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## Impact of Population Growth on Environmental Degradation and Effect on Human Health

*Dr. K. Kanagarathinam*

M.Sc., M.Phil., M.A., M.Phil., MA., B.Ed., MBA., PhD.,

Assistant Professor Dept. of Environmental Science, Sri Subash Arts & Science College, Pollachi, Coimbatore District -642002, Tamilnadu –India :

### ABSTRACT

Population growth is the change in a population over time, and can be quantified as the change in the number of individuals of any species in a population using “per unit time” for measurement. In demography, population growth is used informally for the more specific term population growth rate, and is often used to refer specifically to the growth of the human population of the world. Population dynamics are one of the key factors to consider when thinking about development. In the past 50 years the world has experienced for the more specific term population growth rate depends on the natural increase and on migration global population growth is determined exclusively by the natural increase. Around the world death rates gradually decreased in the 19<sup>th</sup> and the 20<sup>th</sup> centuries with death rates in developing countries plummeting after World War II thanks to the spread of modern medicine that allowed control of infectious diseases. In much of the developing world the decline in death rates preceded the decline in birth rates by 20 years or more, resulting in record high rates of population growth of 3 per cent or even 4 per cent a year. Since the 1960s birth rates have also been declining rapidly in most developing countries except those in Sub Saharan Africa and the Middle East.

**Key words** : unemployment problems, overpopulation, population dynamics, human health, Environment

### INTRODUCTION

As of 2013, the world population is estimated at 7.713 billion by the United States census Bureau (USCB). The USCB estimates that the world population exceeded 7 billion on March 12, 2012. Accounting to a separate estimate by the United Nations population Fund. It reached this milestone on October 31, 2011. The world population has experienced continuous growth since the end of the Great Famine and the Black Death in 1350 when it was near 370 million. The highest growth rates – global population increases above 1.8% per year – occurred briefly during the 1960s. The global growth rate peaked at 2.2% in 1963, and has declined to below 1.1 % as of 2012. Total annual births were highest in the late 1980 at about 138 million and are now expected to remain essentially constant at their 2011 level of 134 million, while deaths number 56 million per year, and are expected to increase to 80 million per year by 2040.

The global human population at present is around 6 billion. It will cross the 7 billion mark by 2015. The world population is growing by more than 90 million per year. Present projections show that if our population growth is controlled it will still grow to 7.27 billion by 2015. However, if no action is taken it will become a staggering 7.92 billion.

### *Objectives of the study*

- To analyse cause of population growth
- To analyse degradation of Environment
- To obtain more Hands to Overcome Poverty

### REVIEW OF LITERATURE

Literatures available on the dynamics of population, poverty and the degradation of forests and the nexus among are plenty. In this connection several studies have also discussed the importance of forest resources on the economy especially for those who depend mostly on such resources for their sustenance and therefore the effect of degradation of such resources. Discussions have been going on to have an idea about the relationships among those aforesaid variables and also to find out the other factors that interfere in the interlinkages among those three. The question always arises that if the relation exists, what is the pattern of such relation and whether it differs from one region to another or from local level to regional and global level? People have been struggling to establish the exact pattern of interconnections for long period of time and to formulate models linking one with another through their physical, technological, social and economic linkages that may lay down the basis for providing a meaningful solution to the observed problems and

avoid any disturbance that may lead to loss of environmental balance and economic collapse. Plethora of studies are available on the topic and after going through those numerous literatures one may find it very difficult and confusing to conclude whether population really matters for environmental and resource management or not. Similarly, there are debates regarding to what extent poverty is responsible for population growth and environmental and resource degradation. Numerous arguments and counter arguments have been given since the development of literature on degradation whether renewable or non-renewable. Similarly, different schools are there regarding the problem of management and control of natural resources and whether the limitation of resources can affect the growth process or not.

**Malthusian theory** (1798 and 1803, republished 1960) formulated before the agricultural revolution, is built upon the assumption that environmental resources such as land are fixed. Malthus did not foresee the technological changes that have accompanied modernization and allowed agricultural output to increase faster than population growth. **Boserup** (1965, 1976 and 1981), however, explicitly takes into account technological change. Moreover, Boserup suggested that in some cases population growth and resulting increased population density might induce technological changes that allow food production to keep pace with population growth. **Simon** (1981 and 1990) went further to suggest that population growth induces sufficient technological change to expand food output faster than population. The dominance of either Malthusian or Boserupian thought in the discussion of population-environment relationships has led to opposing “limits to growth” and “cornucopian” perspectives (Hogan, 1992a). It is important to note that neither Boserup nor Malthus specifically addressed population-environment relations, but rather land use and food production in relation to population. Implications for population and environment relationships have, however, been inferred a posteriori from their work. Both the Malthusian and Boserupian perspectives imply linear relationships between population and environment.

