

# Just population policies for an overpopulated world

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**After three decades of neglect, environmentalists are waking back up to the need to limit human numbers. But like Rip Van Winkle, we find that the world changed while we were asleep. There are now billions more people, hundreds of millions of new members in the global middle class, and elevated consumption among the wealthy. Meanwhile the planet has grown warmer, more polluted, tamer and more depauperate. This article specifies what just population policies look like for an overpopulated world: one where most national populations must decrease significantly to create sustainable societies, and where failure to do so threatens environmental disaster for humans and the rest of life on Earth. It argues that governments in both underdeveloped and overdeveloped countries should encourage and enable one-child families and discourage larger ones, striking a proper balance between reproductive rights and reproductive responsibilities.**

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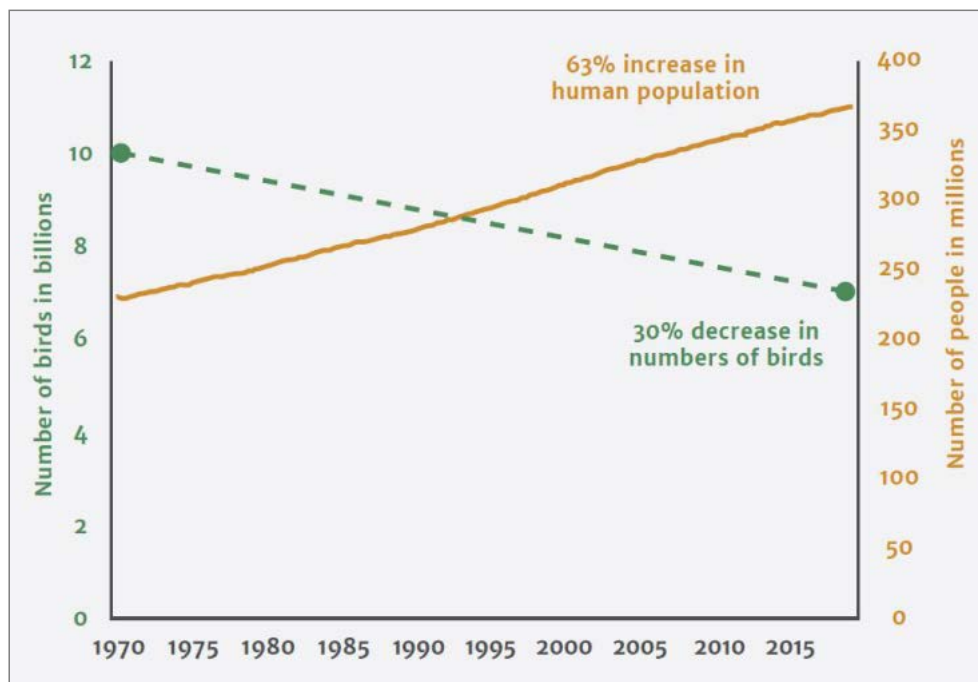
**H**uman rights concerns loom large in population policy discussions. On the one hand, opponents of family planning efforts often point to human rights abuses, such as forced abortions under China's one child policy, to justify their opposition. Others who may approve of family planning argue that government programs that speak too enthusiastically about the environmental or social benefits of reducing population growth, or that set specific targets to reduce fertility, are prone to such abuses. From this perspective, the main human rights concern is that population policies not force people to have fewer children than they want to have, or punish them if they have more than the state wants.

On the other hand, family planning proponents often note that most social pressure and government coercion – now, as in the past – involves coercing women to have more children than they want. From this perspective, providing accessible and affordable contraception is necessary to operationalize a basic human right to reproductive choice, which is key to achieving freedom and equality for women. Hundreds of millions of women around the world are

unable to postpone or avoid pregnancy due to poverty, coercive laws, or opposition from religious leaders or other men.

