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Championing Agricultural Successes for Africa's Future: African Parliamentarians Meet in South Africa

More than 70 percent of Africa's poor work in agriculture, and most of the continent's poor spend at least 50 percent of their income on food staples. Thus, agriculture has the greatest potential to simultaneously increase production and productivity while enhancing the incomes of the continent's rural poor and also raising the real incomes of the urban poor by reducing the cost of food staples.

Recognizing that agricultural growth improves food security and drives rural prosperity and wealth creation, 40 parliamentarians from across Africa met in South Africa in May to determine how best to implement the 2003 Maputo Declaration. The Declaration sought to make agriculture a top priority and increase public funding for agriculture from 6 to 10 percent of total government spending by 2008.

The heads of state and government officials agreed that meeting the goals of the Comprehensive African Agricultural Development Programme (CAADP)

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Coping with an Aging World

In the face of rapidly aging populations in some parts of the developing world, policymakers and development experts must take steps to ensure that older people can lead healthy and productive lives.

In many parts of the world, old age is something new. Thanks to improvements in nutrition, sanitation, and health care achieved during the 20th century, many more children worldwide are living past infancy and more adults are surviving into their sixties, seventies, and beyond. These longer life spans represent a triumph of development, science, and social policy, but the aging of the population is also generating social and economic challenges. Rural

populations in particular are aging at a rapid rate in many developing countries as the young people migrate, and older people are taking on increased economic and household responsibilities. These burdens take a heavy toll on older people, who often find themselves pushed into poverty and food insecurity, especially in areas where the working-age adults have migrated to cities to seek work or been stricken with HIV/AIDS.

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On Biotechnology and Biosafety for Developing Countries

IFPRI is frequently asked about its position on biotechnology. We are aware that some biotechnologies are controversial. We further know that while these technologies alone cannot solve the complex problems of hunger and poverty, some do have great potential to alleviate hunger and malnutrition and benefit poor populations in developing countries. Because this possibility exists, IFPRI believes it would be irresponsible not to assess the potential of genetically modified crops such as nutrient-enriched or drought-tolerant and disease-resistant crop varieties. At the same time, the Institute fully supports appropriate biosafety regulatory systems that are able to assess the risks.

Therefore, IFPRI is involved in projects such as the HarvestPlus program, a CGIAR initiative that seeks to reduce micronutrient malnutrition among poor populations by breeding staple food crops with superior agronomic properties, and has joined with the New Partnership for Africa's Development (NEPAD) to conduct policy dialogues to raise awareness, promote dialogue, and build consensus among stakeholder groups regarding the role of biotechnology and biosafety in agricultural development in Africa.

In collaboration with Oxfam-America, national partners, and an advisory committee representing a range of stakeholders, IFPRI is also working to develop a set of 'best practices' for assessing the social and economic impact of genetically engineered crops. Case studies on herbicide-tolerant soybeans, insect-resistant cotton, and maize are in the planning phases in Africa, Asia, and Latin America to test the proposed methodologies. The goal of this set of studies is to create a 'tool kit' that can be used by national researchers to respond to the information needs of the Cartagena Protocol. IFPRI is also completing a round of case studies that assess the potential economic impact of genetically engineered crops, including highland bananas and maize in East Africa, and vegetable crops in Ghana.

IFPRI is actively engaged on the biosafety front as well, and is coordinating a Program on Biosafety Systems (PBS), which is being implemented by a consortium of partner organizations and CGIAR centers. The overall goal of PBS is to facilitate the inclusion of appropriate biosafety regulations within country-led sustainable development strategies. PBS activities include policy analysis and development, risk assessment, capacity building in regulatory systems, and communication and public outreach. The program is active in East Africa, West Africa, Southern Africa, and Southeast Asia. IFPRI's South Asia Biosafety Program, coordinated with Agriculture & Biotechnology Strategies (AGBIOS), is assessing the impact of biosafety and marketing regulations in India and Bangladesh on the adoption and value of crops and traits.

IFPRI management's current thinking about biotechnology and biosafety, discussed with IFPRI's Board of Trustees at its 2006 meeting, appears in the statement on the following page.

—Joachim von Braun
Director General, IFPRI

IFPRI's Statement on Biotechnology • March 2006

IFPRI, AGRICULTURAL BIOTECHNOLOGY, AND BIOSAFETY

A major theme in IFPRI's strategy is food- and nutrition-related science and technology policy, with a focus on how to make technological innovations relevant, safe, and accessible to poor people. The opportunities and risks that agricultural biotechnology including genetically modified organisms (GMOs), present for smallholder farming systems, poor consumers, biodiversity, and trade are high on our research agenda, together with biosafety policy issues, which encompass environmental and food safety considerations. IFPRI attempts to connect these fundamental biological and policy regimes to its commitment to improve livelihoods and reduce poverty in developing countries.

