



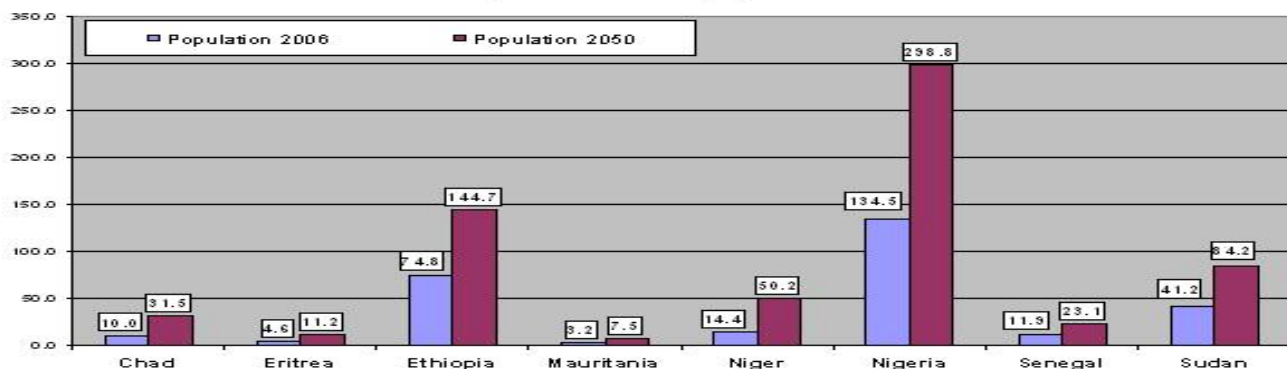
Desertification and migration: An Optimum Population Trust Briefing

- The world's deserts are advancing and there may soon be few places for environmental refugees to go. With the supply of ecologically healthy land shrinking, rapid human population growth in hot dryland areas is making soil quality deteriorate and increasing pressure to migrate. This process is partly due to the global warming impacts on ecosystems caused by consumption in rich countries, which is changing rainfall patterns and bringing more frequent drought, and partly due to rapid population growth in the worst-affected areas. An estimated six million hectares of productive land, an area almost half the size of England, is lost to desertification every year (*UN*). Arable land per person declined from 0.32 hectares in 1961-63 to 0.21 hectares in 1997-99 and is expected to drop further to 0.16 hectares by 2030.
- Continuous population growth, alongside poverty and poor land management, means that more and more ecological resources are being demanded of shrinking areas of forest and agricultural land bordering the world's deserts. The agricultural techniques which improved yields up to the 1990s are now proving less effective, exhausted land is becoming deprived of water and stripped of vegetation, crop yields are faltering, food supplies failing, and rural populations are being displaced from their land in growing numbers as environmental refugees.
- About a quarter of the world's population inhabits drylands and depends on these regions for its livelihood. More than two-thirds of Africa is dryland and the areas around the Sahara are those most at risk of desertification: the northern Sahara covers at least half of Algeria, Libya and Egypt in North Africa, and the southern Sahara desert extends into much of Mali, Niger, Chad, Somalia and Sudan. In these areas deserts are advancing and there is already conflict over land. North Africa is expected to suffer increasingly severe drought by 2100, and central Africa wetter climates (*Hadley Centre, October 2006*), but the projected increase in rainfall will not restore crops and vegetation if it is less frequent but more intense, with lower absorption, and accompanied by more frequent wind storms which can turn fertile land into dust bowls.
- These are also among the areas of fastest population growth and greatest poverty, so that growing populations will fuel existing pressures on land. Nearly a fifth of Niger's land area, for example, is at risk of desertification (*Land resource stresses and desertification in Africa, NRCS, 2001*). One farmer, south of the green belt between agricultural land and the Sahara in Niger describes his predicament: Malam Garba and his brother harvested 700 baskets of millet from their field in 1960, which provided a surplus for both their families. "Many trees and shrubs surrounded their fields including edible species. Villagers did not need to cut down trees for firewood because enough dead wood was available." (*Eden Foundation, Niger, 2000*.) Forty years later, even though his field was three times larger, vegetation loss, soil erosion by wind and diminishing rainfall meant the harvest was only a seventh of what it had been, and could feed only his own family. This farmer's family may also have doubled in size over that period: Niger's population is growing by 3.4% a year, with one of the highest fertility rates in Africa at 7.9 children per woman and only 14% of married women using contraception. Niger's population is projected to grow more than threefold from 14.4 million in 2006 to 50.2 million by 2050 (*World Population Data Sheet 2006, Population Reference Bureau*.)
- Climate change and population pressure will fuel further migration, yet other countries' capacity to absorb migrants is reaching key environmental limits. The impact of Sudan's displaced peoples (where nomads are in conflict with farmers over shrinking amounts of fertile land) is greatest on neighbouring Chad, already suffering serious ecological and population conflicts. Other continents will only be able to take desertification "refugees" at the cost, in most cases, of serious damage to their own environment: Europe, a likely "overspill" area for Africa's projected population growth, is already suffering severe droughts itself. The growing influx of migrants arriving from sub-Saharan Africa via the Canary Islands, which reached 31,000 in 2006* (six times more than in 2005), has already prompted action at an EU level and is almost certainly a taste of the future. Recent waves of economic migration into the EU are likely to be dwarfed by future flows of environmental refugees. By the end of 2005, according to the UNHCR, there were 20.8 million refugees and displaced people worldwide, up 6% on the previous year. The UN says 135 million people globally are at risk of being displaced by desertification, and 60 million people are expected to move from the desertified areas in sub-Saharan Africa towards northern Africa and Europe in the next 20 years (*UNCCD*). (*Revised: EU figures January 2007)

