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IFPRI, NEPAD Collaborate to Improve Food Security in Africa

Research alone cannot produce meaningful change in the lives of poor African people. And a commitment to achieving food security, however well intentioned, will not automatically eliminate poverty and hunger. Bridging the gap between the creation and implementation of policy options, however, can catalyze development in Africa

To realize this objective, IFPRI and the New Partnership for Africa's Development (NEPAD)—an initiative by African leaders to eradicate poverty and promote development by entering into new partnerships with the international community—recently forged a collaborative relationship to link food policy research with the political will of African governments.

"When NEPAD heads of state and delegates agreed that agriculture and food security must be a top priority for Africa, we saw an opportunity to support this commitment," explains Joachim von Braun, director general of IFPRI. "Collaboration between our

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Revitalizing the Drive for Rural Infrastructure

Now more than ever, infrastructure is a top priority in development strategies, if the intention is to reduce poverty, maximize the positive effects of other investments, and foster broadly distributed economic growth.

The government of Honduras and some international donor agencies have made a sincere and ambitious commitment to reducing poverty in this poor country. But the villagers of Agualcaguaire probably haven't heard about it. Although Agualcaguaire is only a few kilometers away from the nearest large town, it is still about a century removed from life in the developed world, or even from life in larger cities in Honduras.

The farms and thatched-roof houses of the town's 346 inhabitants are perched on steep slopes. The village lacks basic infrastructure for water and sewage. Shallow wells

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Inside IFPRI FORUM

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FOR FOOD, AGRICULTURE, AND THE ENVIRONMENT

Protecting the Global Grocery Store

Raspberries from Guatemala. Perch from Kenya. Shrimp from Bangladesh. What do these foods have in common? Each of them was temporarily withdrawn from the international market until the developing countries could meet or enforce the stringent food-safety controls required by developed-country importers. The consequences? In Guatemala, the number of raspberry farmers plummeted from 85 in 1996 to 3 in 2002. Bans on Kenyan fish exports due to concerns about salmonella, and on potentially contaminated shrimp from Bangladesh, dealt similar blows to these countries' exporters.

Though the world's health depends on such measures to protect the global food supply, raising the food-safety bar for agricultural products can jeopardize the economic well being of developing nations already struggling to compete for world-market share. At the same time, food safety regulations required by the international market also benefit public health for people in low-income countries. In developing countries, for example, diarrheal disease is the biggest killer of small children; unsafe foods cause 70 percent of these illnesses. What is needed are techniques and policies to help developing countries raise their food-safety standards—for both domestically consumed and exported agricultural goods—without putting small farmers out of business.

IFPRI has begun to incorporate the issue into its strategy. As one of its first steps in this direction, the institute organized a food safety and security seminar at its headquarters on September 10. "Hunger, food security, malnutrition, and undernutrition are the core of IFPRI's mission. Increasingly these concerns include a significant focus on the safety of food," said IFPRI director general Joachim von Braun in his opening remarks. Featured speakers included Luis Flores, a former chief of agricultural inspectors in Guatemala, who discussed the raspberry ban and its consequences, Professor Laurian Unnevehr, who discussed the food safety-security connection, and Professor Spencer Henson, who spoke about food safety and international trade. About 70 researchers and policymakers attended the event. Concurrently with the seminar, IFPRI launched a new publication on the topic, containing 17 policy briefs and case studies. To access *Food Safety in Food Security and Food Trade*, please go to http://www.ifpri.org/pubs/catalog.htm#focus. ■

International Association of Agricultural Economists Establishes African Branch

This past August in Durban, South Africa, Angela Thoko Didiza, South African minister of agriculture and land affairs, welcomed more than 700 agricultural economists from over 70 countries and called on them to engage policymakers in debate and challenged them to make a real impact on the lives of the poor through research. The economists had come to attend the triennial meeting of the International Association of Agricultural Economists (IAAE).

In one of his last acts as IAAE president, IFPRI director general Joachim von Braun welcomed the establishment of the African Association of Agricultural Economists. "Africa needs a strong community of agricultural economists," von Braun said. "The new association will help meet the unique needs and challenges of professionals working in Africa."

Von Braun opened the conference, titled "Reshaping Agriculture's Contributions to Society," with an address on "Agricultural Economics and Distributional Effects," in which he emphasized the large and growing national and international inequalities related to agricultural and rural policies.

"These disparities threaten peace, growth, and sustainable development," he told conference participants. He challenged the attendees to gain new and sharper insights into the increasing and changing demands on the agricultural sector, which carries the burden of providing food and income to poor people in developing countries, while contending with environmental, genetic resource, food safety, and other concerns.

To address these diverse concerns, conference attendees grappled with four themes around which they presented papers: strategies for reducing poverty, efficiency in food and farming systems, food safety and security, and environmental stewardship. ■

A New Way of Doing Business

Africa has a fresh opportunity to emerge from poverty and hunger, environmental degradation, unemployment, and poor public health. The United Nations, the United States, and other key donors have recently committed to renewed assistance efforts for the beleaguered continent.