IFPRI acknowledges that among the biotechnologies, genetically modified organisms (GMOs) are controversial. In accordance with standard practice in the Consultative Group on International Agricultural Research (CGIAR), IFPRI therefore favors public dialogue and transparency in conducting research on GMO technology. IFPRI provides concepts for designing such dialogues among all relevant players, including governments, parliaments, civil society, and the private sector. IFPRI takes a holistic approach to biotechnology research, examining aspects from biosafety to social issues, and the functioning of regulatory bodies, all of which shape GMO science and policy.

The development of molecular biology and biosafety is subject to numerous international agreements, intellectual property considerations, and research and regulatory capacities that operate under rapidly changing circumstances. Furthermore,

technologies, genetic traits, and new knowledge accumulate at a rapid pace in the fast-growing world of biotechnology. This complex and dynamic environment creates major challenges for decisionmakers and researchers. IFPRI continually reviews and comments on related bio-policies, especially from the perspective of developing countries and poor people.

Within this context, IFPRI will support developing countries by providing research-based information and capacity development that will increase the accuracy and efficiency of their decision making with respect to biotechnology and biosafety.

IFPRI acknowledges that ultimately the decisions on these topics will be made by sovereign national bodies, consumers, and farmers, weighing risks and benefits of using or not using technologies.

Agricultural biotechnologies are a broad and promising area of science. The use and development of genetically modified (GM) crops is one option that developing countries are considering to meet food needs, reduce poverty, and enhance environmental sustainability through improved productivity. Policy research should address all aspects of this process, from product research to product approval, introduction, and marketing, and should help ensure that all steps are undertaken in a transparent way.

IFPRI does not advocate or take a general position on the utility and safety of GM crops, as these are to a considerable extent context- and technology-specific. It seeks to provide information that will allow others to make informed choices. ■

Policy News

An Insider's Look at China's Historical Rural Reforms

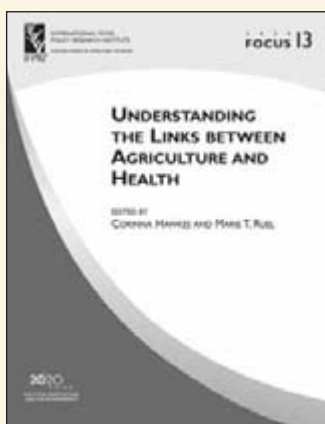
Du Runsheng was a key architect of the rural economic reforms that brought sweeping changes to China's rural structure starting in 1979 and paved the way for strong economic growth in the decades that followed. Below is an excerpt of an essay by Mr. Du, who today is in his nineties, describing how these reforms emerged and evolved, and giving his perspective as a key player of the time. The full essay will be printed shortly and will be available on IFPRI's website.

[By the time] the Cultural Revolution ended, China's economy had been placed in difficulty and an agricultural crisis induced.... When I first proposed the household responsibility system (HRS), I was criticized as follows: Chairman Mao had been dead only a few years. Supporting the HRS, a system he opposed, meant forsaking his principles.

This was the severe environment that reform faced at first. Our support of the HRS, of institutional innovation, and of transformation of the agents of the rural microeconomy would inevitably involve adjusting a number of interests.

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Understanding the Links between Agriculture and Health



While the idea that agriculture affects health has gained increasing acceptance in recent years, the converse is not true: the fact that health also has a significant impact on agriculture has not been so readily adopted, despite the devastating effects of HIV/AIDS on agricultural communities in developing countries. However, a recent IFPRI/2020 Vision panel discussion concluded that now is the time to acknowledge that linkage and use that knowledge to move forward.

“To ignore the bidirectional linkages is to undermine our own efforts,” said Corinna Hawkes, a research fellow in the Food Consumption and Nutrition Division at IFPRI and coeditor of a new collection of 16 wide-ranging policy briefs on different aspects of the topic from scholars around the world (see 2020 Vision Focus 13 at www.ifpri.org/2020/focus/focus13.asp).

Hawkes was one of the panelists speaking at the May 15 discussion, which focused on the linkages between agriculture and health. The other speakers included Marie Ruel, director of IFPRI's Food Consumption and Nutrition Division and coeditor of the collection of briefs; Per Pinstrup-Andersen, chair of the CGIAR Science Council and professor of food, nutrition, and public policy at Cornell University; and Robert Bos, a scientist in public health and environment at the World Health Organization. IFPRI's director general, Joachim von Braun, moderated the discussion.

