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### **Food Gap Widening in Developing Countries One in Four Children Worldwide Will Be Malnourished in 2020**

*Ismail Serageldin, Chairman of CGIAR and World Bank Vice President for Environmentally and Socially Sustainable Development, and Per Pinstrup-Andersen, Director General of IFPRI, will be available for interviews in Washington on Wednesday and Thursday, October 22-23. Please call 703-820-2244 to schedule an appointment.*

By the year 2020, food production could fail to keep pace with increases in the demand for food by growing populations in many developing countries, if present trends continue. This "food gap" -- the difference between developing world production and demand -- will more than double, making some of the world's poorest people even more vulnerable to hunger and possible famine, according to a new report by the International Food Policy Research Institute (IFPRI). The report advocates specific actions now to avert that growing gap and to increase food security for the poor and vulnerable.

The report by IFPRI, one of 16 research centers within the Consultative Group on International Agricultural Research (CGIAR), warns that El Niño, civil strife, low grain stocks, declining food aid and development assistance and other factors will lead to larger fluctuations in food availability in various regions and countries around the world, making the poor even more vulnerable to hunger and possible famine.

To minimize the uncertainty in the future world food situation, policymakers and researchers must begin taking steps now, says the report, **The World Food Situation: Recent Developments, Emerging Issues and Long-Term Prospects**. Policymakers in developing countries need to ensure that their policies promote broad-based economic growth, especially agricultural growth, so that their countries can produce either enough food to feed themselves or enough income to buy it on world markets. In developed countries, policymakers should consider reversing the decline in aid flows and redirecting aid to the most vulnerable developing countries.

"The agricultural research community needs to work to give small farmers in low-income developing countries the technologies they need to produce more food, earn more income and generate more jobs," says Ismail Serageldin, Chairman of CGIAR and World Bank Vice President for Environmentally and

Socially Sustainable Development. "The right steps taken now can help ensure that food security becomes a reality for each and every person."

By 2020, the food gap in wheat, rice, corn and other cereals -- the staples of most diets in the developing world -- is expected to grow from its present 94 million tons in 1993 to 228 million tons, says the report.

The number of children who are malnourished or underweight is projected to drop from 185 million (33 percent of the world's children) in 1993 to 150 million (25 percent of the world's children) by the year 2020. Some 70 percent of the malnourished children under the age of 6 could live in Sub-Saharan Africa and South Asia by the year 2020. The percentage of malnourished children will fall in all regions except for Sub-Saharan Africa, where the number is expected to jump by 45 percent by 2020, to 40 million children. In South Asia, the percentage of malnourished children today is so high that even with a projected decrease, two out of five children will still go without enough to eat by 2020.

"This is completely unacceptable by any standards of human decency," says Mr. Serageldin. "We must do something right now to avoid this silent holocaust."

"The consequences of malnourishment in children are devastating," says Per Pinstrup-Andersen, IFPRI Director General and co-author of the report, along with Rajul Pandya-Lorch, IFPRI's 2020 Vision Coordinator, and Mark Rosegrant, Research Fellow at IFPRI. "Diseases that affect well-fed children only mildly such as measles or diarrhea kill millions of malnourished children every year, while millions of others have their mental and physical growth stunted -- hurting their nation's overall development, as well as themselves."

The report was prepared for CGIAR's "International Centers Week," the organization's annual meeting of the world's leading agricultural scientists and researchers, held in Washington, DC, October 27-31.

### **The Food Production Gap**

The report says two major factors will contribute to the growing food gap:

- Demand for cereals, especially for livestock feed, will increase rapidly. People in developing countries are expected to consume twice as much meat in 2020 as they did in 1993, causing demand for feed grain to double
- Production growth is projected to slow from 2.3 percent annually in the period 1982-1994 to 1.5 percent in 1993-2020. "This is worrisome because yield growth rates from 1982 to 1994 were already low compared with those experienced during 1967-1982," the report says.

