

UAPS 2011

Item 11.3: Population, Environment and Conflict

Abstract

The paper traces the history of competition and conflict over scarce resources throughout evolution, and then among early agricultural and industrial societies. It describes how population growth increases pressure on the natural environment and on farmland soils and water supplies, becoming both the spur for and means of provoking violent conflict with neighbouring communities, states and empires. It outlines several contemporary sources of tension over food, water, energy and other natural resources, in the context of the approaching 'perfect storm' of population growth, climate change and peak oil. It cites examples of the strange omission of any reference to the population driver, and thus to the consequent need for well-funded programmes of family planning and women's empowerment, in many current reports on global issues where they are clearly relevant, ascribing this to an irrational taboo. It contrasts the importance of this issue with the 'derisory' aid for family planning; and makes some recommendations.

Item 11.3: Population, Environment and Conflict

I come to the population issue from my two careers, first as a diplomat, then as an environmentalist. But I came to Africa in 1959 as a first-year VSO volunteer in the then Northern Rhodesia. The population at that time was 4 million; Zambia's today is 13.3 million, more than triple, and rising at 2.4% per year.

Over the three billion years of life on Earth, all species have been kept in balance with their habitat, and evolution has been driven, by four basic natural controls on numbers: competition, predation, starvation and disease. Crudely, nature's rules are based on "No birth control, no death control; only the 'fittest' survive to breed". It is significant that Darwin's 'eureka moment' in developing the theory of evolution came when reading Malthus, with his stress on competition for always scarce resources.

Since the emergence in Africa of early humans until some 10,000 years ago, our species too were hunter-gatherers, subject to the same disciplines. Then the development of agriculture (the first 'great revolution') broke the cycle, by introducing a form of death control. Humans learnt to modify their habitat to produce more food per hectare, and store surpluses from good years to keep more people alive during bad years; so populations began to grow.

Agriculture also led to permanent settlements, in which farmers could produce surpluses to feed non-farmers. This permitted specialization – initially of craftsmen and traders; later, with larger populations requiring more

organization, of rulers, priests, lawyers, scribes, and eventually soldiers. 'Civilisation' and written history begin with this process.

When agricultural technology could not keep pace with population growth, however, famines occurred, and competition for scarce resources, primarily food, re-emerged, frequently in violent forms. From early Sumerian records (the earliest written accounts from any agricultural society), it is clear that, as populations grew, agriculture became more intensive, arable land became degraded, irrigated land became salinated so barley replaced wheat, and competition for food increased. Eventually this resulted in the replacement of peaceful trading between the Mesopotamian city states by genocidal conflict under the Akkadians. The causal links between population growth, environmental degradation, food supply and conflict were clearly established.

This pattern has been repeated countless times throughout history. Most (not all) human conflicts have arisen as violent forms of competition for control of scarce resources, initially for fertile arable and grazing land and access to water, later into modern times also for scarce minerals such as oil. The second 'great revolution' (the industrial revolution) dramatically accelerated population growth, as the engineers learnt to harness fossil fuels to consume natural capital, while the economists convinced us it was income. And the potential scale of industrialised conflict grew in parallel.

Examples of resource conflicts since the Akkadians range from the first Palestinian genocide, proudly recorded in the Book of Joshua, through the rise and fall of the great ancient empires in the Nile, Indus, Yangtse and Tigris/Euphrates valleys, later the Persian, Greek and Roman empires, countless intra-European wars, the great empires of the Sahel, and of Turkey, Central Asia, the Aztecs and Incas, and more recently of the Spanish, Portuguese, Dutch, British, Russian and French. The most recent major examples lie in World War II, in which Hitler explicitly sought "Lebensraum im Osten" (living space in the East), while the Japanese sought to expand from their small and crowded but industrialised islands to create a "Greater Co-prosperity Sphere".