There is widespread agreement on the primary goal: rapid and pro-poor rural economic growth. To achieve this goal, however, requires a comprehensive, forward-looking strategy based on solid data, thorough analysis, and careful follow-up. So far, national development strategies in Africa have been spotty at best, suffering from weak data, inadequate analytical tools, and a narrow focus on isolated issues. Planning is generally a one-shot exercise: Few systems exist to evaluate and monitor progress, success, or failure.

Africa needs a new way of doing business. Supported by a U.S. presidential initiative to end hunger on the continent, IFPRI is taking the lead in developing and deploying a comprehensive and flexible policy-planning support system. Designed to create a fine-grained picture of rural communities and regions, the Strategic Analysis and Knowledge Support System (SAKSS) unifies a number of powerful tools for data collection and spatial and economic analysis—and just as importantly, for post-planning monitoring and evaluation. Working with several research partners, IFPRI has already developed many of the analytical tools that SAKSS requires—for instance, the widely used DREAM model for assessing agricultural investment priorities. Having used SAKSS successfully at the regional level in Africa, IFPRI's researchers are now testing it at the country level in Uganda.

The goal is to institutionalize SAKSS within relevant policymaking institutions for each of three subregions in Africa (East, Southern, and West) and within selected countries. To that end, SAKSS partners plan to remain in each of the regions and selected countries for at least five years to build up and institutionalize the system and train researchers and policy analysts. Making this significant investment now promises to permanently improve the lives of millions of poor African people. ■

Learning How to Change

Donors contribute some $8 billion a year to agricultural research in low-income countries. But are the benefits reaching poor farmers? That depends. Improving seed varieties or farming techniques to increase yield is useful for poor farmers only if they are right for the economic, social, and environmental conditions in which farmers operate. Recent IFPRI impact studies show that agricultural innovations sometimes help poor farmers in developing countries—and sometimes they don't. This is where Institutional Learning and Change (ILAC)—an approach to research and evaluation that involves reflection and adaptation throughout the project cycle—can make a difference. ILAC encourages researchers to work with farmers and other stakeholders to develop new ways of learning about what poor people need and how to respond.

The importance of agricultural research programs for the developing world "learning how to learn" became evident to IFPRI over the last several years, as it undertook a study of the impact made by five CGIAR innovations in Bangladesh, Zimbabwe, Kenya, and Mexico. Rather than using only standard economic measures to assess program effectiveness, researchers combined panel surveys with focus groups, individual interviews, and case studies of village households. In some cases researchers lived in these villages for several months to learn about how technological innovations interacted with the risks people faced and the resources they owned, and how gender, wealth, and power relationships affected people's ability to benefit from new agricultural technologies. At the end of these first-of-their-kind CGIAR studies, IFPRI asked a key question: How can an impact evaluation study and its results influence the strategies and activities of concerned research and development organizations?

To explore this question, IFPRI convened a three-day workshop in February 2003. Senior researchers from eight CGIAR centers participated, along with ILAC specialists from around the world. The workshop, which received support from the Rockefeller Foundation, inspired a new CGIAR initiative that focuses on promoting ILAC among its centers and their partners. Already, researchers and managers at nine centers have indicated their interest in joining this initiative. In the short term, IFPRI has produced two resource documents that explain institutional learning and change. The pilot phase of this initiative has been funded recently. It includes goals such as devel-

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> *"The main principles that define our efforts to make Canadian assistance more effective are supporting local ownership, improving donor coordination, untying aid, and focusing Canadian aid."*

Susan Whelan, Canada's Minister for International Cooperation

Susan Whelan discusses Canada's new approach to development aid and its strengthened support for Africa.

FORUM: Last September you launched "Canada Making a Difference in the World," a policy statement on strengthening aid effectiveness. What are the program's priorities, and how are you positioning Canada to play a leadership role in international development?

Whelan: A few years ago, the international development community committed to the Millennium Development Goals—halving hunger and poverty, improving education and health, empowering women, and preserving the environment—as measures of progress toward poverty reduction and sustainable development in developing countries. We want to do all we can to achieve these goals. At the same time, Canada has been working to strengthen the effectiveness of its aid to ensure that we are making a real difference in the world.

The main principles that define our efforts to make Canadian assistance more effective are supporting local ownership, improving donor coordination, untying aid, and focusing Canadian aid. An important part of focusing our aid efforts is to increase investments in selected countries and priority areas where we know we can have a positive and lasting impact.

FORUM: Where does Canadian public opinion stand on the issue of foreign assistance? How do you maintain or resuscitate public support for development aid and the age-old but ever-pressing problem of ending hunger and poverty?

Whelan: Social, economic, and environmental conditions in all nations are inextricably intertwined. Canadians know that we cannot be safe in an unstable world, prosperous in a poverty-stricken world, or healthy in a sick world. So, according to the people of Canada, working on reducing poverty to contribute to a safer, more equitable and prosperous world isn't just the right thing to do—it's our duty.

