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**POPULATION and POVERTY**

The ultimate driving force behind all deforestation is human overpopulation; both the population in the temperate region that places demands on the resources derived from the tropical rainforests, and the expanding population of developing tropical nations, who exploit the rainforest for survival. Today the world's population stands at approximately 6,490,000,000 (6.49 billion) people. Each minute another 145 people are added to the planet, each day another 208,000, and each year another 76,000,000. Despite declining global birth rates, which have now fallen to the lowest level in recorded history, the U.S. Bureau of the Census projects the population will reach 8 billion by 2026 and expects the population to then level off at 9.1 billion in 2050, barring an outbreak of a widespread deadly plague or a catastrophic environmental disaster. Over 99 percent of this new growth will occur in the less-developed countries of today.

Population GrowthWorld population growth rate continues to plummet

Whether one is a Malthus believer or not, this increase in human population will place tremendous pressure on the planet's resources. The most pressure will come from the world's developing countries, which have the fastest-growing populations and most rapid economic (industrial) growth. In 1995, economic growth in developing countries reached nearly 6 percent, compared with the 2 percent growth rate for developed countries.

Despite economic growth in developing countries, poverty and hunger continue to expand as economic disparities in these countries continue to widen. One in six people in the world lacks sufficient food to fulfill basic daily requirements, despite increasing food supplies worldwide. There are many reasons for this hunger, including the increasing cost of food against falling real wages and the limited access to food reserves. FAO predicts that food demand in developing countries will grow 1.8 percent annually until 2010. To meet this need, another 222 million acres (90 million hectares) of new land must be brought into agriculture in developing countries, mainly in sub-Saharan Africa and Latin America. It is no longer a question whether forest land will be converted, but what forest land.

Additionally, as developing countries become more integrated into the world economy, they will place greater demands on their own natural resources and as a result, pollution and environmental degradation are projected to increase at a rate exceeding the population growth rate. For example, during the 1980s, the population of tropical developing countries grew by roughly 19 percent, while their deforestation expanded by 90 percent. Industrial demand increases for wood, oil, and mineral products found on forest lands. Consumption of wood products—including sawnlogs and veneer logs, pulpwood, and roundwood—is projected to increase over the next few years to supply demand.

One of the greatest threats to the world's environment is the compounding numbers of rural poor who turn increasingly to the rainforests to feed and shelter themselves. These poor, essentially peasant farmers are frequently pushed off more fertile soils by the large, wealthy landowners who have more political clout. Without realizing it, these poor farmers are perpetuating their own situation by their role in deforestation, which worsens their quality of life by increasing their chance of

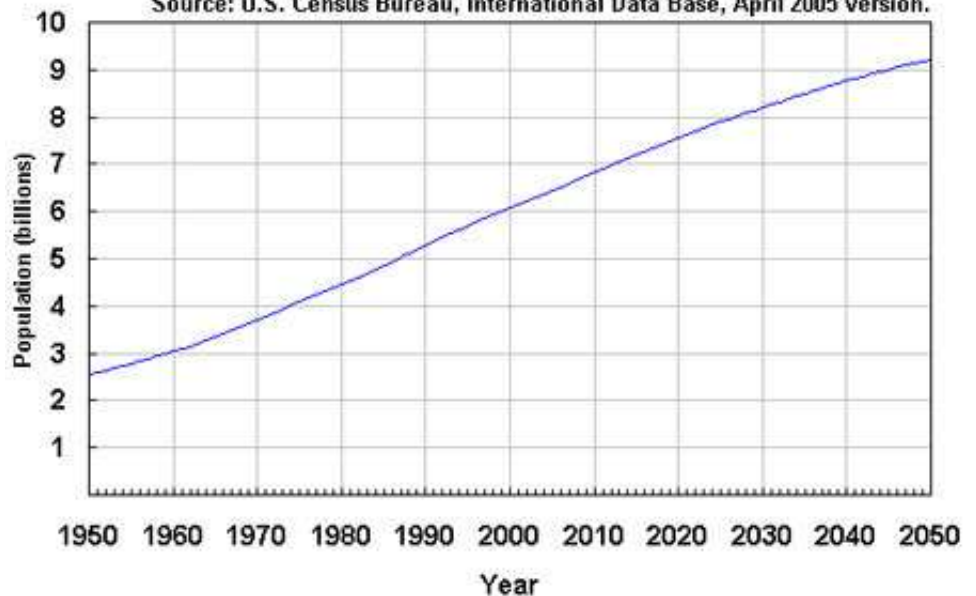
disease, degrading their drinking water stocks, escalating soil erosion, and leaving their children without the benefits of sustainably utilized forest. As the human population grows, the quality of all forms of life plummets as people are forced to move into more and more marginal lands with higher incidence of natural disasters (floods), crop failures, and disease.

