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Populations: A Numbers Game

by Anup Shah | This Page Last Updated Sunday, September 02, 2001

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The human population of the planet is estimated to now have passed 6 billion people¹. This can be seen as a success story (as the previous link mentions), due to improved health care and reduced infant mortality while expanding life spans. However, a common concern is that as the population continues to increase, it will place more strain on the environment, on nations' ability to provide, economies to grow and society to flourish.

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Population Numbers

The United Nations Population Fund estimate the population will rise to around 9.3 billion by 2050:

World population reached 6.1 billion in mid-2000 and is currently growing at an annual rate of 1.2 per cent, or 77 million people per year. Six countries account for half of this annual growth: India for 21 per cent; China for 12 per cent; Pakistan for 5 per cent; Nigeria for 4 per cent; Bangladesh for 4 per cent, and Indonesia for 3 per cent. By 2050, world population is expected to be between 7.9 billion (low variant) and 10.9 billion (high variant), with the medium variant producing 9.3 billion.

— *World Population Prospects, The 2000 Revision Highlights*², United Nations Population Division, Department of

Population densities also vary between regions:

Population in 2001

Country	Total (in millions)	Density (People per square kilometer)	GNP rank
China	1,285	134	7
India	1,025	312	11
United States	286	31	1
Indonesia	214	113	30
Russian Federation	145	8	16
Bangladesh	140	975	53
Japan	127	337	2
Nigeria	117	127	55
Germany	82	230	3
United Kingdom	60	244	5
France	59	108	4
Italy	58	191	6

Sources:

- Population and density figures are from *Population, Environment and Development 2001*, United Nations Population Division home page³.
- GNP data from Size of Economy (GNP) from Table 1.1⁴, *World Development Report 2000*, World Bank

Some notes on the above data:

- I list some nations, (not the full list of course, for which you can follow the cited sources!) initially by GNP.
- I list the main economic powerhouses plus India, China, Indonesia, Nigeria and Bangladesh, as nations that have highest population growths.
- We see that some developed countries have higher densities than developing ones, and also vice versa.
- As we will see in the consumption part of this section, some of the wealthier nations, even if they have smaller populations, consume more resources.

Large populations in and of themselves may not be a bad thing⁵. Many cities in Europe for example, have a higher population density compared to places we normally think of as over crowded, such as India or China. However, where it could cause problems is if demands on natural resources and development increases in an unsustainable and wasteful way, which, unfortunately is how it seems to be happening in many places today.

It was especially during imperial/colonial times that the small European nations (the “centers of capital and empire”)

with large densities had to get their resources from the colonized nations (the “peripheries of empire”) to maintain their high standards of living (and this was really the wealthier classes in Europe, not all people). The Imperial European nations’ ecological footprint was often larger than the size of the nation itself. (This still goes on today with today’s “empires” such as USA, Japan and Western Europe, via trade and economic policies which we will see in following sections.)

A lot of complex reasons all play a role in determining where a large population would be “over” population, such as:

- the exploitative consumption and trading policies that have resulted⁶ in poverty of many people which, in some places, has led to unsustainable use of the environment just to survive
- or due to a region where the ecosystem cannot usually cope under larger populations or changing demands of a given population
- cultural and other societal differences that affect how large family sizes are, or how resources are consumed and shared, or not
- etc.

It is likely, though, that the explosion in population in the last century or so will not continue at the same rate given improved education, advanced technologies etc (and in many regions, population growth *rate* is actually slowing down, while the *absolute* population number is increasing still). It is often global and related national economic practices that can adversely impact ecosystems and the populations alike.

“Overpopulation” or not? Who do we believe?

