10.3197/whpjps.63887831800457

RESEARCH ARTICLE

Scientists' warning: Population as a threat to security

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Abstract

A high population is not only causing environmental problems, such as climate change, degradation and pollution, but also security threats, including food insecurity, water scarcity, unemployment, social conflict, violent extremism, resource-driven wars, and forced migration. If societies continue to view these threats in isolation and ignore population as a contributing factor, the security crisis will not be resolved long-term. Security is achievable, however, if governments make rational choices to reduce population via embracing reproductive ethics of small(er) families and provide affordable access to contraception to all those who ask for it. These are inexpensive interventions that deliver rapid returns, but a lack of political will reflects a lack of understanding that human reproduction has not only ethical, but also security implications. It is also essential to put emphasis on placing human and environmental security ahead of national security, because security is no longer a country- or region-specific matter, but rather a shared burden and one that humanity as a whole must (ethically) respond to.

Keywords

Population growth, human security, environmental security, reproductive ethics, contraception.

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Introduction

In current scholarship, security issues are often discussed separately from issues of growing human population. In my view, without targeting population as a security threat, there can be no long-term human security. This paper explores the links between security, threats to security and population. It aims to bring the topic of population into security discourse. Furthermore, it links both security and population with reproductive ethics; when reproduction is viewed as the problem, it can also be proposed as a solution.

Security as a concept

Security is not a fixed concept but an evolving one. Before 1990, literature took a narrow Hobbesian meaning which included military, political and economic security provided by the state as part of the social contract. The end of the Cold War, the process of globalisation and the gradual transition from the Holocene to the Anthropocene phase of planetary history triggered the reconceptualisation of security towards a wider scope that has also included societal and environmental dimensions (Brauch, 2008: 27–43). New uncertainties are increasingly rooted in environmental and societal, rather than political, instabilities. Brauch (2011: 61) explains that, at present, security no longer represents a situation free of dangers, rather an insurance against a diversity of emergent threats. From a philosophical perspective, this change signifies the shift of focus from protection against concrete dangers towards insurance in the context of abstract threats.

Since the late 1990s, parallel debates in security studies, social sciences and within international organisations have emerged. While the term 'national security' refers to preservation of the state and its institutions and governance structures, 'human security' refers to people's social, economic, political and environmental vulnerabilities and threats (Brauch, 2011: 62). Human security includes the environmental dimension, such as natural disasters, extreme weather and insufficiency of natural resources. As Brauch (2011: 62) says: 'The answers to the questions of security for whom, from whom, by whom, of what values, from what threats and by what means differ fundamentally between these concepts'.

Security has both objective (physical) and subjective (emotional) dimensions (Wolfers, 1962: 147–165). From an objective perspective, it is achieved when the threats are avoided, prevented, managed, coped with, mitigated and adapted to,

whether by individuals, societal groups, the state or international organisations. From a subjective perspective, security is achieved when fears of the threats are allayed (Brauch, 2011: 61). The perceptions of security threats can be easily distorted. They also depend on the worldviews and mindsets of security experts and policymakers (Booth, 1987: 39–66), who can distort the assessment and attitudes to new challenges and threats. International attempts to combat these challenges and threats are often paralysed by opposing worldviews and interests.

Threat as a concept

Threat means: 1. a stated intention to inflict injury, damage, or another hostile action on someone, 2. a person or thing likely to cause damage or danger and 3. the possibility of trouble or danger (Soanes, 2000: 1199). Threats to security can be intentional or unintentional. They can come from within and outside the state (Buzan, 1983: 57). Buzan (1983: 75–83) differentiates between military threats (seizure of territory, invasion, occupation, change of government, manipulation of policy), economic threats (export practices, import restrictions, price manipulations, default on debt, currency controls) and environmental threats (damaging the physical base of the state). Environmental threats consist of floods, landslides, droughts, tsunamis, hurricanes, wildfires, extreme temperatures and earthquakes. Their impacts are often intensified by other threats such as poverty, food insecurity and inadequate housing in highly vulnerable flood-prone and coastal areas (Brauch, 2011: 106).

While many threats have been specifically and repeatedly studied and discussed, one that has a major impact on security has been overlooked: population and its demographic dynamics.

