Population Growth in the Third World

According to the United Nations, "Three quarters of the people in the South [southern hemisphere] live in ecologically fragile areas. Poverty forces them to exploit their limited resources just to survive, leading to over cropping, overgrazing, and overcutting…A vicious cycle of human need, environmental damage, and more poverty ensues." (Hertsgaard 1999:199)

Every 60 seconds, the world population increases by 175 people, a rate of about three people every second. Therefore, about 1.8 million people join the human population every week and 93 million join every year (Chiras 1994:109)! Globally, exponential human population growth, growth that increases by a fixed-percentage, has put enormous stress on the environment and its resources, creating difficulties in meeting the basic needs of the people. According to Paul Erlich, population growth is directly linked to environmental stress as well as environmentally induced economic decline (Cited in Chiras 1994). By 1960, after a decade marked by an emphasis on global development efforts in areas of public health and formal education, several ominous global trends became apparent. The UN Economic and Social Council observed a number of developments. They found that the global population had increased by 19% during the 1950s alone. A demographic change of this magnitude had never been recorded in human history and gave rise to the term "population explosion"(Chiras 1994). Demographers found that developing countries, those with low per capita income, inadequate education, and poor nutrition currently contain three-fourths of the world's population, double about every 41 years, and are responsible for 90% of the current escalation in population growth (Chiras 1994:105). Overpopulation has been identified as the primary cause of impoverishment in the Third World and is at the root of virtually all environmental problems including pollution and resource depletion. Current exponential population growth cannot continue without serious consequences. Therefore, both developed and developing nations must take measures to

curb their growth in order to create a sustainable future. This essay explores the specifics of population growth rates in the Third World and helps to illustrate the scale of the population problem. Examining an effective attempt at population control that takes place in Kerala state, India, provides options for a sustainable future.

In order to understand the situation in the Third World we must also understand why populations grow and what factors affect the rate of growth. A population's growth rate is determined by evaluating a simple growth rate equation. The equation subtracts the number of deaths in a given population from the number of births in any given year.

Growth Rate = (Crude Birth Rate – Crude Death Rate)

Crude birth rate is the total number of births per 1000 in a population. Crude death rate is the total number of deaths per 1000 people (Chiras 1994:113). By looking at the equation one can see that anything affecting these two variables affects the population. Their relationship determines whether the world's population is growing, shrinking, or staying the same. Both birth rates and death rates are influenced by a variety of factors. The crude birth rate of a population, for example, depends on a number of social variables including the availability of contraceptives, the age at which men and women get married, their educational level, a couple's religious beliefs, as well as the status of women. The total fertility rate (the number of children women in a population are expected to have in a lifetime) is another important predictor of crude birth rate. The biological variables affecting fertility include disease and nutrition (fertility is also influenced by the previously stated social variables)(McElroy and Townsend 1996). For example, a healthy, well-nourished woman is likely to have a higher fertility rate than one who is hungry and suffering from disease. Death rates are equally important when determining population growth. Death rates of a given population are affected by the introduction of modern

medicine, better sanitation, pesticides (which curb the number of deaths due to insects carrying infectious diseases), and industry.

Even though the problem of overpopulation is not specific to the Third World (the United States has not reached a balance between births and deaths and is still increasing exponentially), people in developing countries are reproducing faster and in larger numbers than those in the developed world. The question is, why are the populations of poor, undeveloped countries growing so much faster than those of developed nations?

A few decades ago, death rates in the majority of Third World countries were extremely high, with children being the most vulnerable (very few children lived longer than one year)(Chiras 1994:113). As a result, families had large numbers of children in order to increase their numbers of surviving offspring. Even though the social and biological conditions of developing nations allowed for elevated birth rates, the high death rates kept population growth in check. With the introduction of modern medicine and technology (immunization and oral rehydration therapy) the child survival rate in poor countries increased. People in the developing world gained access to modern medicine and became educated about the benefits of proper nutrition and sanitation. Death rates declined, initiating rapid population growth without economic change. People continued to have large numbers of children as they had in the past; however, most of their children were surviving past their first year. The well-meaning efforts to improve and elongate the lives of many through health care and other measures tipped the population growth equation and catalyzed a surge in population growth. In short, the decline in death rates was not paralleled by a decrease in birth rates, thus creating rapid growth in the Third World. A common question is, “why don’t the poor simply stop having so many children?” The

answer to the population problem is not so easy. In developed countries, for example, the presence of strong economic structures insure a low infant death rate and, in turn, assure parents that their children are going to survive. Therefore, there is no need for parents to have high levels of fertility. In addition, supporting children in the developing world is expensive, and the fewer kids a family has, the more probable it is that those few will survive and have greater life chances. Inversely, surviving children are an economic necessity in many parts of the Third World. Families need to have children to perform work. In addition, there are no social services in most Third World countries and parents need children to take care of them in their old age. Because people in developing countries still have low confidence that their children will survive past the first year, they continue to elevate their fertility. Finally, woman's status in some Third World societies influences fertility because they rarely have control over their own bodies. Access to contraceptives and family planning is limited to women for many reasons including religious prohibition and financial constraints.