It seems as though the population debate (whether it is an issue or not, and if so, how to tackle it), seems to have more than two sides to the argument—It has at least four broad categories, at least two stemming from an argument that it is not an issue and at least two from the view that it is:

Two sides that defend current population numbers:

1. Corporations and other power holders that wish to continue their current economic policies, and who see technology solving all the associated problems thus allowing populations to grow.
2. Progressive people who believe that there are enough resources to sustain even a slightly larger population than we currently have, but that will cause problems later. This group believes that there are numerous political issues (largely caused by those in the group above!) that could be tackled either as well as tackling population growth issues, or instead of directing effort towards population growth issues. Some of the links to more information presented below are from groups that fall into this category. “The Politics of Human Numbers⁷” article makes some interesting points. So does this “Population?!⁸” article. People in this group (and the next) would typically be active on issues such as empowerment and equity of women, supporting reproductive health services and so on.

Two sides who feel that over-population issues are affecting us now and that something must be done now:

1. Environmentalists and other concerned citizens and activists who have a genuine altruistic nature and concerns for people and the environment. Some (not all) of those in this camp follow the Malthusian principles

that “numbers and simple analysis could yield an improved understanding of contemporary and future population problems, and that steady growth of populations would produce great and grave problems” (quoted from this link⁹). Some of the links to more information on this section of this site are from groups that fall into this category.

2. People who can use this argument for racial purposes—to discriminate against immigrants, to in essence promote eugenics¹⁰, social Darwinism and so on. Some of these people may also originally have genuine concerns for the environment and have formed extreme ideas about solutions (as can be seen by the article at this link¹¹). Such solutions include following draconian population reduction policies, increasing restrictive immigration policies and so on. In fact, it is interesting to note that some criticism of Malthusian principles point out how that it is based on class distinctions, often looking at the poor as the cause of the problems.

Most people appear to fall into the first categories of each side of the argument mentioned above, due to political influences. However, it is most likely somewhere in between the Progressive and Environmentalist view points above. Of course, the risk of categorizing people means that other perspectives are perhaps less emphasized or missed out. Indeed, there are also those who for example will have a mix of perspectives, including a mix of progressive and environmental ones where perhaps they feel their either is or isn't a problem now, but that the way to deal with it is largely to tackle root economic and social conditions that determine how our resources are used and shared among people.

There are also, some geopolitical concerns too which have been pointed out by some, especially in light of the fact that really it was in the 1950s and 60s that population growth in poor countries started to become a concern to western governments. For example, a U.S. National Security Study memorandum produced in 1974 by the National Security Council at the request of then U.S. Secretary of State, Henry Kissinger, concluded that there were four types of reasons that population growth in poor countries could be a *threat* to U.S. national security:

1. Larger nations would gain greater political power
2. Populous nations would be more able to deny the West access to resources and materials
3. Growing number of younger people might be more able to challenge global power structures
4. Growing populations may be a threat to U.S. investors in those countries.

The memorandum mentioned nations like India, Brazil, Thailand, Turkey, Ethiopia and Colombia as countries of concern in this respect. You can see the memorandum from this Africa 2000 link¹² which includes an FAQ. The resulting report was titled *Implications of Worldwide Population Growth for U.S. Security and Overseas Interests* and serves as an official foreign policy guide to population issues for the U.S. today as well. The request for the memorandum was called NSSM 200 (National Security Study Memorandum), while the official endorsing of it that led to it being a foreign policy guide was called NSDM 314 (a National Security Decision Memorandum).

Richard H. Robbins, in his book *Global Problems and the Culture of Capitalism* (Allyn and Bacon, 1999), also points this out (p.159) and concludes, citing others:

Thus, as Steven Polgar (1972, 1975) suggested, U.S. foreign policy was driven less by a concern for overpopulation than by a concern that increasing population in the periphery hindered the possibility of raising the income level (and purchasing power) of people in the periphery and a concern that

increased populations might represent a political and economic threat to the United States. Polgar said that population concerns in core countries stem not from a fear of overpopulation but from a change in the role of exploited countries. People in the periphery were needed at first for labor and later for markets. In fact, until the 1940s core countries not only were unconcerned with population growth in the periphery, but they complained it was too slow. Once the need for certain raw materials declined as synthetics were developed, and as the poverty of these people precluded their becoming turned into consumers, they ceased being useful, especially since they became potential revolutionaries, migrants, and criminals. “The subjects,” as Polgar (1972:197) put it, “have become burdens.”