Population as a threat

Population is one of the factors in the Ehrlich-Holdren equation on environmental impact of human activities: $I=PAT^2$ (Greguš, 2023: 192). It is also an important, though often neglected factor that has a major influence on security, both national, human and environmental. The scale, density and growth of the human population

2 The relationship between population and environmental impact was developed into this formula, where I is the environmental impact, P is population (the number of humans), A is affluence (material resource consumption and concomitant pollution per person), and T is technology (or the relative efficiency with which consumption and production are achieved).

contributes to a number of areas, e.g. climate change, environmental degradation and pollution, resource depletion, increase in municipal waste, biodiversity loss, deforestation and desertification, water scarcity, food insecurity, starvation and malnutrition, pandemic emergence, inadequate education and healthcare services, increased poverty, inadequate housing, forced migration, climate refugees, radicalisation, extremism, widespread conflict and resource-driven wars (Greguš, 2023: 191). These problems represent direct or indirect threats to security. However, what is important to highlight is the fact that it is not simply the total population size and its ongoing growth, but also the shift in sizes among different populations as well as the shift in the population structure, that are fuelling these problems.

Population size and population growth

In the latter half of the twentieth century, humanity experienced unprecedented population growth. This expansion is projected to continue, with Africa, most notably Sub-Saharan, leading the charge (Greguš and Guillebaud, 2020: 409–410). This region's population, 177 million in 1950, is now 1.257 billion (Macrotrends, 2025) and is likely to reach over 3 billion in 2100 (UN, 2024). Of the 47 countries with the highest global fertility rates, 32 are in this region and the populations of 18 of these countries are projected to reach at least double their current size by 2050.

Within this context, Nigeria emerges as a significant player, standing as Africa's most populous, the world's eighth most populous nation (Gbaka et al., 2024: 2). It is one of the fastest-growing populations globally with astonishing record: a country with a population of 37 million in 1950 now sits at 234 million (Macrotrends 2025) and is projected to reach 477 million in 2100 (UN, 2024).

As such, this country of 923 thousand square kilometres will surpass the whole European Union, at a size of 4.233 thousand square kilometres with a projected population of 419 million in 2100 (Eurostat, 2025), and the United States, at 9.876 thousand square kilometres with a projected population of 421 million in 2100 (UN, 2024).

Population structure and the 'youth bulge'

While population size and growth are important factors, structure should also be considered. In countries with fast-growing populations, there is a high proportion of young people, also known as a 'youth bulge'. Its presence is a predictor of

civil unrest (Cincotta et al., 2003). Current scholarship suggests that surplus populations of 'idle youth' excluded from economic opportunity are prone to being radicalised and pulled into violent (and other) forms of extremism (UNDP, 2023: 71). This trend is particularly prevalent in a population bulge of young men aged 15–29. The overwhelming majority of soldiers, terrorists, criminals, political radicals, as well as football hooligans, are men in this age group. ISIS in Iraq and Syria, the Taliban in Afghanistan, Boko Haram in Nigeria, warn-torn Liberia, or the Rwandan genocide can serve as examples in which it was predominantly young men who joined extremist groups. They were frequently from sexually conservative societies with no jobs. They could not marry and, as such, were easy recruits for any extreme political or religious teaching (Potts et al., 2015: 507).

Potts and Hayden (2010: 63–97) in their book *Sex and War* explain there is an obvious link between a high birthrate, a high proportion of young men in the population and the occurrence of violence and extremism. Unmarried men often form bands of vagabonds (Hudson, 2002: 5–38). Most violent crimes are committed by young men. Potts (2006), who devoted a lot of effort into this sphere, puts it this way:

> Just as smoking is a risk factor for lung cancer, so a high proportion of young men in the population compared with older men is a national risk factor for violence. Not everyone who smokes dies of cancer, but many do; not all nations with a high ratio of younger to older men spawn terrorists, but many do. (Potts, 2006)

This view aligns with the United States 9/11 Commission Report which explicitly stated that 'High birth rates … have produced a large, steadily increasing population of young men without any reasonable expectation of suitable or steady employment – a sure prescription for social turbulence' (National Commission, 2004: 54).

