

IIASA's scientific activities in the field of population have recently been restructured. The World Population (POP) Program, under the leadership of Wolfgang Lutz, will deal primarily with global population issues and serve as the node of regional networks in Europe, Asia, and Africa (see descriptions in the pages of this issue). Substantively, over the coming years POP's research will be dominated by a new emphasis on *human capital*. This implies going beyond the study of age and sex in the analysis of population dynamics and adding education and health status as key dimensions. This has been identified as a grossly understudied area where IIASA has a clear competitive advantage through its having already developed the most appropriate methodology for such analysis (multistate demography) during the 1970s and 1980s. Human capital is also a key dimension in the study of global change, IIASA's overall mission. The human population, with its spatial distribution and social stratification (for which education also is a good proxy), is a prime driver of global change, and its health and well-being are the reasons why we are concerned about the consequences of global change. POP will also study how improved human capital can enhance the adaptive capacity of societies.

The POP Program will be complemented by a new program on demography, uncertainty, and climate change. This program will be led by Brian O'Neill, who recently won the European Science Foundation's prestigious European Young Investigator Award, which will pay for this work over the coming five years. Discussions are currently under way about further activities in IIASA's Population and Society theme area concerning human health and vulnerability.

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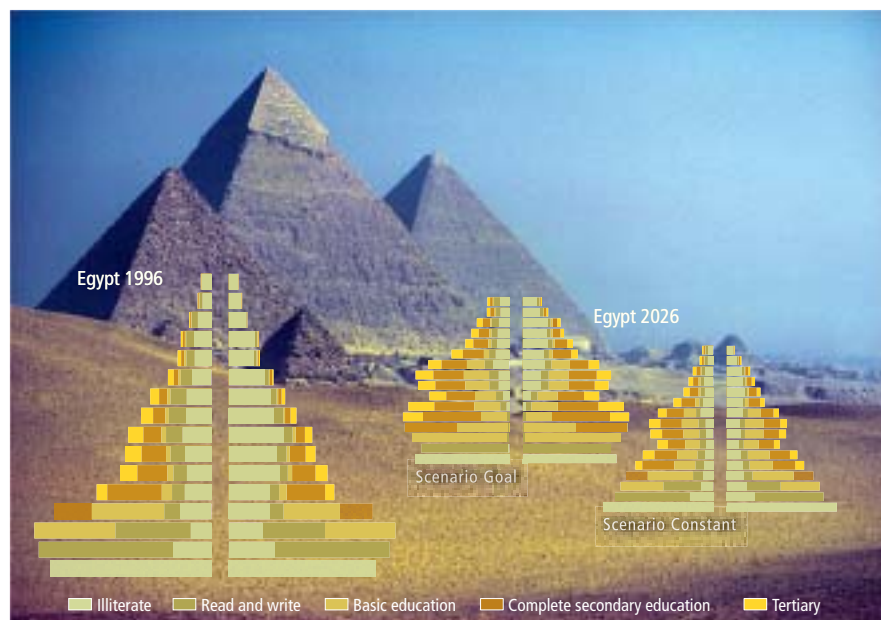
New IIASA PDE Case Study

Population, Human Capital, and Water in Egypt

With its population still likely to double and its water resources being severely restricted, Egypt faces formidable population- and environment-related challenges. The government has an explicit population policy aimed at bringing the fertility rate down to replacement level by 2017. However, it is doubtful whether reaching this goal is feasible, as the fertility decline seems to have stalled during the 1990s and the total fertility rate currently hovers around 3.5.

With its options for agricultural development severely limited, the future livelihood of this rapidly growing population can only be secured through rapid development in the industrial and service sectors. For both sectors, human capital development is a necessary prerequisite for success. Of course, such development needs to be complemented by the right investment and trade policies. But without a sufficiently well-educated population, Egypt will not be able to compete in the global service and industry markets. The figure below presents the age pyramid of Egypt's population in the 1996 census (left-most pyramid) showing that a large proportion of the adult population is still without any formal education, particularly females (right-hand side of pyramid). The two other pyramids show two different scenarios for 2026, one assuming all rates remain constant (right-most pyramid) and the other following Egypt's national goals for fertility combined with the Millennium Development Goals (MDGs) for education (central pyramid). A comparison of the two pyramids for 2026 illustrates the momentum of human capital formation and the difference that ambitious policies could make for younger people.

Human capital formation has been chosen as the initial focal point of this new IIASA population-development-environment (PDE) case study, which follows in the tradition of earlier such case studies on Mauritius, Cape Verde, the Yucatán peninsula, Namibia, Botswana, and Mozambique. The study is being carried out in cooperation with the Cairo Demographic Center (CDC). During a meeting at IIASA in August 2004, researchers involved in the Egypt PDE project concluded that, while many good studies exist on macroeconomic policies and in the field of water research—including sophisticated models of how the water flow of the Nile River would change under different climate change scenarios—there is a major research gap in the field of education and human capital, which can link the demographic analysis to the economic and environmental one. Since population and human capital planning also seem to be of great importance for regional



development planning in Egypt, it was decided that, as a first step, the project would try to collect the necessary data at the level of all 27 governorates of Egypt and then define alternative population and education scenarios at the governorate level. Such small area multistate projections by age, sex, and level of education pose several new methodological challenges that are quite different from earlier national-level PDE case studies.