**Review questions:**

- How does population growth impact the environment?
- How can a falling population growth rate in developed countries still result in deforestation and other environmental problems?

## World Population: 1950-2050

Source: U.S. Census Bureau, International Data Base, April 2005 version.



[\[full photo version\]](#)

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# Energy Bulletin

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## Remember Malthus? He's back for good

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Original article:

by **Rolf E. Westgard**

Remember Malthus? He is the man whose ideas have been the inspiration since 1798 for anyone concerned about over population and food scarcity. Relegated to history's back shelf in the 1960s by agriculture's Green Revolution, his forecasts are back, with a vengeance. Now, in addition to food shortages, we also have scarce fresh water, top soil, crude oil, etc.

Thomas Robert Malthus was the English economist whose 1798 publication, *An Essay on the Principle of Population*, caused Thomas Carlyle to dub economics as the 'dismal science'. The principle theme of the essay is that "the power of population is indefinitely greater than the power in the earth to produce subsistence for man."

An honors graduate in mathematics from Cambridge, Malthus argued that the human sex drive can produce geometric increases in population per the series 1, 2, 4, 8, 16. At the same time, the earth can at best increase food production at an arithmetic rate, as 1,2,3,4,5. Malthus stated that the earth's population must remain within resource limits, either by using human generated "preventive checks" which lower the birth rate, or with nature imposed "positive misery checks" which increase the death rate.

A devout Christian, Malthus abhorred such preventive measures as contraception and abortion. He argued instead for delayed marriage through moral restraint. He opposed the Poor Laws, England's first real attempt at welfare, because their support encouraged earlier marriage and procreation.

Despite his warnings, the world's population has grown by six times since 1800, limited periodically by the positive misery checks of hunger, disease, and war. In the mid-20th Century, the Green Revolution arrived in world agriculture, founded on cheap fossil fuels which powered mechanized industrial farms. They use vast amounts of petroleum based pesticides and fertilizers in lieu of manure and crop rotation. These often irrigated farms produced major gains in cereal crop yields. The end of world hunger seemed in sight.

The Wall Street Journal mocked both England's Prince Charles and Al Gore as "Prince Malthus" and "Senator Malthus" for their concerns about population growth, the environment, and resource scarcity. Technology and hydrocarbons had apparently sidelined the dismal science.

But in the 21st Century, fossil fuel's supply is tightening, and it is no longer cheap. Pesticide resistant bugs flourish; top soils erode from aggressive tilling; declining yields from single crop agriculture demand more fertilizer; ground water tables lower; and the Green Revolution has begun to gray. But world population continues its yearly addition of seventy millions. In parts of the world, nature is implementing Malthus' most serious positive misery check. As he put it, "Famine seems to be the last, the most dreadful resource of nature."

With his math skills, Malthus might well have forecasted the seventy million people that the world adds each

year at its dinner tables. He could not have known that seven hundred million personal cars and trucks would also join the food line by consuming biofuels. If he had, his essay would have been even more dismal. Recent record prices for grains are the result of competition for the same cropland between people and biofuels. To feed continuous E-85 ethanol fuel to one average car or light truck requires allocating the harvest from 2 acres of Midwest corn land.

No problem, say our leaders. We can use cellulose from crop residue like corn stover, the stalks and leaves. But scooping those up to make ethanol exposes the soil to erosion from wind and water. It also deprives the soil of nutrients, requiring more natural gas based fertilizers. Every ton of corn stover contains approximately ten pounds of nitrogen, two pounds of phosphorous, and forty five pounds of potassium. Dealing with the growing scarcity of arable land and transportation fuel will require both conservation and major life style changes, enforced by strong measures like unpopular carbon taxes.

We do have a few political leaders with political courage such as Congressman Oberstar whose leadership of the House Transportation Committee is supporting energy efficient electric rail. Unfortunately, overall, political courage is another commodity that is in short supply.

