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Human Population Explosion: A Note

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ABSTRACT

The study examines the dangers of human population explosion. Secondary data were utilised for the study. The study found that the earth has a limited carrying capacity. Human population is growing at a pace at which the carrying capacity of the earth will soon be exceeded. It found that the imbalance between increased birth rate and ever decreasing death rate is responsible. The study concludes that for the earth to continue to support human existence human population must be pegged at a limit.

Keywords: Earth carrying capacity; Birth rates; Death rates;Poverty.

INTRODUCTION

The rapid growth of world population is described by a simple mathematical principle articulated in 1798 by the Reverend Thomas Malthus, namely, that population grows geometrically or exponentially (1 to 2, 2 to 4, 4 to 8, and so forth) rather than arithmetically (1 to 2, 2 to 3, 3 to 4). World population first reached 1 billion in 1830. By 1930 it had doubled; in 1960 the total was 3 billion people, and nearly half the world`s population was under twenty years old, and the forth billion took only another 15 years. By the year 2012 the world population reached 6.6 billion [1]. There is, then, a population explosion. This shows that history has not ended. On the contrary, it is just on its way to ending. It is becoming complicated by the exclusion of major sectors of the world's population from the good things require for human existence.

THE PROBLEM

If the lifeboat logic holds any water at all, it is perhaps most accurate to conceive of the entire globe as the life boat in which all of humanity will either remain afloat or sink together. This assertion is reinforced by the fact that the `carrying capacity` of the global system – the maximum number of human beings or other life forms that the earth's delicate ecosystem can support-is certainty finite [2]. Living resources essential

for human survival and sustainable development are increasingly being destroyed or depleted [1]. At the same time human demands for those resources are growing fast. The emphasis of ecologists on the carrying capacity of the earth implies that the earth has finite non-renewable resources and can sustain only a limited off-take of renewable resources. A finite earth imposes limits on the numbers it sustain and the consumption associated with interminable economic growth [3]. If too many people are born, or too many resources to support them extracted, the ecosystem will surely be destroyed and life as we know it will cease, hence this study.

THE QUESTIONS

Discussing population explosion brings up a quantum of moral dilemmas. Is it moral to practice birth control? If so, what method(s) is (are) acceptable and successful? If not, is it moral to bring a child into the world if the world`s population is nearing its limits and insufficient food supplies appear a possibility? How long can a finite energy source sustain ever-increasing rates of consumption before automobiles sputter to a stop, industries grind to a half and lights go out? Can human population growth in a finite world proceed infinitely? How many fish can be taken from a fishery before the off-take exceeds the fishery's maximum sustainable yield? How many pollutants can be dumped into the atmosphere before irreparable damage is effected? Can our 'crowded earth' continue to sustain such enormous increases of population? These questions have no universal accepted answers. Nevertheless, as the world`s population explodes with its diverse challenges, humankind must begin to address and solve such questions.

OPTIMISM AND PESSIMISM ON POPULATION

For several generations those who argue about population have divided themselves between 'optimists' and 'pessimists'. Most of them are better termed extremists [4]. Too often enormously complex problems have been presented with a one-dimensional simplicity - the contrast between people and their sustenance, with both projected into the future more confidently than past experience warrants.

The population of the world is estimated to be about 6.6 billion, and to be growing by about 1.7 percent per year [5]. This means that it will double in something

like 40 years, so that, if the present estimated rate of increase continues, at the end of the second decade of the 21st century the world will have about 8 billion people (United Nations, 1995) [5]. Neither the number of the world's inhabitant nor its annual growth is known with even moderate accuracy. An egregious example is Nigeria, whose population constitutes perhaps a fifth of Africa's total. The number of its people may be 145 million, 155 million, 160 million, or more or less. The last census was in 2006; and the next one, is planned for 2018. During this interim of less than a generation, government spokesmen have issued, sometimes in the same year, official figures differing by more than 10 million - not in order to confuse people, but because they themselves have no idea of how many people there are in the country. If even the gross total is unknown, then what can we say of the supposed birth rate of 20 per thousand, the supposed death rate of 8 per thousand

Any researcher who accepts these statistics on the basis of the evidence provided is naive. The basis of most estimates is made up of equal parts inaccurate local counts, cumbrous mathematical formulas, and wishful thinking. But the issue is less what the population or natural increase of Nigeria or South Africa are today than what they will be a generation or two from now. To that crucial question responsible analysts can hardly offer a guess.