Ecologically-minded citizens bring further human rights concerns to the table. Environmental degradation directly threatens many rights often taken for granted in wealthy societies, such as rights to sufficient food, water and shelter, and the right to basic physical security. Indeed, the environmental crisis indirectly threatens *all* human rights, since secure rights depend on a functioning social order, which rests on essential ecosystem services which humanity is rapidly degrading.

Beyond *human* rights concerns, other species arguably have a right to continued existence free from untimely anthropogenic extinction or excessive interference. Such non-human rights also are threatened by excessive and growing human numbers. For example, Rosenberg *et al.* (2019) report that approximately 2.9 billion fewer birds bred in Canada and the United States in 2018 compared to 1970. “Our results signal an urgent need to address the ongoing threats of habitat loss, agricultural intensification, coastal disturbance, and direct anthropogenic mortality,” the authors write, “to avert continued biodiversity loss and potential collapse of the continental avifauna.” All these threats are driven partly by human population increase: while bird populations in Canada and the United States declined 30 per cent, human populations increased 61 per cent over the same period (Figure 1). Habitat was destroyed to build houses, roads and other infrastructure to accommodate 138 million more people, agriculture was intensified to feed them, increasing pesticide and herbicide use and the poisoning of insects and wildlife, *etc.*



**Figure 1.** Change in bird numbers and human numbers in North America, 1970–2018. Sources: Rosenberg *et al.* (2019); United Nations (2019).

The rights against coercion discussed in the first two paragraphs can be secured by increasing reproductive freedom, while those rights discussed in the next two paragraphs may not be. Many countries have in fact achieved near-universal access to contraception while avoiding government coercion in how it is used. There is no inherent conflict between increasing people's freedom to have more children and their freedom to have fewer. But securing environmentally-dependent rights and other species' continued existence depends on limiting human numbers, not on how those numbers are chosen. And there is no guarantee that maximizing reproductive freedom will end human population growth.

Large family sizes remain the desired norm in many countries and among some religious and ethnic groups, while current preferences for small families in other places and among other groups may change. Furthermore, merely ending population growth will not limit human numbers sufficiently to secure environmental sustainability. The evidence – from global climate disruption, to dwindling wildlife populations, to the toxification of Earth's lands and waters – suggests the need for much smaller populations globally and in many individual nations. Three recent studies argue that two to three billion people might be sustainable globally if societies made heroic environmental improvements in existing modes of consumption and production (Lianos and Pseiridis, 2016; Tucker, 2019; Dasgupta, 2019). The current global population is 7.9 billion and growing by 80 to 85 million annually, as it has for decades. The heroic improvements have not been forthcoming.

Since all rights are environmentally dependent and securing them could be rendered impossible by overpopulation, any serious ethical analysis needs to consider limits on reproductive rights. Such a conclusion should not be surprising: ethicists and jurists have long held that no rights are absolute and particular rights find their proper scope within a comprehensive consideration of human interests. This need not mean that coercion is the proper recourse for dealing with overpopulation or excessive fertility (or any other problem for that matter). Non-coercive or less coercive policies are always preferable, *ceteris paribus*. Evidence from many parts of the world over the past half century shows that promoting the benefits of small families while making modern contraception widely available can lead to rapid, voluntary fertility declines (see, for example, <https://overpopulation-project.com/>). We should remain open to the happy possibility that more freedom, combined with greater understanding of the impacts of our reproductive decisions, will solve humanity's population problems – and to the possibility that they will not.

## Rights and responsibilities

International human rights conventions and commitments provide a useful ethical framework for thinking about population matters. The UN's International Conference on Human Rights in Teheran in 1968 declared that “couples have a basic human right to decide freely and responsibly on the number and spacing of their children,” and that while sovereign nations were

free to design their own population policies, those policies should pay “due regard to the principle that the size of the family should be the free choice of each individual family” (United Nations, 1968). Meeting at the height of concern about the global population explosion, however, delegates also “observed that the present rapid rate of population growth in some areas of the world hampers the struggle against hunger and poverty” and impedes efforts to provide people with adequate medical care, educational opportunities and other social services, “thereby impairing the full realization of human rights” and “the improvement of living conditions for each person.” They thus urged member states and concerned agencies “to give close attention to the implications for the exercise of human rights of the present rapid rate of increase in world population.”