“If we look at what we know today compared to what we knew 35 years ago relative to the interaction between agriculture and health, we've made tremendous progress,” said Pinstrup-Andersen. He, like the other panelists, said the next step is to integrate that knowledge, build partnerships, and allocate resources that foster intersectoral initiatives. Von Braun said in closing that the time is now ripe because of the growing numbers of civil society organizations, decentralized governments, and new players in the research funding, development, and innovation fields. (To view the panelists' presentations:

www.ifpri.org/2020/focus/focus13.asp#panel) ■

African Parliamentarians Meet in South Africa *(continued from page 1)*



Richard Mkandawire

established by the New Partnership for Africa's Development (NEPAD) will require new, more productive technology that lowers costs and makes farming more competitive; a greater focus on Africa's growing domestic and export markets; and high-level political commitment to agriculture.

On the political front, the parliamentarians agreed to undertake concerted action on three levels: (1) at the continental level, enhance regional dialogue and harmonize accounting systems, (2) at the national level, institutionalize the Maputo Declaration in budgeting processes and establish peer-review mechanisms to monitor progress toward this goal, and (3) at the personal level, alert constituencies about the importance of agriculture and engage in local and regional dialogues that highlight the successful lessons learned from past efforts at agricultural growth. ■



David Nabarro, United Nations System Coordinator for Avian and Human Influenza

David Nabarro talks to IFPRI about the impact of avian influenza in developing countries and the status of efforts to control the disease.

FORUM: Who has been most affected by highly pathogenic avian influenza (HPAI) thus far, and why?

David Nabarro: Since 2003 the highly pathogenic avian influenza virus H5N1 has infected 227 people and has killed 129, mostly children and young adults. Direct contact with infected birds was the main reason for deaths among humans. Vietnam and Cambodia have the highest number of human cases.

Since the first avian influenza outbreaks in 2003 in Southeast Asia, the virus has spread to more than 50 countries in the Middle East, Western Asia, Eastern Europe, the Indian subcontinent, and Sub-Saharan Africa. Many of these countries are poultry-consuming and poultry-importing countries. Migratory birds have often transported the virus over thousands of kilometers, and at the same time the movement of poultry, poultry products, and people has significantly contributed to virus spread.

The ongoing avian influenza crisis has caused billions of dollars of losses—more than 200 million birds have been culled or have died from the disease. Human health concerns in many of the major consuming countries have led to lower poultry prices and market volatility. The Food and Agriculture Organization of the United Nations (FAO) predicts a reduction in global poultry production by 1 percent to 81 million tonnes in 2006. Per capita consumption in developed countries is estimated to decline by 3 percent in 2006, mainly in Europe. Asian poultry production is estimated to fall by 1 percent.

The spread of AI in Africa will likely reduce poultry production by nearly 5 percent. An estimated 5 percent decline in consumption per person has potential implications for livelihoods and food security in a region where poultry contributes nearly 30 percent to total meat availabilities, FAO has said. Consumers suffer when chicken meat and eggs are unavailable and the prices of alternative proteins are increasing.

FORUM: What would be the socioeconomic and nutritional impact on people at risk (the poor, people with HIV, and women) if HPAI is not controlled?

David Nabarro: Around 80 million people in Africa and 280 million people in Asia live in food-insecure households that keep poultry. Backyard poultry production across most countries in Africa and Asia contributes to poor people's access to food. Poultry production is used as an investment, as savings, as a source of income, for barter, and for social exchange. Especially in poor households, the contribution of poultry and eggs to better nutrition should not be underestimated. A widespread outbreak might reduce the ability of people to buy food.

In countries with large, dense poultry and human populations, the direct losses to poultry caused by the H5N1 virus are considerable. In Thailand and Vietnam, the

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“The overall goal is to detect the virus as early as possible and preferably eradicate it in order to limit infections in humans and reduce economic losses.”

outbreaks in 2003–04 were very extensive, with losses of between 15 and 20 percent of all poultry stock.

In Africa and Asia, more than 70 percent of backyard poultry is owned by women. The money they earn from selling birds and eggs is an important additional source of income and often used for child nutrition and the care of household members. It can be safely said that loss of birds from rural communities over a large area and over several weeks or months weakens the economic position of the rural poor, particularly women. On the other hand, selective hunger as a result of H5N1 outbreaks is possible given that AI outbreaks contribute to poverty among peoples whose livelihoods depend on poultry.

FORUM: What are the most effective control strategies? Can optimal short-term and long-term strategies be identified for controlling HPAI spread, depending on the specific vector or anthropogenic process responsible for the spread?

David Nabarro: The control and containment or final eradication of the H5N1 virus is a complicated task and requires a combination of measures. There is no quick-fix solution that is applicable to all countries. Control interventions must be chosen and adapted according to the economic conditions and the disease status of each country or region. The overall goal is to detect the virus as early as possible and preferably eradicate it in order to limit infections in humans and reduce economic losses.