The rate of human population growth today is not only a function of aggregate birth or fertility rates. It is also a consequence of sharply lower death rates (Parsons, 1995)[6], that have been the result of advance in medical science, agricultural productivity, public sanitation, and technology. The paradox posed by sharply reduced death rates is that this favourable development has contributed to an accelerating rate of population growth – a population explosion.

CAUSES OF HUMAN POPULATION EXPLOSION

The reasons for the astronomical explosion in population are not farfetched. Most of this rapid explosion has been the result of impressive improvements in health and medical services throughout the world. The disproportionate level of death rate to birth rate which brings about population explosion could be explained thus. The

amazing decline in mortality derived partly from one factor: DDT, an insecticide that had been developed during World War II, which when sprayed from airplanes over low-lying areas all but eliminated malaria, the principal cause of death, by killing the mosquitoes that carry it. This anti-malaria campaign is responsible for about half of the fall in death rate worldwide (Lellouche, 1992) [7]. This development became more potent than the impact of the World Wars. The First World War eliminated about 9 million people. The Second World War produced 50 million deaths, both military and civilian. This was the result of massive aerial bombings, automatic weapons, gas chambers and two atomic bombs. In all about 150 million persons were wiped out in the first half of the twentieth century (Brown, 1996) [8].

Additionally, the considerable improvements in agriculture during the second half of the 18th century all but eliminated such food-deficiency diseases as scurvy and raised the general level of health. Likewise, the effective separation of sewage from drinking water eliminated the threat of cholera in the middle of the 19th century. Human health was also aided by the development of mass insecticides and antibiotics jumpstarted the transition of diseases from major scourges to minor nuisance. This means that improvements in sanitation, drugs and medical care and techniques have caused the death rate to decrease much faster than birth rate. This gives a net natural increase in population. Thus, the most obvious consequence of the astounding success in drug development and rapid decline in mortality is, of course, that life expectancy was elongated.

While there was precipitous decline in death rates birth rates remained relatively constant. Birth rates measure the number of births in a society for every 1000 people. The fertility rate – the number of live births per 1000 women between age fifteen to forty-four years in a given year – is a more refined measure, since it relates more directly to the age-sex group that has the highest probability of giving birth. Thus, the one of the causes of population explosion (which is a result of high, but declining, birth rates, and rapidly falling death rate) is the 'momentum' factor [1]. Population momentum is especially great in societies with high proportions of young people. In these societies, families are formed and babies produced at a rate faster than older

persons die. This process will continue until the age structures shift toward equal numbers of people in each age group.

Entrenched religious norms often sanction and encourage parenting, prescribing the bearing of children, particularly male offspring, as both a duty and a path to a rewarding afterlife. This connects with economic factors. For example, large families may be a source of 'social security' for parents who live in societies where there are no public programmes to provide for the elderly. Under such conditions, parents usually try to have as many children as possible so that they can be cared for in their old age. Furthermore, many communities consider large population a boom to economic strength, and population growth is therefore encouraged in the name of community strength and security.

Aside the foregoing, birth control is opposed by religious, social, and or cultural custom. Cultural traditions in many societies ascribe prestige and social status to women according to the number of children they bear. Furthermore, religious optimists express faith in God`s ability to provide for mankind. But these optimists are offset by population pessimists who predict a future of pestilence, famine, and war, all brought about by rising population pressure. Similarly, certain technological optimists maintain faith in the ability of science, technology and humanity to cater for the world`s population, almost regardless of number.