This was the case of Afghanistan in 2001. Its population, including that of young men, is dramatically increasing: 7 million in 1950, 20 million in 2001, 44 million in 2025 (Macrotrends, 2025) with a projection of 129 million in 2100 (UN, 2024). In summary, young populations, i.e. those with a low median age, are often more conflict-ridden than those with a higher median age (Potts et al., 2015: 507).

Threats to security

Many studies indicate that demographic expansion poses threats to security. For the purposes of this paper, they will be divided into eight main issues.

Population and food insecurity

Food insecurity means: 1. a limited supply of adequate food in a household; and/or 2. the inability of a household to obtain sufficient quality foodstuffs in a socially acceptable way (Kendall et al., 1996: 1019–1020). More than 673 million people, 8 per cent of the global population, experienced hunger in 2024. There have been notable improvements in southern Asia and Latin America. Unfortunately, this positive trend contrasts sharply with the steady rise in hunger across Africa and western Asia. The proportion of the population facing hunger in Africa surpassed 20 per cent in 2024, affecting 307 million people, while in western Asia 13 per cent of the population, i.e. almost 40 million people faced hunger in 2024. It is projected that 512 million people could be chronically undernourished by 2030, with almost 60 per cent in Africa. (WHO, 2025). In 2024, the global prevalence of food insecurity was 28 per cent, accounting for 2.3 billion people. This figure is 335 million more than in 2019, before the COVID-19 pandemic and 683 million more than in 2015, when the United Nations Sustainable Development Goal to eliminate hunger was adopted (WHO, 2025).

Food insecurity also exacerbates physical and mental disorders (Lee and Frongillo, 2001: 94–99), various infectious diseases (Oluoko-Odingo, 2011: 1–20) and high numbers of premature deaths (Men et al., 2020, 53–60). It represents a major obstacle in achieving the Sustainable Development Goals and leads to economic and non-economic problems (Battersby, 2017: 115–129). Risks of violent conflict are also elevated since it is well-documented that hunger can lead desperate men to desperate actions, as it did in the case of the Rwandan genocide (Gasana, 2002: 24–33).

A growing population is among one of the most crucial factors contributing to food insecurity (Molotoks et al., 2021: 1–13). Producing sufficient food for a growing population has always been a challenge. Additional mouths impose pressures on agricultural production (Hall et al., 2017: 124–135). Kousar and his colleagues conclude that population growth and urbanisation have a significant and negative impact on food security (Kousar et al., 2021: 1). Urban growth tends

to concentrate in the most fertile areas. Food insecurity is exacerbated by taking these areas out of based production (Kousar et al., 2021: 16). A further driver of food insecurity is affluence changes in food consumption (FAO, 2025) since they require a doubling or more of agricultural production (Alexandratos and Bruinsma, 2012).

Population and water scarcity

Water scarcity means the lack of fresh water resources fails to meet the average water demand. There are two types: 1. physical water scarcity occurs where there is not enough water to meet all demands, and 2. economic water scarcity exists where there is a lack of infrastructure or technology to deliver water to households affordably (Caretta et al., 2022: 560). Half the world's population, i.e. 4 billion people, are assessed as being currently subject to severe water scarcity for at least some part of the year due to climatic and non-climatic factors (Caretta et al., 2022: 558). It is a major problem because water is central to drinking and sanitation. Inadequate sanitation is a problem for 2.4 billion people who are exposed to diseases such as cholera and typhoid fever and other water-borne ailments. Many of these people, mostly children, die each year from diarrheal diseases alone. Water scarcity is also a significant driver of food insecurity (Mahlknecht et al., 2019: 1–15) because it is an essential requirement for agriculture production (Wolde et al., 2020: 1–15) and for cooking and food processing (Pahl-Wostl, 2019: 256–367). Therefore, water scarcity increases food insecurity.

The growing population requires more and more water for drinking, agricultural production and industrial production. Humans have also polluted many water reservoirs. Further, human-made climate change is altering patterns of weather, causing shortages and droughts in some areas and floods in others. Should current trends continue how they are, this situation will only get worse. By 2025, two-thirds of the world's population may face water shortages. For example, the city of Kabul could become the first city in the world to run completely dry (MercyCorps, 2025). Water scarcity and food insecurity pose security threats as people move en masse and intensify competition with other groups for scarce resources. Drought is believed to have contributed to triggering the Syrian civil war in 2011 (Gleick, 2014) although its contribution has been challenged (Eklund et al., 2022). While the concept of 'water wars' remains contentious (Biswas and Tortajada, 2019), water is identified as a trigger, weapon or casualty in almost 2000 past conflicts (Pacific Institute, 2025).