The main internationally agreed-upon H5N1 containment measures are disease surveillance in order to quickly detect and report outbreaks; upgrading of biosecurity in poultry farms; control of movement of birds and products in outbreak areas; temporary market closures and border controls; culling of infected poultry; and vaccination, communication, and education.

Early detection of sick animals and a rapid response are key for a successful control campaign. This requires a well-informed general public and efficient veterinary and human health services, which are seldom all in place in developing countries.

It is important to offer incentives to farmers so that they report suspected cases immediately. Farmers should also be compensated for poultry losses. Far too often virus outbreaks in animals remain unreported because farmers fear economic losses if they report infections in their flocks. Instead they prefer selling diseased chickens on local markets, which often contributes to the spread of the disease.

Designing an effective compensation program appropriate for each country is important. Financial support has to be sufficient to ensure cooperation of particularly poor farmers, but it should not distort market prices and should not be overly generous so that farmers have no incentive to control the disease. Compensation schemes require well-functioning financial bodies; funds should reach farmers directly on a fair and equitable basis. Compensation schemes should follow the principles of transparency and good governance. In general we need to keep in mind that H5N1 containment measures will impose additional costs on poultry production.

FORUM: What type of institutional mechanisms can be used to involve smallholders and the poor in effectively implementing HPAI control strategies?

David Nabarro: The ingredients for success are strong political will and leadership that make H5N1 control campaigns a national priority, involve all sectors of society, mobilize financial resources, build capacity, promote best practices in poultry production, and operate with transparency.

Experience shows that HPAI control campaigns are very difficult to implement in countries with a decentralized government structure, including decentralized decisionmaking and decentralized funding sources. There should be a balance between centralized control and local involvement. It is essential to ensure that control measures are appropriate to vulnerable people as well as to commercial players.

At the local level, the involvement of community animal health workers (such as in emergency reporting and vaccination) and the involvement of civil society (in local control committees, reporting, and vaccination campaigns) are crucial. The strengthening of veterinary systems in poor countries is essential, but it will not happen overnight. Therefore the private sector, nongovernmental organizations, and volunteers could assist in virus search campaigns and could support veterinarians in containment interventions. We need a strong movement in rural areas that would make virus search a top priority.

FORUM: What lessons have been learned from the Southeast Asian experience with HPAI? How can this experience help to inform decisions in other affected and as yet unaffected regions of the world?

David Nabarro: Good surveillance and quick reporting have been the basis for successful H5N1 control campaigns in Southeast Asia. Thailand, for example, has involved thousands of volunteers who have “x-rayed” villages in search of potential virus spots. Early reporting is critical to reduce the spread of the disease and the overall costs of avian influenza. Early reporting, however, is of very little use if the veterinary system cannot rapidly react to investigate and, if necessary, contain an outbreak. Massive investments will be needed in developing-country veterinary services to ensure early diagnosis.

Since September 2005, Vietnam has conducted three rounds of vaccination for smallholder and village poultry, and the number of outbreaks and culled chicken decreased significantly. Vaccination campaigns, however, are very sophisticated interventions that must strictly follow international guidelines, standards, and quality requirements. In the context of Africa, for example, with millions of backyard poultry dispersed over vast rural areas, mass vaccination campaigns will be difficult to implement.

Good public awareness campaigns through a variety of media have helped people in Southeast Asia to learn about the H5N1 virus, to protect themselves and their poultry, and to take informed decisions. Many of the human H5N1 cases could have been avoided if people knew how to protect themselves against the virus.

FORUM: In your view, what type of information do decisionmakers need to effectively implement HPAI control strategies that do not disproportionately harm the poor?

David Nabarro: Decisionmakers need information about the structure of the poultry sector, trade flows through different types of market chains, the importance of poultry and other

livestock to incomes and diets, the capacity of animal health systems at the ground level to carry out rapid response, and communication and information gaps.

Decisionmakers need to remember that while outbreaks have direct consequences, decisions made at various stages in a control program also affect livelihoods and food security. In almost all cases, a control process that minimizes the killing of birds will be preferable. It’s a tricky task to balance the need to wipe out disease against the need to secure livelihoods—countries should include these kinds of calculations in their forward planning.

FORUM: The United Nations has been involved in a global effort to stop the spread of avian influenza, but what is it doing to address the impact of the disease on poor consumers and producers in developing countries who have already been affected by it?

