POPULATION GROWTH: ITS EFFECT ON HUMAN SECURITY WITH EMPHASIS ON SOUTH AFRICA

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ABSTRACT

As early as the 1960s a number of demographers warned that the world was fast becoming over-populated. They held international conferences to highlight the problem, and attempted to get the attention of world bodies like the United Nations, as well as that of national governments. They made recommendations on how the global population explosion should be curtailed, and then stabilised to sustainable levels. Their efforts have been largely ignored, because family planning and birth control are personal issues reaching into the privacy of human existence. The political will to force the issue does simply not exist in most states. The attention which global warming and climate change are currently receiving may goad governments into action. The global warming problem has a major overpopulation component and a direct influence on human security.

1. INTRODUCTION

Thomas R Malthus wrote his famous *Essay on the Principle of Population* in 1798, more than 200 years ago. At the time the world's population had not quite reached 1 000 million, but it took about 130 years to reach the second 1 000 million. The third 1 000 million was added in 30 years (± 1960), the fourth in 15 years (± 1975) and the fifth in 12 years (± 1987). From 1960 to 1987 the world's population increased by 2 000 million, the figure it had taken all the thousands

of years from the emergence of *Homo Sapiens* until 1930 to reach. From 1930 the world's population has more than trebled. The increase amounted to about 1 000 million every 25 years.¹⁾ Per year, the increase is roughly twice that of the South African population of 48,5 million.²⁾

The realisation that the rate of increase of the world's population must be brought under control led to a number of international population congresses or conferences. In 1964 the 'Club of Rome' organised a population congress which published a report on world population growth, the problems it caused, and a number of sensational recommendations in response. In 1974 an International Conference on Population was held in Romania where it was concluded that the problem of too rapid population growth was largely caused by population increases in the Third World. To solve this problem, accelerated economic development was recommended. It was believed that by so doing, the population growth rate would decrease so that population numbers would in time be brought into balance with resources. In 1984 another International Conference on Population was held in Mexico City, where it was concluded that most Third World countries had already fallen into a 'demographic trap', where economic development could no longer break the cycle of rapid population growth and the resultant poverty. The secretary-general of the conference closed the proceedings with the statement that the ultimate and internationally accepted goal was the stabilisation of the world's population within the shortest possible time.³⁾

In 1989 when statistics indicated that 97 million people would be added to the world's population every year for the next 10 years, of which 94 per cent would be added in the developing world, a United Nations (UN) Population conference was held in Amsterdam. The conference appealed to world leaders to prioritise their population control programmes. This appeal was thus also aimed at countries such as South Africa with its small, decreasing 'First World component', and its large 'Third World component' where a high birth rate still prevails.⁴⁾

In spite of the many conferences held on the dangers of the world's population explosion, several of which have taken place since 1989, few countries have given the problem serious attention. The conclusions drawn at these meetings indicate the rising concern of the demographers who take part, but their recommendations re-

ceive little publicity outside their own circles. It is imperative that the influence of uncontrolled population growth on human security and national security be given the priority it deserves.

2. THE CONCEPT OF HUMAN SECURITY

In a 1994 United Nations Development Programme (UNDP) report it was stated that whereas security as a concept had been understood to mean security from external aggression, which is largely a military matter, it should now address the legitimate concerns of ordinary people. In the early 21st century the concerns to a very large extent, had to do with the results of conflicts within countries, which have become more common than conflicts between countries. The populace, particularly in strife-torn and developing countries where poverty is common, seek security in their daily lives. They desire protection from disease, hunger, unemployment, crime, terrorism, social conflict, political repression and environmental hazards.⁵⁾

Human security according to the UNDP report comprises the following components:⁶⁾

- Economic security where the threat is poverty.
- Food security which involves the threat of hunger and famine.
- Health security where the threat is injury and disease.
- Environmental security with the threat being that of pollution, environmental degradation, and the depletion of resources.
- Personal security which involves the threat of various types of violence.
- Communal security in which the integrity of cultures is threatened.
- Political security where the threat is that of political repression.

From the above it is clear that the UNDP report adopted a people-centred approach. Many reports on human security address two concepts namely 'freedom from fear' and 'freedom from want'. The notion that security is a basic human need is at times given priority over and above national security, or at least equated to it. Human security issues can, however, also become national security issues

and over-population has both human and national security implications.

3. WORLD POPULATION GROWTH AND CONTROL

As previously stated, the largely uncontrolled growth of the world's population has been accelerating at a tremendous pace. According to the UN Global Environment Outlook: Environment for Development Programme, the world's population has grown by 34 per cent in the last two decades.⁷⁾ The UN has increased its predicted forecast of the future size of the world's population from 9 100 million to 9 200 million by 2025. The predicted figure has been adjusted upwards as a result of the increase in Western-type medical facilities worldwide, increased longevity, the introduction of HIV/AIDS prevention and treatment programmes, and not least a slower decrease in fertility rates.⁸⁾

The world's population now stands at 6 500 million and is expected to reach 10 000 million by 2050. Most of this growth will occur in the developing world. It is predicted that the populations of North America, Europe and other developed countries will remain more or less constant but that their populations will age considerably. 9) A reputable source reported that the overall number of children per women, termed the fertility rate, had declined in developing countries from 6,1 per woman in 1965-1970, to 3,9 per woman in 1985-1990. It was further stated that the developing world consequently had 70 million fewer births per year than projected for the late-1980s, and that this was partially due to the prevalence of contraceptive use in that part of the world. 10) Although a fertility rate of 3,9 is still indicative of a high population growth rate, the reported 70 million fewer births per year in the developing countries may be exaggerated. Most sources agree that there is an annual increase in the world's population of roughly 90 million people per year, which has been projected to persist to 2025. As much as 95 per cent of this increase is taking place in the developing world and as little as five per cent in the developed countries. 11)

Fertility rates are determined by a number of factors which include socio-economic advancement, women's status, child mortality

and family planning. In advanced societies all four conditions are positive. The demographic transition to smaller families in Western Europe, for example, has resulted from rising prosperity which caused the decline in the fertility rate. It is generally accepted that when modern Western medical facilities are available, a fertility rate of 2,2 will keep the population size static. In some European countries the fertility rate has even decreased to rates less than 2,2, with the result that the population will get smaller.

