

Explaining the debate of ‘Population–Environment–Poverty’ linkage

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Introduction

First we will see what Population, Environment and Poverty means. Population in a lay man’s term is a group of people residing in a particular area, according to Merriam Webster Dictionary “the whole number of people or inhabitants in a country or region”. Environment is a surrounding where both living and non-living organisms reside, according to Merriam Webster Dictionary again “the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival”. The definition of poverty is however tricky and specific to the context as there is no one standard way of measuring poverty all over the world. In 2015, the World Bank defines extreme poverty as living on less than US\$1.90 per day, and moderate poverty as less than \$2 or \$5 a day.

The issue of population, environment and poverty linkages highly came in rise in the recent decade especially after the threat of high population growth and environment degradation. The agenda of population, environment and sustainable development was in 1994 *Program of Action of the International Conference Population and Development* and also in *Agenda 21 adopted at UN conference on Environment and Development 1992*. According to UNPFA report (2001), continued population growth threatens food and

water security, forest resources, biodiversity and increased pressure in limited natural resources and hence the countries will find difficult to resolve this problem. Before this agenda came into the international debates, many scholars and social scientists argued the negative as well as positive debate on growing population growth and natural resources consumption interlinked with the poverty rate.

The ‘Population-Environment -Poverty’ linkage:

The connections that bind human and natural systems are innumerable, but arguably one of the most discussed through human history has been the ever increasing size of the human population and its relation with the natural resources upon which it depends. Population, Environment and Poverty has a very complex yet interrelated relations with each other. For instance, when there is an increment in the population, the environment will be hampered because more head means more resources and more resources mean more abuse and exploitation of environment. Now, when environment is exploited to its full capacity it is certain that it degrades which slowly and gradually will leave us with no enough natural resource left for people to consume and that might trigger poverty. Again, if we want to look at it from another dimension, the rapidly growing number of impoverished people or people living under the poverty line are also a key factor in environmental degradation due to urban expansion, deforestation and cultivation of marginal lands. Unsustainable patterns of consumption by more affluent groups in both developed and developing countries constitute another crucial factor in degradation of the global environment and this negatively challenges the quality of life, particularly that of the people below poverty line.

Population growth itself, remains an insufficient explanation of the relationship between population, ecosystems, and poverty however no one can deny the proportional relationship that increasing population and demeaning environment has. Increase in human population size have dynamic, non-linear impacts on the environment, with feedbacks, thresholds, and synergies amplifying risk and speeding environmental degradation beyond the rate of population growth (Harte, 2007).

Poorer rural populations tend to be more dependent on their natural resource environment and therefore are more vulnerable to changes in their environment, whether it be as a result of climate change or as a result of a locally felt phenomena which alters their landscape (Eakin and Lemos, 2010).

Conceptually high fertility can be envisioned as contributing to the poverty of households through several mechanisms: health and educational needs of large numbers of children generally reduce household savings rates and reduce investments in production activities; high fertility lowers female labor force participation and thus tends to decrease household income; finally, population growth due to high fertility may exacerbate resource scarcity in areas where a large proportion of the population already relies on natural resource-based livelihoods including, agriculture, grazing, forest products, and fishing for income and subsistence on marginal lands and less productive natural ecosystems (MEA, 2005). In addition to strain on the natural resource base, rising population also creates challenges for the equitable provisioning of adequate schooling, material resources, and civic order, thereby straining social conditions. Degraded social order impedes problem solving for environmental problems, causing further strain (Harte, 2007).

Theories on Population-Environment -Poverty’ linkage and ongoing debate:

The main debate and difference in opinion regarding the population, environment and poverty are among Pessimists, Optimists and Distributionists. The world’s population of nearly one billion in 1800 has grown to approximately 7 billion today, and population projections suggest that the world population will fall somewhere between 10.5 billion by 2050, depending on changes in national level fertility and mortality rates (UNPD, 2009). All of the world’s net population growth over the coming 40 years will occur in cities in less developed countries. At the same time the ecosystems that support people’s livelihoods and well-being are being rapidly degraded. Therefore we can say that, environmental degradation is the foremost consequence of various kinds of human activity and rapidly growing population.

Pessimists:

Malthusians/ Neo-Malthusians are referred as the pessimists who believe that we are surviving right now on a borrowed time and that we have surpassed earth’s physical capacity to sustain growth. “The power of population is indefinitely greater than the power in the earth to produce subsistence for man” (Malthus, 1798). Thomas R. Malthus famously argued that population grows exponentially and agricultural production geometrically hence, that day would come when the population would reach at such a peak point that the earth would be unable to produce more and this might lead to poverty.

He also hypothesized that as the mouth of people to be fed grow, food supplies would be inadequate to feed them all and human numbers would be pushed back below the carrying capacity of agricultural systems by “positive and preventative checks.” Positive checks would comprise increases in mortality due to outbreaks of disease, famine, higher infant mortality, malnutrition, and war. Preventative checks would include lowering of fertility through delays in marriage, contraception, abortion, and infanticide. One of the best examples to support this would be China’s one-child policy that was introduced 30 years ago on September 25, 1980 to curb the population growth rate until this October when the policy was banished (Time, 2015).

