, particularly focusing on women.

Craig Boynton is stationed in Tarija, Bolivia, with a small NGO

called PROMETA. Craig has lobbied the organization for more explicit inclusion of health issues into its conservation mission. His work has centered on the Sama Biological Reserve and the Tariquia Flora and Fauna Reserve. Projects in the Sama Reserve include environmental education, improved agricultural production, alternative income projects, training of community health promoters, health education, and maternal and child health activities. In the Tariquia Reserve, a reproductive health survey was conducted. Although there were some problems in the data collection, the survey was the first of its kind in the area and provided valuable information on reproductive and maternal and child health that will inform future projects.

Wendy Philleo recently began her fellowship with the David and Lucille Packard Foundation in Los Altos, California. Wendy is charged



P-E Fellows Richard Cain (left) and Craig Boynton share their experiences informally during a networking dinner that brought Population-Environment Fellows together with Population Fellows, Summer Certificate Course participants, and members of the Minority-Serving Institutions Faculty Seminar.

with helping the foundation develop a joint population-environment grant program. Currently, the foundation has separate population and conservation programs, and historically there has been very little communication between them. Wendy has, therefore, formed a P-E team of staff from the two programs that will look at proposals, help with

program development, and further explore the linkages between population and environment in the foundation's programming. Wendy will also develop project proposals such as research on policies affecting P-E dynamics at the regional and local level, methods to encourage environmental groups to become more of a political constituency for population issues, and developing and expanding leadership in the P-E field.

PAST FELLOWS' PRESENTATIONS

Two visiting former fellows shared their experiences as well. Former Population Fellow Jeanne Noble, who served at the Population Council/Peru, discussed her operations research projects in Bahia, Brazil. Jeanne stressed the importance of using operations research to improve program effectiveness, efficiency, access, and quality.

Former Population-Environment Fellow Jenny Ericson discussed the two years she spent in the Calakmul Biosphere Reserve on the Yucatan Peninsula in Mexico. Jenny worked with World Wildlife Fund and its in-country partner, Pronatura Peninsula de Yucatan, to improve understanding of population dynamics, particularly migration, at the community level. Using participatory rural appraisal methodology, Jenny worked with local inhabitants to create a rough timetable detailing years when large migrations happened and to identify significant recent events. Jenny and her team also instigated discussion among both the landowners and non-landowners about the community's policy options regarding migration and land use.

TECHNICAL SESSIONS

The workshop's afternoon sessions addressed a variety of professional development topics, including grantwriting, managing organiza-

tional change, and job satisfaction in the non-profit sector. The final day of the workshop was dedicated to a technical discussion of participatory rural appraisal (PRA) techniques. Dr. Denise Caudill, an international health and development consultant, and Jenny Ericson led the session. They defined PRA as a semi-structured process of learning from, with, and by rural people about rural conditions. They characterized it as a research methodology that emphasizes participant ownership and analysis of information, and that adopts techniques and materials that help people express and enhance their knowledge. Some of the more common PRA techniques they inventoried include social mapping, matrix ranking, trend analysis, timelines, wealth ranking, and semi-structured group interviewing. Denise also provided a more detailed look at two other techniques – problem trees and force field analysis. In both exercises, the use of simple illustrations to communicate ideas and the sequencing of steps to uncover many levels of information were stressed. These exercises should help participants begin thinking about their goals for the future and how to obtain them.

Jenny described her experiences creating different matrices in rural communities in Mexico using PRA techniques. She facilitated the creation of a matrix of forest products and uses by dividing community participants into groups by gender, having them list the forest products they extract, identifying how each product is used, and assessing the value of each. The exercise illustrated the differences between men and women and helped the community to identify the most important resources for conservation. Jenny also worked on a matrix to discover past periods of change for the community and to project changes into the future. A final project helped the community think about how things are now, how they want them to be

in the future, and what they can do to facilitate change. Most of the goals the groups identified were development-oriented, but it became apparent that the community depended on authorities to initiate change. Completing the exercise helped the groups identify ways to be more proactive and highlighted the community's needs for capacity-building.