**McNicoll** (1990 and 1992a) focused on social and cultural rather than policy factors that mediate population and the environment relations. In contrast to the direct relationship between other animals and the environment, he suggested that social organization and culture filter and focus the relationship between human populations and their environment (McNicoll, 1992a). He proposed that population growth might also alter the social structure such that new technologies or social forms arose which might change the relationship between population and the environment (McNicoll, 1990).

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### Population and level of consumption

Population growth and consumption are fundamental drivers of human environmental impacts. Humans have changed the Earth's ecosystems more rapidly and extensively in the past 50 years than in any other period of human history. This is mostly due to the ever growing human demand for natural resources such as energy, food, water and wood. These changes have degraded almost two-thirds of the ecosystems on which humanity depends and have resulted in a largely irreversible loss in the diversity of life on Earth (Millennium Ecosystem Assessment, 2005).

**Julian Simon (1981, 1996), Simon and Myers (1994)**, were of the opinion that population growth is not a danger, but a benefit. According to them, the world is not running at the risk of shortage of resources. Rather, population growth in many ways helps economic development and better management of resources through their effort and improving knowledge, innovation, etc. Human being continuously learns how to overcome the bottlenecks imposed by the nature. Johnson (2000) also tried to prove through historical evidences that in spite of huge population growth in the last century the level of well-being has increased manifold.

**Boyce (1994)** also argued that it is not poverty but a combination of greed, power and wealth that causes environmental degradation in many developing countries. Many studies also pointed towards logging activities as the principal activity responsible for unsustainable deforestation in many parts of Asia, Central Africa and South America (Somanathan, 1991 ; Anderson, 1989; Repetto, 1990; Cropper and Griffiths, 1994). During 1980s also in Meghalaya to a certain extent~ due to attractive benefit in the logging industries many of the community forests were privatised that had been harvested unsustainably by new owners of land.

**Bhagat and Hassan (1994)** have shown that the changes in major environmental parameters and degradation of resources in the world during the last Century especially after 1950 was not only due to the rapid growth of population but also owing to the escalation of consumption of fossil fuel, industrial production and the growth of the economy, which have been much higher than the rate of growth of population. Therefore, the degradation of natural resources is a complex interplay of population growth, growth of consumption of resources per capita, advancement of technology and the later one is much more important than the former one.

**Kuri (2005)** by using his village level survey data has shown that around one fourth of the income of rural households in Arunachal Pradesh comes from nearby forest resources. However both poor and non-poor people earn substantial material both for consumption and commercial purposes. By regression analysis also he showed that extent of extraction by the families depends positively on their family size and inversely with the distance of forest from the residence of the families. By using panel data on degradation of forest, incidence of poverty and level as well as variation in per capita SDP, De (2006, op. cit.) has found a significantly positive correlation between income variation and degradation. Also a positive relation is observed in his study between reduction in poverty and degradation of forest. However taking queue from the EKC principle or inverted-U hypothesis one can say that the degradation first increases with the rise in income (i.e, in the early stage of development) and after reaching a peak level it declines with further development (Grossman and Krueger, 1995). He opened that the states of North East India were still low developed having lower per capita income and higher incidence of poverty especially rural poverty than the national average and hence, they were on the rising phase of EKC. Moreover, whatever poverty reduction had taken place it was at the cost of forest resources, which were easily accessible by the people.

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## Effects of Population growth

The population growth overall have the following effect. i.e., depletion of Natural Resources, the effects of overpopulation amount of water and food, which is falling depletion of resources. The Earth can only produce a limited amount of water and food, which is failing short of the current needs. Most of the environmental damages being seen in the last fifty odd years is because of the growing number of people on the planet. They are cutting down forests, hunting wildlife in a reckless manner, causing pollution and creating a host of problems. Those engaged in talking about overpopulation have noticed that acts of violence and aggression outside of a war zone have increased tremendously while competing for resources.