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POPNET

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International Institute for
Applied Systems Analysis
A-2361 Laxenburg
Austria
Telephone: +43 2236 807
Telefax: +43 2236 71313
Web: www.iiasa.ac.at
E-mail: popinfo@iiasa.ac.at

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IIASA National Member Organizations

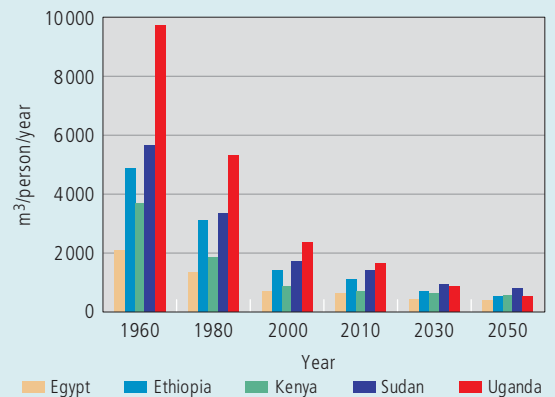
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Netherlands, Norway, Poland,
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Future Water Supply and Demand in the Nile Basin

Most of Egypt's renewable water resources originate outside its borders, from the Nile River. The bulk of the Nile waters originate from two climatically very distinct regions: the Ethiopian highlands and the Equatorial Lakes plateau. There have been several attempts to model the possible impact of climate change on the water flow of the Nile. Because of the great complexity of the system and the fact that different global circulation models predict very different temperature and precipitation for the Nile basin, estimates of the annual Nile flow available for Egypt range from an increase of around 22% to a very dramatic reduction of around 80% for 2060.

There are 10 countries in the Nile basin—Burundi, the Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda—with a total population of around 360 million. Given that the economies of all of the Nile riparian countries are based on agriculture and that their populations are still growing very rapidly, water demand is likely to increase significantly over the coming decades. The figure to the right gives the trend in availability of renewable freshwater resources in five Nile riparian countries from 1960 to 2050. It shows dramatic declines that are largely a function of rapid population growth in the region.

—Laura Sokka



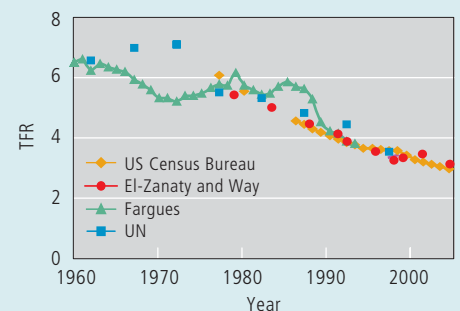
Available renewable freshwater resources in cubic meters per person and year in selected Nile riparian countries (calculated from UN 2003 and FAO 2004).

Egypt's "Stalled Fertility Decline" and the Possible Role of "Tempo Distortions"

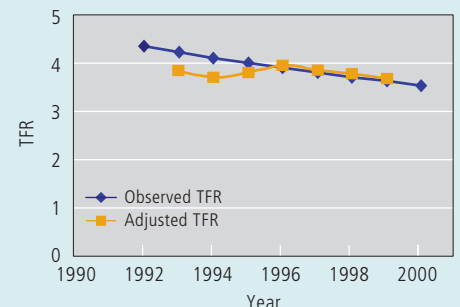
There has been much discussion recently about Egypt's stalled fertility decline over the past decade. Given that minor differences in near-term fertility levels have major impacts on the longer-term population size of a country and that Egypt has an explicit government policy to bring fertility down to replacement level by 2017, this stalled decline has caused serious concern among policy makers. The top figure presents various estimates of fertility trends in Egypt since 1960. It shows that, during the 1980s, Egypt experienced a significant fertility decline from around six to around four children per woman. While studies based largely on interpolation show a continuation of this declining trend during the 1990s (although at a slower pace), a study by El-Zanaty and Way (2004) based on recent Demographic and Health Survey (DHS) data finds that fertility may actually have increased during the late 1990s.

Recent renewed awareness that conventional measures of period fertility are strongly influenced by changes in the "tempo" of fertility (i.e., changes in the mean age of childbearing) prompted a study of whether such tempo effects have also played a role in recent Egyptian fertility trends. Based on data from three recent DHS, the bottom figure presents the paths of the conventional total fertility rate (TFR) and of the tempo-adjusted TFR. These calculations show that the quantum of fertility (as represented by the tempo-adjusted TFR) actually increased in the mid-1990s, reaching a level of 4.0 in 1996. This implies that the (perhaps temporary) stall in the fertility decline is a real phenomenon that merits attention.

—Henriette Engelhardt



Sources: Fargues (1997), UN (2003), El-Zanaty and Way (2004), and US Census Bureau (2004).



Sources: EDHS (1992, 1995, 2000); weighted data.



Cairo Demographic Center (CDC)

The Cairo Demographic Center (CDC), originally called the North African Demographic Center, was established jointly by the United Nations and the Egyptian government in 1963 to serve as Egypt's first interregional center for population studies and research. In 1991, with the termination of the agreement between the two founding institutes, a Presidential Decree was issued stating that the Center would be an independent institution sponsored and financed by the Egyptian government. In 1992, the Egyptian government took full responsibility for the Center and the CDC was declared an independent institution. In 2003 it became affiliated with the Minister of Planning.