Noted Neo-Malthusian Paul R. Ehrlich also argued in his book “The Population Bomb” that the human population was too high, and that while the level of disaster could be mitigated, humanity could not prevent severe famines, the spread of disease, social unrest, and other negative consequences of overpopulation.

Just like the resource pessimists have argued, it seems that different types of natural resources are gradually depleting. Various flora and fauna that existed in the past no longer exist now. Not only this, various conflicts that are found in the world Such as 1973 oil crisis, Recent Russia and Ukraine gas dispute, Russia and the European energy sector dispute, 2nd Congo war, the hidden agenda behind US attack on Iraq, are the few among many which are for the ownership of scarce natural resources Regarding Malthus idea of positive and preventive checks, the idea of positive checks is questionable in the sense that despite various conflicts caused due to population growth; population have not been decreased significantly just due to these conflicts. But his idea on preventive checks can be valid in the present context where different family planning measures have contributed in population control, poverty reduction and environment preservation. Donnelly Meadows computer simulation IPAT model is questionable in the sense of their prediction of population downfall after 2000 in the sense that the population has been decreasing due to awareness and family planning measures rather than problems caused by population growth.

Optimists:

Unlike the pessimists, optimists believe that human is the greatest asset of all and are capable of handling the scarcity of resources. Ester Boserup was one of the notable optimist who counter argued on Malthus’ contentions and provided an alternate response

of humans and their agricultural systems to increasing population growth (Boserup, 1965). A major point in her book “necessity is the mother of invention” can be undertaken to look beyond population growth and its aftermath. She maintained that people will find ways to cope with the scarcity of resources by intensifying land use, increasing agricultural yields, and developing new agricultural technologies. Examples of agricultural intensification include multi-cropping, increased labor to land ratios, and the development and use of better tools, irrigation systems and soil amendments. Boserup thus argued that there are no limits to human population growth assuming sufficient changes in agricultural systems. Boserup’s ideas can now be related with various genetically modified foods and hybrid foods being produced in various parts of the world. For instance, in the USA the Food and Drug Administration (FDA) approved a genetically engineered salmon as fit for consumption (The New York Times, 2015) and Uruguay has slashed its carbon footprint and renewables provide 94.5% of the country’s electricity (The Guardian, 2015).

Optimist’s idea on population, environment and poverty linkage too can be critically viewed. Seeing the situation of the rich countries maintaining the high standard of living, we can say that they were correct when they argued population growth will not degrade the life standard of people. Optimists usually concentrate on technological advancement to solve the problem of population, environment and poverty. Regarding population growth, on one hand, different technological inventions specially the family planning technologies have played the role in population control but with the invention of human cloning, test-tube babies, there are also the chances of population growth which would not have been possible otherwise. Moreover, different technological inventions specially during green revolution of mid 20th century such as multi-cropping, development and use of better tools, irrigation systems and soil amendments have increased the food production dramatically and have decreased the poverty level to some extent and on the other hand the invention of technology has ceased the employment of many people and also the technological divide has further fueled the level of poverty specially in the developing and underdeveloped nations.

Distributionists:

The Resource Distributionists say that poverty can inflict population growth rate because the resources have been distributed unequally among the various sections of the society.

Particularity favored by Marxists and Neo-Marxists the distributionist view has been adopted by various scholars. They assert that the institutions and social arrangements within a society and not its availability of natural resource determines prosperity. When the resources are not disseminated in all the stratus of the society equally and uniformly poverty prevails which gives space for conflicts. Unequal distribution of resources is a very strong factor that precipitate the growth of the country as a whole. For example, In Bangladesh in 1971 it had one of the most arable land and fertile soil but due to powerful landlords only seeking their personal benefits and fighting over power, wealth and resources Bangladesh had to face a large grain deficit and is still one of the lowest in terms of agricultural growth rate (Homer-Dixon, 2010).

Conclusion

A very burning issue today Population, Environment and Population indeed has gained a lot of attention by many scholars and countries likewise. There are many scholars with their own take and attitude on this burning issue but we definitely cannot deny the fact that Population Growth directly or indirectly inflicts Environmental Degradation. If we flip through another chapter, archaeological evidences have suggested that land degradation and over population were indeed the main reasons for many civilization like Mayan, Sumerian to tumble down but the economic optimist view that the limiting factors in those cases were limited knowledge and institution can also not be over looked. There can be many discussions and arguments over the topic but the rapid population growth and its adverse effects like global warming have been faced by all of us. Therefore, societies must take strong action to curb population growth in order to mitigate future disasters, both ecological and social.

The linkage of population, environment and poverty can be viewed both positively and negatively. These different approaches of analyzing the relation between these issues were developed in different time period and in different situations. Hence we cannot totally claim one approach to be superior and other to be inferior.. It is human beings who can conserve the environment and increase human richness. Report by UNFPA states that international agencies, NGOs and private sectors can play crucial role in supporting to facilitate the population stabilization, sustainable development, environment maintenance and diminution of poverty. The ‘environment’ is where we live; and development is what we all do in attempting to improve. The two are inseparable. If development is to be

achieved, development process should highly consider the protection of environment into development plans, policies and action in order to enhance human prosperity.

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