Canadians, both as individuals and in groups and organizations, have been assisting people in developing countries for several decades—longer than my department, the Canadian International Development Agency (CIDA), has been in existence. Survey after survey tells us that Canadians want to help correct the gross global imbalance that confronts us today. Canadians want to work with people in developing countries to make sure that all people, no matter where they're born, have the opportunity to live up to their potential.

FORUM: What accounts for Canada's substantial new commitment to development in Africa? Are there particular countries or sectors that you are focusing on in Africa? What will CIDA be doing differently this time?

Whelan: Africa lags well behind the rest of the world in terms of meeting the Millennium Development Goals. Africa's leaders have responded to this challenge with their own initiative—the New Partnership for Africa's Development (NEPAD). In Kananaskis in June 2002, Canada's Prime Minister Jean Chrétien led the G8 leaders to adopt an ambitious Africa Action Plan in support of this new partnership. Canada is committed to development in Africa.

In December 2001 the prime minister announced an additional Cdn$1 billion in funding for Canada's aid program, including a special $500 million fund for Africa. The federal budget of February 2003—with an increase of 8 percent to the International Assistance Envelope—will allow us to better respond to development challenges and increase our focus on Africa. Canada will spend at least half of all new resources on addressing Africa's challenges. We will focus our programming on a limited number of key sectors linked to national poverty reduction plans such as agriculture, education, health and HIV/AIDS, and private sector development.

What will we be doing differently this time? Aside from focusing our aid in countries and sectors where we know we can have the most impact, we will shift our programming from supporting relatively small, individual projects to supporting larger, coordinated programs that are closely aligned with country priorities. Within three years we expect that more than 60 percent of our programming will go to key sectors such as education, health, and agriculture, and in some cases direct budgetary support, in cooperation with other donors and in keeping with countries' PRSP objectives. Our response to NEPAD, an African-owned development plan, is a good example of CIDA's new way of doing business.

FORUM: **What role will NEPAD play in Canada's renewed efforts in Africa? What else can be done, in your opinion, on the international level to make development cooperation more effective in eliminating hunger and poverty?**

Whelan: NEPAD embodies a philosophy based on renewing and strengthening partnerships among governments and their people, institutions and nongovernmental organizations, and the private sector. It recognizes that the primary responsibility for Africa's development rests with Africans themselves. It seeks to put in place the conditions that will lead to sustainable development and private sector investment, including good governance and the rule of law. This new partnership provides Canada with a strong, African-made vehicle to focus its aid on the continent and to ensure that what we do is in keeping with what Africans want for their own future.

What else can be done? To put it simply, we all—donors and developing countries alike—need to work together in closer collaboration. We can also strengthen our partnerships and go beyond traditional development assistance to include such things as expanded trade, debt reduction, and technical cooperation.

FORUM: **As you noted recently, the private sector in developing countries and Canada will play an important part in CIDA's aid policy in coming years. How do you see the private sector contributing to solving developing-country problems of poverty, hunger, and malnutrition?**

Whelan: Canada believes that the growth of the domestic private sector and well-functioning markets in developing countries and countries in transition is essential for poverty reduction. CIDA's new policy, Expanding Opportunities through Private Sector Development, strengthens our contributions to pro-poor economic growth—the kind of growth that actively engages and directly benefits poor men, women, and youth by opening access to markets and enabling them to use their own assets, natural resources, and capabilities to earn a decent and sustainable income.

A dynamic private sector creates local suppliers of goods and services who can meet the needs of their own communities. And it develops a tax base necessary for financing programs such as health care, education, and environmental protection—programs crucial to making development truly sustainable. When the private sector functions well and equitably, everyone benefits.

Think about small farmers, who in rural areas often make up the largest segment of the private sector in developing countries. These farmers often cannot realize their full potential because of poor policies, inadequate markets, and generally weak institutions. Creating an enabling environment in which agriculture can perform is crucial. For example, well-functioning agricultural markets can underpin a rural economy, help promote rural enterprises, and provide rural services. And, of course, small agricultural producers can tap into national, regional, and international markets.

FORUM: **Given CIDA's commitment to sustainable rural development, what role would you assign to agricultural research in realizing that commitment?**

Whelan: Research is critical to meet current and future challenges in the agriculture sector, and CIDA's policy—Promoting Sustainable Rural Development through Agriculture—reflects this. To remain sustainable and increase environmental and economic security for the poor, an agricultural system must be supported with new knowledge, new practices, and new technologies.

CIDA's programming in research and knowledge sharing over many years has played a key role in developing and sustaining local capacity for long-term agricultural research to improve farming techniques and products. Since they are the end users, farmers and farmers' associations must participate in setting the research agenda to ensure that it is relevant to their reality. Education and training for farmers and farming communities puts research into practice as farmers learn to analyze and define their own needs and to adapt research-generated varieties and agronomic practices to their own conditions.

Research is giving poor communities the skills they need to manage their biodiversity in ways that keep their agroecosystems diverse, productive, resilient, flexible, and protected. Research is improving market access by helping developing-country governments adopt policies to develop markets not only for farmers, but also for marketing cooperatives, nonfarm private sector entrepreneurs, and other off-farm activities in rural areas.