Forecasts and reports about global population growth are probably more or less correct, but authoritative national figures will by their very nature be more accurate. To really influence the rate of growth or decrease in a population, an active role by national governments is essential. The UN can attempt to influence governments to introduce and apply specific programmes, but UN influence is restricted when national issues such as fertility rates are involved. It is thus good practice to study national population control programmes, as well as the consequences of a lack of them, when considering the probable future of the world's habitation.

The importance of such studies is underlined when it is known that in most of the developing world the uncontrolled rate of birth causes untold suffering. In the early 21st century poverty and disease, coupled with lack of food, cause pressing security concerns. About 3 000 million people, half the world's population, live on two euros per day. Forty-five million people are reported to die from hunger and malnutrition annually. With the rise of food prices in 2008, it is reported that 100 million of the world's population are literally starving.

3.1 The population control programme of China

China is arguably the most important country to consider when studying demographic policies and the ways to control a nation's population size and its birth rates. The Chinese population exceeds 1 300 million, which equals roughly 20 per cent of the world's entire population. The country has a strong and stable government, a well-disciplined and productive population, and has maintained an economic growth rate of nearly 10 per cent over the past three decades. China has experienced the largest urbanisation in human history with an estimated 150 million people moving from the rural to urban

areas, where job opportunities beckoned in the growing economy. 14)

In the 1970s China's political leaders, who introduced the policies which have led to tremendous economic growth, realised that a deterioration in the standard of living and an increase in famine and social misery would result if an effective population control programme was not introduced. Since 1979 the Chinese people have been prevented from having more than one child per family, but wealthy people can pay a fine should a family choose to have a second child. Ethnic minorities who make up about 100 million of the county's inhabitants, however, are largely exempted from the 'one child per family' policy. 16)

In order to enforce the one child per family policy, strong incentives were introduced to promote the policy. One-child families received monthly subsidies for the child's education up to age 14 and they were provided with better housing, while heavy fines were imposed on families who had more than one child. Public servants faced dismissal from their posts and could be fined as much as one year's salary if they did not adhere to the norm. The programme was strongly advocated and explained to communities, and contraception, abortion and sterilisation, as and when necessary, play an important role in the process. China's population control programme is also successful as a result of community pressure which is brought to bear on families. The population is decidedly receptive when national and human security issues require their co-operation.

It is estimated that the Chinese population would have numbered roughly 300 million more than presently, had the population control programme not been implemented. The fertility rate is shown to be as low as 1,7 per woman, which indicates that the population is decreasing in numbers over time. The fertility rate may even be lower. One source states it as 1,4, while another claims that the annual population growth is less than one per cent, which is well below the replacement fertility rate. The fertility rate is shown to be as low as 1,7 per woman, which indicates that the population is decreasing in numbers over time. The fertility rate may even be lower. One source states it as 1,4, while another claims that the annual population growth is less than one per cent, which is well below the replacement fertility rate.

Many human security problems affecting China at present are caused by its tremendous economic growth rate, and the fact that it still has to feed an enormous population of slightly less than 1 322 million in 2008.²⁰⁾ Some negative results emanating from the one child per family policy are that the number of Chinese citizens who will be over 60 will be close to a third of the entire population by 2050, while the large workforce needed to support the current

economic boom is dwindling. The working population is expected to shrink after 2015.²¹⁾ The one-child policy has created a generation of only children numbering 90 million people. Although this is probably no problem in itself, it is reported that 119 baby boys are born for every 100 girls. By 2020 it is consequently expected that there will be as many as 30 million unmarried young men, many of whom will be unsettled and who will find it difficult to adapt to society in a positive way.²²⁾

The Chinese authorities have the political will to enforce policies which are never likely to be popular, but which are believed to be essential for a secure future. They also have the power to enforce obedience, but at the same time the authority to amend or change policy when needed. After the earthquakes in Sichuan province in April and May 2008, the government announced that parents who had lost their only child, or whose child had been disabled, would be allowed to have another child. The decision was widely reported in the international media. ²³⁾

3.2 The population control programme of Singapore

Singapore is a city state with a well-disciplined, mainly ethnic Chinese population numbering more than 4 553 000.²⁴⁾ The country had a fertility figure of 6,5 per woman in 1957, but reduced it to 1,9 children per woman by 1977. It thus attained a zero population growth rate, which resulted in an increase in the standard of living and an economic growth rate which led to the almost total eradication of poverty.²⁵⁾

The authorities in Singapore introduced a policy and a plan to achieve a two-child family norm. The controls and incentives introduced included the following:²⁶⁾

- Foreign labourers in Singapore who earned less than US\$750 per year had to apply and obtain a government work permit. If they married a Singapore citizen, for which they also required a permit, the permit would only be issued if the couple agreed to sterilisation after the second child.
- A tax rebate for each of the first two children in a family was granted to the value of US\$750, a third child got the family a rebate of US\$500, and after that no additional rebates were

- granted for additional children.
- Families with two or less children were given preference in the allocation of subsidised housing, and their housing loans carried lower interest rates than those of larger families.
- Children from families with two children were given preference when applying for entrance to schools and colleges that maintained higher standards. Children from larger families would be given the same admittances, but only if their parents agreed to sterilisation.
- Expenses for childbirth confinement were increased for every additional child which was added to a family.