David Nabarro: Since the first H5N1 outbreaks in 2003 UN agencies have been supporting countries in their battle against the virus. The UN advises governments in designing their avian influenza control strategies, provides technical assistance to upgrade animal and human health infrastructure, trains veterinarians and human health workers, conducts surveillance on human cases, monitors virus development, builds capacity to cope with a pandemic, and coordinates global scientific research and development. Communication campaigns are particularly targeting communities in rural areas to inform them about risky behaviors and how they can protect themselves against the virus.

With the spread of the virus outside Asia, particularly to Africa, the role of UN agencies in supporting poor countries has significantly increased and more countries are relying on UN agencies in building their defense line against the virus. I hope donor countries will increase their support to UN agencies so they can continue their important assistance to affected countries and countries at risk.

In the long term, UN agencies will help countries review the effectiveness of their avian influenza strategies, including their compensation plans; review the impact of their strategies on people’s livelihoods; assess the need for rehabilitation of the poultry production sectors; and review possible social and environmental impacts. Balancing disease control measures and human safety against livelihoods will be a major challenge of the future. ■

David Nabarro would like to acknowledge the contributions of Anni McLeod, FAO Senior Officer, Livestock Policy, and Erwin Northhoff.

Biofuels: A Win-Win Approach That Can Serve the Poor

Peter Hazell and Joachim von Braun

In recent years biofuels—that is, fuels derived from renewable biological resources, like plants—have drawn attention as energy sources that may help cope with rising energy prices, address environmental concerns about greenhouse gases, and offer new income to farmers, including farmers in developing countries. In principle, there is a high degree of congruency between these three driving forces for biofuel production and the poverty reduction targets embodied in the Millennium Development Goals. But private sector and market approaches to biofuel development will do little on their own to achieve these congruencies. If this growing sector is to meet broader social and environmental goals, biofuel development will require careful management and public sector support.

The development of biofuels poses risks and has the potential to result in difficult trade-offs. Although biofuel production would have clear benefits for the agricultural sector, the net impact on poverty and food insecurity in developing countries is less clear. Not all countries have the natural resource base to justify significant production of bioenergy crops, but for those that do, the diversion of land and water away from the production of other agricultural outputs, especially food and feed, needs to be considered. This shift could lead to higher food prices, which would be beneficial to farmers who produce a net surplus of food, but detrimental to poor consumers and food-deficit farmers who would have to balance more expensive food against less costly energy. Since the poor typically spend much larger shares of their consumption budget on food than energy, this trade-off is unlikely to be favorable. In addition, although biofuels may be cost-effective substitutes for oil, they are not necessarily much better for the environment. Biofuels can, for example, use a great deal of energy in their production, leading to little if any net reduction in greenhouse gases.

How can win-win outcomes be assured? How can the economic, environmental, and social benefits of bioenergy be made more complementary?

First, there are ways to reduce the trade-offs between bioenergy crops and food production. One is to develop biomass crops that yield much higher amounts of energy per hectare or unit of water. Another is to focus on food crops that generate by-products that can be used for bioenergy. Yet another way is to develop and grow biomass in less-favored areas rather than in prime agricultural areas—an approach that would benefit some of the poorest people. Finally, greater investment in increasing the productivity of food crops would free up additional land and water for the production of energy crops.

Second, it is important to choose appropriate scales and techniques for producing and processing biomass. So far most attention has been given to large-scale production of bioenergy for the market. This is because biomass crops lend themselves to economies of scale in growth and processing, given their bulk and relatively low per-hectare energy yields. Yet the scale benefits need to be balanced against the costs and energy loss of transporting high-bulk biomass products. This situation opens up opportunities for smaller-scale and rural-based production and processing, which would be much more beneficial for the poor than large-scale and urban-based processing. In developing countries, small-scale processing of biomass to produce, for instance, electricity or biogas could help meet local energy needs in rural areas. The agricultural research systems in developing countries have a key role to play in addressing these issues to make biofuels pro-poor. This is a promising area for public-private partnership in research. The Consultative Group on International Agricultural Research (CGIAR) could also play a key role in strengthening international knowledge and facilitating exchange of information on pro-poor development of biofuels. IFPRI itself is devoting increased research attention to the opportunities and concerns surrounding biofuels, especially as they affect poor people.

Third, different crops and processing technologies lead to different environmental outcomes. For example, ethanol produced from sugar cane not only is competitive with oil at today's prices, but also

has favorable energy and carbon balances. In contrast, biodiesel produced from oilseeds and ethanol produced from maize and sugar beets are less competitive on price and have less favorable energy and carbon balances. There is great scope for developing cost-effective technologies that lead to larger carbon savings, and considerable research is being directed at this problem in Europe and the US. The impact on other scarce resources, however, especially water for sugar cane, needs to be factored in as well.