Clearly, there will be no sustainable rural development without advances in agricultural research.

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"CIDA believes that the CGIAR plays an important role in mobilizing cutting-edge science that contributes to food security, poverty eradication, and protecting the environment in developing countries."

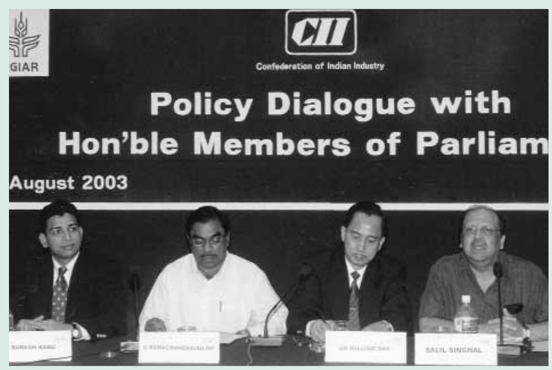
FORUM: What do you see as the CGIAR's contribution to the task of sustainable economic growth and equitable globalization?

Whelan: CIDA believes that the CGIAR plays an important role in mobilizing cutting-edge science that contributes to food security, poverty eradication, and protecting the environment in developing countries. The CGIAR needs to be visionary and innovative in doing research—especially applied research—that the poor need to help them build better lives for themselves through agriculture. Continuing to work on research for the public good—targeting challenges faced by the poor in developing countries, brokering knowledge between advanced scientific committees and the poor, and creating and promoting stronger ownership by the beneficiaries—is an important contribution that the CGIAR can continue to make.

However, in order for the CGIAR to be able to make this contribution, donors must collaborate more effectively to ensure that the CGIAR system has a steady core base of resources. The proportion of core funding has substantially decreased over the past decade, which has weakened the CGIAR. That's why Canada recently significantly increased its core contribution to the CGIAR. The increased flexibility provided by core funding generally allows these research centers to pursue a broader agenda than that supported by direct project financing. ■

Researchers and Parliamentarians Meet in India

Until now, communication has been limited between development researchers and top officials in developing nations. Both groups have as their goal the eradication of poverty, but each has approached the task in its own way. Now this old way of doing business is beginning to change, as researchers in the international development community seek regular communication with a nation's elected policymakers.



Indian parliamentarians meet with CGIAR researchers and with Indian farm and industry representatives.

Members of the Consultative Group on International Agricultural Research (CGIAR) are rising to the challenge. Through the efforts of IFPRI economist Suresh Babu, CGIAR scientists in India recently met for the first time with members of Parliament, the legislative body that represents India's 1.2 billion people.

To arrange the meeting, Babu and others first established a network of contacts among industry and farming groups and local officials. Through this network, they were able to get the ear of parliamentarians in the vanguard of agricultural development.

The groups gathered on August 7 at the New Delhi headquarters of the Confederation of Indian Industry, which co-hosted the event with the Indian Farmers and Industry Alliance and CGIAR. Key CGIAR speakers were Willie Dar, director of the International Crops Research Institute for the Semi-Arid Tropics, who explained the CGIAR's Indian programs; and Babu, who addressed challenges facing the agricultural sector. The parliamentarians asked questions and made suggestions for future research, stressing the need to empower small farmers in an era of globalization.

At the end of the meeting, everyone agreed that it had been invaluable and would be continued on an annual basis. For the CGIAR, Babu's organizing process will also serve as a model for opening comparable communication channels in other developing nations. "By working with Parliamentarians—in India and elsewhere—we can have a real impact on the policy environment," Babu says. ■

Going After the Agriculture-Nutrition Advantage

Why link agriculture and nutrition? Because more agricultural production doesn't always mean better nutrition. Consider: When harvests are sold for cash and agricultural income is diverted to non-hunger-related expenditures, the malnourished continue to suffer. Even when extra food does reach the needy, eating more doesn't necessarily mean eating better.

National governments and international institutions have been forced by famine, drought, or failed food-related policies to pay attention to poverty and hunger issues in Africa. But what about malnutrition, the hidden menace that robs millions of health and energy? Is it understood that hunger and malnutrition are related but not identical? Do governments assume that when they reduce hunger, they are also necessarily reducing malnutrition? Do institutions insist that the critical problem of malnutrition be an integral part of development efforts? Are policies, social norms, and values structured so that they do so?

Too often, the answer is no. A study of institutions in Uganda, Mozambique, and Nigeria found nutrition concerns largely missing from policy dialogue about reducing hunger and poverty, and a need for stronger nutrition advocacy in all three countries. The study, by IFPRI, the International Center for Research on Women (ICRW), and the US Agency for International Development (USAID), also revealed a lack of collaboration between the agriculture and nutrition communities—collaboration that, if cultivated, could powerfully leverage national strategies to combat malnutrition as well as poverty and hunger.

IFPRI and ICRW are focusing on these problems with a multi-year project called The Agriculture-Nutrition Advantage. With partners in Ghana, Kenya, Mozambique, Nigeria, and Uganda, the project will promote links between agriculture and nutrition that take findings from gender analysis into account, with the ultimate goal of improving the nutrition of people in a sustainable and timely manner.