3.3 The failed population control programme of India

In 1975 the Indian government launched a sterilisation programme as an emergency measure, in a year when a drought affected food prices and the oil price increased considerably. The standard of living and the quality of life were seen to have dropped, and the high population growth had an obvious negative effect on economic growth. The emergency measure was reported to have decreased the birth rate from 43 to 35 per 1 000, but due to a decrease in the death rate from 20 to 15 per 1 000, the net population growth rate only fell from 2,3 per cent to 2,0 per cent. However, because of an enormous built-in demographic momentum, the Indian population had increased from 480 million in 1965 to 600 million in 1976, and to 835 million in 1985.²⁷⁾ In 2008 the Indian population was more than 1 129 million,²⁸⁾ with a fertility rate of 3,1 per woman.²⁹⁾

In spite of the sterilisation programme which led to 8,25 million people being sterilised in 1976/77 and a consequent reduction in the birth rate, the Indian programme has not been a success. Some reasons for the failure are the following:³⁰⁾

- The government lacked the political will and vision to manage the programme successfully.
- The programme did not provide high-quality support services to ensure effective guidance, proper consultation, and safe medical

- results to ensure continued acceptance by the public.
- The family planning message was not received and accepted positively, because the programme was not part of a total effort with an emphasis on primary health care and the improvement of the quality of life.

3.4 Population reduction and the developed world

The world's population explosion is largely due to the enormous increase in the populations of developing countries. However, from a human security and global warming viewpoint, it is essential that the developed world should also reduce its population size. By doing so, the developed world will also use its own natural resources at a sustainable rate.

Since the end of the Cold War, it has become practise to refer to the developed world as the 'North' and the developing world as the 'South'. Some southern hemisphere countries such as Australia and New Zealand are according to this broad terminology part of the North. The easy to visualise North broadly consists of North America, Europe, Russia and Turkey.

In 1998 the North had about 20 per cent of the world population of 5 800 million. A decade later it is obviously less, although it was estimated at the time that the 1 200 million people of the North consumed as much as what 20 000 to 24 000 million people of the South would have consumed.³¹⁾

As early as 1993 a Cambridge University scientist proposed that the population of the United Kingdom (UK), a typically advanced North country, should be reduced by 30 million to about half its size. He recommended that the reduction should be managed over roughly 150 years by maintaining the fertility rate, which stood at 1,8 per woman at the time, and by a policy which encouraged small families.³²⁾

This proposal is still sound. Presently, the average British family has only two children, the fertility rate is reported to be 1,7, the population density is 247 per square kilometre, ³³⁾ and the population numbers more than 60 million. However, compared to the global average, the 'real world' size of a family in the UK should be 10 to 15 children, since every child born in the North consumes 20 to 30 times the resources, and causes 20 to 30 times the waste that a

child in the developing world causes over his/her lifetime.³⁵⁾

In the developing world, where high rates of growth are maintained over a long period of time, the population will sooner or later also start to consume resources at the same rate as people do in the North. China serves as an example. The best motivation for them and the people of the developed world to reduce their populations, is clearly that they will be able to enjoy the standard of living which they currently have, while they preserve their environment and conserve their resources.

4. SOUTH AFRICA'S POPULATION EXPLOSION

According to the South African Central Statistical Service (CSS) 1990 report, the South African population increased by 20,4 per cent between 1980 and 1989. The total population made up of all races numbered 11 594 000 in 1950; 15 175 000 in 1960; 20 136 000 in 1970; 25 081 000 in 1980; 27 895 000 in 1985; and 30 193 000 in 1989. The CSS report of 1995 showed the figures to be considerably higher, namely the 1980 total as 29 208 000 and the 1985 total as 33 198 000. Further totals are 38 012 000 in 1991; 40 436 000 in 1994; and 41 244 000 in 1995. A South African statistical report, *Community Survey 2007: Basic Results*, showed the totals of census 2001 as 44 819 778, and an estimated population equalling 48 502 063 for 2007 — an increase of 8,2 per cent since 2001. B

It is evident that the growth rate of the South African population has decreased tremendously since 1995 and even more so since 2001. It has been growing at only 1,5 per cent per year since 2001, which is far less than the two per cent per year growth rate recorded between the two previous censuses. The natural population increase is calculated to be less than and one per cent.³⁹⁾ At the same time immigration from the rest of Africa is reported to be very high.

A projected population growth rate demographic model set up in November 2005 predicts a South African population increase from 45 504 436 in 2001, to 49 418 611 in 2011, and to 51 341 512 in 2021. The model shows an increase of 12,83 per cent over the 20 years

from 2001 to 2021 which is obviously less than one per cent per year. Blacks are expected to increase by 15,14 per cent, coloureds by 17,94 percent and Asians by 7,49 per cent, whereas whites are expected to decrease by 8,08 per cent.⁴⁰⁾

The model shows that the overall population of South Africa is expected to continue to increase, but confirms the fact that the rate of growth is slowing down. This is seen to reflect the influence of HIV/AIDS and the resultant increased death rate, as well as a decrease in the birth rate because of a lower fertility figure of 2,5 per woman, and altered sexual behaviour which is engendered by the fear of disease. The negative growth rate of the white population is the result of large scale emigration, particularly between the ages of 15 to 39, and not the result of HIV/AIDS infection which is at a low level among that population group.