TRENDS IN HUMAN POPULATION EXPLOSION

In the late 1980's the world's human population was estimated at 5.2 billion people. By the year 2010 the population had reached 6.6 billion. A third of the world's population lives in the developed countries. They have adequate food and use up about three-quarters of the world's goods to main their standard of living. About 2.8 billion people live in the tropics. Nearly half of these people live in poverty and barely have enough to eat. Their diet lacks essential nutrients and protein so that many of them are severely malnourished. World human population statistics also show an alarming trend: the populations in developing countries are growing more rapidly than those in

developed countries. In addition, people in the countryside hope to find a better living in towns. So, there is a movement of people from rural to the urban areas.

The world's human population is estimated to be growing at a rate of 1.7 per cent per year. This means that population is increasing by about 85 million people per year. In the developed countries the rate of population growth is controlled. This is because the fall in death rate is accompanied by a fall in birth rate. This is the result of effective birth control programmes. In the developing countries, the birth rate remained high although the death rate has fallen. This is partly due to the population structure. For example, the percentage of women of child-bearing age is higher in Nigeria than in United States. Also, in Nigeria, and in most other developing countries, the women marry when they are very young.

CONSEQUENCES OF HUMAN POPULATION EXPLOSION

> For the first time since the beginning of the Industrial Revolution, there are signs that continuously expanding human demands are overriding the capacity of new technology to offset the constraints inherent in the natural systems and resources on which humanity depends.

The belief that there are 'too many people' has meaning only in relation to something else, such as food and renewable and non-renewable resources. With the rate food and renewable and non-renewable resources are produced and consumed and the rate at which the world population is growing there are evidences that the world population would eventually outstrip its capacity to produce enough to sustain its growing numbers because the earth is finite and its resources and carrying capacity limited. The minimum physical balance require for continue existence of human life is that the population does not exceed the supply of vital resources such as food, water and a source of energy. Without water, nations will not have food; schools will be of no use if the children are undernourished; factories will have no production without energy and water; families cannot lead healthy life without sufficient food, water and energy.

In the attempt to address the problem of demographic explosion and global poverty the United Nations, specialised agencies, no-governmental organisations,

humanitarian institutions have tried policies, strategies, programmes and development projects, using billions of dollars in credit, technical assistance, equipments and donations. Unfortunately, parts of these resources were recycled through tied aid. What remains is lost on the corridors of global corruption. At the end the few people who are rich become richer while the poor become poorer and multiplied. The combined income of the world richest 300 individual billionaires is equal to the total revenues of 3.3 billion persons who represent 50 per cent of the world's population. Even though this can easily be confirm through a tour around most countries of the world, the World Bank, the International Monetary Fund (IMF) and their allies continue to predict a rosy future for the world. The truth, of course is that, in order to have an idea of real happenings around the world, one should travel more rather than read World Bank and IMF reports.

The best way to recognise whether the world shows symptoms of sickness is not to observe the temporary spates of global Gross National Product (GNP) growth, but to see whether people's personal needs are increasingly being met and steady, year after year. In countries of the global South, the majority of the population lives in hell on earth, a small middle class lives in purgatory, and a handful could have their needs met. This is what obtains in places like Algeria, Angola, Burkina Faso, Bolivia, Burundi, Cambodia, Central African Republic, Chad, Congo (ex-Zaire) Cote d'Ivoire, the Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Equatorial Guinea, Gambia, Guatemala, Guinea-Bissau, Guyana, Haiti, Honduras, India, Jordan, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Morocco, Myanmar (Burma), Nicaragua, Niger, Nepal, Rwanda, Pakistan, Paraguay, Peru, the Philippines, Sri Lanka, Syria, Tanzania, Tunisia, and Yemen.