The Teheran Declaration balanced rights and responsibilities, individual freedom and the common good. It affirmed a right to decide the size of one’s family, while recognizing that continuing to have large families could be disastrous and that societies had better goals than maximizing sheer human tonnage. This approach left scope for nations to enact policies to limit population growth, so long as they respected their citizens’ right to determine the size of their families. It also opened the possibility of limiting that right to safeguard other rights, or further the public welfare. Teheran thus provided a reasonable ethical framework for judging population policies: one which supported choice-enhancing policies providing widespread access to modern contraception, condemned intrusive policies such as forced sterilizations, and allowed government programs that encouraged small families. This approach was reaffirmed by UN population conferences in Bucharest (1974), Mexico City (1984) and Cairo (1994), each of which declared couples had “a right to responsibly choose” when to procreate, while extolling the benefits of small families in a crowded world.

This balanced moral framework still seems fit to purpose, provided we renounce its anthropocentrism and commit to respecting the rights and interests of other species, not just humans. Otherwise, we risk the destruction of much of the world’s remaining biodiversity. As the UN’s Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) reported in its comprehensive *Global Assessment Report* (2019), “the global rate of species extinction is already at least tens to hundreds of times higher than the average rate over the past 10 million years and is accelerating” and “the proportion of species currently threatened with extinction according to the IUCN’s Red List criteria averages around 25 per cent” across all relevant taxa.

Ecological citizens insist on addressing this moral catastrophe, including through appropriate population policies, since human numbers play a crucial role in our ability to share Earth justly with other species. Again according to the IPBES (2019): “unsustainable use of the Earth’s resources is underpinned by a set of demographic and economic indirect drivers that have increased ... The global human population has increased from 3.7 to 7.6 billion since 1970 unevenly across countries and regions, which has strong implications for the degradation of nature. Per capita consumption also has grown.”

Affirming a proper balance between rights and responsibilities is part of enabling the flourishing of life in all its forms. I take life's flourishing to be the fundamental ethical value and thus the appropriate overarching goal of public policy. With this goal firmly in mind, what population policies should societies enact in an ecologically-stressed world nearing 8 billion people?

### Moderate reforms?

Many argue that the best way forward is for governments to secure the right of couples to choose their family size, while strongly encouraging them to choose small families. In other words: coercion no, incentives yes; forced sterilizations no, frank reminders that we are overpopulated yes. This is the answer given in this special issue of *The Ecological Citizen* by Joe Bish and Robin Maynard; it is the answer given by many advocates for increased international family planning aid and by many committed environmentalists.

This approach has obvious strengths. It disarms a main criticism of family planning efforts by explicitly and unequivocally eschewing all coercion. It focuses on a genuine win/win aspect of the issue: providing access to contraception helps secure an important right for women and furthers gender equality, while the freedom to choose generally leads to smaller families and associated economic and environmental benefits. Even if more demanding policies might do more, in theory, to further the common good, this approach might be the best achievable. Asking our fellow citizens for more, we could get less. Finally, moderate reform provides some hope of addressing overpopulation. If most couples chose to have only one or two children and few couples chose to have more, many societies could end population growth relatively quickly and begin the necessary task of reducing their populations (assuming a willingness to limit immigration).

I have argued for such moderate policies in the past and continue to support them. However, I now think that they are insufficient and advocate more demanding policies as well. I support intrusive measures to reduce unsustainable consumption levels for the same reasons. Humanity is grossly overpopulated and consuming at patently excessive levels, threatening to create a dystopian future that will harm immense numbers of people, while wiping out much of Earth's remaining biodiversity. Such colossal injustices must be prevented.