— *Richard H. Robbins, Global Problems and the Culture of Capitalism, (Allyn and Bacon, 1999), pp. 159–160. (You can see the on-line accompanying reading materials [here](#)¹³.)*

(Periphery is often a term used to indicate poor, third world or developing nations, that were former colonial countries at the “periphery” of capital. The opposite being the Centers of capital which is largely the West, today.)

Promoting concerns of population issues and blaming the poor could therefore also be seen as a political tool as well as honest scientific/cultural/social/economic issue.

Assumptions and frameworks to explain population growth

A number of assumptions are made about population growth, its effects (positive or negative), and therefore this affects how we see it and how to tackle it, if at all. Summarizing from Robbins, mentioned above (p.149), assumptions include the following:

- Population growth leads to negative effects such as
 - Economic decline
 - Stagnation
 - Global poverty
 - Hunger
 - Environmental devastation
 - Political unrest
- Decreasing death rates in poorer countries, due to medical enhancements, better nutrition, improved sanitation etc led to population increases.
- High mortality balanced by a high birth rate led to stable populations before the rapid growth in the eighteenth century.
- Religious beliefs that promote large families and lack of education for women in poorer countries hamper the ability to control populations.
- Only Western forms of birth control techniques and educational programs will slow birth rates.

These assumptions ignore many socio-economic factors that affect population growth and decline patterns. However, some major frameworks provide support for these perspectives that make them such popular assumptions:

Malthusian perspectives

Thomas Malthus in 1798, wrote the famous *Essay on the Principle of Population*, saying that while populations increase at a geometrical ratio, resources for survival, especially food, increase with a ratio that is only arithmetic. As a result, without “moral restraint” and other checks to control fertility, populations will increase, use up our resources and result in things like famine, war and disease to balance resources and population.

While his theories sound nice and simple (and easy to grasp and therefore popular), a number of criticisms have emerged from various perspectives. One of them includes the actual concerns that Malthus was addressing and is summed up by the following:

[P]opulation growth was not, for Thomas Malthus, the major issue. What concerned him was the rising number of poor in England, why they should exist and what should be done about them. Poverty, according to Malthus, was not a consequence of expanding industrialism, enclosure laws that evicted people from common lands, or the need of manufacturers for a source of inexpensive labor, but arose from the laws of nature, the discrepancy between the powers of reproduction and the ability to expand food production. People were poor because of there were too many of them, and because they kept having children in spite of their poverty. Providing relief to the poor, argued Malthus, would simply encourage them to have more children. Instead, they should be forced to delay marriage (Malthus was opposed to all forms of birth control).

...

The Malthusian position assumes that if poverty exists it must be because of overpopulation, which is the fault of those people who, because of a lack of moral standards, refuse to change their reproductive behavior. There also may have been in the Malthusian position a fear that the army of the poor gathering in cities such as London would stimulate revolution, much as it did in France in 1787.

— *Richard H. Robbins, Global Problems and the Culture of Capitalism, (Allyn and Bacon, 1999), pp. 158–159. (You can see the on-line accompanying reading materials [here](#)¹⁴.)*

In that light, Malthus was in essence blaming the “victims”. This also lent itself well to those who pursued eugenic theories to back notions of racial superiority via genetic traits etc. That is not to say that all, or even most, Malthusians were eugenicists and racists. However, Malthusian principles do have a class bias in them which makes it hard to accept as a complete explanation, as it then questions other perspectives on how global issues are looked at. (Note also, for example, the reference to land ownership and control related issues. These are significant factors in many issues related to poverty, the environment, population and so on and will be discussed in following sections.)

This is also a sentiment that continues today, among many who are wealthy, even in poorer nations:

"[An] incredible thread that often runs through the thoughts of the comfortable is the notion of “blaming the victim.” The poor are miserable because they have too many children, the reasoning goes. Once they start family planning and control their procreational urges, they’ll be on their way to upward mobility. “The better off have always had this attitude toward the poor,” [Dilip] D’Souza says.