Population and pandemic emergence

2020 was the year when the COVID-19 pandemic overshadowed all other global challenges which humanity faced. It was not only a healthcare issue, but also a security threat because it affected the functioning of states, their institutions and people's access to essential goods and services. While some might think the problem is over and no other pandemics lie ahead, experts know better. New diseases and outbreaks of pandemic scale are a near mathematical certainty (Qui, 2020). The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released a major report which stated that nearly all known recent pandemics and emerging diseases, including Ebola, Zika, Nipah encephalitis, influenza, HIV/AIDS and COVID-19 are zoonotic diseases that spread due to close contact between wildlife, livestock and humans (IPBES, 2020). It warned that there are five new diseases emerging in humans every year and that an estimated 1.7 million currently undiscovered viruses are thought to exist in mammal and bird hosts, between 540–850 thousand of which could potentially infect humans (IPBES, 2020).

There is a clear connection between population pressure and pandemics. Zoonotic diseases are on the rise due to the overexploitation of nature (destruction of wild habitats, vast and relentless deforestation), and the increasing consumption of meat products. Such consumption, driven by a growing number of human consumers and their increasing purchasing power in emerging economies, is projected to double by mid-century (FAO, 2025), which will heighten the risk of new pandemics. Since intensive agriculture brings animals into closer contact with humans, it creates an environment that enables the easier transmission of new viruses from animals to humans.

In addition, the triple threat of human encroachment into natural habitats, urbanisation and globalisation increases exposure to new viruses. First, a growing population means people must expand into areas where they can encounter infected species. Subsequently, urbanisation, the movement of people from rural areas into cities, increases urban population density. Large human populations in cities and megacities represent ideal conditions for diseases to spread. Lastly, globalisation results in close contact among populations. Their greater and faster movement within and between countries means diseases can spread more rapidly and extensively (Greguš, 2021: 89–90). In summary, continued population growth and environmental destruction fuel the risk of future pandemics.

Population and climate change

Nine dimensions of earth system regulation have been postulated, each set by a measurement beyond which planetary systems become unstable (Steffen et al., 2015). Seven of these measurements, or boundaries, have been exceeded to date (PBScience, 2025). Three interrelated boundaries pose particularly direct threats to human societies: climate change, the global freshwater cycle and ocean acidification. Deeper understanding of these issues is complicated by intrinsic positive feedback loops, substantial lag times between system change and experiencing the consequences of that change, and the fact these different boundaries interact with one another in ways that yield surprises (Kareiva and Carranza, 2018: 5).

Climate change leads to extreme weather events and catastrophes, such as droughts, floods, heatwaves, storms, sea-levels rising and mega wildfires, which directly or indirectly threaten security (Kareiva and Carranza, 2018: 6). In addition, climate change, as with the freshwater cycle and ocean acidification, is directly connected to food and water provision. As such, climate change induced events and catastrophes can trigger conflicts (Kareiva and Carranza, 2018: 5). However, while all of humanity is – and will be – in this together, the world's poorest communities will feel the effects and consequences of climate change first and most (WEF, 2023).

Climate change is leading to a significant increase in more frequent extreme weather events and catastrophes in Sub-Saharan Africa, including flood and droughts and other consequent degradations of valuable natural environments and the resources needed for life. Somalia, for example, has experienced prolonged drought, leading to the worst famine in half a century (UNDP, 2023: 51). Sub-Saharan countries face extreme environmental threats including water scarcity and food insecurity–which are correlated with vulnerability to terrorism (UNDP, 2023: 17).

The growing world population, with increased production, consumption and over-exploitation of nature, is what is fuelling these changes. While technological solutions are important, like curbing emissions, they are insufficient (O'Sullivan, 2023). If humanity is to overcome this existential challenge, it must curb greenhouse gas emissions per person but also curb fertility. Both are necessary (Greguš, 2022).