Because most of the environmental and social benefits of bioenergy are not priced in the market, leaving bioenergy development entirely to the private sector will likely lead to bioenergy production and processes that are economically efficient but fail to achieve the best environmental and social outcomes. To ensure better outcomes, the public sector has important roles to play.

First, it can help overcome the high initial costs of producing and using biofuels. For example, a viable biofuel industry requires massive and coordinated investments not only by farmers and processors, but also by car manufacturers, consumers, fuel distributors, and garages. As experience in Brazil, Europe, and the United States shows, the public sector can help achieve critical market size through the use of tax and investment incentives, regulation, and direct public investments. The public sector should also focus on meeting the urgent need for biofuel trade and regulatory systems, which are in their infancy in many countries. This emerging agricultural sector should not be burdened with trade distortions, and

World Trade Organization discussions should take this issue into account.

The public sector can also enhance market incentives for achieving greater environmental and social benefits, like greater reduction of greenhouse gas emissions and adoption of appropriate plant scales. Effective tools are taxes and subsidies, regulation, publicly funded research and development, intellectual property protection, and the development and promotion of markets for carbon payments.

Finally, the public sector has a role to play in overcoming vested interests in existing technologies, such as within the car and oil industries.

With oil prices around US\$70 a barrel, interest in bioenergy is running high. The energy needs of rapidly growing countries like China and India, together with unstable oil supplies, suggest that the days of cheap oil are over. Bioenergy offers an attractive alternative for many developed and developing countries, but if its full potential is to be captured, then both the public and private sectors, working as partners, must make long-term commitments and investments in innovation. ■

Peter Hazell was formerly director of the Development Strategy and Governance Division at IFPRI and is now visiting professor at Imperial College London. Joachim von Braun is director general of IFPRI.

Coping with an Aging World *(continued from page 1)*

"Population aging is likely to become a dominant feature of social change around the world," says Wolfgang Lutz, leader of the World Population Program of the International Institute for Applied Systems Analysis (IIASA). "This poses a number of serious challenges that range from the social security of the elderly to increasing needs for health care, changing consumer behavior, and possibly changes in productivity."

The changes taking place now will dramatically shift the age structure of developing-country populations in the next few decades. In its 2004 World Population Prospects, the United Nations projected that, globally, the number of people older than 60 years would triple between 2005 and 2050, and their share of the total population would rise from 10.4 percent to 21.7 percent. "Demographic changes may seem to take place slowly," says John Hoddinott, a deputy division director at IFPRI, "but they can be powerful. They have important implications for how you think about poverty and where you devote public resources."

So what can policymakers, researchers, and development professionals do to help societies cope with older populations and to help older people improve their lives and livelihoods?

The Demographic Transition Speeds Up

Just 50 years ago, in 1950–55, global life expectancy at birth averaged 47 years; by 2000–05, it had reached 65 years. Although life spans are longest in the industrial countries, people in developing countries are also living longer; with the average rising from 41 years in 1950–55 to 63 years in 2000–05, and projected to reach 74 years in 2045–50. In developing countries, the share of people aged 60 or older rose from 6 percent in 1950 to 8 percent in 2005, and projections show it rising to 20 percent in 2050.

This aging of the world population is taking place thanks to a process called the demographic transition, which consists of three main stages. In the first stage, a country experiences high birth rates and high death rates—since both rates are high, population levels are relatively stable. In the second stage, countries experience improvements in sanitation and health care, and the result is a falling death rate, especially among infants and children. As a consequence population rises rapidly, and the share of young people in the total population grows. Many developing countries are at this stage of the demographic transition. In the third stage, the birth rate begins to fall.

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Food Wastage Can and Should Be Reduced

A recent Austrian documentary entitled ‘We Feed the World’ has focused attention in Europe and elsewhere on the juxtaposition between the overconsumption of resources in rich countries and hunger and poverty in the developing world.

One byproduct of this overconsumption is food wastage. According to the film, which is the most successful documentary in Austrian history, Vienna disposes of enough unsold bread every day to supply Austria’s second largest city, Graz. The United Kingdom’s Economic and Social Research Council estimates UK households throw away 378 pounds of food per person each year, while the United States Department of Agriculture (USDA) calculates 20 percent of the country’s food goes to waste, representing an annual value of about \$31 billion in lost resources. Such wastage is not productive, sustainable, or ethical.

While food is being squandered in rich countries, 800 million people around the world often do not know where their next meal is coming from, 166 million children are undernourished, and 1.2 billion people live on less than a dollar a day. As the film explicitly states, any child who dies of hunger today—almost 60 years after the right to food was recognized as a basic human right—is the victim of a crime against humanity.

“The persistence of hunger in a world of plenty is the most profound moral contradiction of our age,” says IFPRI researcher Marc Cohen.