“But now it is respectable to say this.”

— Amitabh Pal, *The Great Divide; India Confronts Globalization*¹⁵, *In These Times*, September 3, 2001

For today, as during Malthus’s time, it also allows the underlying models of political economics, exploitation etc to continue, because those are not seen as the issue. Instead, the poor are to blame in some ways. (More about the consumption and economic models’ impact on the environment will be discussed later in the consumption/stress part of this section.)

Demographic Transition

Another theory on populations is known as the demographic transition which says that birth and mortality rates are linked, so that for example, a high rate of both leads to stable population growth, while an imbalance of high birth rates compared to mortality rates would lead to accelerated growth. Advances in medicine, health, modern contraceptives are attributed to declines in population growth in developed countries today. However, as Robbins (who was quoted above) continues and points out on demographic transition theorists, there were numerous assumptions which he says has a “clearly ethnocentric bias”:

- Fertility rates in pre-industrial, non-Europeans would not or could not be controlled.
- Only Western methods of birth control and contraception would stabilize population growth.
- It is assumed that the resistance of people in poor countries to adopt Western standards of fertility is because of irrational thinking, outmoded religious values, traditional/fatalistic world views etc, while fertility control is seen as rational and modern.

Much of this ignores variations in fertility that arise from various economic and social factors and that pre-industrial societies were actually healthier than we generally believe.

Economic development is seen as another answer. However, the *type* of economic development must be questioned. Later in this section, a look at consumption patterns and the current forms of economic development are shown to be more damaging to the environment than just population numbers alone and that these consumption patterns are seen in wealthier nations, not the poorer ones where people prescribe the overpopulation cures.

What affects population growths and declines, anyway?

While the basic factors affecting population growths and declines are obviously found in births and deaths, there are also additional socioeconomic and cultural factors affecting birth and death rates, such as:

- Fertility (affected by the space of time between children, which itself is affected by cultural norms or cultural taboos as well as consumption patterns)
- Migration (which can influence regional patterns of growth and decline, as a population where many migrate away can lead to a lower population and a reduced pressure of population. Rising birth rates may result if marriages then occur earlier, which is likely. If more men migrate, there are fewer women that will marry which could also lower birth rates instead)

Socioeconomic factors often affect fertility rates and migration patterns themselves, such as (but not limited to):

- Removing or reducing land rights
- Increasing concentration of ownership of land
- Economic/trade policies that increase poverty (such as Structural Adjustment policies that can result in):
 - Lack or reduction of education
 - Lack or reduction in health care
- Lack of rights for women
- and so on.

Robbins continues to show how in prehistoric hunter/gathering societies, fertility rates were generally low and increased when they settled. He continues to then contrast that with the case of French Canadians, which had a high percentage of men, leading to earlier marriages and high fertility. While it had the highest fertility rates in the 18th century, it now has one of the lowest, even though it is a predominantly Catholic society.

He also details the Irish potato famine and the relation to populations. Here he shows another circumstance where the control of land by British landlords led to an initial doubling from 4 million to 8 million between 1780 and 1840 due to increasing available land for Irish people to use for their own needs. Potato was really the main crop grown and when a fungus struck in 1845 and affected entire harvest of the following year, about 1.1 to 1.5 million deaths occurred as well as an annual exodus of 200,000. The average age of marriage also increased. By 1901, the population was down to 4.5 million. He also points out that while an eighth of the population starved, shiploads of food, protected by armed guards, made their way to the ports of England, where people who could afford the food would purchase them. This was an example of how economic and political factors affected populations.

In these circumstances, fertility rates were changed according to the different environmental, social and/or economic circumstances, not necessarily because of improvements in health etc.

Furthermore, similar environmental, socioeconomic changes etc may not always lead to same result in terms of population growth and sizes, because of so many other complex factors involved, as well as the complexity of these factors themselves. For example, in Ghana, population related studies showed that in some cases due to high costs of education and health, the cost of too many children led to some poor families choosing to have fewer children. In this scenario, family planning programs were very effective and successful.

