



## Humanity's Gamble II

**Paul R. Ehrlich and Anne H. Ehrlich**

Our apparently robust civilization is facing a prospect of global breakdown as major support systems begin to crumble. Locked into a centuries-long course of growth and expansion, humanity has taken over the planet's land surface and assaulted the oceans, denying more and more living space and resources to other life-forms. Natural resources needed to support the industrial lifestyle are showing unmistakable signs of diminishing returns to investment. Central to this growing dilemma is the agricultural system that supplies food for humanity but is increasingly stressed by climate change, resource constraints, and rising demand. What changes in policies and behavior might avert a catastrophic food crisis?

It should be obvious that reducing population growth and ending it as soon as possible is a critical need. Family planning/reproductive health services are available in nearly every country. Birth control has long been accepted and used (along with backup abortion in most cases) in virtually all developed nations, where low birthrates prevail today and population growth rates in most are near zero. Many developing countries have followed suit, especially in Asia and Latin America, and have substantially lowered their population growth rates.

The situation is more complex and difficult in many developing nations, however, especially in sub-Saharan Africa where the population is still growing at an average 2.7 percent annually. The development of many societies with high birthrates is constrained by poverty, hunger, high infant and child mortality (which promotes over-reproduction), illiteracy, lack of basic health care, and, often, failing governments. Their dilemma certainly includes a great need for serious efforts to restrain reproduction, but family planning programs in some of these countries are at best token efforts.

Reducing fertility to below replacement reproduction in these regions will take at least a few decades, but the process could be hastened with strong policies such as provision of education, including for girls, basic health and contraceptive services, and inclusion of women in the development process. No society has successfully modernized without these factors, beginning with reductions in birthrates. In Africa, fortunately, there is substantial room for increasing food production, providing education, and building rural health clinics to improve survival rates of children and make modern contraception and

backup abortion universally available, three areas where aid from the developed world could be invaluable.

Improvements in agricultural production are also essential for development (although too many development “experts” have focused mainly on urbanization and industrialization). In sub-Saharan Africa in particular, increasing agricultural efficiency, adopting more ecological farming practices, and reducing food waste could dramatically improve well-being and support the development process in general.

While the problems of agriculture are most acute in the poorest nations where rapidly rising demand for food puts extra pressure on weak systems, the global food system at large is facing stresses from water shortages, widespread soil deterioration, and climate-caused weather disasters, as well as potential shortages of fertilizers and energy. Even so, the odds of avoiding a collapse of the global food system could be considerably improved by a coordinated worldwide effort to: stop expanding land under agriculture (to preserve natural ecosystem services); increase yields where possible (especially of tropical crops); revise industrial agricultural practices to make them more ecologically sound; place much more emphasis on soil conservation; increase the efficiency of fertilizer, water, and energy use; and greatly enlarge investment in, and dramatically change the direction of, agricultural research and development. It is also very important to stop overfishing and attempt to restore natural fisheries, which may be difficult while greenhouse gas emissions are changing the temperature and chemistry of the oceans.

Finally, people in the richer countries should reduce their consumption of animal products and diversion of crops to biofuels, and all societies should reduce food wastage. It would be helpful to educate everyone about how the human food system works, and move appropriate nutrition for all to the top of the global policy agenda. All this is admittedly a large order.

All is not hopeless, however. Demographic shrinkage is occurring or approaching in most over-consuming rich nations, where it is most important. Giving women equal rights everywhere would help promote fertility reductions and improve humanity’s odds of avoiding catastrophe. It would be a lot easier to nourish 8.2 billion people adequately in 2050 than 9.7 billion.

In analyzing the prospects for supplying the rapidly growing human population with adequate diets over the next several decades and beyond, leaders of developed nations should explain that their citizens should *have a maximum of two children per couple and work to curb their consumption. The impossible goal of perpetual economic growth through increasing consumption must be abandoned. The bottom line is the human predicament is unlikely to be resolved unless the scale of the human enterprise – global population size and per capita consumption among the rich – can be reduced as rapidly as humanely possible.*

*MAHB-UTS Blogs are a joint venture between the University of Technology Sydney and the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to joan@mahbonline.org*

MAHB Blog: <http://mahb.stanford.edu/blog/humanitys-gamble2/>