Due to demographic momentum, changing birth rates shift the population gradually at first, while large differences only emerge decades later. While some have argued that bending the curve on global population growth will be too slow to affect climate change, they are ignoring the more rapid impacts on the rate of population growth. It translates directly into reducing emissions from construction and deforestation, both emissions-intensive activities. Rapid impacts also include improvements in family food security and children's access to education, contributing to climate change resilience. Reducing birth rates cannot compete in any way with other efforts to reduce emissions–in every case, they increase the impact of those investments. For example, they magnify the rate at which new renewable energy capacity can displace fossil fuels rather than merely lessening the growth of energy demand (Lowe et al., 2022). If it takes decades to achieve big gains, this situation increases the urgency to get started. The delayed benefits are similar to those from planting forests, but nobody argues that planting forests is too slow of a solution. As the Chinese proverb advises, the best time to plant a tree is 20 years ago, but the next best time is today.

Population and unemployment

Population expansion not only leads to food insecurity and water scarcity, but it is also associated with unemployment and poverty. Population growth frequently outstrips a country's ability to provide basic services and jobs, thus leading to unemployment and poverty. There are many studies which have explored the connection between population growth rate and its influence on unemployment levels (Gbaka et al., 2024: 2). The countries with the fastest growing populations tend to rank highly on global indices of youth unemployment, hunger, poverty, environmental degradation and fragility (Walker, 2016). Unemployment and poverty are not directly security threats, but they can provoke social conflict and violence. Young men are particularly readily provoked, as discussed above in relation to youth bulges.

Population and social conflict

A large increase in population makes social conflict more likely. There are many studies confirming this claim. Homer-Dixon (1994: 39–40) studied the connection between population growth, pressure on environmental resources and conflict, and concluded that poor countries are more vulnerable to environmentally induced conflicts. Tir and Diehl (1998: 319–339) estimated that population growth

has a significant impact on military conflict, especially in poor countries. Hauge and Ellingsen (1998: 299–317) found that factors such as deforestation, land degradation and water scarcity, in combination with high population density, increase the threat of domestic armed conflicts. Diehl and Gleditsch (2001) concluded that conflict is more likely when high population growth combines with land scarcity. Bruckner (2010: 535–550) studied 37 Sub-Saharan countries between 1981 and 2004 and found that a 5 per cent increase in population growth rate raises the threat of civil conflict by around 6 per cent. Consistent with the notion that population contributes to conflict, Acemoglu, Fergusson and Johnson (2019: 1566) concluded that large population increases in many developing countries after 1940 contributed to an increase in internal violent conflicts, including violent protests and civil wars.

Crimes such as homicides, abductions and kidnapping are more likely to occur in African countries like Nigeria that have had rapid population expansion (Gbaka et al., 2024: 2). Gbaka and his colleagues suggest that such growth can strain resources, potentially resulting in conflict and poverty. He points out that this phenomenon becomes particularly pertinent in the context of Nigeria, where burgeoning population growth intersects with various socioeconomic and security challenges (Gbaka et al., 2024: 2, 13). He concludes that the recuring incidents of unrest, insurgency and elevated crime rates seem to be linked to the growing population and unemployment, suggesting a possible correlation between population growth and insecurity, and that population growth affects insecurity in the long run. This finding is consistent with previous ones, according to which recent unrest, insurgency and high crime rates in Nigeria appear to be rooted in expanding population and unemployment. This hints at a potential relationship between population growth and insecurity (Iwu, 2020: 58–68). Sakanko and David (2018: 77–90) also noted that as Nigeria experiences rapid population growth, there is a heightened demand for resources, including food, jobs, housing and essential services. If these resources are not adequately provided, it can lead to increased inequality and competition, potentially fuelling conflicts.