During the next 25 years, an increasing share of food in developing countries will have to come from imports from developed nations. For those countries with sufficient foreign currency reserves, including

the fast-growing Asian countries, this should not be cause for alarm. However, many of the low-income developing nations, including most of Sub-Saharan Africa, will not be able to generate the necessary foreign reserves to purchase this food on the world market. Further, many poor people within these countries will not be able to afford or have access to markets where this food is sold.

“With an almost 60 percent projected increase in net cereal exports between 1993 and 2020, the United States is expected to capture a large share of the increased export market in cereals,” the report says.

“To close the gap between food needs and food availability, developing countries and international organizations must invest more in agricultural research and extension, credit, education, health services, especially for women, rural infrastructure, and other public actions that can accelerate broad-based growth within and outside the agriculture sector,” says Mr. Serageldin.

### **Future Volatility in Food Availability**

Several factors that could lead to greater fluctuations in food availability in various regions around the world:

- Cereal stocks have fallen to low levels that are below the margins of safety;
- Weather fluctuations, such as El Niño, affect production in hard-to-predict ways;
- Water is likely to be allocated away from agriculture;
- Declining soil fertility in many regions is beginning to constrain food production;
- Food aid and other international development assistance from developed countries are falling;
- Developments in the two most populous countries -- China and India -- could put great pressure on world food markets;
- Rapid urbanization in low-income developing countries places increasing stress on food delivery and processing systems;
- Civil strife and political instability can cut food production and lead to widespread hunger and starvation.

More volatile grain prices and reduced stocks could add to the precarious food situation for poor people in low-income countries. As grain prices were peaking in 1995-1996, the world's stockpiles of extra grains plunged to a 20-year low of 250 million tons. Since then, stocks have been gradually built up, but the ratio of stocks to consumption remains below the level considered by the United Nations Food and Agriculture Organization to provide a margin of safety necessary for world food security.

“Humanity is entering an era of fluctuations and changes in the world food situation,” says Mr. Pinstrup-Andersen. “Some are positive, such as the fragile economic recovery in Sub-Saharan Africa. Others, such

as weather conditions spurred by El Niño, low grain stocks, and declining international assistance and food aid to developing countries, could exacerbate the already precarious food situations of many low-income people in poor countries. In times of shortage, grain stocks can be released onto the world market to meet demand. Low stocks of grain means there is less of a buffer.”

Poor countries are now especially vulnerable to all these fluctuations because global food aid deliveries in 1996 fell to 7.5 million tons, less than half of the 16.8 million tons distributed in 1993, and the lowest amount of aid delivered in more than a decade, the report says.

“Food aid is no substitute for increased production of food in the developing countries. But it is absolutely necessary at times of stress such as famine or war, particularly for vulnerable sections of society,” says Mr. Serageldin.

### **El Niño & Water Shortages**

Weather changes are now underway or imminent in many parts of the world with the resurgence of El Niño, a large-scale warming of the sea surface off the South American coast.

The 1982-83 El Niño caused some \$10 billion in weather-related damage worldwide, and the 1991-92 El Niño resulted in a severe drought in Southern Africa that caused a 60-percent drop in cereal production in some countries.

“The temperature and rainfall anomalies accompanying El Niño could have significant negative effects on agriculture in many of the low-income developing countries,” says Mr. Serageldin. “Already, Southern Africa, Central America and parts of South Asia are in the grips of dry conditions extending into drought. Forest fires are sweeping across Indonesia, and parts of South America are being battered by excessive rainfall. More agricultural research is needed to deal with these negative effects, such as how to develop drought-resistant crops, and how to manage water resources more efficiently.”

Such research is particularly important because 28 countries with a total population of more than 300 million people face water stress today, and by 2025, the number could increase to 50 countries holding more than 3 billion people, the report says.

“Water may emerge as the key constraint to global food production,” says Mr. Rosegrant. While water supplies tighten, demand for water will continue to grow rapidly, increasing 35 percent between 1995 and 2020, the report says. “Constraints could be especially severe in fast-growing developing countries such as China, where the rapid expansion of urban and industrial demand for water will require transfers of water out of agriculture,” adds Mr. Rosegrant.