The above statistics, in a summarised form, show that the South African population grew from a mere 11,5 million in 1950 to 40,4 million in 1994. From 1994 to 2007 the population grew from 40,4 million to 48,5 million, and is predicted to increase to 49,4 million by 2011, and then to 51,4 million by 2021. The rapid growth prior to 1994, shows that the authorities gave the population explosion scant attention, and unfortunately politicians on both sides of the political divide encouraged the rapid growth of their population groups. Since 1994 no real effort has been made to inhibit the growth of the population, and the current decline in the growth rate, probably influences politicians to believe that the problem will 'simply go away'. However, the problem prevails. The country is already over-populated as is evident from the high unemployment figure and endemic poverty among the black population, which by all accounts is spreading to whites as well. South Africa's water resources are limited, as is the amount of arable land. Agricultural experts have been warning for years that water availability and food production have definite ceilings, beyond which production means are not available.

Immigration figures provided by the South African Police Service (SAPS) reflect that there were between 5,5 and eight million illegal immigrants in South Africa in 1999. The Department of Home Affairs estimated the figure to be about four million.⁴¹⁾ The fact that the figures vary so much show that immigration control is poor, and that little effort is made to control this aspect of population growth.

Poor control of South African land borders and an often stated government policy that migrants must simply integrate with the population and join the economy, confirm that the government has no intention of influencing the uncontrolled population growth.

In South Africa abortion has been legalised, which obviously restricts unwanted population growth, but at the same time a child support allowance is paid to women with little means, amounting to R200 per month for each dependent child. In a country in which poverty is rampant and employment is difficult to come by, such a small allowance simply serves to increase the birth rate with a further increase in poverty, since it may motivate women to merely have more children to obtain an income. The R200 per child allowance seems humane, but it also ensures the continuous support for government.

It takes no great insight to realise that, from a human security perspective, the South African population must be stabilised and in fact decreased over time. A government approved study must be done to establish the optimum habitation of the country, after which the authorities with the willing support of the people, must systematically manage the pursuit of that goal. The worst thing that can happen is that future South African governments are so afraid of losing their support, that they do not do what is obviously essential for the wellbeing of future generations.

5. ECONOMIC SECURITY

Economic security, a component of human security, has to do with the threat of poverty and unemployment. Poverty and unemployment in fact threaten any form of sustainable development, particularly in the developing world where riots caused by hunger and poor living conditions are common. The attacks on foreigners in South Africa in 2008, said to be caused by xenophobia, were amongst others caused by poverty and unemployment which had escalated to crisis proportions. This was due to uncontrolled immigration, leading to many more people attempting to integrate into an economy not able to support the population already dependent on it for their livelihood.

The lack of employment in the rural areas and a mass movement to the towns, have caused a housing crisis in the urban areas of South Africa. South Africa is becoming more urbanised at a rapid rate since 2,7 per cent of the population is reported to be moving to towns annually to seek employment.⁴²⁾ By 2006, 56 per cent of the population, estimated at 47,4 million at the time, already resided in the towns.⁴³⁾ There are reportedly at least 189 'squatter camps' or informal settlements in Gauteng, housing 22 per cent of the province's population. In the Western Cape there are more than 220 informal settlements in which 14 per cent of the population live. KwaZulu-Natal has 506 informal settlements, and evidently as much as 24 per cent of Northwest Province's inhabitants are living in these settlements. The Minister of Housing stated that it was not possible for the state to supply free housing for all the country's poor.⁴⁴⁾

No matter how hard the state tries to supply free housing, the escalating number of the poor will simply outnumber the supply of houses. This is caused by more people joining the ranks of the poor, as well as urbanisation which is caused by unemployment and overpopulation in rural areas. By 2005 more than 4,2 million people lived on less than US\$1 a day in South Africa, measured at 2000 prices. This was an increase from 1,9 million in 1996. The number of people living in 'relative poverty' in South Africa increased from 17 million in 1996 to more than 22 million in 2005. The black African population's relative poverty classification figure rose from 16 316 321 to 21 389 782 over the same period. The coloured's figure increased from 619 664 to 815 154; the Indian's from 66 081 to 86 945; and the whites' from 98 654 to 197 289. A relative poverty classification was allocated to people whose incomes ranged from R871 or less per month for one person, to R3 314 per month for a household of eight or more people. 45)

The widespread poverty and the fact that South Africa is already over-populated is clearly a threat to the well-being of the people. The poor are themselves a threat to society, since the conditions under which they live are extremely negative for the young to grow up in, and the increasing gap between the poor and the rich can only lead to resentment and more upheavals.

While it is essential to reduce the population of developing countries such as South Africa, it is as necessary for the resource consumption levels of the developed countries to be rolled back. In 1998 it was estimated that roughly one quarter of the world's population accounted for about three quarters of the world's consumption. The developed countries of the North were reported to consume 75 per cent of the world's energy, 90 per cent of its hardwood, 81 per

cent of the paper used, 80 per cent of the iron and steel, 70 per cent of the milk and meat, and 60 per cent of the world's fertilisers.⁴⁶⁾

Since some developing countries of the South, such as China and India have experienced an enormous economic growth rate over a relatively short space of time, they have also increased their resource consumption extensively. They have, for example, joined the ranks of the large consumers of protein-rich foodstuffs. The added consumption of the richer developing countries with very large populations, is said to be one of the major factors leading to a threat to food security. The obvious conclusion to be drawn is that not only must the poor developing countries reduce their populations, but the global population must decrease their consumption and make life on earth sustainable.