*Rolf E. Westgard is a professional member of the Geological Society of America.*

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#### **Editor's Notes**

A response to [Malthus, the false prophet](#) in The Economist. Rolf E. Westgard is an EB contributor. His articles are often posted in Duluth and other local newspapers. Related: [Was Malthus just off a few decades?](#) (Barre Montpelier Times Argus) -BA

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May 15, 2008

## Johann Hari: Are there just too many people in the world?

This is a column I don't want to write. Its subject is ugly; it makes me instinctively recoil. I have chastised people who bring it up at environmentalist meetings. The people who talk about it obsessively have often been callous about human life, and consistently proved wrong throughout history. And yet... there is a grain of insight in what they say.

The subject is overpopulation. Is our planet over-stuffed with human beings? Are we breeding to excess? These questions are increasingly poking into public debate, and from odd directions. Phillip Mountbatten - husband of the British monarch Elizabeth Windsor - said in a documentary screened this week: "The food prices are going up, and everyone thinks it's to do with not enough food, but it's really [that there are] too many people. It's a little embarrassing for everybody, nobody knows how to handle it." He is not alone. A strange range of people have voiced the same sentiments over the past few months, from the Dalai Lama to Hu Jintao, from Conservative mayor Boris Johnson to Democratic Governor Bill Richardson.

They start by listing the sums, which are indeed startling. Every year, world population grows by 75 million people - equivalent to another Britain and Ireland whooshing fully-populated from the oceans. At the turn of the 18th century, there were 600 million people on earth. At the turn of this century, there were 6.6 billion. By the time I am in my sixties, there will be more than nine billion - at which point there will be more people alive simultaneously than in the first 17 centuries after Christ combined.

The overpopulation lobby say this will inevitably leave more and more people chasing after a diminishing amount of resources on an ecologically-ravaged planet. At their most pessimistic, they say human beings will, in the long sweep of planetary history, look like a big-brained version of a locust cloud. They eat everything in sight and multiply fifty-fold - until they have consumed everything, when they turn in desperation on each other, munch off their siblings' heads, and then fall out of the sky dead.

They say with a frown that this global swarming is driving global warming. How can you be prepared to cut back on your car emissions and your plane emissions but not on your baby emissions? Can you really celebrate the pitter-patter of tiny carbon-footprints?

Yet this subject seems to leech out all the dark toxins of environmentalism - a movement I believe is the most urgent and important in the world. There has always been an element of green thinking that viewed humans as a parasitic infestation, wrecking the Eden of planet earth. The philosopher John Gray calls our species "homo rapiens". The founder of Earth First!, Dave Foreman, called us "Humanpox" and wrote: "The Aids epidemic, rather than being a scourge, is a welcome development in the inevitable reduction of human population... If [it] didn't exist, radical environmentalists would have to invent [it]."

If environmentalism sounds - or is - misanthropic, we will lose the argument. Most human beings will never think the world would be better off without us. Nobody thinks they are the surplus human being who should not have been born. These strident arguments hand a huge gift to the anti-greens, who always said we were anti-human beneath the surface.

It also looks like displacement. The places where population is growing fastest - sub-Saharan Africa, rural China and Bangladesh - have virtually no carbon emissions, and pitiful food consumption rates. The gap is so huge that to be responsible for as many gas emissions as one British person, a Cambodian woman would need to have 262 children. Can we really sit in our nice homes, with a fridge-full of food we will mostly chuck away and an SUV in the drive, and complain that she is the problem?

Once this gut-reaction has kicked in, I then think of the horrible history of overpopulation predictions. Most famously, the 18th century demographer Thomas Malthus said mass starvation was inevitable because population increases geometrically while food production grows arithmetically. He didn't anticipate the coming of the Industrial Revolution. His successors in the 1960s, like Paul Ehrlich and the Club of Rome, similarly didn't see the Green Revolution that was galloping around the corner of history.

So it is tempting to say now that the overpopulation argument will smack into some new technological development. It's not quite true to say there is a diminishing amount of resources, because the genius of human beings is to find new ways to use what is there. Two centuries ago, nobody could have conceived that the sun's rays or the waves in the ocean were a resource to be used - but solar and tidal power make it so.