After these presentations, the fellows divided into groups to design their own PRA tools to measure how people manage their productive and reproductive resources over time. They then discussed potential pitfalls to PRA, including "PRA fatigue," in which communities grow tired of doing the same exercises with different NGOs and never seeing any benefit. This problem highlights the importance of knowing the development history of the community and other organizations doing work in the area. A related problem is when communities become accustomed to PRA and begin giving researchers information that suits the organization's focus. The quality of the information gathered can also be compromised if the researcher is not aware of the kinds of people participating, who is dominating, and who is the best source for the kind of information needed. Also, because PRA exercises can create expectations in the community, it is important to help community members identify what they want as well as strategies for obtaining it. Finally, it is important to consider using PRA as a complement to more quantitative methods that provide the "hard" data required by most funders.

Workshop participants rated the event highly, not only for the utility of the technical and professional development sessions but for the interaction among fellows.





LESLIE JONES

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Leslie Jones began a placement in 1999 at the World Neighbors headquarters in Oklahoma City. She provides technical support and training in integrated reproductive health (RH) and family planning (FP) programs focused primarily on World Neighbors' activities in Central America, Mexico, and Haiti. Her role is to help integrate RH/FP programs into existing sustainable agriculture, natural resource management, and health initiatives, thereby strengthening World Neighbors' integrated population-environment programs in the region.

World Neighbors is recognized as a leader in people-centered development, having worked in partnership with rural communities in Asia, Africa, and Latin America since 1951. The organization's purpose is to enable marginalized people to meet basic needs by strengthening their ability to analyze and solve problems and to determine their own development path. With an annual budget of \$3.2 million, World Neighbors supports a decentralized structure of 18 country programs and six regional field offices. Its staff, partner organizations, and volunteers are local country nationals.

From 1993 to 1996, World Neighbors, in partnership with the Center for Medical Orientation and Family Planning (CEMOPLAF), conducted the Bolívar Integrated Development Program, a three-year operations research project to test the effectiveness of an integrated approach that combines sustainable agriculture and livelihood activities with community health, reproductive health, and family planning. Findings from the study demonstrated the increased effectiveness of the integrated approach over programs that promoted health and family planning alone, encouraging World Neighbors to strengthen their integrated programs throughout Latin America.

Leslie's placement is making a major contribution to these integrated efforts. She not only provides technical support and training in reproductive health program development and community organizing, but she helps to establish and strengthen linkages among World Neighbors, reproductive health service providers, and related organizations in Latin America and other

regions. She also assists with research design and implementation and in the development of more effective systems for documenting and disseminating the impacts of integrated population-environment programs. As a representative of World Neighbors, Leslie is responsible for sharing the organization's experiences through conferences, workshops, reports, policy recommendations, and fundraising publications.

World Neighbors' programs in Latin America are diverse, and Leslie's responsibilities vary depending on country-specific goals and needs. In Ecuador, efforts are focused on supporting the replication of the successful

Bolívar methodology in other Latin American countries. In Honduras, Guatemala, Mexico, and Haiti, Leslie assists in all stages of programming including securing funding, hiring of RH/FP staff, providing technical support in RH/FP, sharing of

integrated and participatory methods, and in program assessment, analysis, and documentation.

Leslie, who is fluent in Spanish, comes to the Population-Environment Fellows Program with a strong background in international development and conservation. She received her MS in International Agricultural Development from the University of California at Davis in 1995, specializing in international health, gender, and the environment. She served the Peace Corps Environment Program in the buffer-zone communities of the Cosiguina Volcano Wildlife Refuge and the Punta San Jose Turtle Reserve in Nicaragua, helping the communities develop programs for sustainable economic development, household livelihood, and health. She also worked as the Women's Program Coordinator for Alistar/Nicaragua, coordinating sustainable development activities within the BOSAWAS Biosphere Reserve. She has amassed valuable experience in program development, coordination, and evaluation; participatory rural appraisal; institutional strengthening and capacity-building; and fundraising.

While pursuing her master's degree, in addition to her coursework in gender and international health, Leslie served as a research assistant for a project on international nutrition focusing on maternal and child health and for a project on women's reproductive health in Africa. Before beginning her placement, she also participated in the Population Fellows Programs' Summer Certificate Course in Population, taught by University of Michigan Assistant Professor and former Population Fellow Win Brown (see page 18).

RECENT FELLOWS

The program expects that through this placement Leslie will gain additional experience in the population-environment field, specifically in the areas of integrated reproductive health and family planning programs, and that World Neighbors will gain a highly qualified and motivated professional to expand its successful population-environment initiatives in Latin America.



