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At the threshold of the 21st century, widespread poverty, food insecurity, and environmental degradation cause severe human suffering and threaten to destabilize the world's economies and ecosystems. More than 800 million people -- 20 percent of the world's population -- are food insecure, lacking economic and physical access to the food required to lead healthy and productive lives. The article summarized below presents the 2020 Vision, developed by the International Food Policy Research Institute, which looks forward to the elimination of malnutrition through efficient and low-cost food systems which are compatible with sustainable management of natural resources. The authors argue that this vision can be realized if individuals, communities, businesses, governments and the international community as a whole change their behavior, priorities and policies and work together to take action. Priority actions include further investment in poor people, acceleration of agricultural productivity, sound management of natural resources, strengthened capacity of developing-country governments to perform appropriate functions and increasing and realigning international development aid.[1]

Poverty and Human Resource Development

Thirty percent of the world's population currently lives in absolute poverty, on less than $1 per day. The poor generally do not have the means to grow or purchase an adequate food supply. Thus, the extent to which food needs are converted into effective market demand will depend on the purchasing power of the poor. Agricultural production can meet the food needs of the poor by acting as both a source of food and of employment and incomes that allow the poor to buy food.

Sustained action is necessary to improve the productivity, health, and nutrition of poor people, and to increase their access to employment and productive assets. Primary education, health care, clean water and sanitation, skill development, and incentives for gender equality are essential goals for government and non-governmental organizations. Further, improved access to productive resources by the rural poor, especially by women, can be facilitated through land reform and sound property rights legislation, strengthened credit and savings institutions, more effective rural labor markets and infrastructure for small-scale enterprises.

Population Growth and Movements

In the next 25 years, an estimated 70-80 million people will be added annually to the world's population, 98 percent of them in developing countries. Rapid population growth and urbanization could more than double the urban population in developing countries by 2020. Developing countries are projected to increase their demand for cereals by 80% between 1990 and 2020, and for livestock products by 160%.[2] Providing access to reproductive health services and eliminating high-fertility risk factors such as high rates of infant mortality are essential to curbing population growth. Female education and measures to improve income security for women are among the most important investments for assuring food security and sustainable resource use.

Food Supply

Food production increases did not keep pace with population growth in more than 50 developing countries in the 1980's and early 1990's. Growth rates in yields of rice and wheat have begun to stagnate in Asia, and production from marine fisheries appears to have peaked. Significant expansion of cultivated land area is not economically or environmentally feasible in most of the world. To increase food production, more efficient use must be made of land already under cultivation. In many areas where the poor are concentrated, food yields are low and variable. Low-income developing countries are grossly under-investing in agricultural research compared with industrial countries, even though agriculture accounts for a much larger share of their employment and incomes.

To overcome this problem, agricultural research and extension systems, the growth of which has declined in recent decades, need to be strengthened in and for developing countries to increase the productivity of land and agricultural workers and thus lower the costs of food production, processing and distribution. Biotechnology research should be expanded to support sustainable intensification of small-scale agriculture.

Natural Resources and Agricultural Inputs

Degradation of natural resources such as soils, forests, fisheries, and water systems undermines food production capacity. Since 1945, approximately two billion of the 8.7 billion acres of agricultural land, permanent pastures and forest and woodlands have been degraded by overgrazing, deforestation and poor agricultural practices. The causes of this degradation include inadequate property rights, poverty, population pressure, inappropriate government policies, and lack of access to markets and credit and inappropriate technology. Crop productivity losses from degradation are significant and widespread. Poverty, population growth, and continued food insecurity will continue to promote deforestation and soil degradation, especially in Africa, unless more effective ways are found to meet food needs.

Overcoming water-related problems is central to achieving the 2020 vision. New water sources are increasingly expensive due to increasing construction costs of dams and reservoirs and environmental concerns, and current efficiency of water use in agriculture, industry, and urban areas is low. Pollution of water resources by industrial effluents and runoff of agricultural chemicals and sewage is a growing problem. In most areas water for irrigation is essentially unpriced. Policies that effectively manage water as a scarce resource are essential.

The depletion of soil nutrients, a significant cause of soil degradation, is a critical constraint to food production in sub-Saharan Africa. While there are negative environmental effects from overuse of fertilizer, in most developing countries the task is to promote a balanced and efficient use of plant nutrients from both organic and inorganic sources.

Overuse of pesticides creates a threat to human health and the environment, and lead to the evolution of resistant and secondary pests, eventually causing decreased food production. More research and farm-level experimentation is needed to promote integrated pests management with minimal pesticide use.

To achieve these goals, investments need to be made by the private and public sectors in infrastructure, market development, natural resource conservation, soil improvements and primary education and health care, as well as in expanded agricultural research in areas with large agricultural potential, fragile soils and high poverty concentrations.

Natural resources also must be priced according to their value to ensure their efficient use. Local farmers and communities should be provided with incentives to protect natural resources and restore degraded lands. Local control over resources must be strengthened, and local capacity for organization and management improved. Integrated soil fertility, water management, and pest control programs can best be implemented at the local level.

Markets and Infrastructure

Developing country governments need to provide support for efficient agricultural input and output markets. However, the recent transition from controlled to market economies generated confusion about the appropriate role of government and weakened its capacity to perform needed functions. Each government must decide which agricultural policy functions should be strengthened, and which are best relinquished to the private sector.

Additionally, governments need to facilitate a social and economic environment that provides all citizens the opportunity to assure their food security, through a long-term national strategy for food security and nutrition, agricultural development and natural resource management. Specifically, governments should:

• Maintain adequate exchange rates and monetary and fiscal policies for accelerated economic growth;
• Gain access to international markets;
• Lower food marketing costs through investment in improved transportation infrastructure and marketing facilities;
• Phase out inefficient, state-run firms in agricultural input and output markets;
• Create an environment conducive to effective competition among private agents;
• Remove policies and institutions favoring large-scale, capital intensive enterprises over small-scale ones;
• Develop and maintain public goods infrastructure such as roads and electrical facilities or effectively manage private sector investment in these areas;

• Develop and enforce standards, weights and measures and other regulatory instruments essential to market development;
• Facilitate development of small-scale credit and savings institutions;
• Provide technical assistance and training to create and strengthen small-scale, rural enterprises.

Domestic Resource Mobilization and International Assistance

Domestic resource mobilization through savings and investment is imperative to achieving the elements of the 2020 Vision. Currently, however, low income in poor countries leads to low savings, low investment, low growth, continued poverty, and continued low savings. Private capital flows to developing countries benefit a handful of medium-income countries, bypassing the poorest countries, while official development assistance has declined. This downward trend in international development assistance must be reversed, with all members of the United Nations moving towards spending a target of 0.7 percent of their GNP on foreign aid.

Development assistance should complement national and local efforts, and be made more widely available to those countries whose governments have demonstrated a commitment to and strategy for reducing food insecurity and who most need assistance. In response, each recipient country should develop a coherent strategy for achieving its goals related to overcoming food insecurity, and should identify the most appropriate uses of international assistance.

Notes

1. International Food Policy Research Institute (1995).
2. See Rosegrant et al. (1995) and Harris, J.M. (1996).