And yet, and yet ... why do my own arguments leave me echoing with doubt? A dark voice in my head says: you would accept that, to pluck an absurd number, 100 billion people would be too many. You don't think human genius is infinitely expansive; there is a limit to what it can solve. So isn't the question just where you draw the line? If 100 billion is too much, why not nine billion?

Hmm. You should always take on the best arguments of your opponents, not the worst. There are good people - a world away from the British royals or the human-hating fringes - who are sincerely concerned about population levels: people like Professors Chris Rapley and John Guillebaud. They argue that although the swelling billions are not now emitting large amounts of greenhouse gases, they will see that we are doing it and will (totally understandably) want to join in the carbon bonfire.

But if this is a problem, is there a solution that isn't abhorrent? Some people seem to reach instinctively for authoritarian answers. The government of China has bragged that its "greatest contribution" to the fight against global warming has been its policy of punishing, imprisoning or sterilising women who have more than one child. Some environmentalists - a small minority - eye this idea jealously.

There is a far better way - and it is something we should be pursuing anyway. It is called feminism. Where women have control over their own bodies - through contraception, abortion and general independence - they choose not to be perpetually pregnant. The UN Fund For Population Activities has calculated that 350 million women in the poorest countries didn't want their last child, but didn't have the means to prevent it. We should be helping them by building a global anti-Vatican, distributing the pill and the words of Mary Wollstonecraft.

So after studying the evidence, I am left in a position I didn't expect. Yes, the argument about overpopulation is distasteful, often discussed inappropriately, and far from being a panacea-solution - but it can't be dismissed entirely. It will be easier for 6 billion people to cope on a heaving, boiling planet than for nine or 10 billion - and we will only get there by freeing women to make their own reproductive choices. To achieve this green goal, it's necessary to mix some oestrogen into the environmentalist palette.

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**OPINION**

## Consumption Dwarfs Population as Main Environmental Threat

*It's overconsumption, not population growth, that is the fundamental problem: By almost any measure, a small portion of the world's people — those in the affluent, developed world — use up most of the Earth's resources and produce most of its greenhouse gas emissions.*

**BY FRED PEARCE**

It's the great taboo, I hear many environmentalists say. Population growth is the driving force behind our wrecking of the planet, but we are afraid to discuss it.

It sounds like a no-brainer. More people must inevitably be bad for the environment, taking more resources and causing more pollution, driving the planet ever farther beyond its carrying capacity. But hold on. This is a terribly convenient argument — “over-consumers” in rich countries can blame “over-breeders” in distant lands for the state of the planet. But what are the facts?

The world's population quadrupled to six billion people during the 20th century. It is still rising and may reach 9 billion by 2050. Yet for at least the past century, rising per-capita incomes have outstripped the rising head count several times over. And while incomes don't translate precisely into increased resource use and pollution, the correlation is distressingly strong.

Moreover, most of the extra consumption has been in rich countries that have long since given up adding substantial numbers to their population.

By almost any measure, a small proportion of the world's people take the majority of the world's resources and produce the majority of its pollution. Take carbon dioxide emissions — a measure of our impact on climate but also a surrogate for fossil fuel consumption. Stephen Pacala, director of the Princeton Environment Institute, calculates that

**The world's richest half-billion people are responsible for 50 percent of the world's carbon dioxide emissions.**

the world's richest half-billion people — that's about 7 percent of the global population — are responsible for 50 percent of the world's carbon dioxide emissions. Meanwhile the poorest 50 percent are responsible for just 7 percent of emissions.

Although overconsumption has a profound effect on greenhouse gas emissions, the impacts of our high standard of living extend beyond turning up the temperature of the planet. For a wider perspective of humanity's effects on the planet's life support systems, the best available measure is the “ecological footprint,” which estimates the area of land required to provide each of us with food, clothing, and other resources, as well as to soak up our pollution. This analysis has its methodological problems, but its comparisons between nations are firm enough to be useful.

They show that sustaining the lifestyle of the average American takes 9.5 hectares, while Australians and Canadians require 7.8 and 7.1 hectares respectively; Britons, 5.3 hectares; Germans, 4.2; and the Japanese, 4.9.

The world average is 2.7 hectares. China is still below that figure at 2.1, while India and most of Africa (where the majority of future world population growth will take place) are at or below 1.0.