6. FOOD SECURITY

Food security, and the threat of hunger and famine, is receiving a tremendous amount of international and local media attention. The rise in food prices in early 2008 has already resulted in riots in various African countries, among them Burkina Faso, Cameroon, Guinea, Mozambique and Senegal. Africa faces a grave threat from the staggering rise in food prices, and families who are among the very poor and who spend most of their budget on food, are so badly affected by price increases that it results in their children going hungry for days on end. It is reported that about 14 million South Africans find themselves in the same situation. 48)

A World Economic Forum report tabled at the forum's Africa Conference in Cape Town in June 2008, stated that food security in Africa has been deteriorating since 1970. As a result about 200 million people on the continent suffer from malnutrition. It is estimated that 33 per cent of the inhabitants of sub-Saharan Africa are underfed, and as many as 55 per cent fall into that category when Central Africa as a geographic region is considered alone. ⁴⁹⁾

As many as 350 million people in Africa do not have access to clean water. It is estimated that 90 per cent of disease in developing countries is caused by a lack of uncontaminated water for domestic use. The chief sufferers are children, and it should be noted that the demand for fresh water was estimated to have doubled between 1971 and 2000, due to the increase in the number of people requir-

ing it.⁵⁰⁾

By the end of April 2008 the price of medium grade rice had increased by 120 per cent since the beginning of the year, that is in four months. This was caused by the increase in demand, amongst other things, since rice production is simply not keeping pace with the demand for it from the surging Asian population. It is estimated that rice consumption worldwide increased by 0,9 per cent in 2007 to close to 424 million metric tonnes. Over the same period production increased by less than 0,7 per cent. Bad weather conditions for rice production also decreased supplies, and some major rice consuming countries such as Bangladesh had to import 2,4 million metric tonnes of rice from India simply to stave off famine. The shortage of rice in the Philippines, which is an importer of the crop, may cost the country as much as one per cent of its Gross Domestic Produce (GDP).⁵¹⁾

The affect of the rice price and the shortage of the foodstuff is clear, when food security considerations force countries such as Vietnam and China to impose export quotas in order to maintain domestic supplies and to avoid further price escalation. This also means that less rice is available for Africa and for NGOs that try to feed the most vulnerable populations, many of whom are in sub-Saharan Africa. ⁵²⁾

In the field of food security, a subject drawing considerable attention is whether it is an acceptable practice to convert food crops into biofuels. The US can, from a food security viewpoint affecting only itself, afford to do so. It is reported that farmers in the US are subsidised to produce ethanol from maize, and receive a 51 cents per gallon subsidy to do so.⁵³⁾ The global energy crisis affects all countries. Consequently, such a policy seen only from the fuel price aspect is perfectly sound. Nevertheless, it is criticised from a moral viewpoint because of the millions of people who lack sustenance. If the global population explosion had not occurred, the use of crops to make fuel would not have been an issue. As previously stated, in 1998 the UN's medium term projection for the world's population by 2050 was 10 000 million, and it was estimated that the world would have to produce three times the number of calories as at the time. Such an increase in production was deemed impossible.⁵⁴⁾

7. HEALTH SECURITY

As previously mentioned, it was estimated that rapid urbanisation in South Africa had resulted in 56 per cent of the population already residing in towns in 2006. The 2008 estimate has increased by four per cent to 60 per cent of 47,7 million inhabitants, which equals roughly 29 million, most of whom live in the largest cities. More than 3,5 million of these people are estimated to live in informal settlements.⁵⁵⁾ It must be added that a great number of the so-called townships, and central city living areas are very over-crowded and sub-standard.

Over-crowding, poverty, informal settlements and simply too many people lead to the pollution of rivers and the water supply. In 2005 only 47,2 per cent of the black population had flush/chemical toilets. Pit latrines were used by 39,8 per cent of the people, 2,8 per cent had only bucket latrines and 10 per cent of the people had no facilities at all. The coloured population's statistics showed that 4,1 per cent had pit latrines, two per cent had bucket latrines and 1,7 per cent had no facilities whatsoever. 56) At the time blacks numbered more than 37 million and coloureds more than four million of whom 52,6 per cent and 7,8 per respectively, were subjected to the use of pit latrines or worse. In 2006 the South African government committed itself to eradicating the bucket system in formal townships by 2007. The Minister of Water Affairs and Sanitation, however, stated that the sanitation budget 'fragmented nationally' would unfortunately delay the supply of adequate sanitation by that date, to about another 14 million people.⁵⁷⁾

Poor sanitation and malnutrition, coupled with over-crowding in the cities, also lead to high levels of disease. In South Africa the cause of deaths attributable to HIV/AIDS are seldom recorded as such. However, the fact that such a large number of South Africans are dying from tuberculosis (TB) and pneumonia, suggests that many of those deaths are HIV related since a very large proportion of HIV fatalities are the result of TB and pneumonia infection. Both diseases are highly infectious and high population densities, poor ventilation in small shacks or houses, and degraded immune systems are breeding grounds for both TB and pneumonia. In 2004, South Africa recorded 670 cases of TB per 100 000 people, the second highest incidence measured against 36 other countries. Only

Zimbabwe recorded a higher figure, namely 673 cases per 100 000 people.⁵⁸⁾

In 2004, 897 485 live births were recorded in South Africa, reflecting only the births of South African citizens. In the same year the under-five mortality rate per 1 000 live births was 67. Rounded off to 900 000, the total of under-five deaths equals 60 300. This high figure is attributed to poor health security as can be seen when countries where slum conditions are common are compared with states where few slums exist. India and Nigeria, which for example fall into the first category, respectively recorded 85 and 197 under-five mortality rates per 1 000 live birth respectively in 2004. Australia and Germany, in the second category with no true slums, respectively recorded only six and five under-five mortalities per 1 000 live births in 2004.