The USDA estimates that roughly 49 million people could be fed each year by the United States’ lost food resources. While it may be too simplistic to assume that what is wasted in one part of the world can be used to feed people in another, there must be ways to better organize the food chain so as to recoup and redirect some of the billions of dollars that are currently being tossed into the garbage each year. Not only could that kind of money feed many people who are currently going hungry, it could fund universal primary education and help meet some of the other Millennium Development Goals. It could also go a long way toward enabling developed countries to meet their pledge to devote 0.7 percent of GNP to development assistance. And yet, more food and more opportunities are being wasted every year.

While some local and national governments have begun to enact food recovery programs, more could be done to alert consumers, producers, and policymakers to opportunities for preventing such an egregious loss of resources along the whole food chain. It is a moral imperative as well as an economic necessity. ■

An Insider’s Look at China’s Historical Rural Reforms

(continued from page 3)

Three measures to reduce resistance were conceived: First, the reform would not initially call for abandoning the people’s communes, but rather would implement a production responsibility system within them.... Second, the responsibility system could take a number of forms, among which the populace could choose.... Third, the reform began with a limited region, where it received popular support, and then widened step by step.

After its release, HRS spread nationwide, liberating both land and labor. In 1978, China’s grain yield was approximately 300 billion kilograms.... With system reform, grain output increased to 400 billion kilograms by 1984. At the same time, the value of gross agricultural output grew by 68 percent and the peasants’ average income per person grew 166 percent. This achievement, which attracted worldwide attention, convinced cadres who held opposing views and unified the way people thought. ■

Population growth slows, and the population ages. The industrial countries have been in this stage for decades, and now a number of developing countries have entered this stage, or will soon do so.

Demographic changes that took a century or two to unfold in the industrial world are now taking place over decades in the developing world. In France, for instance, it took 115 years for the share of older people to rise from 7 percent to 14 percent. Many developing countries are on track to achieve the same increase in 20 years or less. “Developing countries are becoming increasingly serious about population aging, and there is a growing realization that appropriate policies must be put in place sooner rather than later,” says Libor Stloukal, population policy officer at the Food and Agriculture Organization of the United Nations (FAO).

The aging of populations is not occurring at the same rate in all regions of developing countries. Some countries, especially in Africa, still have high fertility rates, and thus populations are still growing rapidly. The number of children aged 0 to 14 in Africa is projected to rise from 375 million in 2005 to 555 million in 2050, and the number of people aged 15 to 64 is projected to rise from about 500 million to about 1.3 billion. China, on the other hand, is experiencing low fertility rates and rising life expectancies, and these factors are projected to raise the share of the population over age 60 to 31 percent by 2050.

Yet rapid aging per se is not necessarily a problem, explains Zachary Zimmer, an associate at the Population Council. The issue is whether a country has an adequate health care system and other infrastructure to deal with an aging population. “A rapid rate of aging may be of little concern in a country that has the infrastructure, whereas even a slow rate of aging can be problematic for a country that does not,” he says.

Aging in Rural Areas

Issues related to aging may be most immediate in the rural areas of many developing countries. The proportion of older people is rising much faster in rural areas than in urban ones, largely because of the migration of young adults to the cities in search of work, and in some countries because of the death of young adults from HIV/AIDS. The result is a rising phenomenon of what some observers call “hollowed-out households,” made up of the young and the old. Adults in their prime working years from ages 15 to 59 are simply not present. Reliable data on exactly how many such households exist in developing countries do not exist, but experts agree that the situation is becoming more and more common and presents a significant challenge to development efforts.

A tremendous problem faced by older people in rural areas is poverty. As people find their physical capacity diminishing, their earning power often declines, especially in the physically demanding sector of agriculture. So to maintain their livelihoods, older people must depend on family or community support or on social assistance programs. Yet economic and social changes, as well as the absence of adult children, can erode traditional systems for supporting the elderly. Although remittances from adult children who have found work elsewhere can help greatly, many elderly receive none.

“The productive opportunities for older men and women may become very limited, particularly if they are left to cultivate land that is beyond their physical capacity and have no possibility to hire labor, use animal power or mechanization,” says Stloukal.

Investing in the Older Generation

The industrial countries have made social assistance for the elderly a key social policy, and some advocates argue that it is time for developing countries to do the same. HelpAge International, a nongovernmental organization (NGO) based in the United Kingdom that seeks to improve the lives of older people in developing countries, has compared the two largest noncontributory pension programs in developing countries—those of Brazil and South Africa. HelpAge found that these social pensions cost relatively little: Brazil’s pension programs reach 5.3 million poor older people at a cost of 1 percent of gross domestic product (GDP). In South Africa, they reach 1.9 million people at a cost of 1.4 percent of GDP.