Population and violent extremism

Over the last decade, the global landscape of violent extremism has dramatically shifted, as violent activity expanded from the Middle East and North Africa to Sub-Saharan Africa (UNDP, 2023: 14). Worldwide deaths from terrorism have fallen

by over one-third globally since peaking in 2015, mainly following the decline of ISIS in Iraq and Syria (IEP, 2022: 29), but attacks in the Sub-Saharan region have more than doubled since 2016 (IEP, 2022: 2) and deaths from terrorism in this region have risen tenfold since 2007 (IEP, 2022: 29). Now, with almost half of all terrorism deaths globally, Sub-Saharan Africa has emerged as the new global epicentre of violent extremism. Countries involved include Somalia, Burkina Faso, Niger and Mali (UNDP, 2023: 14). Other traditional hotspots are Cameroon, Chad and Nigeria, but violent extremist activity is spreading further across the continent, from southern Africa, notably Mozambique, to coastal regions of West Africa, such as Benin and Togo (UNDP, 2023: 48). Its spread has devastating impacts on lives and livelihoods and on prospects for security and development (UNDP, 2023: 14). But as António Guterres, the United Nations Secretary-General, warned in his 2022 remarks to the High-Level Meeting on the Sahel: 'The effects of terrorism, violent extremism and organised crime will be felt far beyond the region and the African continent' (UN, 2022).

Economic pressures, poverty and a lack of employment are cited as central drivers of extremism (UNDP, 2023: 21). Violent extremist groups recruit others by luring them in with the hope of employment, for instance 25 per cent of voluntary recruits cited 'employment opportunities' as their primary reason for joining, particularly among male respondents (UNDP, 2023: 17). Half of these recruits in Niger cited climate change-related difficulties as one of their reasons for joining violent groups (UNDP, 2023: 51). However, while climate change is disrupting subsistence and livelihoods to a limited and localised extent, population growth is rendering young adults landless, jobless and food-insecure at a much greater rate (Hall et al., 2017).

Population and forced migration

Insecurities such as climate-change induced extreme weather events and catastrophes, food insecurity, water scarcity, unemployment, poverty, social conflicts and violent extremism, have all contributed to escalating displacement and migration of people, dwarfing the scale of activity during World War II. The largest proportion of displacement has taken place in Nigeria, Somalia and the Central African Republic (UNDP, 2023: 7) and Syria (Idris, 2013: 394–395). But worse is still to come. By mid-century, today's flow of migrants will seem like a trickle compared to tsunamis of involuntary migrants forced by increasing population

pressure and deteriorating environments to move elsewhere, seeking refuge and solace in more stable states. This move will represent security threats for countries of departure, countries of passage and countries of arrival.

While countries, such as Australia, Canada or the United States, are surrounded by ocean buffers, Europe, with its close proximity to Africa, its land bridge to the Middle East and its neighbourly status with politically volatile nations to the East, will feel these pressures first and foremost. Given that recent sharp rises in migration have led to the rise of anti-immigration political parties, there are reasons to believe that Western societies will respond with further restrictions and bans on both legal and illegal immigration, as well as security measures such as walls, border-patrolling drones and troops and with more authoritarian styles of governing. Meanwhile, a widening gap between the rich and the poor within those already vulnerable Western countries will push society towards instability from the inside (Nuwer, 2017). Thomas Homer-Dixon warns that the more dissatisfied and afraid people become, the more they will tend to cling to their in-group identity – whether religious, racial, or national – leading to further insecurities. In an interview with Rachel Nuwer he said, 'You're setting up the psychological and social prerequisites for mass violence'. When violence finally breaks out, or another country or group decides to invade, collapse will be difficult to avoid. There is a risk that democratic, liberal governance will fail, while stronger autocratic governments will be the 'winners' (Ibid, 2017).

The need for reproductive ethics (of smaller families)

As shown, a rise in population causes or worsens many environmental and socio-economic problems and security threats, including food security, water scarcity, pandemic emergence, climate-change induced extreme weather events and catastrophes, unemployment, poverty, crime, social conflicts, violent extremism and terrorism, wars and forced migration. Attempts to target these separate proximal threats while ignoring the population factor are not strategic and will not solve the security crisis long-term. Population growth is an underlying exacerbator of all the aforementioned security threats. Ending population growth is not sufficient to avoid the many threats already in train, but it is an essential prerequisite for diminishing the emergence of new threats and beginning to mitigate existing stressors. Decreasing reproduction, thus fertility and population, will increase security, not only national but also human and environmental. Beyond

security, it is vital for achieving sustainability and most of the United Nations Sustainable Development Goals (Greguš, 2023: 190–199).

