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BY JASON BREMNER

# POPULATION AND FOOD SECURITY: AFRICA'S CHALLENGE

30 million children in sub-Saharan Africa are underweight.

**500  
MILLION**

people will be added to sub-Saharan Africa's population in the next 20 years.

40% of the population is under age 15, and their reproductive choices will greatly influence future population size and food needs.

Nearly 240 million people in sub-Saharan Africa, or one person in every four, lack adequate food for a healthy and active life, and record food prices and drought are pushing more people into poverty and hunger.<sup>1</sup> At the same time, the world's population has now surpassed 7 billion, and news headlines that in the past have asked "Can we feed the world?" are beginning to ask the equally important question, "How many will there be to feed?"

This brief examines trends in population growth, fertility, and family planning in sub-Saharan Africa and makes the case that investments in women and family planning are necessary to fulfill future food needs. Food security and nutrition advocates must add their voices to support investments in women and girls and voluntary family planning as essential complements to agriculture and food policy solutions.

## The Number of Hungry Continues to Rise

**Although progress has been made in achieving MDG 1, the absolute number of underweight children has risen steadily since 2000.**

Food security exists when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life. Achieving food security requires that:

- Sufficient quantities of appropriate foods are consistently available.
- Individuals have adequate incomes or other resources to purchase or barter for food.
- Food is properly processed and stored.
- Individuals have sound knowledge of nutrition and child care that they put to good use, and have access to adequate health and sanitation services.<sup>2</sup>

Food security is at the top of the list of Millennium Development Goals (MDGs) with the goal of eradicating poverty and hunger. More than 60 countries

are making great progress toward achieving the MDG hunger target 1.C, which is to halve, between 1990 and 2015, the proportion of people who suffer from hunger. Achieving food security in sub-Saharan Africa, however, remains a great challenge. Despite some advances, most of the region is not on track to reach the MDG hunger target, and rapid population growth makes tackling hunger even more challenging.

Progress toward this target is measured as the percentage of children under age 5 who are moderately or severely underweight for their age. Since 1990, the prevalence of underweight children in sub-Saharan Africa has decreased from 27 percent to 22 percent.<sup>3</sup> However, in terms of absolute numbers, the picture changes dramatically because, due to high fertility and limited reproductive health information and services, the region has 50 percent more children than it did in 1990.<sup>4</sup> Today, 30 million children (one in five) in sub-Saharan Africa are underweight—5.5 million more than 20 years ago.<sup>5</sup>

## Population and Future Food Needs

**How much additional food is needed to feed the world in 2050 depends greatly on future fertility.**

Population growth will greatly increase the amount of food needed to adequately feed sub-Saharan Africa's people. Despite impressive reductions in child mortality and improvements in life expectancy, women's reproductive health lags behind and birth rates remain high. Women in the region have on average 5.1 children, a decline from 6.7 children in 1970 but still more than double the world average of 2.5 children. At the same time, almost 40 percent of sub-Saharan Africa's population is under age 15 and have yet to enter their reproductive years. Consequently, the reproductive choices of today's young people will greatly influence future population size and food needs in the region.

Sub-Saharan Africa's population is projected to more than double from 856 million today to about 2 billion in 2050, even if couples choose much smaller families over the coming decades.<sup>6</sup> A rapid decrease in fertility (the average number of children a woman will bear in her lifetime), however, is far from certain (see Box 1). Fertility declines when women and their partners desire a smaller family and choose to delay or space their births, and when they know about and can access a variety of contraceptive methods. Economic development and women's education foster the use of family planning and smaller families; however, a number of challenges contribute to sustained high levels of fertility across the region. In many countries, high child mortality and traditional cultural views contribute to couples still preferring large families. Gender inequities result in many girls having children early in adolescence and having little power over the number of children they bear. And limited access to family planning results in millions of unintended pregnancies. Furthermore, current levels of funding for family planning and reproductive health from donors and African governments fail to meet current needs, much less the future needs of the growing number of people entering their reproductive years.<sup>7</sup> Failure to increase resources for family planning will further delay reproductive health gains and fertility declines and could result in a far larger population and thus greater-than-anticipated food needs in sub-Saharan Africa by 2050.