The CDC has the following mission and objectives:

To plan and provide training in demography, population, and development The Center's mission is to educate a new generation of specialists in demography and in population and development in the developing world through rigorous training at various levels coupled with research opportunities. In addition to its general diploma in demography (a one-year program), the CDC also offers a special diploma in population and development. This program is designed to develop the skills of participants by introducing them to advanced techniques of demographic analysis and research, and to principles of population policy formulation and evaluation. Students who do well at this second level qualify for admission to the master of philosophy program in demography, enabling them to undertake independent research in the area of demography.

To undertake research studies and surveys in population and related fields The CDC fosters innovative interdisciplinary approaches to population studies and helps policy makers to design and implement appropriate population and development policies. The CDC is widely acclaimed for the high standards and quality of its research. Several national and international

The Cairo Demographic Center's 34th Annual Conference on Population and Development, will take place on 19–22 December 2004 in Cairo, Egypt.

The conference themes are population and sustainable development; women's empowerment and increasing their contribution to development; family health; population and security; population distribution, urbanization, internal migration, and slums; mass media and population communication; population trends; legislation and population issues; and information and communication technology in population fields.

A monograph will be published containing papers presented at the conference.

research organizations solicit the CDC's assistance in implementing research projects and operations research studies. These organizations include the National Population Council of Egypt, Family Health International, the Population Council, USAID, and the Ford Foundation. In undertaking its research, the CDC applies creative methodologies including advanced qualitative techniques and sophisticated multivariate statistical methods.

To provide technical assistance and consultancy services to governments and organizations The CDC provides advisory services in population-related matters to a number of governments in the region. The CDC maintains strong relations and cooperates regularly with national, regional, and international population organizations.

To organize national and regional seminars on population and development issues to disseminate research findings to a wide audience The CDC regularly organizes and participates in numerous international meetings on population-related topics. For information on the CDC's latest annual conference, see box at bottom left.

All inquiries, correspondence, and comments should be addressed to:

Cairo Demographic Center
78 Street No. (4) El-Hadaba Eloya
Mokattam (11571)
Cairo, Egypt
Tel: +202 5080735; +202 5080745
Fax: +202 5082797; +202 5080248
E-Mail: cdc@frcu.eun.eg
Web: www.cdc-egypt.org



Interview with Magued Osman

Dr Magued I. Osman is the director of the Cairo Demographic Center. He is also an advisor at the Egyptian Information and Decision Support Center, a visiting professor at the College of Medicine and Medical Sciences at the Arabian Gulf University in Bahrain, and a member of the Higher Council of Policies of the National Democratic Party in Egypt. He holds a PhD and an MS in biostatistics from the Case Western Reserve University. He was formerly a professor in the Department of Statistics of the Faculty of Economics and Political Science, Cairo University, and a research professor at the Social Research Center at the American University in Cairo. Dr Osman serves and consults on a number of international boards and panels.

Professor Osman, you have worked in several Arab states. What do you see as the biggest population-related challenges in the Arab world?

There are several population challenges facing the Arab world. However, these challenges differ from one country to another. A number of Arab countries are suffering from overpopulation and are facing a deterioration in the environment; many cannot continue to maintain their infrastructure or reach a reasonable level of per capita spending on education and health. Other countries—namely, the Gulf states—have achieved a remarkable level of human development, but are faced with an increasing level of unemployment among nationals despite the fact that expatriates are the majority of the labor force. Other challenges include the marriage squeeze and high celibacy rates, which are related to the rapid improvement in female education.

It has become harder to obtain international funding for demographic research and training. How does this affect demography in the Arab region?

The lack of international funding in the field of demographic research is affecting the availability of reliable information on recent demographic changes. For this reason there is a shortage of evidence-based research that can be used in formulating population policies and integrating population and development policies.

The government of Egypt has the explicit goal of bringing fertility down to replacement level by 2017. Considering recent fertility trends, do you think this will be very difficult to achieve. If so, why?

The slow fertility decline that has been observed in Egypt in the past decade will probably prevent Egypt from achieving its goal by 2017. The reductions in fertility have been moderate for a number of reasons, including the relatively high level of desired fertility, even among the educated population; child labor; high dropout rates for girls; early marriage; and the poor health system in southern Egypt. One of the challenges facing Egypt's reproductive health/family planning program is contraceptive security, should USAID funding decline in the future.

What do you see as the mission of the Cairo Demographic Center over the coming years?

The Cairo Demographic Center will focus on improving the quality of education provided to graduate students enrolled in the diploma and master of philosophy programs in demography. This process has already begun with improvements in the learning environment at the CDC, thanks to the support of the Ford Foundation. The CDC will work on attracting international scholars to join its faculty on both long- and short-term bases. As the leading research center in the area of population studies in the Arab world, the CDC will also continue its mandate in supporting governmental and nongovernmental organizations and in building capacity.



New IIASA Research Partner in Africa
**African Population and Health
 Research Center (APHRC)**

The African Population and Health Research Center (APHRC) is a nonprofit, nongovernmental international organization. The Center was established in 1995 as a Population Policy Research Fellowship program of the Population Council, with funding from the Rockefeller Foundation. In 2001, it became an autonomous institution with headquarters in Nairobi, Kenya.