- Millions more people are likely to be added to regions under threat of desertification. In the Sahel and Horn of Africa regions, the populations of **Chad, Eritrea, Ethiopia, Mauritania, Niger, Nigeria, Senegal, Sudan and Somalia would all double in less than 30 years if growth continued at the current rate. All are projected to double by 2050. **In all these countries fewer than 15% of married women use any type of contraception. In Nigeria, the most populous, numbers are growing by 2.4% a year and projected to rise to 299 million by 2050. And with only 4% of Nigeria's women reported to be happy to limit their family size to two children, access to contraception without a change in desired family size might have little effect (PRB 2006).
- Other continents are threatened by desertification. Indian agriculture is suffering water resource depletion, while it expects an extra 600m people by 2050, more than the population of the EU25. Half of India's population has access to contraception, yet six years after its National Population Plan of 2000, average family size is about three children. China, which is also threatened by water shortages and encroaching deserts, has spared the rest of the world (by its one-child population policy) an extra 400 million people who would have needed to draw on the world's water supplies. But China's water-consumers are still expected to grow from today's 1.3 billion people before peaking at 1.6 billion.
- Even with stable population size, overgrazing, poor irrigation, soil erosion and desertification reduce the amount of ecologically productive land per person. Reversing population growth worldwide, therefore, would help to relieve these stresses on the global ecosystem. The first step is to provide access to all modern methods of contraception to some 350 million couples worldwide to whom this is currently denied. (In developing countries, research shows that without reproductive health education, some forms of poverty alleviation can *increase* fertility and population growth.) The need for governments to act is rising up the agenda: in Africa, the African Union Ministers of Health have agreed unanimously in 2006 to "adopt a plan of action to ensure universal access to comprehensive sexual and reproductive health services throughout the continent" (UNFPA, 22 September 2006).
- Culture and religion need not be a barrier. The Islamic Republic of Iran, where the fertility rate was about seven children per woman in 1980, launched a government population policy in 1989 which has achieved replacement family size following an officially backed family planning programme and progress with women's rights and education. Its population is still growing rapidly, however, because more than two-thirds of its people are under 25. Densely populated Catholic Italy has one of the lowest fertility rates in the world, at 1.3, and its population has stopped growing. With near-desertification in some parts of southern Italy, this will relieve stress on its own environment as well as that of the world as a whole.
- Global human population is projected by the UN to grow by 2.5 billion to 9.1bn by 2050. If the average worldwide total fertility rate (2.65 in 2000-05) could be reduced by just half a child per woman (to 2.15, just above the replacement rate of 2.1), world population would still reach 7.7bn in 2050, but there would be 1.4bn fewer climate changers and 1.4bn fewer to feed.

Population
in millions

Population growth in Sub-Saharan Africa
Source: World Population Data Sheet 2006, Population Reference Bureau



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