Equally significant, HelpAge reports that the programs can keep whole households out of poverty, because older people tend to share their pension benefits with their families. In both countries, households that included a pensioner were significantly less likely to become poor than households without a pensioner.

Pensions can also help older people carry another large burden—caring for people living with HIV and children orphaned by AIDS. “Older people are the backbone of AIDS care,” says Jo Maher, HIV and AIDS coordinator for HelpAge International, “and the cost of care is enormous.” HelpAge reports that up to two-thirds of people living with AIDS receive care from parents over age 60. Moreover, 9 out of 10 orphaned children live with their extended family, and in many countries this means a grandparent.

“Older people find that their roles have changed dramatically,” says Maher. “They are returning to work and care-giving at a time when they could once have expected to be getting care themselves.”

Moreover, older people are often left out of campaigns to give people information, treatment, and resources for coping with the HIV pandemic, she says. Information on the disease needs to be targeted to older people in ways they can make use of—for instance, many older people in rural areas of developing countries get information via radio rather than newspapers or magazines. And direct financial support like pensions can ease the burden tremendously.

There are other options besides direct payments to older people, Zachary Zimmer points out. In developing countries, families are responsible for supporting older people, and policy measures can help maintain or enhance these strong family traditions. For instance, policies can ensure that workers get time off to care for older people or give them tax benefits for doing so. “In many parts of the world, people see the Western system—where support for the elderly comes from the government and where people go into some kind of

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institution when they are no longer able to care for themselves—as a failure. They want an intergenerational approach that gives more dignity to older people and allows them to keep a place in the family and in society,” says Zimmer.

Not only governments, but also NGOs will have to change their work in response to the needs of older people, says Bernd Dreesmann, chairman and chief executive officer of All Help the Aged (AHA), a German NGO affiliated with the International Federation on Aging. “The aging process in many developing countries—among them India and China—will force NGOs to add new instruments to their aid programs,” he says, “including special medical treatments, care facilities adapted for older people, and support measures for poor families who must care for their elderly relatives much longer than in the past.”

At the international level, developing countries have agreed on the need for policies designed to help older people. In April 2002, at the Second World Assembly on Aging, the United Nations member states adopted the Madrid International Plan on Action on Aging. The plan calls for, among other things, allowing older people to be full participants in society and development, for enabling them to work as long as they want and are able to, for improving living conditions and infrastructure in rural areas where many older people live, and for eradicating poverty among older people, including through social pensions.

Despite good intentions, many countries have not followed through with commitments made in the action plan. To push authorities to keep their promises, older people in five countries—Bangladesh, Bolivia, Jamaica, Kenya, and Tanzania—are monitoring their countries’ actions with the help of HelpAge International and local NGOs. The case of Bangladesh suggests that such monitoring groups can achieve real results. Advocacy by older citizens helped push the Bangladesh government to raise the old-age allowance from US\$2.50 to US\$2.75 a month in 2005 and to extend coverage from 1 million to 1.32 million people. Monitoring groups also helped older people sign up for the allowances they were entitled to and stimulated banks to improve their procedures for disbursing these payments to older people.

Preparing for the Population of the Future

The projections related to aging may seem alarming in some cases, but on the positive side, they give valuable information that can help policymakers and others prepare for the coming changes in population structure. “Population aging will be affecting most of the world between now and 2050,” says Zimmer. “It’s not something unpredictable—we have a lot of advance warning.”

What the projections show is that the aging of populations worldwide is going to require policy action and investment from policymakers and development specialists—and soon. “Governments and NGOs should initiate aid programs for the senior sector without further delay so that they have the necessary experience by the time the old-age ‘tsunami’ hits many developing countries in 10 to 15 years,” says Dreesmann. Delaying policy actions until large population shifts have already occurred will make the task of integrating older people into a strong and healthy economy and society much harder.

In 2050, a huge share of the world’s older population—approximately one fifth or more depending upon the future course of fertility and mortality—will live in China. Currently the great bulk of the Chinese population is of working age, but eventually these workers will grow old, and they have fewer children to support them than did past generations. Thus China’s actions may offer important lessons for other rapidly aging countries, Zimmer explains.

For all countries, attempting to meet the needs of the different generations will raise the possibility of difficult trade-offs. “How much do you want to devote public resources to the old as opposed to the young?” John Hoddinott asks. “This is not an easy question to answer, but governments will need to address it as these population changes take place.” As democracy spreads among developing countries, older populations may use elections to demand public support.

The evidence suggests that investments in older people’s well-being and livelihoods can offer significant benefits by reducing poverty. Ultimately, then, such investments may help improve the lives of people of all ages. ■

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