In all these cases, growing populations provided both the spur, and the means, for conquest of other, weaker peoples' lands. As the Greek historian Thucydides summarized the crude laws of international relations in the fifth century BC, "Strong states do what they will; weak states suffer what they must".

These are all examples of international conflict, arising at least in part from populations growing beyond the carrying capacity of their own immediate habitat. But equally common are smaller intra-national, inter-group conflicts over resources. Inter-tribal conflicts in pre-Roman Britain, pre-conquest America and pre-colonial Africa were mainly focused on access to scarce resources to supply and feed ever-growing populations. In recent years unfortunately, Africa, with the fastest growing population of any continent, has provided a number of similar examples; but food riots have occurred much more widely.

The under-lying dynamics of this long record of conflict are clear. It is a simple manifestation of the laws of physics that, on a finite planet, natural material resources of all kinds – notably good arable soils and grazing land, fresh water, minerals, fisheries, game animals and forests - are limited; and the more people there are in any given area, region, country or planet, the more pressure they will put on their environment, and the less of the planet's resources each will have. As long as there is sufficient space around them, growing populations will simply expand outwards until they encounter other populations; at which point, competition, sometimes leading to conflict, will ensue.

If formal boundaries are established, and some over-arching authority exists able to prevent conflict, competition for scarce resources then switches to the commercial field, and in favourable circumstances becomes a useful driver of the market economy. But when the market fails to provide for basic needs, conflict can again erupt. There is an old saying that "Every city is just nine meals from anarchy"; or more crudely, "When food runs short, people turn nasty". New Orleans in the immediate aftermath of hurricane Katrina provided some recent examples; but of greater global significance, fear of domestic food shortages have in recent years triggered a number of food-export bans, notably by China and India (rice) and Russia and the Ukraine (wheat). These illustrate the naivety of regarding the world market in food as no different from that in, say, cloth or electrical goods.

I was born in conflict – during an air raid in London. But since then, the global basis for food production has been transformed by two factors: population growth; and food technology. In 1960, when I entered university, the amount of arable land in the world was enough to provide 0.5 ha for each person – sufficient for a modest European standard of living. Population has more than doubled since, and land degradation increased, so there is now only 0.2 ha per head. In China, with its huge problems of soil erosion, there is 0.1 ha. These are constraints imposed by the biophysics of the planet – soil takes a long time to form, and is difficult to re-create. Yet the latest UN projections for population by 2050 range from 8.1 to 10.6 billion – a range of 2.5 billion, substantially more than the entire global population when I was born. Clearly the potential for conflict is vastly greater at the top of this range than at the bottom.

At the same time, technology - the growth in irrigation and the 'Green Revolution' - has so far kept our seven billion people more or less fed, though a billion go hungry. But Norman Borlaugh, the 'father of the green revolution', said when accepting his Nobel prize 40 years ago that he had only created a 40 year breathing space in which to stabilize our population – the 'Population Monster' as he called it. He has, of course, been ignored.

I first became aware of the importance of population growth as a driver of poverty in 1984 when, as British Deputy High Commissioner in Zimbabwe, I noticed that its growth rate was then 3.5% per year. I pointed out to the Economy Minister Bernard Chidzero (an old friend from my previous posting as UK representative to UNCTAD in Geneva, and once tipped as a candidate for first African UN Secretary-General) that this meant the economy had to grow at 3.5%

in real terms, year in, decade out, just to stand still in per capita terms. Though normally a very mild man, he became quite testy and replied: "Of course I know that! And of course I know that almost no African economy can sustain that growth rate. So of course I know that we will all get poorer until we get our birth rate down. Don't tell me – tell the other idiots!" Since I then supervised the UK aid programme, I steered increased funds into the family planning programme. (The link between rapid population growth and poverty has been well demonstrated since by, among others, the UK All-Party Parliamentary Group's 2009 report 'Return of the Population Growth Factor: Its impact upon the Millennium Development Goals').