For additional examples and discussion of these aspects, see also chapter 3 of *World Hunger: 12 Myths*, 2nd Edition, by Frances Moore Lappé, Joseph Collins and Peter Rosset, with Luis Esparza (fully revised and updated, Grove/Atlantic and Food First Books, Oct. 1998). With kind permission, it has been reproduced and posted on this web site, at this link¹⁶ (and from that link, you will see links to other sections from that chapter which you can browse for more details as well).

Gender empowerment

Empowering women, providing better education etc are also related to economic circumstances to some extent, as mentioned by Robbins, who quotes Handwerker in a study on changes in patterns of family relations:

Handwerker (1989:210) concluded that changes in patterns of family relations, not large-scale population control programs of the sort advocated by the Cairo Population Conference, will determine fertility. It is not knowledge of contraceptive techniques or a population problem per se that inhibits women from having smaller families, but an issue of power relations. Family planning programs, said Handwerker:

Should not be expected to bring about fertility transition because they can neither create the jobs, nor provide the education necessary for many jobs that would permit women to achieve meaningful control over their own lives. The “right” to have a small family is not a real option for women who are dependent for basic material well-being on their children.

— Richard H. Robbins, *Global Problems and the Culture of Capitalism*, (Allyn and Bacon, 1999), pp. 176–177. (You can see the on-line accompanying reading materials [here](#)¹⁷.)

Education and empowerment for women is definitely important. It is not to say there should be none. It is to recognize that as well as providing better education, the economic environment must be improved upon so that education can be made use of.

(More discussion on the importance of gender issues, womens empowerment and so on is discussed later on another in this section.)

Economics and poverty

Economic factors, as mentioned above, can also have an affect on fertility and populations. Lappé, Collins, Rosset and Esparza also point out how in many cases in conditions of poverty, families will make an economic choice to have larger families to hope for an increased chance in survival. (See the above link for more). Poverty, arising from adverse economic conditions and impositions, as detailed in the poverty section¹⁸ of this web site, therefore can have effects on population sizes.

But larger families do not necessarily mean additional consumption of resources that devastate the environment in all cases. In fact, the nuclear family of western cultures (the 2.4 children family), while smaller in number often consume far more resources. Robbins also details how in the 1940s and 1950s, the U.S. Department of Commerce, at the pressure of affected businesses promoted the notion of larger homes, and even a room per child, in order to increase sales of the many products that are purchased in a home. It is well accepted that with four percent of the world’s population, the U.S. consumes from 20 to 25 percent of the world’s resources. In that light then, just sheer population numbers alone do not constitute “over” population.

Over-population has to be in relation to something to qualify it being over. That something is the use of resources. Tackling inequitable resource consumption, and its sustainability, as well as the economic fundamental drivers that lead to this would be a better place to address the effects on the planet that are often attributed to population sizes.

This is further seen in the agricultural practices and land use in poor nations in such a way that the poorer people don’t get to see much of the food produced. The increasing emphasis on monoculture (growing single crops at a time),

which require additional inputs, such as more water, more land, increased herbicides and fertilizers etc result in serious resource consumption and environmental degradation more so than the effects of the poor. Land in poor countries is often cleared to grow cash crops to export to the wealthier nations, leaving less for the use by the poor themselves, reducing their chance to get out of poverty and hunger, and also increasing the damage to the environment, due to unsustainable use of the land, water and other resources. And it is not always the poor that are clearing these lands and forests; it is often multinational corporations or the nation at the suggestions of institutions like the IMF and World Bank. For more about those perspectives, see this web site's section on hunger and poverty¹⁹ and biodiversity²⁰.

Also, because the land is so poorly used, top soil erosion, polluted water, water scarcity etc affect and burden the poor further. Increasingly, as land is unusable, and because of power politics resulting in a concentration in land ownership, people move to the cities for wage labor, as they are driven away from subsistence labor. Land ownership for the poor provides mechanisms to ensure sustainable and efficient use, because of the need to care for it for their survival, as detailed for example, by Vandana Shiva, in her book *Stolen Harvest* (South End Press, 2000). The increasing populations in cities are no doubt a strain in many cases but the causes of “over” population in those cities are rooted in these economic policies and conditions.