8. ENVIRONMENTAL SECURITY

Environmental security includes the threats of pollution, environmental degradation and resource depletion. There are presently few topics that receive more attention than environmental security. Global warming, largely the result of carbon dioxide (CO₂) emissions caused by the industrialisation of virtually the whole world, has resulted in world leaders such as a former US Vice President, Al Gore, giving the topic as much media coverage as international sport. He has publicly stated that the poor of the world will be the hardest hit by climate change, but that there is only "one world, ... sharing one oxygen tank". Therefore, it is essential that the rich countries of the North assist the poorer countries of the South in curbing over-population, "because more population means more pollution". ⁶⁰⁾

A report which has also been given wide media coverage is that of the UN Environment Programme, the fourth *Global Environment Outlook: Environment for Development (GEO-4)*, set up by 400 research scientists and reviewed by 1 000 of their peers. The report, as previously mentioned, stated that the 34 per cent increase in the world's population from 1987 to 2007, from 5 000 million to 6 700 million, had been the cause of many of the pressures on the earth's resources. Some of the main conclusions, as regards environmental security in particular, were the following:⁶¹⁾

- Since 1987 the output of the average farmer had increased by 40 per cent, to keep up with the demand caused by the growth of the world's population and economy. The intensified land use was unsustainable and was causing degradation, a threat which is as serious as global warning and the loss of bio-diversity.
- The increase in the use of fertilisers required to meet the demand for more food is of particular concern because of the contamination which the chemicals cause.
- The need for more irrigation is reducing the quantity and quality of water in the rivers. The result is also that about one in 10 of the world's main rivers run dry at some point during the year, before the water reaches the sea.
- Rising desertification and the occurrence of regular droughts are destroying the quality of the earth's soil.
- Measures to protect bio-diversity are regarded as extremely urgent. Species are becoming extinct at a rate 100 times faster than any in fossil records. The scientists described the situation as the sixth major extinction event in the history of the world.
- Roughly 60 per cent of the world's ecosystems were described as degraded or used unsustainably, with over-exploitation, pollution, land-use changes and habitat loss as some of the main contributory factors.

In October 2007 a representative of the UN GEO-4 added that South Africa would experience 'serious waterstress' because the country's underground water was nearly spent. It was also stated that about two million children were dying from infections caused by air pollution. Air pollution is particularly bad in some South African cities such as Johannesburg and Pretoria, which lie on the highveld and which is virtually wind still for many months of the year.

9. PERSONAL SECURITY

Personal security involves various forms of violence which include social conflict and crime. South Africa has had a very high crime rate for years, and it shows no clear tendency to diminish. Social conflict in the form of riots expressing dissatisfaction with poor municipal services is becoming common, and recently violent attacks on foreign nationals made front page international news.

The causes of this appalling situation are also situated in the consequences of a far too large population. As already pointed out, a large part of South Africa's population lives in relative poverty, and the lack of employment opportunities makes escape from want extremely difficult, if not impossible. The lack of border and immigration control has led to the addition of millions of unskilled immigrants to a society already suffering from the results of over-crowding in the cities. The latter is also the result of very rapid urbanisation in a country where the social conditions are extremely conducive to crime.

The people who lead the migration to the cities are young persons between 18 and 30 years of age. Statistics show that 44,56 per cent of the black population were between 15 and 39 years old in 2006, and it is that segment of population which has urbanised most rapidly. Statistics also reveal that violence occurs in countries where more than 30 percent of the population are between 15 and 29. Evidently, in 2005, 31 per cent of the blacks were between 15 and 29. It is this section of the population who are not only mostly involved in the crime, but who also suffer its consequences.

10. COMMUNAL SECURITY

According to a UNDP report, communal security — a component of human security, involves the threat to the integrity of cultures. There is nothing that degrades moral values and culture more than abject poverty and wretchedness, the direct results of excessive population densities and over-population.

The black population of South Africa, among whom the greatest degree of poverty in the country exists, has a traditional culture namely 'ubuntu' which is held in high esteem. Ubuntu prescribes that every human being has dignity and worth, and that all people, whether they be rich or poor, should be treated accordingly. That a very large portion of the black population lives according to these principles is not in contention. However, the incidence of violent crime in the form of armed robberies with no respect for human life, rape of women, children and even babies, and commonality of murder and arson, indicate that ubuntu as a culture is under attack and

badly eroded.

The incidence of white collar crime, corruption and fraud reported to be increasing among all racial groups in South Africa, indicate that the respect for law and order is definitely regressing. Whether that is caused by the rate of political and societal change in the country only, or by over-population and its results, is not clear. Most probably both factors play a role. Since *ubuntu* has family values and cohesion as its basic tenets and never condones licentiousness, and should black society in South Africa live under better conditions, it could be at peace with itself.