## Improving Agriculture, Nutrition, and Women's Reproductive Health

**Multi-sector investments in women and girls are critical to increasing food production and reducing hunger.**

Almost two of every three people in sub-Saharan Africa live in a rural area, relying principally on small-scale agriculture for their livelihood. Improving agriculture on small farms is critical to reducing hunger.<sup>8</sup> According to the FAO, women will play a key role since they perform half of agricultural labor in the region and contribute even more in many countries. Consistent and compelling evidence shows that when the status of women is improved, agricultural productivity increases, poverty is reduced, and nutrition improves. Improving women's prospects in agriculture, however, faces many obstacles. Women often lack land and do not have access to credit and agricultural extension services.<sup>9</sup> Furthermore, they face special burdens related to their traditional roles of childbearing, caring for the family, and fetching water and firewood.

**Farm size and land rights.** About 80 percent of farms in Africa are less than 2 hectares, and while the region is becoming more urban, the rural population is still expected to grow by more than 150 million people over the next 40 years.<sup>10</sup> Farms will likely get smaller as farmers subdivide agricultural land among their children. In the Democratic Republic of Congo, rural population almost doubled from 1970 to 1990, and average farm size declined from 1.5 hectares to 0.5 hectares.<sup>11</sup> There is evidence that declining farm size is making it more difficult for farmers to

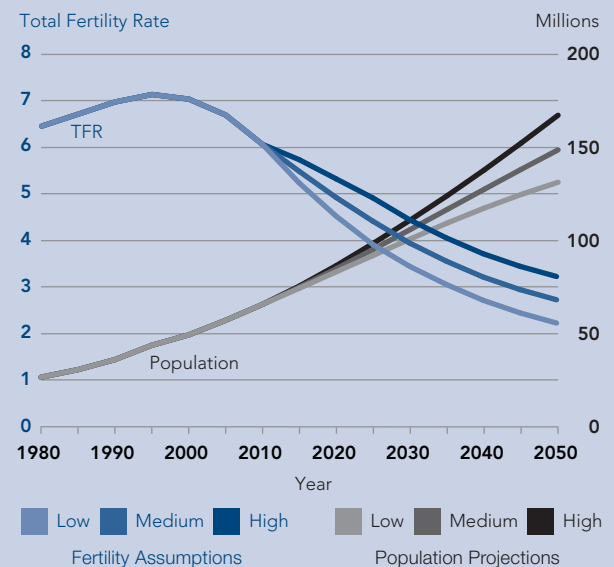
### BOX 1

## A Closer Look at Population Projections

The United Nations develops low, medium, high, and constant population projections for every country and region in the world, and the UN medium projection estimates that population in sub-Saharan Africa will more than double by 2050 to almost 2 billion. This medium projection assumes that fertility will decline from 5.1 children per woman today to 3.0 children by 2050. Even the less-optimistic high population projection—2.2 billion people in sub-Saharan Africa by 2050—assumes a decline to 3.5 children by 2050. Reducing fertility requires significant investments in women and girls such as education and improved access to family planning information and services.

The UN's medium population projection assumes that fertility rates in developing countries will do what they did in developed countries—decline to approximately two children per woman on average or less by 2100. For example, medium projections assume that the average number of children a woman in the Democratic Republic of Congo (DRC) will have in her lifetime will decline from 6.3 today to 2.7 in 2050. For fertility to decline to 2.7, the use of modern contraceptive methods would need to grow from 6 percent of women in the DRC today to more than 70 percent of women by 2050. Even with this uptake of contraceptives, population in the DRC will increase 120 percent by 2050, growing from 66 million today to 148 million.

### Fertility Assumptions and Population Projections in the Democratic Republic of Congo



grow enough food to have a secure livelihood and feed their families. In a recent national survey in Kenya, the majority of farmers reported that their land's production is not sufficient to support their families, and two out of three felt that there is not available land for their children to stay in the community and farm.<sup>12</sup> Women face even greater land constraints than men and are less likely to own land or to have access to rented land; and the land women do have access to is often of poorer quality and in smaller plots.<sup>13</sup> Improving women's access to land will improve agricultural productivity in the region.<sup>14</sup>

**Inputs for agriculture.** Agricultural yields in sub-Saharan Africa remain lower than other developing regions. Agricultural inputs and the techniques and technologies needed to boost production are lagging far behind the rest of the developing world.<sup>15</sup> Organic and inorganic fertilizers remain prohibitively expensive for most African farmers, although efforts are underway to improve access. Greater poverty, lower levels of education, and lack of credit among women prohibit them from using fertilizers and improved seeds or mechanical tools and equipment. In many countries, women are only half as likely as men to use fertilizers, contributing to low agricultural yields on their plots.<sup>16</sup>