Mission and Objectives

The Center's mission is to promote the well-being of Africans through policy-relevant research on population and health.

The Center's objectives are to contribute to science through high-impact research projects and publications; inform policy decisions with research-based evidence; and strengthen research capacity in sub-Saharan Africa.

To achieve its mission and objectives, the Center brings together African scholars to take the lead in developing priority research programs and enhancing the use of research findings for policy formulation and program improvement in sub-Saharan Africa. The Center is staffed by a multidisciplinary team of highly trained scientists drawn from different parts of Africa. APHRC emphasizes excellence at all levels of

its research endeavors. The Center also builds partnerships through collaborative linkages with African and other academic and research institutions to enrich its work and impact.

Research

The Center's research focus is guided by two themes: clarifying changing linkages between urban health and poverty, and investigating emerging population and health issues in sub-Saharan Africa.

Urban health and poverty The combined impacts of rapid urbanization, increasing poverty, and deteriorating health conditions in African cities pose serious constraints to development efforts in the region. To guide policies aimed at improving the well-being of the urban poor, APHRC has instituted a program of research and action to determine, implement, and evaluate interventions for improving the deteriorating health and living conditions of Africa's urban poor. APHRC's initial work on urban health and poverty has focused on

testing cost-effective interventions for improving child health in Nairobi's slum settlements. The Center has set up a longitudinal demographic surveillance system in Nairobi's slums to serve as the primary research tool for monitoring and evaluating health and poverty-alleviation programs and for studying linkages among urbanization, poverty, and health outcomes. The Center is currently expanding its urban research to other cities in Africa, starting with Accra (Ghana), Blantyre (Malawi), and Kampala (Uganda).

Critical and emerging population and health issues Africa is typified by unique demographic and health indicators such as high population growth, a young age structure, and the severe impacts of the HIV/AIDS pandemic. The Center is committed to increasing global understanding of key aspects of the social, economic, and cultural environment that maintain these conditions. The Center's specific areas of focus under these two research themes are health and social equity, reproductive health, adolescents' transition to adulthood, schooling, fertility transitions, maternal and child health, mortality and cause of death, migration dynamics, aging, and food security.

Capacity Building

APHRC has developed programs for strengthening professional and institutional capacity to enable African researchers to fully participate in defining and implementing priority population and health programs on the continent. These programs include technical workshops, post-doctoral fellowships, sabbatical fellowships, visiting scholar fellowships, research traineeships, and internships.

Technical Assistance

APHRC provides technical assistance directly related to its research agenda to governmental and nongovernmental partners to enhance formulation, implementation, and evaluation of evidence-based policies and programs. Areas of focus in technical assistance include data collection, management, and analysis; policy analysis; project design and implementation; monitoring and evaluation; development of research tools; and institutional capacity strengthening.

Policy Dialogue

Policy dialogue is facilitated through the dissemination of research findings through seminars, project reports, policy and media briefs, working papers, and peer-reviewed journal articles. Additionally, the Center engages the general public in highlighting the implications of its research findings through newspaper articles and radio and TV programs. The Center also underscores the need to partner with policy makers and program managers throughout the research process to maximize end-users' input and the ultimate impact of the findings.

All inquiries, correspondence, and comments should be addressed to:

African Population and Health Research Center
 Shelter Afrique Center, 2nd Floor
 Longonot Road, Upper Hill
 P.O. Box 10787, 00100 GPO
 Nairobi, Kenya
 Tel: +254 (0)20 2720400/1/2
 Fax: +254 (0)20 2720380
 E-Mail: info@aphrc.org
 Web: www.aphrc.org

Some Key APHRC Research Programs

Under the urban health and poverty theme, the Center runs the *Nairobi Urban Health and Poverty Partnership*, a program of research and action that seeks to determine cost-effective strategies for addressing the health, environmental, and livelihood needs of the residents of Nairobi's informal settlements. This project is part of APHRC's *Regional Program on Urban Health and Poverty in Africa*, which is currently extending to other African cities, including Accra (Ghana), Blantyre (Malawi), and Kampala (Uganda). The program's aim is to provide the evidence base to guide policy deliberations and programs to improve the well-being of the urban poor in African cities.

APHRC's research on urban health and poverty has revealed marked inequities in both health and social indicators—including schooling—between slum and non-slum areas of cities across sub-Saharan Africa. Even compared with rural areas, urban slum communities exhibit worse outcomes. As a result, the Center initiated the *Nairobi Urban Health Equity Gauge* program to document health inequities in Nairobi, disseminate the findings to key decision makers, and foster policy dialogue on effective strategies to reduce the gaps in health and social outcomes between the urban poor living in slums and other population subgroups. This program is part of the *Global Equity Gauge Alliance*, which seeks to support an active approach to monitoring inequalities and promoting equity-sensitive programs and policies within and between societies.