In virtual all these states, food production and per capita consumption of energy and water lagged far behind population. The failure to have their material desires gratified is tearing their cohesion. In these states, the average per capita income for the thirty-five years from 1990 to 205 grew less than 3 per cent, which is the minimum growth needed in order to escape poverty. For instance, for over two decades, the average growth rate per capita was, in Algeria 0.5 per cent; in Angola 0.2 per cent; in

Sierra Leone 1 per cent; in Sudan 0.1 per cent; in Mexico 1.8 per cent, to name but a few. The problems of these states are not due to theses low income per capita growth rates, but to the combination with an explosive population growth, which exceeded 2.5 per cent per year. The populations of these countries have less food security every day. Food represents the lion share of their countries' imports.

The Food and Agriculture Organisation (FAO) considers that food security consists in always providing for humanity a sure supply of sufficient food for an active and healthy life: Sufficient, that malnutrition (under 2,400 calorie daily) does not occur. Today, nearly 1.5 billion human beings do not have food security but depends on food aid [5]. Little by little human existence is turning into a beggar civilisation. Agricultural land per capita on the planet has diminished by 7 per cent since 1979. The earth soil does not produce as usual anymore as a result of fertilizer saturation, salinity caused by bad irrigation, and desertification from deforestation.

Furthermore, agricultural lands are disappearing due to urbanisation. Agricultural production on the global level has started to decline in virtually every state. If current rates of land degradation continue, close to one third of the world's arable land (symbolised by the stalk of grain) will be destroyed in 20 years. By then worldwide famine would be imminent. According to the World Bank, food production has lost the race with population growth; world grain reserves at present would cover only 45 days of grave food crisis. Today, food demand grows by 3 per cent, while food production grows by 2.8 per cent. The rate of growth of basic foodstuffs – wheat, corn, soya beans and rice – is slowing down. Within the last thirty years, the rate of growth of global grain and cereal production has fallen far below the rate of population growth, falling every year by 1 per cent [8]. Most countries now import appreciable amount of food as a result of population explosion and environmental problems like soil erosion among others. The seas have been greatly depleted, and many species of fish are becoming extinct. Within the last thirty years, worldwide supply of fish per inhabitant had reduced by 8 per cent while catches are smaller, from Chile to California, from Iceland to Namibia. The fishing fleets are practically clearing the seas of fish.

The United Nations considers the minimum requirement for a healthy and active live to be 2,000 cubic meters of drinking water per year [5]. Today, water to produce food and supply industrial and human consumption is scarce around the world. According to international hydrological studies of the United Nations and Stockholm Institute for the Environment by year 2025, two thirds of humanity will be affected by water shortage. The UN report above estimates that 2 billion people suffer water shortages worldwide. The World Bank claims that 1 billion people live without enough drinking water and 1.7 billion lacks sanitation. This condemns humanity to imminent sickness and premature death. This is the consequence of the earth's hydrological cycle shortage occasioned by population explosion. The symptoms of the extinction of the human race are already evident in emerging water crisis – underground water, lakes and rivers are shrinking all over the world.

The water remaining, in rivers, lakes and streams that flow through human settlements are polluted with agricultural pesticides, industrial waste and human excrement. This is the product of the dumping of human excrement and industrial waste in ways that pollute rivers, lakes, seas and underground water table [5]. The world is on the verge of water crisis between channelling water from the rivers, lakes and underground strata to sanitation pipes, industrial use, swimming pools, parks, golf courses and stadiums or food production.