**Women's health and food production.** Women also face gender-related constraints that may limit the labor they are able to put into their farms.<sup>17</sup> They are usually responsible for domestic work such as collecting water and firewood and preparing meals for the household. In addition, pregnancy, breastfeeding, and child care may limit women's mobility and the time they are able to spend laboring on their farms. Poor access to reproductive health information and services often leads to adolescent pregnancies, girls dropping out of school, and frequent pregnancies—all of which negatively affect women's health and economic opportunity. Low levels of schooling, poor health, and compromised nutritional status constrain poor rural women in their multiple roles as agricultural producers, workers, mothers, and caregivers.<sup>18</sup>

The complex development challenges women, families, and their communities face require multi-sector investments in women's agriculture, education, and health. Integrated approaches will improve prospects for women, increase food production, and improve the well-being of households.

## Recommended Policy and Program Actions

### SUPPORT VOLUNTARY FAMILY PLANNING PROGRAMS

Reducing hunger in sub-Saharan Africa will depend on the size of the future population and thus on increased investments in family planning. Almost two out of three women in the region who want to avoid pregnancy or delay or space their births are not using a modern method of contraception.<sup>19</sup> Providing

#### BOX 2

### Women's Empowerment in Agriculture Index

USAID's Feed the Future (FTF) initiative recognizes that empowering women is vital to achieve FTF's first-level objective, "Inclusive Agricultural Sector Growth," particularly in areas like decisionmaking and leadership. The concept of empowerment is both broad and multi-dimensional; to simplify its measurement, FTF has defined and operationalized the concept into five dimensions:

- Women's role in household decisionmaking around agricultural production.
- Women's access to productive capital.
- Women's income and expenditures.
- Women's individual leadership and influence in the community.
- Women's time allocations.

To measure changes in women's empowerment in agriculture along these dimensions, USAID's Bureau for Food Security is developing an index in partnership with the USAID Planning, Policy, and Learning Bureau, International Food Policy and Research Institute (IFPRI), and the Oxford Poverty and Human Development Initiative (OPHI), Oxford Department of International Development at the University of Oxford. The innovative Index is currently under development and is expected to be available to the public in spring 2012.

family planning information and services to these women would reduce unintended pregnancies by 77 percent and cost US\$2.4 billion annually. These investments would reduce high-risk births that result in infant and maternal deaths. Smaller, healthier families also demand less from education, health, and other services, including agricultural extension.<sup>20</sup> Unfortunately, family planning programs remain underfunded and do not meet current needs, much less future needs, and support for population policies and family planning programs is often isolated in the health sector. Slowing population growth through voluntary family planning programs demands stronger support from a variety of development sectors, including finance, agriculture, water, and the environment.

### EMPOWER WOMEN AND GIRLS TO IMPROVE HEALTH AND ELIMINATE HUNGER

In many parts of sub-Saharan Africa, women lack decisionmaking power, especially on reproductive health, farming, or basic household spending. Programs that help women complete their education benefit both agriculture and health.<sup>21</sup> Girls who

## Combining Coffee Agribusiness and Community Health

Rwanda's farming families need more than increased incomes to improve their lives; they also need better health care and services. Recognizing that the coffee sector provides an ideal opportunity to reach a sizable segment of the population, USAID added a health component to the Sustaining Partnerships to Enhance Rural Enterprise and Agribusiness Development (SPREAD), an existing agribusiness project aimed at improving Rwanda's specialty coffee sector.

SPREAD focused on improving the specialty coffee value chain, including forming and strengthening coffee cooperatives, improving coffee quality, establishing long-term relationships between Rwandan producers and specialty importers and roasters, and building capacity of the National Coffee Board. The project built upon its coffee cooperative structures to deliver an innovative health component, which includes:

- Training and mentoring coffee extension agents to act also as community health agents. They conduct health outreach and education on a range of basic health topics including HIV prevention, reproductive health and family planning, safe births, nutrition, and water and sanitation. Male and female coffee/health extension agents educate households, distribute condoms and water purification solution, and refer community members to local health services. These activities save time and resources as they occur during agricultural meetings, coffee processing activities, and visits to farmers' homes and fields, and serve as a forum to meet both agribusiness and health objectives.
- Training and mentoring a network of peer educators to conduct behavior change communication activities such as community theater with farmers and their families. These activities serve as a forum for dialogue around community issues involving coffee farming, and family health and well-being.
- Facilitating discussions about gender-related issues such as how coffee revenue is used within households, alcohol and gender-based violence, condom use, and decisions about family size and contraception.