Project teams will demonstrate to decisionmakers how findings from use of this methodology can clarify where resources and interventions are most needed and how they can be most effectively applied. Learn more at www.agnutritionadvantage.org. ■

Learning How to Change (continued from page 3)

oping a comprehensive knowledge base for sharing information about ILAC; preparing a range of options for integrating ILAC into planning, monitoring, and evaluation systems in the CGIAR and its partners; and introducing ILAC into several pilot projects. For example, while experimenting with a range of seed delivery mechanisms to serve the poor, CIMMYT will emphasize the building of learning skills among staff, by having scientists, delivery agents, and farmers reflect on the effectiveness of different approaches. "If done well, impact studies can reveal important insights about where agricultural research does or does not help to reduce poverty, but these insights are often lost or do not move beyond the small group of researchers involved," says Michelle Adato, a research fellow at IFPRI who organized the workshop. "ILAC systematizes processes of reflection and response at all stages of the project cycle, and among a wide group of scientists, research managers, and partner organizations." ■

IFPRI, NEPAD Collaborate

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IFPRI, NEPAD sign memorandum of understanding.

organizations will help move NEPAD's agenda forward, which is close to our own."

Following a series of meetings between von Braun and Wiseman Nkuhlu, chairman of NEPAD's steering committee, IFPRI and NEPAD signed a Memorandum of Understanding on August 14 for joint work in food policy research, capacity strengthening, and policy communications.

"IFPRI will help NEPAD design development strategies related to food, agriculture, and natural resource sectors for an initial period of three years," says Suresh Babu, a senior research fellow at IFPRI and the institute's liaison to the partnership.

IFPRI will also facilitate cooperation on food and agricultural policy between NEPAD and CGIAR centers in Africa that conduct research on crop development, poverty alleviation, and environmental sustainability.

By working together, IFPRI and NEPAD hope to increase the pace of progress in reducing poverty and hunger in Africa. ■

Rural Infrastructure *(continued from page 1)*

supply the villagers with drinking water, but the water is often contaminated with animal waste and agricultural runoff.

Nearly all of the villagers are subsistence farmers who rely mostly on the corn, millet, beans, and livestock they raise for their meager incomes. To get their goods to market or to buy seeds or fertilizer, they must first complete a 45-minute hike over mountainous terrain. It is possible to drive the remaining seven kilometers to the municipal center of Morolica—but only if the summer rains haven't made the road impassable.

What the villagers of Agualcaguaire are missing is physical infrastructure—roads, electricity, communications technology, irrigation, and sanitation.

According to Mark Meassick, a strategic planning specialist with the Inter-American Institute for Cooperation on Agriculture (IICA), many Latin American countries like Honduras have been severely held back because of insufficient investments in infrastructure and infrastructure-related services, particularly in rural areas. "Adequate infrastructure is crucial to development," Meassick explains. "It makes no sense for isolated regions to produce more efficiently if they can't get their products to market. And without infrastructure for health, it becomes difficult for rural families to be productive when one has to constantly confront illness."

Unfortunately, like the residents of Agualcaguaire, villagers and rural people in scores of developing countries confront these hurdles every day. Kevin Cleaver, director of agriculture and rural development at the World Bank, points out, "service gaps in the developing countries are enormous, and the differences in availability of infrastructure between urban and rural areas are stark." According to the World Bank, 46 percent of households in rural areas had access to electricity, compared with 89 percent in cities; 12 percent of households in rural areas had in-house taps, compared with 59 percent of urban households; and 7 percent of households in rural areas had sewer connections, compared with 61 percent of urban households. Very few rural households had telephones—only 8 percent compared with 38 percent in urban areas. Furthermore, Cleaver notes that about 700 million rural people live more than two kilometers from an all-season road. For many, the obstacles presented by inadequate infrastructure make daily living difficult and escaping from poverty seemingly impossible.

An Essential Public Good

Recognizing the enormous hurdle to equitable economic growth that inadequate infrastructure represents, some recent development agendas have given it more promimence. According to Sunday Dogonyaro, principal programmes coordinator for the New Partnership for Africa's Development (NEPAD), "Infrastructure is a pre-condition for development and as such the NEPAD Heads of State Implementation Committee, at its May 2003 meeting, reiterated agriculture, infrastructure, and health as their uppermost priorities, in that order."

"Now more than ever before," says Richard Uku, advisor to the vice president for infrastructure at the World Bank, "infrastructure is a pivotal part of the World Bank's development strategy, in part because of the dire need for infrastructure services, and the strong demand from the Bank's clients and shareholders. It is also consistent with international efforts to make the Millennium Development Goals come to fruition."

But in what ways is infrastructure so important? According to Ayo Abifarin, director of World Vision's Food Security Program in the Africa region, "Infrastructure is the backbone of rural development strategies, be it education, agriculture, health, sanitation, or enterprise." Furthermore, says Abifarin, "absence of one or more infrastructure components adversely affects the results of any rural development process." Infrastructure connects people to markets, enables equitable development, reduces prices of important shipped and transported goods such as fertilizer and high-quality seeds, and allows access to health and other services necessary for human welfare. Without it, rural areas face economic isolation and stagnation.