MELISSA THAXTON

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Melissa Thaxton started a placement in July with the World Wildlife Fund in Kathmandu, Nepal. Initially focusing on the preservation of endangered species, the Nepal program has expanded to include support for effective management of protected areas, conservation education, and capacity-building of government and local partners. Its efforts now emphasize Integrated Conservation and Development Projects aimed at balancing the needs of local human populations with the conservation of natural resources. Most recently, WWF's People and Conservation Program in Washington, D.C., has supported efforts to understand patterns of human resource use in high biodiversity areas, the effects of population growth and migration on conservation efforts, and the role of women in resource use and fertility decision-making. Recommendations for addressing these issues include the establishment of culturally sensitive reproductive health programs and the integration of a gender perspective in all WWF/Nepal projects and programs.

Melissa's role in Kathmandu is to strengthen WWF's population-related work and to institutionalize these efforts within WWF/Nepal and its partner organizations. She will focus on two project sites: the Royal Bardia National Park in lowland southern Nepal and the Kanchenjunga Conservation Area Project, a mountainous region in the northeast of Nepal. Her activities include applied research on population dynamics around protected areas, integrating population and gender issues into project activities, and helping to build the institutional capacity of WWF and conservation partner staff to address population and gender issues.

In Royal Bardia, Melissa will research the effects of recent buffer-zone legislation that returns park revenues to the community through a local User Group Committee. The research will focus on local patterns of resource use, migration to and from the area, and the empowerment of women. In particular, she is examining how the new revenues are allocated and whether immigration is encouraged by the new resources. In the Kanchenjunga Conservation Area, where subsistence slash and burn agriculture is practiced and seasonal and permanent out-migration are common, Melissa is

exploring the effects of conservation and tourism development activities on migration patterns and the generation of off-farm employment opportunities as well as the dynamics of resource use and population growth.

Understandings derived from Melissa's research will serve as the basis for developing new project activities that would mitigate the negative impacts of population growth, migration, and resource use on biodiversity conservation. Melissa will act as an advisor to WWF/Nepal project staff in developing these projects. She will also respond to requests for technical assistance on demographic and reproductive health issues by WWF partners.

In addition, Melissa's fellowship focuses on building WWF/Nepal's institutional capacity to address population issues. Melissa will work closely with Kathmandu and field staff, possibly organizing workshops, conferences, and trainings on population issues and research methods. She will also work to develop and solidify partnerships between WWF/Nepal and organizations specializing in demographics, reproductive health, and women's empowerment in order to promote continuity in program development and implementation.

Melissa comes to her Population-Environment Fellowship with a strong background in natural resource management and a firm grasp of international sustainable development and population issues. She received her Master's of Environmental Management from the Nicholas School of the Environment at Duke University with a concentration in resource economics and policy. Her coursework especially concentrated on gender and equity issues surrounding agricultural and forest resources in developing countries.

Melissa's international experience includes two years in the Arusha Region of Tanzania conducting environmental education seminars and technical workshops for rural villagers in a sustainable development project aimed at establishing income-generating tree nurseries. She then participated in the evaluation of projects, utilizing participatory rural appraisal techniques and gender analysis tools. She returned to Tanzania to complete research for her master's thesis, evaluating the impact of gender roles and relationships on the effectiveness of the tree-planting projects and gaining a deeper understanding of the communities in her study.

In addition to her graduate coursework in population and health, Melissa volunteered with Planned Parenthood of Orange and Durham Counties; the Women's Center of Chapel Hill, NC; and the Rape Crisis Hotline of Williams College. Like Leslie, Melissa also participated in the Population Fellows Programs' Summer Certificate Course in International Population, Family Planning, and Reproductive Health.

THE SYMPOSIUM

ON MIGRATION, ENVIRONMENTAL CHANGE, AND SECURITY

sponsored by the University of Michigan Population Fellows Programs
and the Woodrow Wilson Center's Environmental Change and Security Project

The relationships among population dynamics, environmental change, and security are at the core of a number of foreign policy concerns, yet they remain underexamined by researchers and policy-makers. To stimulate this examination and use it as the basis for informed policy guidelines, the University of Michigan Population Fellows Programs (PFPS) and the Woodrow Wilson Center's Environmental Change and Security Project (ECSP) hosted the first of three symposia on these subjects.

On October 14 and 15, 1999, a core group of 20 researchers met at the University of Michigan to begin development of an applied research agenda addressing the relationships among migration, environmental change, and security. The two-day format included presentations by experts on the relationships between and among these issues and breakout sessions in which groups examined selected factors (such as gender, ethnicity, political institutions, and policy) that can mediate these relationships.