In response to the inequities observed in education, the Center has initiated a *Schooling* research program that seeks to assess the circumstances and reasons associated with primary school enrollment, retention, dropout, and progression among the slum and non-slum residents of Nairobi. This program was motivated by the introduction of free primary education in Kenya in 2003, which provided an opportunity to assess factors, other than school fees, that affect school enrollment and retention. The overall aim of the research program on schooling is to provide the evidence base to guide policy decisions and program action in achieving one of the key Millennium Development Goals of ensuring children everywhere complete a full course of primary schooling by 2015.

As part of its efforts to address the unique vulnerability of adolescents in sub-Saharan Africa to HIV and AIDS, APHRC, in partnership with the Alan Guttmacher Institute and partners in Burkina Faso, Ghana, Malawi, and Uganda, is working to protect the next generation through a multicountry study that is assessing HIV risks among adolescents in sub-Saharan Africa.



Interview with Alex Ezeh

Dr Alex Ezeh is the executive director of the African Population and Health Research Center (APHRC). He holds a PhD in demography from the University of Pennsylvania; his research interests include gender and reproductive outcomes, health consequences of third-world urbanization, and HIV and AIDS. He has published extensively on these themes in international journals including *Demography*, *AIDS*, *Studies in Family Planning*, *International Family Planning Perspectives*, *Population Studies*, and *Genus*. Dr Ezeh serves on a number of international boards and panels.

Many reports about Africa reveal that concern about rapid population growth has been replaced by concern about AIDS. Is this justified?

AIDS remains one of the most important challenges facing sub-Saharan Africa today. Yet, the declining attention to rapid population growth and reproductive health problems in the region may make it even harder to win the fight against HIV/AIDS. Rapid population growth amid declining economies leads to increasing poverty—a major co-factor in HIV infection. Limited funding for reproductive health and family planning programs is already leading to decreasing uptake in contraceptive use and increasing levels of unwanted pregnancies—both of which are associated with increased risk of HIV infection. Integrating HIV and reproductive health programs is likely to yield much better results.

Your center has chosen a research focus on urban population and health problems. What was the motivation for doing so?

Development programs and research in sub-Saharan Africa remain focused on crisis management. At APHRC, we believe policy-oriented research should transcend current challenges and engage in early identification of potential problems and development of appropriate responses to them before they become crises. We focus on urban population and health problems because sub-Saharan Africa has one of the fastest rates of urban growth. This rapid urbanization is occurring amid declining economies, leading to a growing proportion of the urban population, and indeed of the total population of sub-Saharan Africa, living in sprawling overcrowded slums characterized by a lack of basic services and amenities, poor environmental conditions, and limited livelihood opportunities. The consequences of this pattern of urbanization are evident in the rapid narrowing and reversal of the urban advantage in health and other social indicators across sub-Saharan Africa. Yet, we have very limited information on feasible strategies and cost-effective options for delivering health and social services within urban informal settlements. Without concerted efforts to address the health, livelihood, and environmental challenges faced by the urban poor, it is unlikely that we will achieve any of our development targets, as the profile of the urban poor will increasingly define national indicators in many countries in sub-Saharan Africa. The Center provides scientific evidence to sensitize governments in sub-Saharan Africa and their development partners to the need to pay adequate attention to urban issues in their development planning.

In many parts of the world, funding for demographic research has become harder to get. Is this also true for Africa?

Yes, this is particularly true for Africa. The challenge is not just for demographic research, but also for population and reproductive health programs. In the two decades preceding the International Conference on Population and Development (ICPD), demographic research was at the center stage of international development assistance. Fertility and mortality have since fallen in most regions. Only in sub-Saharan Africa has mortality been rising due to AIDS, and fertility is

still higher there than in other parts of the world. Many foundations and bilateral and multilateral partners that funded population research and programs have since moved to other priorities. Notwithstanding this shift, demographers and population scientists continue to play a crucial role in the region. The set of analytical skills associated with the field can be readily applied to addressing other issues such as poverty, environment, HIV/AIDS, etc., that are the current priorities of donors. The main drawback is declining research attention to core demographic processes such as population projections, estimations, and macrolinkages between changing population composition and development goals and targets.

APHRC's mission is to improve the well-being of Africans through policy-relevant research on population and health. How do you achieve this? How do you ensure your research makes a difference in people's lives?

Making research count is always a challenge for researchers. At APHRC, we believe that, by generating evidence to guide policy decisions, by addressing issues that are locally relevant, by facilitating better global understanding of population and health challenges in sub-Saharan Africa through publications in peer-reviewed outlets, and by engaging in continuous dialogue with policy makers at the local, national, regional, and global levels, we will, in a substantial way, contribute to better policies and programs on priority issues that will improve the well-being of our people.

Where do you see APHRC in 10 years?

APHRC has made significant achievements in its core programs on research, policy dialogue, and strengthening research capacity in sub-Saharan Africa. Yet, more still remains to be done in these areas. Indeed, many African governments do not make budget decisions on priority development needs based on research evidence, and bilateral and multilateral development partners rarely call on African institutions to provide them with evidence to guide their program priorities for Africa. Furthermore, African scholars remain marginal in global discourse on African problems, and many well-trained and skilled Africans leave the region because of the lack of institutional support for meaningful careers in research. In 10 years, I see APHRC having contributed in very practical ways to reversing these conditions. I see the Center becoming a reference point in generating evidence to guide national, regional, and global population and health policies in Africa. I see the Center continuing to play a facilitative role in strengthening training and research capacities concerning population and health in the region. I see APHRC tripling its annual publications in reputable peer-reviewed journals from the current average of 15. I see the Center going beyond social and behavioral sciences research to more biomedical health research. We call on all our partners to support us in making these expectations a reality in the next 10 years.