Moderate population proposals fail to acknowledge how dangerous our environmental problems have become and thus fail to propose adequate solutions. They are like moderate climate change proposals that ask people to voluntarily retire their gas guzzlers while increasing subsidies for electric cars, or ask people taking their sixth airplane flight of the year to pay a few hundred dollars for carbon offsets. Such modest, voluntary measures will not decrease consumption sufficiently to adequately address climate disruption or our other pressing environmental problems. They normalize average consumption levels that cannot be accommodated ecologically. Societies should instead demand more from their citizens – for example, by rapidly phasing out gasoline-powered cars and limiting individuals to one or two airplane flights a year.

In the same way, moderate reformist population policies normalize unsustainable population levels. They treat citizens as children, who cannot be told the truth or asked to discipline themselves in response to reality. Societies should instead set population policies that have a reasonable chance of achieving sustainable population levels. Not immediately, like Thanos in *Avengers: Endgame*, but within a timeframe that allows us to do justice to future generations and our fellow Earthlings.

## Overpopulation

But what are sustainable population levels, globally or for individual nations? That depends on numerous factors, including how luxuriously people want to live and whether they choose to share the landscape generously with wildlife. The higher the average level of consumption, the lower the sustainable human population (Lianos and Pseiridis, 2016; Tucker, 2019; Dasgupta, 2019). The more habitat and resources devoted to sustaining other species, ditto. As justice toward our fellow human beings has a cost, so does justly sharing Earth's lands and seas with other species.

Lianos and Pseiridis (2016) calculate that the world could safely accommodate 3.1 billion people living on an average annual income of \$9000, an amount deemed sufficient to sustain a materially satisfactory life. Ecological sustainability was determined based on remaining within the global constraints assumed by the Living Planet Index. They then calculated sustainable populations for the world's 52 most populous nations, on the premise that each country was entitled to a share of the sustainable global population equal to its share of global agricultural land. Table 1 shows the difference between current and sustainable populations for the world's five most populous countries based on these stipulations. It also provides recent population projections to 2100 for each country.

These sustainable national population numbers assume a willingness to limit or reduce average annual income to \$9000; at higher average incomes, the

	Population (2010), in millions	% share of the world's permanent cropland and arable land	Share of a sustainable world population, in millions	Required population change, in millions	Projected 2100 population, in millions
China	1337.7	8.17	253.2	-1084.5	1065
India	1205.6	11.0	341.0	-864.7	1450
USA	309.3	10.53	326.5	17.2	434
Indonesia	240.7	2.83	87.6	-153.0	321
Brazil	195.2	5.02	155.6	-39.6	229

**Table 1.** Population and overpopulation in the world's five most populous countries. Data in first four columns from Lianos and Pseiridis (2016), last column from United Nations (2019).

sustainable population decreases proportionally. Of course, many other things besides the availability of agricultural land factor into sustainability. Lianos and Pseiridis ignore, for example, the question of whether some agricultural land should be rewilded to benefit other species; doing so would decrease sustainable human population size proportionally. All that noted, their rough calculations give some idea of the amount of population decrease these countries would need to achieve sustainability. China and India together would need to decrease their populations by approximately 1.9 billion people.

Americans' average annual household income in 2020 was nearly ten times \$9000. This suggests its sustainable population might be only a small fraction of the projected 326 million, even with heroic efforts to decrease consumption – a heroism my fellow citizens are not noted for. At current average income levels, America's sustainable population would be 40 to 50 million. Looking at projected populations for 2100, none of these countries are anywhere close to achieving a sustainable population under status quo demographic and economic trends and policies.