The following is a synopsis of the discussion, including insights on the state of current research and recommendations for future investigation.

Michael Teitelbaum: Demographic Variables and Security

Keynote speaker Michael



Teitelbaum, a demographer at the Alfred P. Sloan Foundation in New York, provided context for the presentations by asking, "What can we conclude about the relationship between demographic variables – population size, popula-

tion density, rates of population growth – and political violence, including aggressive behavior?" In his judgement, there is no clear empirical evidence to support the widely held view that low-income, high-population growth, high-density countries are more violent or more likely to be aggressive than countries with higher per capita income, lower population growth rates, or lower densities. But, the number of people fleeing states as a result of violence has surely gone up. From this perspective, he concluded, population density does not necessarily *create* violence, but it does explain the high mortality rates and high migration rates that result from violence in these areas. While in some ways self-evident, he said, this observation does call attention to the vulnerability of large numbers of people living in violence-torn countries and to the problems faced by humanitarian organizations trying to provide protection for growing numbers of people at risk.

Teitelbaum then turned his attention to the dilemma large-scale migration poses for both security and humanitarianism. In terms of security, migrants are often seen as

Through the Symposium Series, the PECS Initiative aims to create:

- **an information-sharing network** to foster ongoing exchange among researchers, policy-makers, and practitioners;
- **thoughtful analysis** of migration issues and their relationships to environmental change and security;
- **a research agenda** that will stimulate new course offerings and innovative applied research on these issues;
- **a policy framework** to assist decision-makers with informed and creative problem-solving.

threats to local, national, and regional stability. (The most obvious cases are the so-called "refugee warriors" – people who migrate to a neighboring country from which they mobilize military action against the regime in their "home" country.) In other cases, migrants and refugees are seen as threats to the government of their country of settlement, in part because of the social and economic burdens they may place on their destination country or region. This is especially true if they are moving into an already poor or politically unstable area. But perhaps the most combustible situation arises when migrants shift the ethnic balance in the destination country. These cases can prompt receiving states to take a variety of actions. They may attempt to moderate the inflow of people by providing economic assistance to both source and transit countries – or they may threaten unspecified actions (including armed intervention) unless the source country restrains the exodus.

Such migrations, Teitelbaum concluded, pose a serious conundrum for liberal democracies. While they claim to support the right of all people to depart from, and return freely to, their "home" countries, these democracies often do not

accept a symmetrical right of entry of these migrants into *their* countries. Thus, they are often reluctant to truly promote the right of free departure, which they say is high principle, unless they are sure the resultant movements will be small.

Steve Lonergan: Questioning Environmental Degradation as a Cause of Migration

Steve Lonergan, a professor in the Department of Geography at the University of Victoria, Canada, and Director of the Global Environmental Change and Human Security Project, proceeded to a narrower topic, asking, "What do we really know about the contribution of environmental degradation and resource depletion to population movement?"

As the research now stands, he suggested, there are several problems in assuming that "environmental migrants" do indeed exist. This is largely because we cannot yet truly isolate to what extent various environmental factors are a genuine "cause" of migration. Among the problems he identified is the lack of a clear and comprehensive model for conceptualizing migration decision-making. Many researchers rely on traditional "push" theories (environmental degradation pushing people from their homes) and "pull" theories (better environmental/economic conditions luring them elsewhere). These simplistic models, Lonergan said, mask the complexity in migration movements, including the structural inequalities that exist in societies and their impact on the decision to migrate.

Another problem in linking environmental "causes" to migration, according to Lonergan, is the lack of clarity in definitions and key concepts. These include uncertainty over the legal implications of the term "environmental refugee," difficulty in isolating the precise

types of environmental stresses that might cause population movements, and the relative contribution of environmental versus economic, institutional, and related factors to the migration decision. There are also issues such as the degree to which "countable" migration must be involuntary versus voluntary and permanent versus temporary.

He also noted that links cannot be truly claimed at the moment because much of the evidence for "environmental refugees" is anecdotal and not the result of rigorous and systematic research.