The United States always gets singled out. But for good reason: It is the world's largest consumer. Americans take the greatest share of most of the world's major commodities: corn, coffee, copper, lead, zinc, aluminum, rubber, oil seeds, oil, and natural gas. For many others, Americans are the largest per-capita consumers. In "super-size-me" land, Americans gobble up more than 120 kilograms of meat a year per person, compared to just 6 kilos in India, for instance.

I do not deny that fast-rising populations can create serious local environmental crises through overgrazing, destructive farming and fishing, and deforestation. My argument here is that viewed at the global scale, it is overconsumption that has been driving humanity's impacts on the planet's vital life-support systems during at least the past century. But what of the future?

We cannot be sure how the global economic downturn will play out. But let us assume that Jeffrey Sachs, in his book *Common Wealth*, is right to predict a 600 percent increase in global economic output by 2050. Most projections put world population then at no more than 40 percent above today's level, so its contribution to future growth in economic activity will be small.

Of course, economic activity is not the same as ecological impact. So let's go back to carbon dioxide emissions.

Virtually all of the extra 2 billion or so people expected on this planet in the coming 40 years will be in the poor half of the world. They will raise the population of the poor world from approaching 3.5 billion to about 5.5 billion, making them the poor two-thirds.

**The carbon emissions of one American today are equivalent to those of four Chinese, 20 Indians, or 250 Ethiopians.**

Sounds nasty, but based on Pacala's calculations — and if we assume for the purposes of the argument that per-capita emissions in every country stay roughly the same as today — those extra two billion people would raise the share of emissions contributed by the poor world from 7 percent to 11 percent.

Look at it another way. Just five countries are likely to produce most of the world's population growth in the coming decades: India, China, Pakistan, Nigeria, and Ethiopia. The carbon emissions of one American today are equivalent to those of around four Chinese, 20 Indians, 30 Pakistanis, 40 Nigerians, or 250 Ethiopians.

Even if we could today achieve zero population growth, that would barely touch the climate problem — where we need to cut emissions by 50 to 80 percent by mid-century. Given existing income inequalities, it is inescapable that overconsumption by the rich few is the key problem, rather than overpopulation of the poor many.

But, you ask, what about future generations? All those big families in Africa begetting yet-bigger families. They may not consume much today, but they soon will.

Well, first let's be clear about the scale of the difference involved. A woman in rural Ethiopia can have ten children and her family will still do less damage, and consume fewer resources, than the family of the average soccer mom in Minnesota or Munich. In the unlikely event that her ten children live to adulthood and have ten children of their own, the entire clan of more than a hundred will still be emitting less carbon dioxide than you or I.

And second, it won't happen. Wherever most kids survive to adulthood, women stop having so many. That is the main reason why the number of children born to an average woman around the world has been in decline for half a century now. After peaking at between 5 and 6 per woman, it is now down to 2.6.

This is getting close to the "replacement fertility level" which, after allowing for a natural excess of boys born and women who don't reach adulthood, is about 2.3. The UN expects global fertility to fall to 1.85 children per woman by mid-century. While a demographic "bulge" of women of child-bearing age keeps the world's population rising for now, continuing declines in fertility will cause the world's population to stabilize by mid-century and then probably to begin falling.

Far from ballooning, each generation will be smaller than the last. So the ecological footprint of future generations could diminish. That means we can have a shot at estimating the long-term impact of children from different countries down the generations.

The best analysis of this phenomenon I have seen is by Paul Murtaugh, a statistician at Oregon State University.

**It is the height of hubris to downgrade the culpability of the rich world's environmental footprint.**

He recently calculated the climatic "intergenerational legacy" of today's children. He assumed current per-capita emissions and UN fertility projections. He found that an extra child in the United States today will, down the generations,

produce an eventual carbon footprint seven times that of an extra Chinese child, 46 times that of a Pakistan child, 55 times that of an Indian child, and 86 times that of a Nigerian child.

Of course those assumptions may not pan out. I have some confidence in the population projections, but per-capita emissions of carbon dioxide will likely rise in poor countries for some time yet, even in optimistic scenarios. But that is an issue of consumption, not population.

In any event, it strikes me as the height of hubris to downgrade the culpability of the rich world's environmental footprint because generations of poor people not yet born might one day get to be as rich and destructive as us. Overpopulation is not driving environmental destruction at the global level; overconsumption is. Every time we talk about too many babies in Africa or India, we are denying that simple fact.