"At present, Sasakawa African Association farmers are caught in a double squeeze of high input costs and low output prices because of the infrastructure bottlenecks and other inefficiencies in the supply/demand chain," explains Marco Quinones, Africa program director of the association, which aims to increase small farmer productivity and access to input supplies. "Farmers respond to incentives as anyone

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Breakdown in Cancun

Eugenio Díaz-Bonilla, David Orden, and Marcelle Thomas

The World Trade Organization (WTO) ministerial meeting in Cancun ended without accomplishing its main objective: adoption of a detailed negotiating framework for completing the Doha Development Round by early 2005. The schedule for completing the round was already considered tight, and without the Cancun framework, completion will almost certainly be postponed. The current situation is reminiscent of events during the Uruguay Round. After the breakdown of talks at the 1988 ministerial meeting of the General Agreement on Tariffs and Trade (GATT) in Montreal, Uruguay Round negotiations barely moved for several years. And then as now, disagreements on agriculture played a major role in the impasse.

But important differences distinguish the two rounds. One change has been the creation of the WTO as an international institution that, in contrast to the less-structured GATT Secretariat, allows communication, analytical work, and even low-key negotiations to continue beyond the ministerial meetings. At the same time, however, the increase in member countries renders those talks more complex. Cambodia and Nepal, the first least-developed countries to accede to the WTO, were accepted as members during the Cancun Ministerial, pushing the total to 148.

The Uruguay Round was completed basically when the United States and the European Union agreed on a framework for agriculture in the so-called Blair House agreements and sold the deal to (or, some would say, imposed the deal on) the rest. In Cancun a similar U.S.- and EU-sponsored framework came early, but the original U.S. position calling for substantial increases in market access, elimination of export subsidies, and control of domestic support appeared to have been watered down significantly to accommodate the Europeans and to allow more room for countercyclical payments under the U.S. 2002 Farm Act.

The U.S.-EU proposal faced fierce resistance from a group of developing countries called the G-21, whose membership kept shifting and growing during the talks. The emergence of this group was a significant event in the negotiations, because for the first time developing countries from different groups agreed on a common framework for agriculture. The group included developing countries from the Cairns Group (such as Argentina, Brazil, South Africa, and Thailand), original country sponsors of the development box (Cuba and Pakistan), and other key countries such as China, India, and Mexico. Altogether these countries represent close to two-thirds of all world farmers.

The G-21 proposal called for tightening domestic support restrictions for developed countries (elimination of export subsidies, more ambitious targets and timelines for reducing amber box subsidies, elimination of the blue box, and a cap and strict criteria for the green box). The group also requested more flexibility for developing countries under the special and differential treatment provisions. A key question for the future is whether the groups of developing countries will continue to consolidate around this tough position for agricultural liberalization.

The divergent negotiating proposals of both the developed and developing countries left little room for agreement in the short time available. The United States was willing to adjust domestic support to agriculture only in return for increased access to markets in Europe, Japan, and developing countries. The European Union, Japan, and South Korea insisted on agreement on other topics (the so-called Singapore issues of investment, competition policy, transparency in government procurement, and trade facilitation) as a condition of more agricultural liberalization. With regard to agriculture specifically, the European Union argued that the requests of the G-21 went too far in capping domestic support, and the Europeans would not consider eliminating export subsidies except for products of particular interest to developing countries. African and least-developed countries strongly opposed any additional commitments on the Singapore issues that would burden their weak public sector institutions. The issue of U.S. cotton subsidies also proved to be highly controversial with African and other developing countries.

During the Cancun process, developing countries made some gains on health issues, but if talks are not back on track soon, these countries will continue to lose billions of dollars in agricultural income and exports because of the policies of industrialized countries. Developing countries should also consider the fact that asking for protectionist policies in agriculture for themselves is not the best approach to solve poverty and hunger.

What's next? The breakdown in Cancun is a setback for the world economy. In December the WTO member countries will have another opportunity to put the negotiations back on track during the meeting of the General Council. The round needs to be salvaged by committed players, in developing and developed countries, that understand the importance of strengthening a rule-based trade system that considers the needs of the poor and vulnerable. ■

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else does. No markets, no production. Bottlenecks in infrastructure constrain the market," says Quinones.

Adequate infrastructure is especially critical for the most vulnerable, particularly during food crises. As Simeon Ehui, a senior scientist at the International Livestock Research Institute, explains, "Where rural infrastructure is well developed, the risk of famine is limited because governments, local communities, nongovernmental organizations (NGOs), and the private sector can help move food quickly from surplus areas to deficit areas."

The Ups and Downs of Infrastructure Spending

National governments have slashed their spending on infrastructure in the past two decades. According to Shenggen Fan, a senior research fellow at IFPRI, between 1980 and 1998 spending on infrastructure as a share of total government expenditures fell from 6 to 4 percent in Africa, from 12 to 5 percent in Asia, and from 11 to 6 percent in Latin America.