To help improve understanding of the links between environmental change and migration, Lonergan made a number of suggestions, including:

- Develop case studies that identify how environmental degradation influences migration, with specific consideration given to the development of procedures to assist those affected by environmental disruptions. Cases should include situations where there was environmental stress and no population movement as well as those where movement did occur.
- Identify factors that would help researchers predict when environmental disruption would lead to migration and who is most vulnerable (that is, based on physical and social vulnerability, who would be likely to migrate and who might be able to adapt to the disruption).
- Focus efforts on identifying adaptation mechanisms and how these mechanisms might be reinforced in vulnerable communities and regions. More case studies should be carried out in areas where communities coped well with environmental stresses in order to identify strategies for application elsewhere.

Marc Levy: A Call to Operationalize "Environment" and "Security" Before Seeking Links

Marc Levy, Associate Director for Science Applications at Columbia University's Center for International Earth Science Information Network (CIESIN), asked, "How can environmental change affect security?" His response is that there is as yet no interesting answer to this question. "Environment" and "security" have no useful operational definitions and, therefore, cannot be part of research programs, guide policy, or make productive links to other themes such as migration. Rather, the question needs to be reformulated to make it more useful to policy-makers and practitioners concerned with these issues.

The first step in this reformulation, according to Levy, is to identify the separate relationships that link "environmental change" to "security." The first relationship is between changes in natural systems (climate, soil, water, forests, etc.) and basic human needs (health, nutrition, and habitat). It is only *through this relationship* that environmental change can affect security. When declining natural systems compromise human needs, conflict over those resources can ensue.

With the nature of this relationship in mind, Levy identified three strategies for improving the approach to linking environmental change with security. The first, disaggregation strategies, involve defining limited, concrete aspects of "environment," "human needs," and "security" that fit into realistic research programs and are actually useful to policy makers. An example of this type of study is the work on the relationship between seasonal climate variability (environmental change) and vector-borne disease (human health) in order to provide

useful information to policy makers. Ultimately, Levy suggested, it will only be from aggregating this disaggregated information that useful theory-building on the relationships among environmental change, human well-being, and security threats will occur.

The second strategy Levy identified for linking these issues is the use of structural strategies to define the factors that mediate between environmental changes and security outcomes. He suggested that vulnerability to environmental change and the capacity to respond to this change were the two primary mediating factors that determined whether changes in natural systems would affect humans' ability to satisfy their basic needs. He further identified state strength and the degree to which polities are organized along ethnic or regional lines as the main factors determining whether compromised resources and needs would lead to violence. Adopting a structural strategy to address environmental change and security would include developing research strategies to deepen understanding of how the structures relate to these issues and to each other.

Finally, Levy recommended scale strategies that would focus analytical attention on the scale where phenomena occur, not where disciplinary biases make us comfortable. These would include ethnic groups, households, river basins, urban settlements, and agrarian communities. With this approach, one must formulate questions, acquire data and apply methods appropriate to that scale.

Given the relationship among environmental change, human well-being, and security, Levy identified the following research priorities:

- Identify on what parts of the planet do soil, water, climate and other basic resource systems combine with demographic dynamics to

produce regions of high vulnerability? Where are things getting worse fast? (Major approaches to addressing these questions include geographic information systems and systems analysis.)

- Identify the importance of various intervention points for addressing the mediating factors in these relationships: Under what conditions does it make sense to devote effort to improving natural resource management practices as a strategy for reducing political violence or conflict? Under what conditions is it better to devote effort to improving political institutions, economic conditions, or social dynamics such as migration and family planning? (Major methodologies for addressing these issues include comparative case study analysis, statistical analysis, and causally-sensitive process tracing.)

Nazli Choucri: Defining the Relationships between Migration and Security

Nazli Choucri, professor of political science and Associate Director of the Technology and Development Program at the Massachusetts Institute of Technology, was asked to present on the linkages between migration and security. As she was unable to attend, University of Michigan Professor Emeritus of Sociology and former Population Fellow Gayl Ness presented her paper.

Choucri began with a definition of terms, using the nation-state as the unit of analysis. She proposed a concept of "security" comprised of three components: military security (the state's ability to defend itself from attack); regime security (the government's ability to discharge its responsibilities and protect against domestic disorder); and structural security (the state's ability to preserve its inhabitants' prevailing sources of livelihood). As she put it, "A state is

secure to the extent that all three dimensions or conditions for security are in place, and it is insecure to the extent that one or more dimensions of security are threatened...."

With this in mind, she elucidated the link between "population" and "security" through the dimension of "structural security." She disaggregated this concept into the state's ability to meet the demands of the population given the availability of resources and the prevailing levels of technology in the context of a given environment. Thus, when population change creates resource needs that exceed the prevailing technological capacity to meet those needs, structural security may be eroded.