## **Civil Strife**

Civil strife and instability at regional, country and local levels will further restrict the poor's access to food. In areas of conflict, rural populations are frequently forced to flee for their safety, leaving crops untended. Animal herds are raided, crops are burned, productive assets are stolen. Conflicts disrupt traditional agricultural practices, thus exacerbating the effects of climatic fluctuations. Cattle herds that frequently protect against the negative food security effects of drought are reduced or eliminated.

Population density, hunger, poverty and natural resource degradation are contributing to the initiation or maintenance of conflicts in countries such as Burundi and Rwanda. Most wars occur in poor countries where food insecurity and hunger are rampant. Of the 20 countries currently experiencing civil strife, 14 have low levels of access to health care, education and other necessities for well-being.

"The extent to which poor countries are successful in feeding themselves depends, in large part, on their avoidance or resolution of civil conflict," says Mr. Pinstrup-Andersen. "And conversely, when nations work to bolster their agricultural sectors, they'll strengthen their position against civil conflict."

## **Former Soviet Union and Eastern Europe**

Countries of the former Soviet Union and Eastern Europe pose a major quandary to food experts, because it is not yet clear whether these countries, once major net grain exporters, will help to feed the world or participate in draining global food supplies.

Projections by IFPRI show that Eastern Europe and the countries of the former Soviet Union will become major net exporters of cereal by 2020, of an estimated 33 million tons annually. Cereal production is forecast to increase by almost 40 percent between 1993 and 2020 to 341 million tons. However, should crop production in this region increase more slowly than forecast, these countries could instead become major net grain importers by 2020.

## **China and India**

Experts are sharply divided over food prospects in China, which contains one-fifth of the world's population. IFPRI predicts that total cereal demand in China will increase by 43 percent between 1993 and 2020 to 490 million tons, while cereal production will grow by just 31 percent, to 449 million tons. China's net cereal imports of 41 million tons in 2020 would represent 18 percent of the developing world's projected net cereal imports.

However, if the Chinese government fails to increase investment in agriculture, cereal production would fall 19 percent below IFPRI projections, meaning that China would have to import 85 million tons of cereal in 2020. This would cause world cereal prices to jump 10 percent, severely hampering the ability of

low-income countries to buy sufficient food to feed their people. However, China could become a net cereal exporter by 2020, if its government raises investment in agriculture.

India, with a population of 930 million in 1995, in the midst of major economic reform that, if successful, will cause Indian incomes to rise much faster than in previous decades. The percentage of malnourished children would drop from 60 percent to 40 between 1993 and 2020. But if income growth triggers a large increase in demand for meat, then global demand and prices for cereals and meats could jump sharply.

### **Hope in Africa**

Sub-Saharan Africa is showing the first signs of an economic recovery since the 1970s. The report says that Africa's gross domestic product (GDP) increased by 4.2 percent in 1995 and 4.8 percent in 1996, and is forecast to grow by 4.8 percent in 1997. With the continent's population growing by about 3 percent a year, GDP per capita will have increased for three consecutive years, for the first time in many years. Africa's recovery has been wide-based, with 20 countries achieving a GDP growth rate of 5 percent or higher in 1996.

"The economic recovery in Sub-Saharan Africa is fragile, however," says Ms. Pandya-Lorch. "Some of the factors that contributed to the recovery are shorter-term in nature and cannot be expected to persist. Economic growth rates will have to be much higher if they are to make a dent in Sub-Saharan Africa's poverty. The region must focus on making sure farmers have access to better farming technologies and seeds to increase production of staple food crops."

"The future is not preordained," says Mr. Serageldin. "In the 1960s, dire predictions about famine and disaster did not occur because different actors -- governments, policymakers, scientists, farmers, non-governmental and international organizations -- came together and acted in concert. We now need a similar effort to stave off the threat of hunger and famine, for the current generation, and those yet to be born. With collective action, we can succeed."

The International Food Policy Research Institute was established in 1975 to identify and analyze policies for sustainably meeting the food needs of the developing world. CGIAR is an informal association of 57 countries, international and regional organizations, and foundations that support sustainable improvements in agricultural productivity through 16 research centers around the world.

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