Fan suggests three reasons for the decline in spending on infrastructure, both public and private. First, the structural adjustment programs imposed by lenders in the 1980s and 1990s required developing-country governments to cut their budgets and thereby reduced investment in infrastructure. Second, in many regions private investment replaced government spending on infrastructure—but only partially. Because many infrastructure services are public and available to anyone without charge, private investors have no incentive to invest in those sectors or services. With less government support, certain essential services were underfunded. In some cases, the vacuum left by government withdrawal could not be filled by the private sector because of prohibitive risks, high transaction costs, lack of access to information, and the absence of contracts and property rights. Finally, Fan explains, a lack of evidence showing the connection between infrastructure investment and poverty reduction made funding difficult to secure.

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Moreover, new issues, like the environment and health, emerged as the focus of development spending in the 1980s and 1990s, according to Alex McCalla, professor emeritus of agricultural economics at the Univer-sity of California at Davis. "These things were seen as critical for development," says McCalla, who worked at the World Bank from 1994 to 2000. "As a result, physical infrastructure investment took a back seat."

Now, however, physical infrastructure and the necessary funding to support it seem to be gaining momentum. Key players, including governments, NGOs, and development institutions such as the World Bank and the Asian Development Bank have put rural infrastructure on their priority lists.

The World Bank recently put in place a new Infrastructure Action Plan that shifts emphasis from "bricks and mortar" investments—that is, the mere construction of infrastructure projects—to infrastructure service delivery. The plan places a stronger emphasis on improving infrastructure access by ensuring efficient, affordable and sustainable delivery of infrastructure services. According to Uku, "The big difference is that in the past our focus was more on the nuts and bolts of infrastructure, in terms of building projects like power plants or roads. We continue to invest in infrastructure projects, but in the context of the services they can provide. In the case of roads, for example, the Bank is not simply interested in financing road construction but in how the provision of rural roads will impact development and the quality of people's lives."

Uku adds that in Rajasthan, India, with better roads and transport, the proportion of pregnant women traveling more than 100 miles to give birth at Zanana Hospital almost doubled. Before the roads, many women were unable to make the arduous journey, often giving birth at home without adequate medical care. In Morocco, women and girls benefited the most from road improvements. Primary school enrollment for girls jumped from 28 percent before road improvements to 68 percent afterwards. The new roads made walking or transport to schools safer and encouraged parents to send their daughters to school. "There are many ways in which infrastructure makes a positive impact," Uku continues. "Sanitation, transport, health, education—delivering these services are critical and that's what a large part of the World Bank's focus is now."

Choosing Infrastructure Projects: Which Road to Take?

The renewed focus on infrastructure development raises some critical questions. What exactly should governments invest in? How do priorities differ by region? What should governments do differently this time around?

According to Ehui, "The answers to these questions will depend on factors such as agricultural potential, the degree of market access, and the density of population." He describes three potential scenarios. First, in areas of high agricultural potential and good market access (like central Kenya), continued maintenance of feeder roads and transport systems, along with the development of storage facilities and market institutions, will prove to be most useful. Second, in areas with good agricultural potential but poor market access (such as the highlands of Uganda or southern and western Ethiopia), road development and improvement of marketing systems will be important. Finally, in low-potential areas such as northern Ethiopia, infrastructure development to support water harvesting will be essential. Clearly, a "one size fits all" approach to infrastructure investment will not meet the needs of every country or region.

In many areas, transportation infrastructure appears to be among the most urgent needs. In Sub-Saharan Africa, for example, high transportation costs account for 30–60 percent of private traders' operating costs and put African agricultural goods at a competitive disadvantage in global markets. Because many parts of rural Africa have a lower population density than rural Asia, per capita investments in roads and other transportation infrastructure are more expensive than in Asia. Still, rural Africans' isolation from regional and world markets leaves them more vulnerable to disturbances in the supply chain caused by drought and war that can often result in famine.

A recent study by Fan reinforces the importance of roads for rural India and China as well. Whereas a number of public investments in rural areas can help reduce poverty, stimulate agricultural growth, and improve food security, the study found that roads had a notable impact. In India, for example, government spending on road construction reduced poverty more than did agricultural R&D and education spending. In China, roads ranked third among poverty-reducing investments. In both countries, roads had a greater impact on poverty reduction and agricultural productivity than did electricity, communications, irrigation, or soil and water conservation investments.

In Latin America, road building is also key to improving market access and lowering transportation costs, says Hans Jansen, a researcher at IFPRI. When roads are built, rural household incomes improve. A simulation model developed by a Wageningen University–Centro Agronómico Tropical de Investigación y Enseñanza (Catie)–Ministry of Agriculture and Livestock project in Costa Rica demonstrated that the Limón–San José Road, a major highway, cut transportation costs by 60 percent and increased national welfare by 1.5 percent per year as a result of increased domestic trade, more specialized regional production, and growth in exports.

Local Participation for the Long Term

If infrastructure projects are approached the right way, the positive impacts can be enormous, creating both direct and indirect advantages for rural and urban people. Ensuring these benefits means involving local communities in planning, implementing, and maintaining infrastructure projects.