These countries also lack energy security. Compared to 1,000 kilos of petroleum per capita in the global North the global South uses only 120 kilos. Due to inability to access energy, the populations have permanently resort to firewood, consequently causing more deforestation, erodes the soil and abort food production. The populations' access to water does not fare better. More than 70 per cent of these countries' population lacks drinking water and sanitation. One of the clearest characteristics of these countries is the absence of connection between the official world and their semi-urbanised populations. These human masses organise in their own manner, ignores legal and other formalities, conduct separate economies that do not appear in the national accountings, and overwhelm the states with their demands and spontaneous organisation. These populations are largely unemployed or underemployed, living

outside the national and global society; has rural roots and are partially urbanised, with no real awareness of nationhood. They often attempt to affirm their identity through ethnic affinities, ancestral myths or in religious – magic interpretation and radical ideologies. They are growing into cultures that violently reject modernity, as is the case with the various strands of Islamic fundamentalism, *Al Quada,* Islamic State in Iraq and Syria (ISIS), *Boko Haram*, as well as other radical movements that are emerging.

If these countries failed to reduce their birth rates, modernise their economies, adding greater technological content by the year 2025 the poverty that now affects 1.8 billion people would affect 4 billion. In our time, humanity's future depends on knowledge and information. It depends on research. It depends on the number of engineers and scientists. More importantly, it depends on population control. Unfortunately while the population of the global South constitute 75 per cent of humanity it posses only 7 per cent of the world total of scientists and engineers, spent less than 2 per cent of the world investment on scientific research and development, and produce only 3 per cent of the software (De Riverdo, 2001) [9]. Even this laughable arsenal of science and technology concentrate basically in Brazil, China, Hong Kong, India, Malaysia, Taiwan and Singapore.

These states' desires for development are not in doubt. The challenge has been the failure to resolve the contradictions between demographic explosion and economic development. In most of these states, the political authority – the state – emerged from the independence process before the nation, that is, before the development of a true bourgeoisie and unifying national capitalist economy. Thus, these states are children of their enthusiasm for freedom, but not the offspring of middle-class prosperity and scientific and technological progress. Therefore, it has not been possible to replicate the developed, capitalist and democratic nation-state in most of the countries. They exist with low incomes, in poverty, technologically backward and governed by low-powered democracies.

While Europe and the United States have succeeded in eliminating virtually all their poverty through technological advancement poverty has become practically hereditary in the global South. Most of the states emerged without any national

development options, due to the unfortunate coincidence of their independence with a technological revolution that need less and less of the raw materials and abundant supply of human resources that are their only comparative advantages. As the quantity of the raw material required for each unit of industrial production continues to diminish, the chances of citizens of the states to meet their needs through export are being destroyed. The only comparative advantage of these states – abundant human resources (now a liability) and raw materials – are becoming every day less important to the global economy. This is why the global South is rift with unsuccessful national projects.

When the virus of scientific and technological destitution in the global South finished its collusion with demographic explosion human civilisation will be in jeopardy. These signs are already self evident in a few states [10]. If India, China, Bolivia, Nigeria, Indonesia or Morocco continues to grow their populations, in less than two decades from now, global population would reach 8 billion. Of this figure about 6.6 billion would live in the global South. There would be at least 3 billion poor, plus 840 million who would be starving and hundreds of millions who would be unemployed. At least 2.5 billion would lack adequate housing. 2 billion would have zero access to clean water or a commercial energy supply [11]. Many cities like Lima, Sao, Paulo, Bogota, Lagos, Cairo, Nairobi, Dhaka and New Delhi would be chaotic, polluted, full of unemployed youth and plagued y delinquency. By outstripping the production of food, energy, and water, the result will be more poverty, caused by tremendous demographic pressure on these three crucial resources. In sum, the enormous human settlements would become environmental bombs and social infernos as a result of pollution, unemployment and delinquency [12]. Many persons in these places would eventually become citizens of the International Red Cross and Crescent, Critas, Medecins Sans Frontiers (MSF) and the intensive humanitarian care of the United Nations.