- Coordinating with local health centers to provide HIV counseling and testing and intestinal parasite treatment at coffee-washing stations during harvest season, where farmers bring coffee cherries daily for processing.
- Building relationships between coffee cooperatives and local health NGOs, such as the International Planned Parenthood Federation of Rwanda and Population Services International, to stock and sell branded condoms and water purification solution at coffee-washing stations and administrative offices.
- Supplying clean drinking water and hand washing at coffee-washing stations and offices, and setting up rainwater catchment tanks in pyrethrum growing areas, where potable drinking water is extremely scarce.

Results of SPREAD's health program show the benefits of an integrated approach. Local health officials and NGOs appreciate the easy access to farmers that the coffee cooperatives provide, especially to rural men, who are often difficult to reach with reproductive health information. SPREAD's agribusiness staff and coffee cooperative managers support health activities because they recognize the links between farmers' health, coffee quality, and successful cooperatives. The health program, through its consistent dialogue, capacity building, and contact with farmers, is able to address some of the broader cultural and behavioral factors affecting agribusiness activities and farmers' welfare. The farmers, peer educators, cooperative managers, and health extension agents appreciate the services, citing increased knowledge and acceptance of family planning, HIV testing, and condom use, and positive changes in gender roles and resource use in their communities.<sup>1</sup>

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complete a secondary education and who are empowered to participate in household decisionmaking choose smaller families, are healthier, and have healthier children. These same women then can better invest in the health and nutrition of their families and in the necessary improvements in agriculture.<sup>22</sup> Agriculture and health programs must continue to focus on investments in women and girls, particularly their education, thus giving them the resources, information, and services they need to play an effective role in meeting future agricultural and nutrition challenges. USAID's Feed the Future Initiative is developing a Women's Empowerment in Agriculture Index to help programs gauge needed investments (see Box 2, page 3).

## SUPPORT RESEARCH AND PROGRAMS THAT LINK AGRICULTURE, NUTRITION, AND REPRODUCTIVE HEALTH

Donors and development agencies are making great strides in linking agriculture, nutrition, and health programs, but many funders still hesitate to address population and family planning. Innovative examples from the field, however, show that beneficiaries, community leaders, and practitioners recognize the benefits of programs that integrate health needs, including family planning, into efforts to improve agricultural systems.<sup>23</sup> These programs represent a potential win-win solution for some of the long-term challenges to reducing hunger. Integrated programs, through agricultural extension, may be more successful at reach-

ing rural people who have no access to health systems; engaging men who receive little information about family planning; and reaching women more efficiently with health, nutrition, and agriculture services. Families receive a more holistic package of services aimed at improving their crops and livelihoods, and at creating stronger, smaller, and healthier families (see Box 3, page 4). There is little research, however, on the effects of pregnancy, the postpartum period, and lack of child care on agricultural productivity, women's mobility, and the ability of women to work or go to market.<sup>24</sup> Increasing support for innovative research and programs that bridge the divide between the agriculture and health sectors will lead to a new generation of programs for reducing hunger.

## Conclusion

Investments in women's agriculture, education, and health are critical to improving food security in sub-Saharan Africa. Improving access to family planning is a critical piece of fulfilling future food needs, and food security and nutrition advocates must add their voices to support investments in women and girls and voluntary family planning as essential complements to agriculture and food policy solutions.

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**DATA WORKSHOPS.** PRB's data workshops and online training assist the Annie E. Casey Foundation's KIDS COUNT network in using data about the status of children in the United States. Participants take away the knowledge needed to access data about their particular state and communicate with policymakers.

## ADVANCE

PRB works to advance the well-being of current and future generations. Toward that end, we analyze data and research, disseminate information, and empower people to use that information to inform policymaking. While the numbers of publications created or workshops conducted are one way to measure PRB's work, the creation of evidence-based policies, increased demand for health services, and active coalitions are better gauges of progress toward positive social change.

**EVIDENCE-BASED POLICIES.** PRB provides analysis for the KIDS COUNT Data Book, an annual report card on the well-being of children and families in the United States. The Data Book has helped promote the passage of several U.S. policies, including the State Children's Health Insurance Program.

**DEMAND FOR HEALTH SERVICES.** Articles written as part of a media training effort in child marriage in Senegal led to the Vice President of the National Assembly's call for a study to understand and address this common and harmful practice.

**ACTIVE COALITIONS.** PRB works with the East Africa Population, Health, and Environment Network to increase information sharing across the region. The AFRICAPHE online discussion group improves access to information and capacity-building and funding opportunities.



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