Voluntary limiting of childbearing is the most ethical option. Individuals might limit childbearing from essentially selfish motives, considering the costs and lifestyle constraints associated with raising children, or through concern for their children's best interests; or they might have wider ethical motives for the good of future humanity and the rest of the species with which we share our planet. The reproductive ethics of small(er) families respects a maximum of two children per family, i.e. replacement level, to avoid worsening the situation, while one or none can be seen to make a positive contribution to restoring ecological balance.

While some consider it immoral to discourage people from reproduction, the reality is precisely the opposite. It is immoral to close our eyes to environmental degradation and security threats that human reproduction causes. The more people in general, the more young men in particular, the more threats to security. Targeting population by embracing voluntary reproductive restraint is the most ethical way.

The need for contraception and empowerment

Reproductive ethics of small(er) families, however, are not going to work without specific tools such as, contraception, family planning methods and services. It is important to highlight that this should be *voluntary* family planning, because it is about responding to what women (and men) want, not telling them what to do. However, because traditions around family size and the roles of women are resistant to change, it is not enough merely to ensure access for those who ask for it. When population growth poses so many threats to the future security of parents and their children, promoting the benefits of smaller families, so that people can make informed decisions, is no less than a duty of care.

The World Health Organisation estimated in 2021 that 164 million women have an unmet need for contraceptive services (WHO, 2021). They are aged 15–49 and want to avoid pregnancy. Many studies show that fertility remains high where there is a significant unmet need for family planning. Access to family planning has a powerful impact on birth rates. Family size falls when people have the knowledge, means and motivation to prevent unwanted pregnancies. Without

contraception, which separates sexual intercourse from childbearing, the default position in any heterosexual partnership is a large family (Potts et al., 2015: 508).

Children in small families are more likely to enter school and stay in school than children in large families (Knodel, 1990: 31–62). In countries where the birth rates have fallen, children graduating from school are more likely to be employed as adults. As such, voluntary family planning not only allows women to obtain autonomy and control over their bodies and their lives, but it simultaneously allows societies to seek economic prosperity. Widespread, effective and voluntary use of contraception is an essential factor and the most ethical vehicle not only to achieve ecologically sustainable human societies, but also to raise world living standards.

Hence, in all the ways discussed above, contraception contributes to world peace and security (Potts et al., 2015: 509). Potts gets it right in the title of his paper 'The pill is mightier than the sword' (Potts, 2006).

To address the persistent unmet need for family planning, it is necessary to find sufficient political will and funding to ensure affordable access to contraception to all, and to build public acceptability of small family ideals (Greguš and Guillebaud, 2023: 589–597). It is not only ethical and pragmatic, it is also *cost-effective*. According to the Copenhagen Consensus, for every US dollar spent on contraception the return on investment is $120 (CCC, 2015).

Finally, and importantly, the education and empowerment of girls and women plays a valuable role in security. It is stated that women's empowerment is fundamental for peace (UKFAC, 2014). Also, Hudson and colleagues (2009: 38–39) state that measures of the 'the physical security of women [in a society] is strongly associated with the peacefulness of the state'.

The need for long-term thinking

Given that population is a long-term issue, what is necessary is long-term thinking. Short-term thinking only causes short-term relief. It deals with the problems, not the origins of the problems, extinguishing fires instead of preventing them from starting. As such, governments need to embrace the same long-term thinking in security as doctors do in preventive medicine (of which family planning is a

prime example). The goal of preventive medicine consists of prophylaxis, i.e. in prevention of new problems and diseases. It has long held that it is better to prevent diseases from emerging than curing them as they appear. It is more effective, and cheaper, than treatment, but it is also superior ***ethically***, in that it reduces human suffering by preventing diseases in the first place (Greguš, 2022).

Likewise, a similar, far-reaching paradigm shift is required in security. It entails moving us from viewing security threats as security problems *only*, to take a more holistic view, with a focus on addressing underlying causes of security threats and adopting a preventative approach. As an essential ingredient in the cocktail of tensions and triggers behind almost all security threats, human population growth is the primordial problem. Governments cannot ensure future security if they ignore the need for population stabilisation.