### *Degradation of Environment*

Due to cause of Population Growth environmental and surrounding will be polluted and its affect to effect directly human life and overuse of Coal, oil and natural it has started producing some serious effects on the environment. Rise in the number of vehicles and industries have badly affected the quality of air. Rise in amount of CO<sub>2</sub> emissions leads to global warming. Melting of polar ice caps, changing climate patterns, rise in sea level are few of the consequences that one might have to face due to environment pollutions.

### *Conflicts and wars*

Overpopulation in developing countries puts a major strain on the resources it should be utilizing for development. Conflicts over water are becoming a source of tension between countries which could result in wars. It cause more disease to spread them harder to control. Starvation is a huge issue facing the world and the mortality rate for children is being fuelled by it. Poverty is the biggest hallmark one can see when talking about overpopulation. All of this will only become worse if solutions are not sought out for the factors affecting the population. One can no longer prevent it, but there are ways to control it.

### *Rise in Unemployment problems*

When a country becomes overpopulated, it gives rise to unemployment as there fewer jobs to support large number of people. Rise in unemployment gives rise to crime as people will steal various items to feed their family provide them basic amenities of life and high cost of living as difference between demand and supply continues to expand due to overpopulation, it raises the prices of various commodities including food, shelter and healthcare. This means that people have to pay more to survive and feed their families. Suppose people forget about the environment and only worry about themselves. Nonetheless with the increasing population, even that is not possible because with the increasing number of people have to share the resources with even more people Resources of all types are limited, even employment, especially in India.

### *Population Explosion*

Population explosion is a global phenomenon and its consequences can be seen on the surface and in the atmosphere of the Earth. The high growth rate of population, particularly in the developing and underdeveloped countries led a way for declining environmental quality in all spheres of the Earth. Growing population means growing needs. To meet the need of the growing population, there was tremendous increase in developmental activities. As a result of this, over exploitation of natural resources took place. The over utilization of natural resources, tremendous growth in economic sector and setting up of the large scale industrial worldwide manifested a way for declining biological and natural resources and enhancing pollution. The planet Earth is passing through the major environment problems such as global warming, climatic changes, ozone depletion, different types of population, depletion of natural resources, depletion in fertility of soil, desertification, shrinking forest covered areas and agricultural land, urbanisation and acute shortage of water, origin of slums and many more. These problems are worldwide, but more intensive in the developing and underdeveloped countries.

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## Effects of Population Explosion

**High birth rates:** some of the socio-cultural cause responsible for high birth rate in India. Marriage is also a religious duty and practice of early marriage system is still now in India. More than 80 % of girls are married during the fertile period of 15 to 20 years of age and give birth to a number of children.

**Polygamy :** Some people in India prefer to have more than one wife and such polygamy system give birth to more children and Every family in India prefers a male child. There are some religions rites which can be preferred by a male child. So the parents in spite of number of girl child they wait for a male child. The widow marriage system in modern society helps in the growth of population.

**Poverty :** Due to overpopulated causes there 40 % of the population in India is below the poverty line and they consider children as their asset and they earn at a very low age and bring wages. It helps in the rapid population growth.

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## Food Resource

Due to overpopulated food resources are always limited and in a developing and highly developing country like India, resources are even scarcer. Population explosion results in the shortage of even most basic resources like food. More than half of all children under the age of four are malnourished,

30 per cent of new burns are significantly underweighted and 60 percent of women are anaemic. Resources are limited everywhere, and Leads to Reduction in Savings and Investment with how savings in overpopulated countries, there will be very limited investment in growth areas of the economy.

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### Suggestion

The above study shows clearly cause of overpopulation and its effects of human life, everybody should take responsibility to control the overpopulated as given below :-

**Increase in Female Literary rate and Education** – the educated people have a better and more responsible outlook towards the size of their families. They can understand the advantages of a small family and adopt family planning methods to reduce the family size. This will help in reducing the birth rate.

**Chunk of Population lives in Rural Areas :** In India, most of the population lives in the rural areas, However, family planning is not widely advertised in rural areas. Also in rural areas, social and religious norms are more strictly followed. As a result all the problems are even more intense in rural areas with the addition of the lack of family planning facilities in those areas.

**Tax benefits concessions :** Government of various countries might have to come with various policies related to tax exemptions to curb overpopulation. One of them might be to waive off certain part of income tax or lowering rates of income tax for those married couples who have single or two children. As humans are more inclined towards money, this may produce some positive results.

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