Migration, then, alters this framework through the effect of a modified "population factor" on other elements of security. As people move, they may change the physical environment on which the population depends, affecting structural security. Or, they may change the political environment, potentially affecting both structural and regime security. Migrations cause changes in a given population's numbers as well as its composition (in terms of skills, ethnicity, age, legal status, etc.). As newcomers place demands or exert claims on the state, it results in a political response of some kind. In a simplified model, these demands may compete with the demands of the existing population, and the situation can become politicized into an "us" versus "them" mentality.

Such politicization can indeed be mediated by the state, particularly through citizenship laws and the rules of access regarding entry and exit – as well as whether the state includes migrants in the population it serves. As Choucri put it, "These are powerful mediators that render meanings to numbers, thus determining whether migrants are 'wanted' or 'unwanted,' politically assim-

lated or segregated, and included or excluded from coverage by the prevailing social contract." When migrants are sent the message that they are "unwanted," it may not constitute an immediate security threat, but it may "crystallize the lines of contention."

Choucri concluded with the following propositions, which she recommended for further inquiry:

- Migrants affect overall national security through impacts on any one or more of the constituent elements. The initial (politically visible) impacts are often via regime security. Migrants may politicize both themselves and the local populations.
- The politicization of migration, if unmediated by institutions, can consolidate divisiveness.
- The more resilient the state and the better able it is to serve its changing population, the less likely migration will become a security issue.
- Migration is seldom a proximate threat to security, but the security calculus points to the entry points that may trigger insecurity. The extent is contingent on the prior two issues plus the scope and scale of mobility.
- By the same token, the logic of feedback serves as a reminder that the loss of security may itself trigger added (or initiate new) migration.
- Migrant attributes (such as ethnicity, religion, age, skill composition, etc.) provide further logic for making migration more rather than less salient to security.

Among her research recommendations were the preparation of a "state of the art" review of migration-security linkages; determination of relevant baselines for both migration and security; formation of a coherent framework for assessing the evidence

generated by case studies to date; and engaging in interdisciplinary, quantitative, falsifiable inquiries of migration-security connections.

DAY TWO: Working Group Sessions

Participants spent the second day in breakout sessions discussing gender and ethnicity and the domestic and foreign policy process. Each group was asked to generate recommendations for possible projects, questions, methodologies, and indicators to be included in the research agenda. They were also asked to propose ideas for future Population, Environmental Change, and Security Fellowships including recommended organizations, scopes of work, and desired impact.

Director of the Population Fellows Programs Frank Zinn presented the findings of the gender and ethnicity working group. They chose to look at the origins, destinations, and effects of migration on different groups including groups that chose not to migrate. The group developed three main research ideas:

1. Develop and run a test model that shows whether high population growth (migration or fertility) and/or high land inequality will lead to conflict, migration, or cooperation. To do this, it would be necessary to look at cases with different combinations of population growth and land inequalities and map the various outcomes.
2. Carry out a series of case studies to determine reasons why people do not migrate in situations where migration would be expected. It would be necessary to work in areas of high vulnerability and to look for differentials on the basis of age, gender, and socio-economic status.
3. Disaggregate the migrant stream by gender, age, and socio-economic status to answer the following questions: Who migrates? Did they

want to migrate? Does behavior (reproductive health, fertility decisions, and environmental behavior) change after migration? Does migration bring with it a change in the status of women or ethnic groups?

The policy working group designed two alternative frameworks to guide thinking about why people move and what the outcomes of migration might be. The first method proposed dividing migration into international and local, and based on those categories, identifying influential variables through case studies and multivariate analysis. Policies impacting the variables could then be identified.

The second framework was developed to respond to the concern that separating local from international migration might be a false distinction, and that such division might separate outcomes that are actually the result of similar processes. The second framework, therefore, made two divisions within the rubric of migration: origins and destinations, and vulnerabilities and capabilities. Within these divisions, researchers could consider a full range of variables influencing migration decisions. Such a framework focuses research attention on three main questions: Where are the important points of origin for migration? Where do migrants tend to move? And why do they choose specific destinations?