Overpopulation, the offshoot of population explosion, casts doubt on whether a society can make any appreciable economic progress. Evidence shows that large population is in most cases a liability, rather than an asset as it makes modernisation and economic development difficult. Progress is eaten up by the need to feed, clothe,

and educate millions of new people. In other words, rapid population growth, in sum, translates into rising numbers of labour force entrants, faster-expanding urban populations, pressure on food supplies, ecological degradation, and increasing numbers of 'absolute poor'. Globalisation makes goods which are cheaply produced with the technology of the developed world available in the global South. The availability of these goods is starting to enter on a collision course with the demographic explosion in the South. Globalisation has allowed the most predatory version of materialism to spread worldwide. Consumerism is being globalised but ethic is not. Quick profit, instantaneous material gratification with the obsession of participation in the material consumption, at any price no matter how is the order of the day. Thus, even though globalisation has given rise to the desire for Western style living, based on high consumption, material comforts, and permanent entertainment all over the earth population explosions inhibit social mobility and capital accumulation. No doubt, globalisation fails to foster human solidarity, and promote environmentally friendly patterns of consumption [13]. It has dismantles the social progress made in the centuries past.

In its most predatory version, globalisation is an obstacle to the rise of a new planetary ethic and a global society with less social exclusion and more environmental protection. The main obstacle today is not a lack of financial or technological capacity. It is an absence of an ethic that considers humanity as one single unit. Those who have are unwilling to sacrifice resources for causes that are not related to their immediate prosperity. This is ratonalised as a process of natural process which throws us into competition for survival, heedless to ethical and social and environmental parameters. The ideal of natural selection negates the genetic base of the human species which obliges man to be ethical and social or to suffer the revenge of his fellow men that are the object of his depredation. Contrary to the ideals of natural selection, Julian Huxley noted that nature is totally 'amoral'. Huxley posited that if nature is taken before the court of ethic, it will be condemned, since it is morally indifferent. The human genes, which are programmed for society, begin to protest that they are being excluded, that their family or social group is in danger. When this happens, humanity reaches that

stage, when the excluded group dehumanises its predators by resorting to irrational and violent actions against them. There are already many barbarian warriors and predatory creatures set off by the demographic explosion and social exclusion of the world. Once this limit of human depredation is passed on the global scare, everyone is the loser, including the predator, and the result is global turmoil.

It is not hard to know that any human group that feels excluded from the bar necessities of existence, preyed on by development, will finally turn upon its predators, by resorting to varied forms of reaction ranging from delinquency to terrorist fanaticism. The continued application of the law of the jungle to human development can only continue with multifarious consequences for humanity. Consequently, the continued existence of humanity depends precisely on not imitating, the law of natural selection [14]. For humanity to continue to survive, it must jettison following the ideal of survival of the fittest. The focus should be to make fit the greatest number possible, so that all may survive. This can be done by protecting the sources of human livelihood such as land, food and water.

In the effort to meet the needs of the world's expanding human population agricultural, industrial activities among a host of others is increased [4]. These activities released a whole lot of pollutants into the various ecosystems disturbing their delicate balance; making the non-living environment undesirable or unfit for life; and threatening the health and existence of living organisms including humans. Farmland is taken over by urbanisation, reducing food production. Over-fishing is depleting fish stocks. Greenhouse gas emissions create air pollution leading to climatic changes droughts and floods. Chemical and nuclear industries continue to bury their toxic waste. Goods are shipped across the world wrapped in kilometres of paper and cardboard deprived from deforestation. Man has become an irresponsible economic and environmental predator.

The enormous factories with their chimneys and the large proletarian are being phased out by new technology [1]. Computer software and automation save on human labour. In a few developed countries of the North, such as Switzerland, Belgium, Canada, Spain, the United Kingdom or the United States, this situation can be tolerated

[4]. The services sector can absorb the labour power rather redundant in the manufacturing field. But population explosion, in other places, increases the supply of unskilled labour which becomes more redundant with closure of manufacturing firms and which the services sector cannot absorb. The citizens of the developing countries of the global South, where food production and per capita consumption of energy and water lagged far behind population growth, are the ultimate victims. This is due largely to the unfortunate coincidence of their countries' independence with a technological revolution that needs less and less of the raw material and abundant supply of human resources that are their only comparative advantages [15].