The notion of birth control has never really been entertained among much of the South African population. It has never been part of African culture and in Zulu custom, for example, a man without children is considered a nobody. Demographers attribute the high fertility rates of African countries to low educational levels; low incomes; large rural populations; the low status of females; the need for security for old age through large families; early marriages; strong family ties; the high rates of infant mortality; tribalism; and strong adherence to ancestral religions, and in some cases to Islam and Roman Catholicism, each of which promote large families. ⁶⁸⁾

As early as 1991 it was suggested that there were indications that South African families were limiting their family sizes for economic and educational reasons. The change, however, is far too slow. A change in attitude is essential and it can be achieved based on *ubuntu's* basic tenet that every individual has worth. If the case, then births should be planned and welcomed, and no child should be brought into the world to live in squalor. In that way the integrity of African culture can be defended, and its family values can be sustained for the future.

11. POLITICAL SECURITY

Before 1994, South African authorities had implemented a family planning programme known as the Population Development Programme. Political statements by some government ministers, mainly in the 1960s, that the whites needed larger families, naturally gave population growth control an unfortunate political slant.

Women with low income who desired to apply birth control, could use the state's primary health care system, which issued con-

traceptives in the form of pills and other medical services, in clinics, hospitals, and other medical centres open to the public. Unfortunately, stories of disparaging remarks, insults and malpractices by nurses, nurse aids, clerks and even doctors were told in the townships. These stories had the negative effect that women refused to use the facilities, and the result was that they used their own contraceptive measures or none at all.⁷⁰⁾

The Population Development Programme had sound aims and motivations, amongst others that the result of family planning would raise the quality of life of the population by decreasing fertility, and improving the levels of literacy and career involvement of women in particular. The primary health programme was intended to bring about a reduction of infant mortality, which was to result in a reduction in the fertility rate.⁷¹⁾

At a meeting in Midrand in 1990, the South African State President at the time, stated that the 1989 *Amsterdam Declaration* which had the theme "a better life for future generations", was endorsed by the South African Population Development Programme. He also said that "married couples and individuals have the basic right to decide freely and responsibly about the number and spacing of their children. They must be provided with the information, education and means to do so".⁷²⁾

The 2008 South African population figures show that the pre-1994 Population Development Programme was a failure. The post-1994 programmes are also failures, since they have all the characteristics of those efforts used before 1994. The South African authorities still give very little attention to birth rates and population growth rates, and have an attitude that high economic growth will overtake poverty, over-population and high population densities. From time to time, high-handed treatment of women seeking abortions and family planning at medical institutions is also still reported in the media. It is also clear that state medical facilities and their service to the public have worsened considerably.

Amongst others, transformation and Black Economic Empowerment (BEE) experienced by some whites as a form of political repression, has contributed to large scale white emigration. Therefore it is one policy that has indirectly reduced the population. Unfortunately, the emigrants have taken a considerable amount of management and technological know-how with them. This, along with the lay-offs of some economically active people, has contributed to poor municipal service, national electric power failures, and a decline in certain basic state maintenance and service activities, not to mention fewer employment opportunities for the poor.

12. CONCLUSION

There is no doubt that the world is already over-populated. Poverty levels and the rate at which the earth's natural resources are exploited to maintain human existence, proves it. South Africa is already over-populated, and the idea that its population growth rate should be decreased to avoid a too large population somewhere in the future, is outdated. Reports that the urban black birth rate is decreasing are possibly true, but that rural fertility rates are also decreasing seems doubtful. The time has come for a dedicated national project to stabilise and decrease the South African population.

Countries with large ethnic Chinese majorities have been successful in gaining control of their population development programmes. They have learnt through experience that the population size must be controlled, and they have the political will and national discipline to do so. South Africa needs to develop that discipline, based on a sound national family planning programme.

The programme to stabilise and slowly decrease the size of South Africa's population, must be set up diligently, with a massive input from all the population groups living in the various areas of the country, and earning their incomes in various ways. The following governmental actions to achieve the desired results are suggested:

- An official appreciation/estimate must be made by experts to establish the ideal South African population size, in order to sustain human development and existence in the country, considering amongst others factors such as the availability of water and of arable land for food production.
- The formulation and implementation of a border control and immigration policy which is to the advantage of all South African people.
- Based on the experience of the population control programmes of China and Singapore in particular, a norm of two children per

family, could be considered. China's one child per family programme is rather drastic and seems to have some important disadvantages. Both Singapore and Taiwan have had successful programmes aiming at two children per family.

 The policy to be instituted should be propagated repeatedly on television, radio and at political rallies, and poster adverts showing the benefits of smaller families should be seen everywhere.

It is imperative that the political will be developed to introduce and motivate an effective family planning and population control programme in South Africa. The government must understand the relationship between over-population on the one hand, and poverty, malnutrition, famine, unemployment, crime, squatting and a host of other ills on the other. Failure to do so will lead to unrest and a lot of misery in a country where the gap between the rich and the poor is expected to increase.

REFERENCES

- 1. Ramphal, S, "Where is the Time-Bomb Ticking?", in Polunin, N (ed), *Population and Global Security*, Cambridge University Press, Cambridge, 1998, p 80.
- 2. Statistics South Africa, *Community Survey 2007: Basic Results*, Geographical Information Systems, National Department of Public Works, p 1 (http://www.epwp.gov.za).
- 3. Jordaan, J, in collaboration with Mfono,Z and M Tshabalala, *Population Growth our Time Bomb: The Solution to South Africa's Population Problem*, JL van Schaik, Pretoria, 1991, p 59.
- 4. *Ibid*, p 60.
- UN Development Programme (UNDP), UN Human Development Report, Oxford University Press, New York, 1994, pp 3 and 22-23, cited in Liotta, P H and O Taylor, "Sense and Symbolism: Europe Takes on Human Security", Parameters, US Army War College Quarterly, Vol XXXVI, No 3, Autumn 2006, p 88.
- 6. UNDP, "New Dimensions of Human Security", *UN Human Development Report*, Chapter 2, pp 22-25; and *Ibid*, p 90.
- 7. Beeld (Pretoria), 26 October 2007.
- 8. Institute for Futures Research, *Scan@ifr*, Vol 4, No 10, October 2007, University of Stellenbosch, Bellville, 2007, p i.
- 9. *Ibid*, pp 23-25.
- 10. Ramphal, S, op cit, pp 83-84.