Are increasing populations a cause of problems, or effects of others?

Population numbers are a concern of course. Environmental degradation is a concern of course. However, conventional or mainstream theories that blame environmental degradation on over population, where it is the poor that is largely accused of the problems, and not other activities by humans that are more damaging leads to inappropriate suggestions on how to deal with the issue. It is worth quoting Robbins once again here:

Whether there is a population problem remains a moot question at best. There is no evidence that population increases in the periphery [poorer countries] inhibit economic development, or that population increases are the major cause of poverty and environmental devastation. Poverty clearly is related to colonialism and the expansion of the capitalist world economy, and as we shall see, population growth in the periphery is at best a minor factor in global pollution. This does not mean population regulation is universally undesirable, but it does mean fertility decisions are best made by women and men together based on local economic and social conditions, not be central planners whose ulterior motives may not be in the best interest of the people involved. It is foolhardy at best to expect a woman to have fewer children if they are her major source of economic security. And it is foolish to force families to reduce their size if the family's economic well-being depends on the size of the family production unit and its ability to supply labor or bring in additional wages.

— *Richard H. Robbins, Global Problems and the Culture of Capitalism, (Allyn and Bacon, 1999), p.177. (You can see the on-line accompanying reading materials here²¹.)*

In the next paragraph, he does however, point out that “it is clear that smaller families can confer some benefits. Research suggests for example, that educational opportunities for children, particularly women, decline in larger families. This if education is a condition for economic independence limiting fertility is likely to be desirable (Birdsell 1994).”

Note however, that structural adjustment policies of the World Bank and IMF (and pushed by wealthy countries like the U.S.) have forced poor countries to cut back on things like education, health and so on, making the above-mentioned economic independence harder to gain. Therefore in many cases (not all), the other option of larger families have been followed.

Oxfam also points out that population factors are related to causes of poverty, when commenting on the belief that there are too many people and that the poor have too many children:

Poor people do have large families but usually because they HAVE TO. For a start, many children die young, so couples have more as a safeguard. Those who do survive often bring in additional income for the family, help with farm work and provide security for parents in their old age.

There's no doubt that a rapidly growing population can strain a poor country's natural and financial resources. However, concern over population size often obscures the fact that it's inequitable distribution of resources (like land) among people, rather than their numbers, that causes poverty.

Paradoxically, the most effective way to stabilise population growth is to raise living standards: as men and particularly women gain increased access to health services, become better educated and more financially secure (as is happening with the middle classes in many Third World cities), they tend to have fewer children.

— *Why a Third World?* ²², *Exploring the reasons for poverty in developing communities, 1992, Oxfam Community Aid Abroad*

The types of family bonds and ties that are created differ between the nuclear family and this extended family, and so if circumstances allow for smaller families, there is also a change in the social makeup of the family structure. While there are many positive aspects for a smaller “nuclear” family, there is one aspect with regards to consumption mentioned above, but also quoted here, again from Robbins:

Nuclear family structure, especially to the extent that it requires a reversal of wealth flow from children to parents to parents to children, has created, again since the 1950s, a whole new class of consumers—twelve—to twenty-year-olds, with their own supply of wealth and their own consumer desires (and culture). *Will that create new markets and economic growth, or will it bring with it the same social problems that so-called youth culture creates in our own society?* Obviously it is difficult to predict, yet there has been virtually no discussion on the implications of changes in family structure that are required if we continue to promote fertility decline. (Emphasis is original)

— *Richard H. Robbins, Global Problems and the Culture of Capitalism, (Allyn and Bacon, 1999), p.178. (You can see the on-line accompanying reading materials here* ²³*.)*

In the highly acclaimed book, *World Hunger, 12 Myths* when looking at the issue of population, the authors concluded the following:

Critical points [are] too often muddled in discussions of population:

- Fertility and population-growth rates are declining worldwide.
- Population density nowhere explains today's widespread hunger.
- Rapid population growth is not the root cause of hunger but is-like hunger-a consequence of social inequities that deprive the poor majority, especially poor women, of the security and economic opportunity necessary for them to choose fewer children.
- To bring the human population into balance with economic resources and the environment, societies must address the extreme maldistribution of access to resources-land, jobs, food, education, and health care. That is our real challenge.
- Family planning cannot by itself reduce population growth, though it can speed a decline. Family planning can best contribute to the transition when it is but one part of comprehensive changes in health care that expand human freedom and opportunity rather than control behavior.

We believe that precisely because population growth is such a critical problem, we cannot waste time with approaches that do not work. We must unflinchingly face the evidence telling us that the fate of the world hinges on the fate of today's poor majorities. Only as their well-being improves can we attack hunger and assure that fertility decline is sustainable.

To attack high birth rates without attacking the causes of poverty and the disproportionate powerlessness of people is fruitless. It is a tragic diversion our small planet can ill afford.

— *Frances Moore Lappé, Joseph Collins and Peter Rosset, with Luis Esparza, World Hunger: 12 Myths, 2nd Edition, by (fully revised and updated, Grove/Atlantic and Food First Books²⁴, Oct. 1998), p.40.*

Further pages within this population section of this web site will also introduce resource usage and consumption issues, but first we look at the impacts on providing food for a growing population. (The entire chapter from which the above is quoted, is also reposted on this web site, which we turn to next.)

Where next?

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9. [Loss of Biodiversity and Extinctions](#)
10. [Nature and Animal Conservation](#)

Online Sources:

(Note that listed here are only those hyperlinks to other articles from other web sites or elsewhere on this web site. Other sources such as journal, books and magazines, are mentioned above in the original text. Please also note that links to external sites are beyond my control. They might become unavailable temporarily or permanently since you read this, depending on the policies of those sites, which I cannot unfortunately do anything about.)

1. <http://www.ens-newsire.com/ens/jul1999/1999-07-19-05.asp>
2. <http://www.un.org/esa/population/publications/wpp2000/wpp2000h.pdf>
3. <http://www.un.org/esa/population/unpop.htm>
4. http://www.worldbank.org/data/wdi2000/pdfs/tab1_1.pdf
5. <http://www.africa2000.com/IMPACT/populationwar.html>
6. Global Issues: “Trade, Economy, & Related Issues”, Last updated: Saturday, November 12, 2011,
<http://www.globalissues.org/issue/1/trade-economy-related-issues>
7. <http://www.africa2000.com/IMPACT/populationwar.html>
8. <http://www.zmag.org/zmag/articles/albert3.htm>
9. <http://www.dieoff.com/page147.htm>
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13. http://faculty.plattsburgh.edu/richard.robbins/legacy/population_readings.htm
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17. http://faculty.plattsburgh.edu/richard.robbins/legacy/population_readings.htm
18. Global Issues: “Causes of Poverty”, Last updated: Sunday, April 08, 2012,
<http://www.globalissues.org/issue/2/causes-of-poverty>
19. Global Issues: “World Hunger and Poverty”, Last updated: Sunday, August 22, 2010,
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20. Global Issues: “Biodiversity”, Last updated: Sunday, March 04, 2012,
<http://www.globalissues.org/issue/169/biodiversity>
21. http://faculty.plattsburgh.edu/richard.robbins/legacy/population_readings.htm
22. <http://www.caa.org.au/publications/iid/WATW/index.html>

Note, if the above link has expired, please try the following alternative

Archived copy of the original publication, from archive.org

<http://web.archive.org/web/20031020042444/http://www.caa.org.au/publications/iid/WATW/index.html>

23. http://faculty.plattsburgh.edu/richard.robbins/legacy/population_readings.htm

24. <http://www.foodfirst.org>

by Anup Shah

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“Give a man a fish; you have fed him for today. Teach a man to fish; and you have fed him for a lifetime.” — *Old Chinese Saying*

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