Former IIASA Researcher Joins UNECA



Dr Hassan Musa Yousif, a former researcher in IIASA's World Population (POP) Program, has joined the United Nations Economic Commission for Africa (ECA) as a population affairs officer. Central to Yousif's work with the ECA is promoting the Commission's sustainable development policies and programs in the area of population as they relate to the environment, agriculture, reproductive health, and HIV/AIDS in Africa.

Yousif has been undertaking comparative analysis, studies, and research on the determinants of the demographic transition in Africa and integrating research findings into policies and action plans. In this process, he is also responsible for

monitoring and evaluating the implementation of the Dakar/Ngor Declaration and the Programme of Action of the International Conference on Population and Development (ICPD, Cairo 1994) at the regional level, including servicing of the African Population Commission (APC) and liaising with and representing the ECA among other United Nations agencies, governments, the African Union, and inter- and nongovernmental organizations. His work activities also include building capacities for advanced policy analysis and advocacy, particularly through the use of existing models, such as the population–environment–development–agriculture (PEDA) model, which was developed by the ECA with technical assistance from IIASA, and the timely production and dissemination of publications on sustainable development in Africa.

Research Partnership in Asia
Update from the Asian MetaCentre

The Asian MetaCentre continues to grow, developing new projects and expanding its activities into new areas of research.

New Journal in 2005

Asian Population Studies is the first international population journal to focus exclusively on population issues in Asia. It will be published with Routledge and launched in 2005. Gavin Jones will serve as the editor, with Angelique Chan, Wolfgang Lutz, Vipan Prachubmoh, and Brenda Yeoh on the editorial committee. The journal will

www.populationasia.org
 E-mail: popnasia@nus.edu.sg

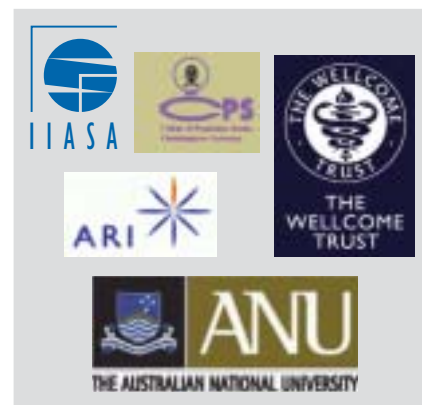
publish original research on population-related matters in this complex, rapidly changing region, and welcomes substantive empirical analyses, theoretical works, applied research, and contributions to methodology.

For further information, see www.tandf.co.uk/journals/authors/rapsoauth.pdf.

New Staff and Visitors

Over the past year, the Asian MetaCentre has welcomed a number of visitors and new staff members. Visiting professors to the MetaCentre included Dr Elspeth Graham (12 February to 30 July), and Dr Paul J. Boyle (12–18 February), Dr Adrian Sleight (8–20 November), Dr Judith

Ennew (10–31 October), Dr Yasuhiko Saito (15–28 July and 30 September to 7 October), and Dr Nicola Piper (13–22 August). In May 2004, Ms Theodora Lam joined the MetaCentre as a research assistant; Dr Nguyen Thanh Liem joined as a postdoctoral fellow in June.



Forthcoming Workshops

Asian Transnational Families [Singapore, 2–4 February 2005]

The exponential increase in international migration over the past two decades is a main driver of contemporary social change in Asia. The extent and depth of the impact these unprecedented migration flows have on the basic fabric of Asian society are clearly visible when we examine the “institution” of the “family.” In the context of shifting global patterns of immigration and settlement—as well as a range of more fluid, transnational, circular, or multiple migrations—the “transnational family” as a “new” form of living arrangement is becoming more common across a wide spectrum of societies.

This international workshop on “Asian Transnational Families” emphasizes the following interrelated themes: family projects and politics; citizenship and exclusion/inclusion; family care-giving and affection; the “other” transnational family; and gender identity and generational change.

The Impacts of Migration on the “Left-Behind” in Asia [Hanoi, 10–11 March 2005]

While much work has been done on the impact of migration on receiving countries and on migrants themselves, less attention has been paid to the effects of migration on sending communities and the family members “left behind.” This is true for Asia for several reasons. As migration continues to rise in Asia, so does the pool of the population left behind. New forms of migration constantly emerge, creating new social concerns. The increasing feminization of migration, leading to many more women on the move, also brings greater concern regarding the welfare of those formerly under their care—the children, men, and elderly left behind. The escalating number of women on the move may also have implications for the stability of the social family fabric.

This workshop will focus on the impact of migration on the health and well-being of the non-migrants “left behind” in Asia—both at the level of specific groups and at the household and community levels—as well as on migration and demographic effects.

Recent Publications

Singapore Journal of Tropical Geography, 25:2 (July 2004). Special Issue on “Southeast Asian Migrant Women: Navigating Borders, Negotiating Scales.” Guest Editors: T.W. Devasahayam, S. Huang, B.S.A. Yeoh

The movement of people across national borders in search of waged employment is a steadily growing global phenomenon, and the migration of women today is even estimated to surpass that of men. This SJTG special issue focuses on the feminization of intraregional labor migratory flows within Southeast and East Asia since the 1990s.