- 11. Myers, N, "Global Population and Emergent Pressures, in Polunin, N (ed), *op cit*, p 23.
- 12. *Ibid*.
- 13. Liotta, P and O Taylor, *op cit*, p 97.
- 14. Hessler, P, "China's Journey: The Great Nation is on the Move", *National Geographic Journal*, Vol 213, No 5, May 2008, p 46.
- 15. Kurlantzick, J, "The Family Way", *Time Magazine*, Vol 171, No 23, 9 June 2008, p 31.
- 16. Procopio, J, *National Geographic Journal*, Vol 213, No 5, May 2003, *op cit*, p 126.
- 17. Jordaan, J, *op cit*, p 61.
- 18. South Africa Survey 2006/2007, South African Institute of Race Relations, Johannesburg, 2007, p 29.
- 19. Kurlantzick, J, op cit, p 31.
- 20. *The Military Balance 2008*, The International Institute for Strategic Studies, Routledge, Taylor and Francis Group, London, 2008, p 376.
- 21. Lange, K E, *National Geographic Journal*, Vol 213, No 5, May 2008, *op cit*, p 98.
- 22. National Geographic Journal, Vol 213, No 5, May 2008, op cit, p 54.
- 23. Kurlantzick, J, op cit, p 31.
- 24. The Military Balance 2008, op cit, p 400.
- 25. Jordaan, J, *op cit*, p 67.
- 26. *Ibid*, pp 66-67.
- 27. *Ibid*, pp 63-65.
- 28. The Military Balance 2008, op cit, p 341.
- 29. South Africa Survey 2006/2007, op cit, p 29.
- 30. Jordaan, J, op cit, pp 64-65.
- 31. Ramphal, S, *op cit*, p 89.
- 32. Ibid, p 79.
- 33. South Africa Survey 2006/2007, op cit, pp 29 and 26.
- 34. The Military Balance 2008, op cit, p 157.
- 35. Ramphal, S, *op cit*, p 89.
- 36. South African Central Statistical Service, *Demographic Statistics 1990*, Pretoria, 1990.
- 37. South African Statistical Service, *RSA Statistics in Brief 1995*, Pretoria, 1995.
- 38. Statistics South Africa, Community Survey 2007: Basic Results, op cit, p 1.
- 39. Business Day (Johannesburg), 30 October 2007.
- 40. South Africa Survey 2006/2007, op cit, p 12.
- 41. Oucho, J O, "Migration in Southern Africa", *ISS Paper 157*, Institute for Security Studies, Pretoria, December 2007, p 5.
- 42. Rapport (Johannesburg), 1 June 2008.

- 43. South Africa Survey 2006/2007, op cit, p 1.
- 44. Rapport (Johannesburg), 1 June 2008.
- 45. South Africa Survey 2006/2007, op cit, pp 202-203.
- 46. Ramphal, S, *op cit*, p 89.
- 47. Okonjo-lweala, N, "A Consuming Need", *Time Magazine*, Vol 171, No 20, 19 May 2008, p 29.
- 48. South African Environment Outlook 2006, cited in Beeld (Pretoria), 15 January 2008.
- 49. Sake-Rapport (Johannesburg), 1 June 2008.
- 50. Myers, N and Polunin, N (ed), op cit, p 21.
- 51. Ritter, P, "No Grain, Big Pain", *Time Magazine*, Vol 171, No 17, 28 April 2008, pp 30-31.
- 52. *Ibid*, p 31.
- 53. Sacks, J D, "Act Now, Eat Later", *Time Magazine*, Vol 171, No 18, 5 May 2008, p 33.
- 54. Myers, N, op cit, p 20.
- 55. Beeld (Pretoria), 15 January 2008.
- 56. South Africa Survey 2006/2007, op cit, p 397.
- 57. *Ibid*.
- 58. *Ibid*, p 331.
- 59. *Ibid*, p 319.
- 60. Bono, "Al Gore, The Former Vice President, now a Nobel Laureate has become America's Environmental Conscience", *Time Magazine*, Vol 170, Nos 26/27, 31 December 2007, 7 January 2008, p 58.
- 61. Sunday Times (Johannesburg), 28 October 2007.
- 62. Beeld (Pretoria), 26 October 2007.
- 63. Maree, A and J Prinsloo, "The Causes of Crime: Is South Africa on the Right Track?", *Strategic Review for Southern Africa*, Vol XXIV, No 2, November 2002, p 99.
- 64. South Africa Survey 2006/2007, op cit, p 14.
- 65. Beeld (Pretoria), 1 May 2008.
- 66. Jordaan, J, op cit, p 81.
- 67. *Ibid*, p 80.
- 68. *Ibid*, p 69.
- 69. *Ibid*, p 81.
- 70. *Ibid*, p 85.
- 71. *Ibid*, p 102.
- 72. *Ibid*, p 103.
- 73. Goldemberg, J, "Energy for a Sustainable World Population", in Polunin, N (ed), *op cit*, p 247.