Meanwhile, a new source of potential conflict has arisen very recently in Africa with the sale or lease of good farmland to Chinese and Arab 'investors', anxious to secure their own food supplies, and Americans and others foreseeing rising food prices as demand exceeds supply, and thus opportunities for profit. But this process displaces traditional farmers from their lands, causing understandable resentment. Should this result in civil disorder or actual conflict, it is easy to imagine scenarios in which little of the food from these new estates will reach its intended markets.

Competition for water is closely tied to that for farmland. The Colorado and Murray-Darling rivers no longer reach the sea. International tensions are rising over dam construction for power and/or irrigation along the Nile, Brahmaputra, Euphrates and Mekong systems. At the same time, groundwater irrigation is depleting fossil aquifers at great speed in South Asia, China, Mexico, parts of Brazil, and importantly the US, where the great Ogallala aquifer is progressively drying out. These not only stir up local conflicts of interest between, for instance, farmers, industrialists and residents of expanding cities, but hasten the day of global food shortage, and consequent price rises and competition for supplies. There is also emerging evidence that deforestation in, for instance, the headwater forests of Thailand is altering the climate, and reducing rainfall during the small monsoon. Climate change, with shifting patterns of rainfall and more floods and droughts, is likely to exacerbate these tensions.

The third element in the 'perfect storm' is peak oil – or more accurately, shrinking energy return on energy invested (EROEI). Industrial agriculture consists essentially of turning oil into food; and there seems no doubt that oil prices will rise structurally from now on. In its wake, other energy prices seem likely to follow, with adverse impacts on all energy importers. The prospect of further oil and water wars is widely discussed; and growing populations require growing quantities of both. Again, the risk of conflict is lower with stable than rising populations.

These are all alarming trends. They would be hard enough to manage, and keep everyone adequately fed and conflict-free, even with a stable or reducing population. They become harder – and ultimately impossible, as our Patron Sir David Attenborough so often says – with an ever-increasing population. The familiar I=PAT function (Impact on environment and resources = Population x Affluence (resource-consumption per head) x Technology (resource-efficiency)

holds broadly true; and we need to address them all. Of course we, the rich, must reduce our excessive consumption of the Earth's finite resources; and we shall all do our best to improve technology.

But while populations continue to rise, we are just running ever faster to stand still. This applies in all countries, developed and developing alike – my own organisation's primary aim is to stabilize the UK population and then reduce it by voluntary means, because we cannot sustainably support our own numbers from our own resources, and every additional Briton has the carbon footprint of, for instance, 22 more Malawians. Indeed a recent opinion poll we conducted showed that 80% of us in Britain think our population is too high, while two thirds think our ideal population would be 50 million or fewer, and link population growth to 'social conflict'. Instead, we are already 62 million, with 10 million more projected in the next 22 years!

The harsh fact remains that all populations will definitely stabilize at some point, because they cannot grow indefinitely on a finite planet. But when they do, it can only be in one of two ways, or a combination: either sooner by fewer births; or later by more deaths. This means: either the humane way (contraception, backed by non-coercive policy to make it universally available and educate and encourage people to use it); or the 'natural' way (famine, disease and violent conflict – the default position if current growth continues). As Maurice Strong, Secretary General of the 1992 Rio Earth Summit said, "Either we reduce the world's population voluntarily, or nature will do this for us, but brutally". Since then, the population has grown by 1.5 billion people, and malnutrition has increased.

There is, however, an obvious solution. It follows from the above that well-resourced, non-coercive family planning and women's education and empowerment programmes should be a key element in all development projects, so that the gains improve the lives of individuals without having to be shared among an ever-growing number of claimants. This should be a very high priority, for donors and recipients alike, if they wish to pre-empt serious environmental degradation with its resultant resource-conflict, and achieve development. As Kofi Annan said, "Population stabilization should be a priority for sustainable development". Population growth affects all Government Departments, - Finance Ministries, Planning, Agriculture, Environment, Industry, Transport, Energy, Health and not least Security and Defence. Good family planning programmes should be a top priority for all of them.