At root this is an ethical issue. Back in 1974, the famous environmental scientist Garret Hardin proposed something he called "[lifeboat ethics](#)". In the modern, resource-constrained world, he said, "each rich nation can be seen as a lifeboat full of comparatively rich people. In the ocean outside each lifeboat swim the poor of the world, who would like to get in." But there were, he said, not enough places to go around. If any were let on board, there would be chaos and all would drown. The people in the lifeboat had a duty to their species to be selfish – to keep the poor out.

Hardin's metaphor had a certain ruthless logic. What he omitted to mention was that each of the people in the lifeboat was occupying ten places, whereas the people in the water only wanted one each. I think that changes the argument somewhat.

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## Population, hunger, and environmental degradation **Are there too many people?**

By CHRIS WILLIAMS

*Chris Williams is the author of "Hothouse earth: Capitalism, climate change, and the fate of humanity," which appeared in issues 62 and 64 of the ISR.*

“COULD FOOD shortages bring down civilization?” This was the title of an article in the May 2009 edition of the magazine *Scientific American* by Lester R. Brown.<sup>1</sup> The article begins: “The biggest threat to global stability is the potential for food crises in poor countries to cause government collapse. Those crises are brought on by ever worsening environmental degradation.”

Brown is no fringe character; he has won numerous environmental awards and authored over 50 books addressing various aspects of the environmental crisis. Until 2000 he was president of the Worldwatch Institute, which publishes the influential and authoritative *State of the World* annual reports as well as the annual publication *Vital Signs*. A major preoccupation of Brown for more than three decades has been the idea that the world is perennially on the brink of running out of food because increases in human population are outstripping food supply. Now he is equally concerned that overpopulation is a major driver of ecological devastation. While Brown has been a resource-depletion doomsayer for decades, he is echoed by many others. Neo-Malthusian arguments are resurfacing with a vengeance as explanations for the recent global food crisis and, even more so, among people genuinely concerned by the ongoing, and indeed accelerating, destabilization of planetary ecosystems.

### **The return of Malthus**

A number of liberal writers and publications have raised the specter of growing population as an unpleasant yet necessary topic of conversation. Johan Hari, a writer for the *Independent*, posed the question in one of his columns last year, “Are there just too many people in the world?” While noting that Malthusian predictions have consistently been wrong and often used as arguments against the poor, he nevertheless concludes that, “After studying the evidence, I am left in a position I didn’t expect. Yes, the argument about overpopulation is distasteful, often discussed inappropriately, and far from being a panacea-solution—but it can’t be dismissed entirely. It will be easier for 6 billion people to cope on a heaving, boiling planet than for nine or 10 billion.”<sup>2</sup> An editorial in the

*Guardian* newspaper from March of this year, entitled “The Malthusian question,” even while rejecting the more outrageous population-reduction arguments and overt Malthusianism of organizations such as the Optimum Population Trust, confirms in alarmist terms the relevance of population-based arguments to environmental decay:

Yet human numbers continue to swell, at more than 9,000 an hour, 80 million a year, a rate that threatens a doubling in less than 50 years. Land for cultivation is dwindling. Wind and rain erode fertile soils. Water supplies are increasingly precarious. Once-fertile regions are threatened with sterility. The yield from the oceans has begun to fall. To make matters potentially worse, human numbers threaten the survival of other species of plant and animal. Humans depend not just on what they can extract from the soil, but what they can grow in it, and this yield is driven by an intricate ecological network of organisms. Even at the most conservative estimate, other species are being extinguished at 100 to 1,000 times the background rate observable in the fossil record.”<sup>3</sup>

The notion that population growth is the foremost cause of environmental degradation and societal destabilization is raised in the Summer 2009 issue of *Scientific American*'s publication, *Earth 3.0—Solutions for Sustainable Progress*. The cover article, titled “Population and Sustainability,” by Robert Engelman, vice president for programs at the Worldwatch Institute, poses the question: Can we avoid limiting the number of people? It begins:

In an era of changing climate and sinking economies, Malthusian limits to growth are back—and squeezing us painfully. Whereas *more people* once meant more ingenuity, more talent and more innovation, today it just seems to mean *less for each* [emphasis in original].<sup>4</sup>

Engelman does not believe that coercive population control methods are necessary, primarily because, as he notes, they haven't worked. Nevertheless, he urges governments, institutions and people to consider how we can best reduce population growth in order to conserve resources, reduce our ecological footprint, and prevent conflict over worsening environmental conditions.