Between the 1930s and the 1970s and especially during the so-called Green Revolution, humanity invested enormous resources into increasing agricultural production. Due to high-yielding crops, new chemical fertilisers, synthetic herbicides and pesticides, agricultural production manifoldly increased. However, the 'Father' of the Green Revolution and Nobel Laureate Norman Borlaug was not as optimistic as the mainstream media was in praising the success of the Green Revolution. At the end of his 1970 Nobel Lecture, he said: 'The Green revolution has won a temporary success in man's war against hunger and deprivation; it has given man a breathing space. If fully implemented, the revolution can provide sufficient food for sustenance during the next three decades. But the frightening power of human reproduction must also be curbed; otherwise the success of the Green Revolution will be ephemeral only. Most people still fail to comprehend the magnitude and menace of our burgeoning population' (The Nobel Prize, 1970). While international efforts for voluntary family planning gathered momentum during the 1970s, they were gradually disenfranchised from the mid-1980s and especially since the 1994 International Conference on Population and Development in Cairo (Campbell and Bedford, 2009). And so, the tide of food insecurity appears to be flowing once more (WHO, 2025).

Worse, short-term reactive thinking prevails. It can be viewed in the case of combating terrorism. Since the 11 September 2001 attacks in the United States, security-driven militarised responses prevailed, having been shaped by

the discourse of the global 'War on Terror'. However, 15 years later, the United Nations in its 2016 Plan of Action to Prevent Violent Extremism acknowledged that the traditional 'single-minded focus only on security measures and an utter disregard for human rights have often made things worse' (UN, 2016). The plan highlighted the importance of development approaches.

By 2021, the world's military spending reached its highest level since the end of the Cold War (SIPRI, 2022: 1). In Sub-Saharan Africa, it increased greatly (SIPRI, 2022: 5–6), and counter-extremism initiatives in Africa achieved some initial success. Still, extremist groups continue to expand in the continent and have devastating impacts across much of Sub-Saharan Africa. To prioritise prevention over security-driven responses, funding that is disproportionally allocated towards militarised capacities needs to be reallocated to mitigate the conditions that give rise to violent extremism, including the population factor. Just as in the case of contraception, it is not only pragmatic but also cost effective. Evidence shows that every US dollar invested in prevention and peacebuilding activities can reduce the cost of conflict and violent extremism by sixteen dollars long-term (UNDP, 2020: 9). Projected forward from 2017 to 2027, this outlay would save US$2.94 trillion in direct and indirect losses from conflict (IEP, 2016: 3), not to mention the human suffering and premature deaths avoided.

From 2007 to 2016, total security spending was estimated to be US$838 billion in Africa, corresponding in absolute terms to almost US$84 billion per year (UNDP, 2020: 1–5). Fully funding family planning and reproductive health services globally would cost less than a quarter of that amount (Sully et al., 2020), and would do much more in contributing to a sustainable future, security and stability.

Ultimately, long-term thinking also helps us to realise that the threats to security that humanity faces today, and will face in the future, are planetary in scale. Insecurity crises, whether from violence, disease or deprivation, are felt far beyond the regions of origin. For this reason, it is essential to put emphasis on placing human and environmental security ahead of national security. Security is no longer a matter for specific countries or regions, but one that humanity as a whole must (ethically) respond to.

Conclusion

Without arresting human population growth, there can be no long-term, global security. Security experts and policymakers must pay more attention to the reproductive ethics of small(er) families, the need for increased availability and access to contraception, women's education and empowerment and long-term thinking. Only then can humanity as a whole achieve security, not just for some privileged states (or groups of populations), but for all regions, countries and demographic groups of the world. Now and in the future.

Greater investments into promotion of reproductive ethics of small(er) families, into increased availability of all family planning methods and services, including safe abortion, education and empowerment of women, are essential. They are not only ethical, but they are long-term solutions and cost-effective, thus pragmatic and strategic measures to achieve security.

Dedication

In memory of Malcolm Potts (1935–2025), the author of *Sex and War* and *The Pill is Mightier than the Sword*, whose well-lived life and devotion to international reproductive health and family planning, as well as the future of life on planet Earth, has been an inspiration to many.

Acknowledgement

I would like to thank Jane O'Sullivan of The University of Queensland for her extensive and constructive comments on the manuscript.

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