Asian and Pacific Migration Journal, 13:1 (2004). Special Issue on “Migration and Health in Asia.” Guest Editors: M. Toyota, S. Jatrana, B.S.A. Yeoh

Arguably the most dynamic region in the world in terms of population mobility, Asia is experiencing migration flows of unprecedented volume and complexity. This APMJ special issue examines the vulnerability of migrants crossing transnational borders and the health risks (e.g., HIV/AIDS, SARS, bird flu, etc.) faced by these migrants in Asia within the family, economic, institutional, and social contexts.

International Journal of Population Geography, 9:6 (Nov/Dec 2003). Special Issue on “Labour Migration and the Family in Asia.” Guest Editors: P. Boyle, E. Graham, B.S.A. Yeoh

This publication from the Asian MetaCentre provides a brief review of economic approaches to labor migration, including studies recognizing the importance of the family in migration decision making. The editors also consider the importance of remittances in family-related labor migration and their value in developing economies. This selection of papers contributes to the debate about the limitations of the human capital model and helps us to understand labor migration and the family in the Asian context.

Recent Activities

International Conferences

- Demographic Window and Healthy Ageing: Socioeconomic Challenges and Opportunities [Beijing, 10–11 May 2004]
- Population Dynamics and Infectious Disease in Asia [Singapore, 27–29 October 2004]

Panel Discussion

- Population Issues in Singapore, Japan and Scotland—Professor Paulin T. Straughan (Department of Sociology, National University of Singapore); Professor Yasuhiko Saito (Center for Information Networking, Nihon University); Professor Paul Boyle (University of St. Andrews) [Singapore, 26 July 2004]

Public Seminars

- The Future of India—Professor Tim Dyson (Development Studies Institute, London School of Economics) [Singapore, 5 July 2004]
- Are We Living Longer, Healthier Lives? The Concept and Application of Health Expectancy to Japan—Professor Yasuhiko Saito (Center for Information Networking, Nihon University) [Singapore, 30 September 2004]
- Changing Indonesian Childhoods: A Three-Generation Study in a Javanese Village—Professor Ben White (International Centre for Child and Youth Studies, Institute of Social Sciences, The Hague) [Singapore, 18 October 2004]
- The Right to Be Properly Researched: Ethics, Participation and Triangulation in Research on the Physical and Emotional Punishment of Children—Dr Judith Ennew (Centre for Family Research, University of Cambridge) [Singapore, 20 October 2004]

Training Workshop

- Advanced Demographic Techniques [Bangkok, 20 September–22 October 2004]

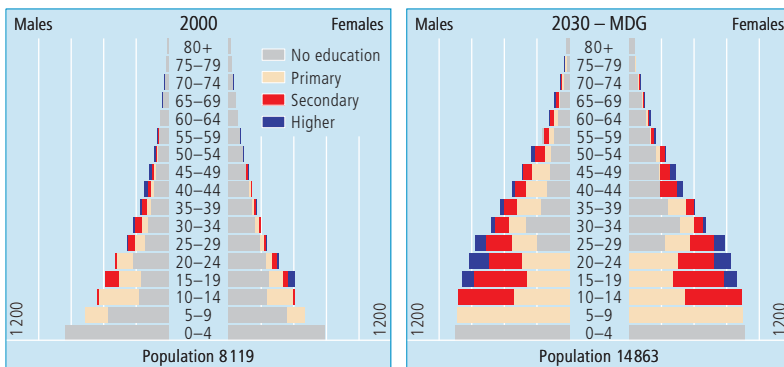
IIASA–AED–World Bank Project Forecasting Human Capital

IIASA's World Population (POP) Program and the Academy for Educational Development (AED) are collaborating with the World Bank on a study of the importance of forecasting human capital in developing countries. In the first phase, the researchers at IIASA (Wolfgang Lutz and Anne Goujon) and at the AED (Annababette Wils) will publish a paper establishing the feasibility of the multistate projection methods that will enable researchers to show the long-term effects of near-term investment in education.

The researchers argue that forecasting human capital is important for a number of reasons. First, such forecasts can provide important guidance for resource-allocation planning. Second, the models can help national and international agencies set more realistic targets. Finally, the resulting projections provide valuable support for arguments to expand school systems by showing how short-term improvements in enrollment translate into longer-term improvements in the educational composition of the adult population.

The paper also demonstrates that the demographic methodology of multi-state projections is in many respects superior to economic approaches (such as the perpetual inventory method) that have been used in the past to forecast educational attainment. In this demographic method, the population of a country or region is cross-classified by age, sex, and different categories (states) of educational attainment. The population is projected into the future based on assumed education-specific fertility, mortality, and migration rates as well as age- and sex-specific transition rates from one educational status to another. This implies, for example, that the fertility of the total population changes as a consequence of the changing educational composition of the female population of reproductive age.

The feasibility of this method for countries with data problems is demonstrated for a set of developing countries with few data sources other than Demographic and Health Surveys. The figure to the left shows the case for



Population projections for Guinea, in 2000 and for MDG scenario in 2030. *Source:* Authors' calculations.