Take, for example, a building project completed in Lutzville West in the Western Cape province of South Africa in the late 1990s. According to Michelle Adato, a research fellow at IFPRI, a community-based public works program provided jobs and skills training during construction, built a community hall that was needed as a meeting space for a range of social and economic activities, and developed capacity in that community to run future development projects. As one committee member expressed, "We are still shaken up about this. [We] can't believe that we did this," adding that they were "waiting anxiously for the next" project to manage. And when the project was complete, some workers were able to use their training to get permanent construction jobs elsewhere.

Careful planning is crucial. "In order to reap multiple benefits from infrastructure projects," says Adato, "you need a number of ingredients: You need to have community participation in a real sense at all stages of the project, and training to enable this to work. You need to use labor-intensive designs and construction methods in order to create jobs. And in the process of deciding what to build, you should think about not only the benefits that the project will provide in the short term, but also the possibilities for generating future economic activity. All these things need to be considered up front."

In order to keep the benefits of infrastructure flowing, maintenance is also a must. "Nothing is worse than starting a fancy project that a given country cannot afford to sustain and then watching the whole thing deteriorate," says McCalla. "If you want infrastructure to persist after the development agency leaves, there has to be ownership. You need the participation of the people with whom you're working and adequate revenue, whether public or private, to maintain the infrastructure."

Paying for Infrastructure

Development of infrastructure has two basic objectives, according to Jennifer Sara, lead infrastructure specialist in the Latin America and Caribbean region for the World Bank. "Step one is poverty alleviation

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Rural Infrastructure *(continued from page 11)*

and improving the quality of life. Step two is improving economic growth and opportunity," explains Sara. If people don't have an income base, then they cannot pay for services and therefore infrastructure projects are not sustainable or maintainable.

Although financing strategies differ by infrastructure type, notes Sara, ideally users should be able to pay for services. Governments also play a critical role by providing initial capital costs when necessary. And private companies should be selected to build and operate infrastructure based on a competitive bidding process. Finally, says Sara, "You need a regulatory framework to ensure that consumers get the best-quality service at a good price."

In some cases, particularly with small-scale, localized projects, infrastructure initiatives function best when communities contribute directly. Local people can supply labor, or households can pay for the use of the services. Either way, it allows the community to participate in supporting and maintaining infrastructure and to exercise some degree of control over proposed projects.

The mix of public, private, and local financing will depend on the population density of an area. "In Sub-Saharan Africa, where population density is low," says Peter Hazell, director of IFPRI's Development Strategy and Governance Division, "central governments have to take on a larger funding role than in Asia or Latin America. In the very poor African countries, donors have to co-finance on a relatively larger scale than in other regions. Otherwise infrastructure investments in Sub-Saharan Africa that are crucial for long-term development will not be economically viable."

Under the right economic conditions, the community and the private sector can be important players in infrastructure's financial equation. In Latin America, for example, legislative changes that allowed increased private sector participation generated infrastructure investments totaling about US$290 billion for energy, water and sanitation, and telecommunications between 1990 and 1999, according to the World Bank. Still, government support and oversight is essential. In their efforts to reduce public spending, many governments have neglected the social responsibility of ensuring that the needs of the poor are addressed in the context of ongoing reforms.

Although the challenge of securing and maintaining funding for infrastructure projects is a task in itself, widespread corruption further complicates the issue. Tunku Aziz of Transparency International explains that infrastructure development decisions are too often made to serve private interests instead of the public good. He notes that high-cost projects are often favored over cost-effective projects for the simple reason that higher-cost projects allow for larger kickbacks to corrupt officials. "Systems of checks and balances must be put in place and institutionalized. This will help increase transparency and accountability by putting official policies and decisions in the public domain and under public scrutiny," says Aziz.

Closing the Infrastructure Gap

Targeted physical infrastructure development, coupled with a focus on access and maintenance, has the potential to greatly reduce worldwide hunger and poverty. So why isn't more being done about it? To be sure, an impressive sum of money is required to make adequate infrastructure a reality, and borders, both international and local, need to be "breached" so that useful infrastructure can be shared across communities and countries. That requires coordination, cost sharing, and capacity to plan well. A good measure of government commitment, private-sector participation, and citizen support is necessary to achieve these goals. Despite the financial costs and institutional demands, however, infrastructure is a public good developing countries cannot do without.

As IFPRI Director General Joachim von Braun explains, "In order to reduce hunger and poverty and improve quality of life and economic opportunity, it is essential for countries to design and implement successful strategies for key rural infrastructure sectors. But this will not become a reality without international finance; certainly not in Africa, where the problem is most critical." ■

Reported by Albert Lewis

Quick Poll

Do you believe that investment in infrastructure should be one of the top three priorities in rural development strategies for the poorer developing countries?

❏ Yes ❏ No

(Please go to **http://www.ifpri.org/pubs/newsletters/ifpriforum/forumpoll.htm** to respond to this poll. We will announce the results on our website and in the next issue of this newsletter.)

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