The day concluded with a brief discussion of the issues and questions raised during the conference that require further consideration. One issue that arose was how to support USAID and the State Department in incorporating the insights from the symposium's work on migration, environmental change, and security into their agendas and programs. A first step toward this goal will be to advance scholarly work on these linkages through a focused research agenda

for which this meeting laid the groundwork. In addition, it is important to create better linkages among practitioners, policy-makers, and researchers. The symposium's next steps will address both of these issues.

Next Steps

Next steps for exploring the linkages among migration, environment, and security center on two symposia in 2000. In May, a group of scholars, Population and Population-Environment Fellows, policy-makers, and NGO practitioners will convene in Carlisle, Pennsylvania, at the U.S. Army War College to conduct a two-day gaming and scenario exercise. To be set in East Africa, the simulation will feature a complex set of environmental and migration contingencies within and between countries. Teams of participants, representing the multitude of actors involved in addressing environmental catastrophes and mass migrations, will negotiate with one another to discover lessons for future cooperative responses.

Then, in the fall, a similar group of experts and practitioners will convene at the Woodrow Wilson Center in Washington, D.C., to discuss and debate the policy implications of recent migration, environment, and security research and ongoing programs in the scholarly and practitioner communities.

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If the answers aren't close at hand, you might be a candidate for the Population Fellows Programs' (PFPS) new Summer Certificate Course in International Population. Designed to provide an intensive two-week introduction to the field, the course covers issues ranging from demographic transition theory and new approaches to quality of care to post-Cairo evaluation techniques and seminal case studies. An extended three-week version of the course was pilot-tested this summer at the University of Michigan (U-M) School of Public Health with a group consisting of two new fellows, nine prospective fellows, two graduate students, and one staff member. U-M Assistant Professor and former Population Fellow Win Brown taught the course, which featured intensive readings; group projects; and guest lectures from program specialists and academics such as Karen Hardee (The Futures Group International); Ruth Simmons (U-M); and Robin Barlow (U-M). Sessions culminated with participants team-researching, designing, and presenting proposals for family planning interventions in a variety of developing countries.

The course was designed to fill a very specific need. As the field of international family planning and reproductive health has become more sophisticated, the program has found that it must recruit fellows with specialized backgrounds in areas such as communications, business management, policy analysis, conservation, and information technology if it is to help its host agencies meet their objectives. This course serves as an efficient mechanism for equipping these recruits with the information they need to apply their skills to the field.

The PFPS will, of course, continue to recruit the majority of its candidates from the traditional route – schools of public health with programs in international health and population. However, this course allows us to cast a wider net and to draw professionals with highly sought skills to this important work.

The 2000 session of the Summer Certificate Course will be held June 5-16. Please contact Summer Programs Coordinator Sarah Harrison at <schar@umich.edu> for more information or to receive an application.

RECENT FELLOWS (con't.)



BRIAN HUBBARD

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Newly appointed Population-Environment Fellow Brian Hubbard joined the CDC's National Center for Environmental Health (NCEH) in January to work on data collection and analysis in the area of "international urban health and megacities." Though the relationships among population dynamics, urban environmental conditions, urban infrastructure, and human health seem in many ways intuitive, the CDC and other organizations working on these issues have been limited in their ability to conduct evidence-based advocacy for either programs or policies by a frustrating lack of data with which to clarify the nature of these relationships.

NCEH has requested a fellow to address several issues that were revealed by its preliminary research. Existing urban health data are scarce and often non-comparable – and where disaggregated data are available, there are large intra-urban disparities in health status. In addition, urban population size, in and of itself, does not appear to be related to urban health indicators or urban infrastructure coverage, but the latter appear to be negatively related to urban population growth.

Brian will help address these issues by collecting reliable urban and intra-urban data and spearheading more analysis of the relationships among these data, in terms of health, environmental, demographic, and socio-economic indicators. Brian may also assist in mapping data using geographic information systems, where appropriate. The aim is for Brian's efforts to help guide the development of sound urban public health policy and to assist in the prioritization and targeting of future public health interventions.

Brian will be based at the CDC's headquarters in Atlanta but will travel to various cooperating sites to assist in the collection of both primary and secondary data. He will work to assemble secondary data from a variety of sources, ranging from Demographic and Health Surveys to disease control programs to a variety of project-specific assessments. He may also spend a significant portion of his placement working with Mexico's National Institute of Public Health in Cuernavaca, collecting primary urban environmental and health data to explore issues such as water/sanitation and air pollution. In addition, he may collaborate with CARE/Peru to develop and implement a culturally sensitive

environmental health assessment tool in Lima and Iquitos, and to participate in strategic planning based on the findings.