Guinea. In 2000, Guinea had a very low level of education, even among the younger cohorts. The right-hand pyramid shows what the (rather unrealistic) achievement of the Millennium Development Goals (MDG) for education would do to the education structure. Even under this overly optimistic scenario, the adult population over age 30 would not yet have benefited from these efforts by 2030. The paper also goes into a more detailed analysis of what would be involved in more practical terms to achieve such a tremendous expansion of school enrollment under conditions in which the school-age population increases rapidly.

Most importantly, the paper shows that there would be no insurmountable obstacles to applying this method to projections of educational attainment by age and sex for most countries in the world.

Three IIASA PDE Case Studies in Africa

The Consequences of AIDS on Sustainable Development in Namibia, Botswana, and Mozambique

The World Population (POP) Program at IIASA has completed its series of case studies on the consequences of HIV/AIDS on sustainable development in Southern Africa. The studies used population–development–environment (PDE) models to examine the impact of HIV/AIDS on economic growth in Botswana, Namibia, and Mozambique. Results from all three modeling exercises showed that significant economic growth will continue even under the burden of high HIV/AIDS death rates.

These findings were presented in a series of high-level science policy dialogue meetings in Namibia, Botswana, and Mozambique aimed at showing the results of the PDE models for the different sectors and countries, and making recommendations for policy actions. In all three countries, the meetings were followed by one-day computer simulation workshops.

IIASA has made the results of the case studies available in a series of Executive and Interim Reports and on a CD-ROM/Web site. These reports summarize the major findings of the PDE computer simulation models by country.

The future development paths of the demographic, economic, and water sectors over the next two decades are based on a range of scenarios in the context of the HIV/AIDS pandemic in the Southern African region.

- *Botswana's Future: Modeling Population and Sustainable Development Challenges in the Era of HIV/AIDS.* Executive Summary. W.C. Sanderson, M.E. Hellmuth, and K.M. Strzepek. February 2001.

- *Namibia's Future: Modeling Population and Sustainable Development Challenges in the Era of HIV/AIDS.* Executive Summary. W.C. Sanderson, B. Fuller, M.E. Hellmuth, and K.M. Strzepek. February 2001.

- *Mozambique's Future: Modeling Population and Sustainable Development Challenges.* Executive Summary. A. Wils, M. da Costa Gaspar, M.E. Hellmuth, M. Ibraimo, I. Prommer, and E. Sebastião (in English and Portuguese). February 2001.

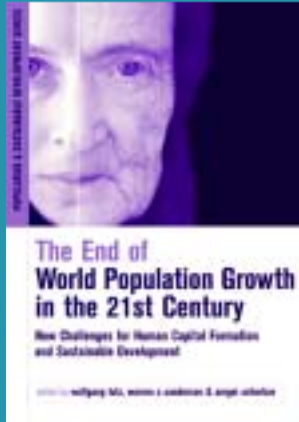
- *Botswana's Future, Mozambique's Future, Namibia's Future: Modeling Population and Sustainable Development—Challenges in the Era of HIV/AIDS.* CD-ROM/Web site (www.iiasa.ac.at/Research/POP/pde).

- *Population–Development–Environment in Namibia. Background Readings.* B. Fuller and I. Prommer, eds. IR-00-031. May 2000.

- *Population–Development–Environment in Mozambique. Background Readings.* A. Wils, ed. IR-02-049. July 2002.



More information on IIASA's PDE case studies is available at www.iiasa.ac.at/Research/POP.



The End of World Population Growth in the 21st Century

New Challenges for Human Capital Formation and Sustainable Development

Edited by
Wolfgang Lutz, Warren C. Sanderson, and Sergei Scherbov

Published by Earthscan in association with IIASA
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ISBN 1-84407-089-1 hardback

"This book makes several important contributions to rigorous thinking about population dynamics in the 21st century. With state-of-the-art modeling of demographic change in populations stratified by age, gender, education levels, and other key characteristics, Lutz, Sanderson, Scherbov, and their co-authors offer a series of fascinating studies that link demographic change with environmental stress, food insecurity, urbanization, and other critical social processes. This book builds on important earlier contributions from the IIASA team, and like the earlier studies, will be widely read and highly influential among demographers, economists, and other modelers of long-term dynamic social processes."

Jeffrey D. Sachs, Director of the Earth Institute at Columbia University and Special Advisor to UN Secretary General Kofi Annan

"...the most innovative book on population change I have ever seen: a must for all policy and decision makers."

Hans van Ginkel, Rector, United Nations University

The End of World Population Growth in the 21st Century is the first volume in the new *Population and Sustainable Development Series*, which provides fresh ways of thinking about population trends and impacts.

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How to Deal with Uncertainty in Population Forecasting?

Wolfgang Lutz and Joshua Goldstein, Guest Editors
International Statistical Review, 72(1&2):1–106, 157–208

Population projections need to explicitly consider the uncertainty of all three components of population change: fertility, mortality, and migration. At a meeting in 2002, organized by IIASA and the *Vienna Institute of Demography*, leading experts representing alternative approaches to scenario analysis and stochastic population

forecasting offered their views on dealing with this uncertainty. Their collected papers are now reprinted in a combined special issue of *International Statistical Review*.

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