The dimensions of the population crisis did not get so large simply because the human population is growing by a fixed percentage every year (exponential growth). It is because population, pollution, resource use, and environmental damage are all increasing exponentially. There are numerous consequences associated with the demographic trends taking place in countries such as India and Nepal. When examining the environmental and social costs of human overpopulation we must start by understanding the concept of carrying capacity. Natural ecosystems persist because they possess mechanisms that limit populations within the carrying capacity of the environment. Carrying capacity is defined as the maximum number of organisms that an ecosystem could support for an indefinite

period without degrading environmental resources (McElroy and Townsend 1996:37). The carrying capacity of the Earth is determined by at least four factors: living space, food production, resource availability, and waste assimilation. Carrying capacity is not static, however. It varies from year to year depending on factors such as climate. In addition, organisms can change the carrying capacity of their environment. Humans have been able to expand the Earth's ability to support more people through advances in tool making, agriculture, industry, and medicine (Chiras 1994). Clearly, the technological evolution of human civilization has increased the Earth's carrying capacity, and some believe that the Earth can hold even more people. However, we have evidence that the current human population already exceeds the Earth's carrying capacity. Polluted air, depleted ocean fisheries, species extinction, deforestation, stripped landscapes, poverty, widespread starvation, acid deposition, and global warming are all signs that we are living unsustainably and that humanity has pushed beyond the carrying capacity of our ecosystem (Bodley 2000). Our planet is no longer able to naturally assimilate the large amounts of waste produced by our excessive population expansion. Further pollution of the air and water; increased shortages of food, water, grazing land, and other natural resources; or continued extinction if plants and animals could cause the population size to decrease over time, or even quite suddenly. Reaching a level of sustainable living requires efforts not only to slow the growth of the human population but also to stop it.

So, what are the solutions? People are not victims of their own fertility. They can make choices about how many children they have. For example, when the cost of a large family outweighs the benefits, people voluntarily reduce the number of children they have. There are three effective ways to reduce the fertility of a population:

1) Make sure that children survive and provide adequate health care for children, thus increasing the child survival rate.

2) Reduce poverty and dependence on child labor. This can be achieved through redistributive mechanisms and government incentives for smaller families.

3) Empower women: If you give women the power and ability to make their own reproductive decisions they will reduce their fertility. Educate women (and men) about the implications of large families; make changes in social attitudes concerning birth control, contraceptives, and abortion. Give women access to economic resources independent of their husbands so that their value and status is not determined by their fertility.

An example of the effective execution of these population control strategies is that of Kerala state. Located on the southern tip of India (see map below), Kerala is one of the

smallest states in India. Formed in 1956, Kerala is the most progressive state in India. Although India has a Third World economy, the living standard and progress of Kerala is almost equal to Europe. For example, Kerala's literacy rate (90.59%) is the highest in India and one of the highest in the world. Kerala's history of matriarchy, general knowledge, and political awareness in unparalleled in the Third World (Microsoft® Encarta® Online Encyclopedia 2002)**.** The most remarkable thing about Kerala is that it has reduced its birth rate by 40% in the last 15 years (Gulati 1993, Nature of Things, n.d.). In Kerala, the burden of human fertility is being limited. It's a unique success and its been achieved by the women. When the local government recognized the growing poverty and congestion of Kerala as a problem, they initiated a set of population control strategies that paralleled the three stated above. A health care program, primarily for women and children, was introduced. Traveling clinics visited villages, monitored the growth of the children, and educated mothers about proper nourishment, hydration, and hygiene. Next, the government changed the social attitudes concerning contraception and fertility by providing cash incentives for men and women who were sterilized (the surgery was free and safe). In addition, condoms and birth control pills were distributed by the traveling clinics. However, the education and empowerment of women had the biggest impact on the fertility rate of Kerala. The government pressured young women to go to school. Opportunities for higher education and choice job positions opened up to women of all economic backgrounds. As a direct result, more and more Kerala women postponed marriage and children to pursue their careers. This denied them of at least three years of fertility. As women gained access to economic resources independent of their

husbands, they were no longer valued solely by the number and sex of the children they had in a lifetime. The government of Kerala state realized that to be effective, their population-control program must address cultural beliefs, psychological factors, and educational barriers (Nature of Things, n.d.). The situation in Kerala projects successful and positive options for a sustainable future.

The future of world population is difficult to determine because hardly any factors, such as fertility, are static. Some demographers believe that world population will level off somewhere between 8 and 15 billion and that the exponential growth curve will make a smooth transition to a stable population size. Others believe that the exponential growth curve will go through a gradual drop-off caused by population exceeding the carrying capacity. Still, others foresee a more ominous pattern. Instead of leveling off or declining smoothly, the human population may experience sudden die-offs followed by spurts of growths and plunges (Chiras 1994). In many regions, human populations have already exceeded the carrying capacity of the environment. The Earth's carrying capacity, if exceeded, could result in a devastating crash virtually eliminating humans and other organisms from the Earth. With Kerala state as an example of what changes can be accomplished there is clear hope for the future.

Literature Cited

Bodley, John. 2000. *Cultural Anthropology: Tribes, States and the Global System*. Mountain View, CA: Mayfield Pub. Co.

Chiras, Daniel D. 1994. *Environmental Science: Action for a Sustainable Future*. Redwood City, CA: Benjamin/Cummings Pub. Co.

Gulati, Leela. 1993. Population Ageing and Women in Kerala State, India. *Asia-Pacific Population Journal* 8(1): 53-63.

Hertsgaard, Mark. 1999. *Earth Odyssey: Around the World in Search of Our Environmental Future*. New York: Broadway Books.

McElroy, Ann and Patricia K. Townsend. 1996. *Medical Anthropology in Ecological Perspective*. Boulder, CO: Westview Press.

Microsoft® Encarta® Online Encyclopedia. 2002. "Kerala". *Http://encarta.msn.com* © 1997-2002 Microsoft Corporation.

Nature of Things. N.D. The Women of Kerala State. Video program produced by the Canadian Broadcasting Corporation. [Date of production unknown].

World Bank. 2000. *World Development Indicators*. New York: Oxford U. Press