Aside that most of these countries do not have market economy of national dimensions, because of the number of inhabitants that live in poverty or below the poverty line. Besides, they do not control many segments of their economic activities, because these are mainly in the informal, and what remains in the formal sector is controlled by the International Monetary Fund (IMF) and World Bank [16]. Nor do they have jurisdictional control over all their territories, since large areas are in the hands of insurgent groups, bandits or drug dealers. Most often than not, political life itself is controlled from outside, with international monitoring of their human rights obligations and their questionable electoral processes. This is as these states appear in the world press as territories with elected, but not democratic, government, lacking in basic institutions, where barbaric acts occur and human rights are violated, where armed confrontations and drug-driven terrorism take place [17]. Meanwhile, these political realities of the developing world are set off by demographic explosion and by unemployment, plagued with social, ethnic, religious and cultural resentment. In sum, these states are forever confronted with the cruel reality of their population explosion, lack of national market, meagre production of food and fuel, and their low-priced raw materials export.

SOLUTIONS TO HUMAN POPULATION EXPLOSION

Nations of the world can adjust their economies, balance their public expenditures, lower inflation, liberalise and privatise. Still, if they do not diminish their

population growth [6], while producing adequate food, energy and water in environmentally friendly manner, the earth heads to a precipice [18]. An alternative to population explosion is pursuit of a steady economy, wherein a constant stock of population is sought[8]. Realising zero population growth will require profoundly altered attitudes. It will require an alteration in attitudes toward cultural norms regarding family and child-bearing. Explosion in population could be controlled through the wider use of more efficient contraceptives, with birth and death rates in balance. This could be achieved if individuals decide to have smaller family size. It could also be achieved if young people could develop the will to postpone marriages for some ten or fifteen years beyond puberty.

Social revolution may also be among the solution to population explosion. Social revolution which aimed at making women to take more control of their own lives might bring about lower birth rates. Additionally, if old attitudes about the superiority of male children 'over' female children are displaced, fewer and fewer couples may be expected to continue to have children simplify to assure a male heir. To curtail population explosion, population and family planning programmes which could be effectively monitored and implemented has to be introduced. Control of birth rate itself could substantially address the problem. This could be done by setting up family planning clinics with trained staff all over the country to provide family planning services to married people. It could be done by having regular family planning campaigns to promote birth control methods and the acceptance of a small family. It could be done by promoting sterilisation among married couples who have completed their families. It could be done by making newly-married couples aware of the importance of family planning. Giving rewards to married couples who volunteer to have only one child. The United Nations Fund for Population Activities and the International Planned Parenthood Federation must be reformed to carry out their functions in this wise.

Stemming the tide of an ever expanding population implies that the world move towards a replacement-level rate of fertility and mortality. Replacement is measured by the net reproduction rate (NRR) which is the average number of daughters born to a woman who survive to child-bearing age given prevailing levels of fertility and

mortality. An NRR of 1.0 is the exact replacement level, since at this level each generation of mother is having exactly enough daughters to replace that generation in the population. For every decade of delay in achieving an NRR of 1- replacement level- the world's peak population will be some 15% greater.

CONCLUSION

Population explosion continues because the world has not experienced falling birth rates following the extraordinary rapid increase in life expectancy that occurred due to improvement in medical services. It is the combination of rapid declines in death rates and persistently high birth rates that lead to population explosion. To solve the problem of population explosion, general economic and social development must be pursued. Since population explosion is a political and economic problem it requires reforms for the welfare of individual families to be improved and equality of benefits to all for fertility reduction. In the alternative, whether humanity admits it or not, nature is on the verge of taken its revenge accompanied by worldwide resource scarcity and climatic change, at the very moment when population explosion assails the planet. The world should get ready for the destruction of the environment and dwindling supply of physical resources for life, in relations to the growth in population.

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