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BUSINESS CORRESPONDENCE: Area Code 202. Membership and Subscriptions: 467-4417.

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Population Growth and Development

The article in this issue by Fred T. Sai, a distinguished African scholar, underscores the spreading concern in developing countries about rapid increases in population growth. Sai considers, in the African context, the relation of growing populations to aspects of social and economic development. Concern over these issues is also reflected in the creation of a AAAS Committee on Population, Resources, and the Environment.

The continuing burst of population growth in developing countries has little historical or evolutionary precedent. When the populations of Europe were growing most rapidly during the Industrial Revolution, the rates usually were about 1 percent per year, and the peak never exceeded 1.6 percent. At the same time, improvements in agriculture, sanitation, food and water supplies, as well as industrial development, were able to support growing populations. In Africa today, the average growth rate is about 3 percent per year.

Many areas of development are seriously frustrated by this rapid population growth, although limitations of technological advance, political, and economic freedom, and agricultural policy are also important influences. Most African countries put 25 to 35 percent of their annual budgets into education, but they have not been able to provide enough school places and trained teachers to meet the needs of the child population. Rapid growth of population exacerbates unemployment and underemployment and problems of food production and distribution and is a factor in deforestation, overgrazing, and overcultivation, which favor desertification. Much of the arable land will be difficult and expensive to bring under cultivation. With malnutrition widespread, children especially are more vulnerable to infectious diseases.

More and more leaders of developing countries are inclined to turn to the scientific community for help. Two new publications on population issues should be useful. A World Bank study* on population change and development synthesizes data on demographic changes, consequences of rapid population growth, the slowing of population growth, family planning as a service, population policies, and the various population-development relations that have emerged from the research of the past decade. The well-documented conclusions are of great interest.

The accumulating evidence on population change in developing countries underscores the strong link between fertility decline and the general level of socioeconomic development and the contribution that family planning programs can make to slowing population growth. Differences in fertility among and within countries are related less to income per person than to life expectancy, female literacy, and the income of poorer groups. They are also related to availability of family planning services . . . Countries which have made a substantial and sustained effort in family planning have achieved remarkable success; where education is widespread it is even more striking.

For the second study, *Determinants of Fertility in Developing Countries*,† sponsored by the National Academy of Sciences, the researchers first constructed a framework for analyzing fertility determinants and then prepared papers in this framework. It is built around the supply and demand for children, fertility regulation and its costs, fertility decisions, nuptiality, and the effects of social institutions on fertility. Finally, a synthesis of current evidence and an agenda for further research point the way toward analysis that would clarify critical issues for the future of developing countries and indeed the interdependent world.

The scientific community—perhaps the closest approximation now existing to a worldwide community—can build on studies like these in responding cooperatively to requests from developing countries to help tackle their great problems.—DAVID A. HAMBURG, *President, AAAS, and President, Carnegie Corporation of New York*

*World Bank, *World Development Report 1984* (Oxford University Press, New York, 1984).

†R. A. Bulatao and R. D. Lee, Eds., *Determinants of Fertility in Developing Countries* (Academic Press, New York, 1983).