His solution to this problem, which is the same as Hari's and Brown's, is to ensure women control their lives and bodies through access to reproductive healthcare, education, and employment opportunities. These measures are to be welcomed and fought for—including in the United States. All empirical evidence points to the fact that socially and financially empowered women, as part of the general economic development of a country, are the key to population stabilization.

But as Frances Moore Lappé notes, the overpopulation leading to hunger argument has it backwards. Higher population growth rates are a product of hunger, not its cause:

Despite the evidence, many people see high birth rates and hunger in the Global South and arrive at what seems like commonsense: just too many mouths to feed. But scanning the globe, no correlation between people density and undernourishment is to be found. High birth rates are best understood not as a cause of hunger but as a symptom. Along

understood not as a cause of hunger but as a symptom. Along with hunger, they are a symptom of powerlessness, especially of women denied control over their fertility. Mounting evidence from around the world suggests that as people, especially women, gain education and income, fertility rates decline.<sup>5</sup>

Fighting for women's emancipation is a worthy goal in its own right, as is global poverty reduction. The question must be asked: why does women's emancipation have to be linked to population control? This is similar to the way in which fighting climate change is argued for on the basis of national security—to "reduce our dependence on foreign oil." In this schema, fighting for women's rights or combating climate change are not in and of themselves desirable societal aspirations, but rather they conform to other objectives held by ruling elites.

In relation to the argument about population growth, the more fundamental questions that need to be answered are twofold: first, does population growth explain food shortages; and second, can population growth explain environmental degradation. Whether population growth is outpacing food production and causing widespread famine or running up against the "natural" ecological limits of the earth are critical ones to answer for three interrelated reasons.

First, many people committed to fighting for a better world answer these questions with an unequivocal "yes." It seems commonsense that more people must mean more resource use, therefore fewer resources for everyone and concomitantly greater demands placed on ecological limits. Second, if the answer is yes, all of us committed to fighting for a more humane world need to adopt radically different emphases for our activism. If population growth is the main danger, then the solution is to pour resources and activism into tackling it as the single most important task to avoid many millions more people descending into starvation and unleashing further environmental damage on the planet. This leads to the third important reason for taking up the question of population: by arguing that population growth is the main cause of mass starvation and environmental ruin we play into the hands of ruling elites who want to blame the victims; logic that has historically led to some highly unsavory arguments and policy decisions.

### **Historical origins of the overpopulation argument**

The argument that population always outstrips, or is about to outstrip, food supply has a long and inglorious history stretching back to the late 1700s when world population was a small fraction—around one-twelfth—of what it is today. Most often it is an argument labeled Malthusian, after Thomas Malthus who published his first *Essay on the Principle of Population* in 1798 that was substantially revised in his more influential *Second Essay* published in 1803.

Malthus supplied no supportive data for his claim, but this didn't stop him from asserting that population always grows geometrically, whereas the food supply only increases arithmetically. Rather than arguing for the eradication of poverty, Malthus argued against any and all social services to the poor. To provide support of any kind would only encourage the poor and

indigent to breed faster, which would keep a constant pressure on food supply and thereby undermine the food required by the middle class and the wealthy. Checks to population growth such as starvation, disease, low wages, and draconian tightening of the English Poor Laws were therefore recommended to ensure a relatively stable working population. To quote a particularly notorious passage from the 1803 edition:

A man who is born into a world possessed, if he cannot get subsistence from his parents on whom he has a just demand, and if society do not want his labor, has no claim of right to the smallest portion of food, and, in fact, has no business to be where he is. At nature's mighty feast there is no vacant cover for him. She tells him to be gone, and will quickly execute her own orders, if he does not work on the compassion of some of her guests. If these guests get up and make room for him other intruders immediately appear demanding the same favor.... The order and harmony of the feast is disturbed, the plenty that before reigned is changed into scarcity.... The guests learn too late their error, in counter-acting the strict orders to all intruders, issued by the great mistress of the feast, who, wishing that all her guests should have plenty, and knowing that she could not provide for unlimited numbers, humanely refused to admit fresh comers when her table was already full.<sup>6</sup>

In other words, helping the poor not only hurts them, but also threatens to drag the well-fed down to their subsistence level. Under this credo, no sharing is permitted, as it will only generalize starvation to the entire population because there is only so much to go around. Despite his progressive ideas on how to deal with population growth, Engelman explicitly resurrects this argument in his opening sentence quoted above that “*more people* today just seems to mean *less for each*.”