But it clearly isn't. Why not? I believe it is because, since the 1994 Cairo conference, 'Population' as an issue has been defined, and thus marginalized, almost exclusively as one of 'Sexual and Reproductive Health and (women's) Rights', a sub-set of health, of concern only to Health Ministries. The result is that the priority and resources available for family planning, in both donor and recipient countries, has failed even to keep pace with, let alone eliminate, the rising unmet need for family planning - currently 215 million women worldwide who wish, but are unable, to exercise their basic human right to take control of their own fertility, and consequently suffer frequent coercive pregnancy. Total

world aid for family planning is only \$400 million per year – or 10% of the Goldman Sachs bonus pot! EU aid for family planning is only 0.4% of total EU aid – even though the other 99.6% is doomed ultimately to fail to achieve development if family planning is neglected, numbers keep rising, and overwhelm any development gains from other projects. These are derisory, outrageous figures!

In addition, this re-definition of the problem of population growth as primarily a feminist issue has greatly aggravated the perverse, irrational and deeply damaging taboo about discussing the issue as a problem at all – a taboo emerging during the 1980s from a bizarre and unconscious coalition of the religious right, led for obvious reasons by the Catholic Church, and the liberal left in support of those in former colonies who considered it inherently racist.

The taboo now still permeates Western thought about the population problem, at both environmental and developmental NGO level and at Government level. For instance, although the UK Government's Chief Scientist referred in a speech to the approaching 'perfect storm' of population growth, climate change and peak oil production, leading to greater food, water and energy insecurity, a UK Government "Foresight Report on the Future of Food and Farming" which he chaired simply accepted the UN medium projection of 9.2 billion by 2050 as a 'given' to be accommodated rather than a variable to be tackled. It thus omits the obvious fact that it would be much easier to feed eight billion people than ten; so that the measures to achieve the lower number (ie family planning and women's empowerment) should be a central part of any food security programme. Nor does it mention what every mother subsisting on the equivalent of a dollar a day already knows – that her children would be better fed if there were four of them around the table instead of ten.

Similarly the report of last year's conference on the UN Convention on Biodiversity in Nagoya recorded the failure to achieve any of the main targets, without mentioning increasing population pressure on natural habitats as one of the causes; so that family planning should form part of any global wildlife conservation programme. There are many other examples of clearly conscious omission of the population growth factor from reports where it is obviously relevant.

So I surmise that the prime goal which unites everyone in UAPS is to increase vastly the priority, and hence funding, in both donor and recipient budgets, to meet the ever-growing unmet need for family planning, and its accompanying programmes of female education and empowerment. 'Sustainable Population Objectives' or (naturally non-coercive) 'Policies' should be adopted in all countries, developed and developing. With 40% of pregnancies unintended, reducing that number to zero would perhaps stabilize the global population in time to pre-empt widespread environmental, economic and societal breakdown.

So what can we do about it? First, we must break the taboo. We must stop avoiding the issue of population growth, as a driver and multiplier (not, of course, the only one) of all the serious problems our Earth faces – from

desertification to over-consumption and resource-scarcity to conflict prevention – because it is ‘sensitive’. We must stop tip-toeing around the ‘elephant in the room’, wrapping it up as only a matter of ‘demographic dynamics’ or ‘SRHR’ – terms few people understand. It is all these things, of course, but it is much, much more. Kofi Annan is right. Stable populations are an essential, though not, of course, sufficient condition for sustainability. And societies which are not sustainable can never be sustained. They collapse into chaos and conflict.

I am frankly frightened of the world my favourite person, my little half-African granddaughter, seems likely to inherit. I know that if she and all our children are to have the chance of a decent life, one of the many things we must do is to stabilize our numbers as soon as possible. I hope this is one clear message that will go out from this Conference.

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