Consider now Lianos and Pseiridis's calculations for sustainable populations for the seven most populous European nations (Table 2). Leaving aside Russia as a continent-sized outlier, the others would all have to cut their populations substantially to achieve sustainability: France by 40 per cent, Italy by 66 per cent, Germany by 70 per cent, the UK by a whopping 81 per cent – down from 63 million to 12 million people. All this, remember, with the stipulation of an average annual income of \$9000. With the extra income that most Europeans probably would want to retain, sustainable population sizes decrease proportionally.

This puts the perennial 'population versus consumption' discussion in proper perspective. To create sustainable societies, European nations would have to dramatically cut both. So would the United States and most other

	Population (2010), in millions	% share of the world's permanent cropland and arable land	Share of a sustainable world population, in millions	Required population change, in millions	Projected 2100 population, in millions
Russia	142.4	7.90	244.8	102.4	126
Germany	81.8	0.78	24.2	-57.6	75
France	65.0	1.26	39.0	-26.0	65
UK	62.8	0.39	12.1	-50.7	78
Italy	59.3	0.62	19.3	-40.0	40
Spain	46.6	1.12	34.6	-12.0	33
Poland	38.2	0.73	22.8	-15.4	23

**Table 2.** Population and overpopulation in Europe's seven most populous countries. Data in first four columns from Lianos and Pseiridis (2016), last column from United Nations (2019).

developed nations. Developing nations, meanwhile, face demands for more consumption by the poor, rising consumption by a burgeoning middle class and the same excessive consumption by the wealthy seen in the developed world. Here, too, sustainability demands greatly decreased human numbers and reduced consumption by those able to afford it.

The moral should be clear. If we want to create sustainable societies, we will need to decrease populations, reduce average consumption (at least in wealthier nations) and deploy less harmful technologies. All three – not one instead of the others. This conclusion holds whether we conceive sustainability as taking no more than our fair share of the global commons, or as creating societies that could be sustained on the territory they occupy. It holds regardless of how fairly we divide the sacrifices necessary to achieve sustainability. It even holds whether we choose to preserve our native biodiversity or not. The UK might be able to squeeze a few million more people onto its territory long-term by sacrificing its remnant wildlife, the US a few tens of millions more. But we would still need to cut our populations drastically to have any chance to create sustainable societies or do our part to create a sustainable world.

### Just and realistic population policies

Current human populations are nowhere near compatible with long-term human wellbeing or the flourishing of life. These facts don't merely justify stringent efforts to reduce human numbers as quickly as humanely possible, they morally require them. These efforts must start not someday, somewhere else, but here and now in our own societies, and continue over the next few generations with a sense of urgency.

Overpopulation threatens massive suffering for billions of people and extinction for millions of species. It imperils life's flourishing, the ultimate value. This justifies the following ethical imperative:

- ***Would-be parents should restrict themselves to one child.*** More is socially irresponsible at this point in history. Many environmentalists already limit themselves to two children, replacement rate, out of environmental concern. But as we have seen, merely stabilizing current populations will not be sufficient to avoid environmental degradation and might not be sufficient to avoid environmental catastrophe.

These threats also justify the following public policies:

- ***National governments should guarantee their citizens universal, affordable access to family planning services, modern contraception and abortion on demand.*** When women are free to choose whether to bear children and couples can limit the size of their families, fertility rates usually decline, often rapidly.
- ***National governments should encourage their citizens to have only one child and discourage them from having more, through tax policies, safety net policies, direct propaganda and more.*** We cannot rely solely on personal, voluntary choices to secure environmental sustainability. We cannot allow



overly-fecund free riders to overwhelm the efforts of more responsible citizens. It won't work.

- ***National governments should strictly limit immigration, as part of comprehensive efforts to reduce their populations to sustainable levels as quickly as possible.*** Currently many developed nations have growing populations despite fertility rates that have been below replacement for decades. We cannot ask citizens to limit their numbers for the common good, while their governments undermine their efforts. Again, it won't work.