Brian's career goal – to apply information system techniques to the field of international public health – and his experience collecting, analyzing, and reporting health, population, and environment data make him a unique fit for this data-intensive position. He has undergraduate training in software engineering and an MPH in International Health and Development from Tulane University. During his graduate studies, Brian worked with several professors on research projects, including a study of provider-related barriers to contraceptive use in Tanzania. Most recently he served as a research and evaluation analyst for the Academy for Educational Development, a nonprofit service organization that works with partners to solve international development problems in part through the application and promotion of state-of-the-art research.

In addition to his technical skills in data collection, analysis, and interpretation, Brian has developed cross-cultural sensitivity and language skills. He served as a Peace Corps volunteer in The Gambia, where he not only taught secondary school mathematics but incorporated environmental, population, and health issues into his lesson plans.



JOHN WILLIAMS

Conservation International/Washington
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John Williams has just joined Conservation International (CI) to help institutionalize the organization's incipient population-environment work in Mexico and Central America. He will help develop CI's capacity to analyze demographic trends affecting conservation in the areas in which it works, and he will help the organization develop mechanisms for providing family planning, reproductive health, and related services in these areas. John will be based in CI's Washington headquarters but will direct much of his attention to its model population-environment projects in Mexico and Guatemala.

Conservation International, which works "to conserve the Earth's living heritage and to demonstrate that human societies can live harmoniously with nature," focuses its attention on hotspots that are simultaneously the most critical for the survival of biological diversity and the most threatened by human activities. Because these areas are often facing rapid population growth, CI formally initiated a population-environment program in July 1998. The program involves both incorporating demographic analysis into conservation planning and

developing model field projects in which CI helps communities to meet their needs while minimizing population pressures on the surrounding ecosystems. The organization launched its first such model project in the 1.6 million hectare Maya Biosphere Reserve of northern Guatemala, incorporating community health and women's empowerment into its conservation work. CI is now planning its second such project in the Selva Lacandona, Mexico's final remaining block of lowland tropical forest in eastern Chiapas. The area is home both to the Montes Azules Biosphere Reserve, which protects one-half of Mexico's tropical species, and to a human population of 400,000 which is growing at the rate of seven percent a year.

As a Population-Environment Fellow, John will be charged with furthering CI's capacity to collect and use demographic information as a standard part of conservation planning and decision-making. He will help educate CI staff regarding demographic issues and will help train the country programs of the Mesoamerica region to conduct demographic surveys around CI project sites. He will also support the projects in developing a database that will track the demographic dynamics of these areas, and he will coordinate with CI's Center for Applied Biodiversity Science to map correlations between CI's conservation hotspots and demographic hotspots. Using this knowledge and an understanding of the biodiversity and ecosystem priorities of the projects, John will help staff develop family planning and reproductive health interventions in key locations. This may include developing partnerships between CI and local family planning organizations and/or adding population components to CI's existing health projects. Finally, John will work with monitoring specialists to ensure that demographic trends and statistics are incorporated into local project monitoring efforts.

John's experience in reconciling conservation goals with indigenous peoples' rights and needs is a solid match for his workplan at CI. John has a B.A. in biology from Colorado College and a joint Master's of Public Policy and Master's of Environmental Management from Duke University. During his research for the latter, he lived among the Machiguenga tribal peoples of the Manu National Park in the Peruvian Amazon, administering a survey he designed to assess their resource and material needs, development goals, and attitudes toward the park rules and administration. The results allowed him to evaluate the compatibility and areas of conflict between the Machiguenga's development goals and the conservation goals of the park.

In addition, during his graduate program John served as an assistant forest manager for Duke University's

7,700-acre research forest and as a research assistant on a nutrient cycling project in a Puerto Rican rainforest. More recently, he has worked as a consultant at the Inter-American Development Bank, editing and authoring publications on biodiversity, forest management, forestry, and urban greening for the Environmental and Sustainable Development Department. He followed this with two years' service in the Peace Corps as a parks and wildlife volunteer in Morocco. During this time, he worked with Berber villagers living around a national park to develop economic alternatives to grazing and deforestation and to provide basic environmental education about park resources. Most recently, John worked as a consultant with Conservation International, doing demographic analysis around the Montes Azules Reserve in Chiapas, providing him a head start on his fellowship workplan.



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