I am not proposing that governments harshly punish people who have more than one child, or end all immigration. I am proposing population reduction as a major policy goal for countries that are overpopulated, with targeted policies to reduce their populations, including financial incentives for one-child families and financial penalties for families with more than one or two children.

I confess to considerable unhappiness with this conclusion. These policies would entail significant costs to many would-be parents and immigrants. If they did not, they would not achieve their purpose. I would prefer not to have governments tell people where to live, or how many children to have. However, in the crowded world that humanity has created, such impositions are preferable to massive ecological degradation and all that implies. Failure to support such policies now means accepting great human suffering and a depauperate world in the future.

I support similarly intrusive policies to incentivize lower per capita consumption and prohibit excessive consumption. Not just a limit of one or two airplane flights a year, but a prohibition on owning personal aircraft, and so on down the line for all important categories of consumption. In these cases, too, it gives me no pleasure to stick my nose, or my government's nose, into such personal decisions. But I don't see any other path to achieving ecological sustainability.

Many will find these policy proposals overly restrictive, even unjust. The most common counterarguments are that they would violate human rights. It will be claimed that people have a right to choose the size of their families; a right to live and work where they choose, regardless of national boundaries; a right to own and fly airplanes, if they didn't break any laws in securing the money to buy them and can pass their flight tests.

But these proposed rights are claims on limited resources. If anything like the calculations described in Lianos and Pseiridis (2016), Tucker (2019) and Dasgupta (2019) are correct, a right to have more than one child cannot be universalized due to resource constraints. Not today and not for the next few generations here on planet Earth. This is enough to show that no such moral right currently exists, whatever our laws may say.

If we want to create societies where a moral right to have more children can exist in the future, we will need to endure a period where citizens are discouraged from having more than one child. Societies that fail to embrace

these policy recommendations may create conditions where no one has an effective right to raise any children. That is the path we appear to be on now.

A related argument holds regarding immigration, which involves individuals staking claims to limited resources in a new country. In a world that's overpopulated, a right to free international movement can undermine the right of future citizens to have a child, or the rights of future children to food, shelter and the stable civil order on which all rights depend. Starvation and the breakdown of civil society are forms of coercion, too, and arguably much worse ones than restrictions on immigration or procreation. Just as free-riding citizens cannot be allowed to undermine national efforts to achieve sustainability through excessive fecundity, neither can free-riding non-citizens, or free-riding nations. Once again, I believe similar arguments hold regarding overconsumption, and that public policy and international environmental treaties should reflect that reality.

I make no claims about the acceptability of these population policy proposals to the general public. Americans and Europeans, the groups with whom I am most familiar, know little about the connections between human numbers and sustainability. Americans have been so coddled and confused in recent decades that our ability to discipline ourselves to further the common good is close to nil. My sense is that Europeans are in somewhat better shape as functioning citizens, but whether they might seriously consider such proposals is doubtful, at least for now. All I claim for my proposals is that they are the right thing to do and that this will become clear in time, should they not be put into practice.

## References

- Dasgupta P (2019) *Time and the Generations: Population ethics for a diminishing planet*. Columbia University Press, New York, NY, USA.
- Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) (2019) *Summary for Policymakers. Global assessment report on biodiversity and ecosystem services*. IPBES Secretariat, Bonn, Germany.
- Lianos P and Pseiridis A (2016) Sustainable welfare and optimum population size. *Environmental Development and Sustainability* 18: 1679–99.
- Rosenberg K, Dokter A, Blancher P et al. (2019) Decline of the North American avifauna. *Science* 366: 120–4.
- Tucker C (2019) *A Planet of 3 Billion*. Atlas Observatory Press, Washington, DC, USA.
- United Nations (1968) *Final Act of the International Conference on Human Rights, Teheran, 22 April to 13 May 1968*. New York, NY, USA. Available at: <https://is.gd/kn4hDI> (accessed October 2021).
- United Nations (2019) *World Population Prospects*. UN Population Division, New York, NY, USA.