Marx and Engels were scathing in their condemnation of Malthus, whom they considered to be an ideological servant of the ruling class rather than a disinterested scientist. Blaming the poor for their poverty and finding a “theory” that purported to show that aiding the poor was harmful to society fit perfectly with the needs of capital at the birth of the Industrial Revolution, when the whip of poverty was useful to dragoon displaced peasants and artisans into factory wage labor. As to Malthus’ method, Marx considered his population theory to be both unhistorical and unsupported by facts. As Marx writes in the *Grundrisse*,

Malthus’s theory...is significant in two respects: (1) because he gives brutal expression to the brutal viewpoint of capital; (2) because he *asserted* the fact of overpopulation in all forms of society. Proved it he has not...he regards *overpopulation* as being *of the same kind* in all the different historic phases of economic development; does not understand their specific difference...he transforms the historically distinct relations into an abstract numerical relation, which he has fished purely out of thin air, and which rests neither on natural nor on historical laws...overpopulation is likewise a historically determined relation. in no way determined by abstract numbers



... or by the absolute limit of the productivity of the necessities of life, but by limits posited rather *by specific conditions of production*.... How small do the numbers which meant overpopulation for the Athenians appear to us!

Marx argues that what level of population is sustainable is dependent on how people procure their subsistence:

The overpopulation e.g. among hunting peoples, which shows itself in the warfare between the tribes, proves not that the earth could not support their small numbers, but rather that the condition of their reproduction required a great amount of territory for few people.<sup>7</sup>

There can be no absolute criterion for what constitutes overpopulation if it can exist in societies consisting of thousands of people and those consisting of hundreds of millions. From a Marxist viewpoint therefore, what constitutes overpopulation varies according to the material level of development and operative social relations; both of which are historically determined and therefore must be contextually examined as such.

The modern biological concept of the “carrying capacity” for the earth,  $K$ , as it is often presented in connection to humans, has more than an element of Malthusian thought to it. From a biological perspective, carrying capacity is the population of a species that can exist within its ecosystem over a long period of time without degrading it. Written differently, the long-term equilibrium population a particular stable ecosystem will support, whereby birth rates equal death rates. However, applied to humans, it is obvious that as we are the unitary example of a species that can

consciously modify its environment, the number of humans a local or global environment can support depends not on some abstract number “fished out of thin air,” but on the level of economic development and the social relations of the society. Humans can both grow more food and, given the opportunity, consciously self-limit our reproduction based on rational economic and social considerations. With specific regard to humans therefore, putting this into the relevant social and historical context is the critical point.

The shibboleth of absolute overpopulation obscures the more immediate causes of suffering under capitalism, namely, unemployment. Yet unemployment is not a result of a shortage of means of subsistence (or even of means of production), but as a result of *overproduction*. The periodic crises that lead to mass layoffs are due not to too little, but *too much* being produced in terms of what can be sold profitably. Malthus, Marx argues,

relates a specific quantity of people to a specific quantity of necessities. Ricardo [a bourgeois economist of the time] immediately and correctly confronted him with the fact that the quantity of grain available is completely irrelevant to the worker if he has no employment; that it is therefore the means of employment and not of subsistence which put him in the category of surplus population.

This is clearly shown today when mainstream economists use the term “effective demand.” If people have money to pay for food, their demand is “effective”; if they are too poor to afford food, then their demand is not effective and they are “surplus”—they must somehow try to survive on less than \$2 a day, as two billion people around the world are forced to do. This is a fact noted by the UN: “A stubbornly high share of the world’s population remains in absolute poverty and so lacks the necessary income to translate its needs into effective demand.”<sup>9</sup>

In other words, historically how many humans the earth can support depends primarily on the level of productivity of the existing population and the social relations within which they are embedded. Despite the resurrection of this old argument, which has been continually refuted, statistics show conclusively that “carrying-capacity” is as much socially as it is materially determined from the given level of productive development, not some arbitrary measure of what constitutes “too many” people. Moreover, once class societies come into play, is not possible to simplistically extrapolate from the existence of hunger in wildly varying cultures and populations throughout history the common thread of overpopulation as the cause. The existence of hungry people in Malthus’s day had nothing to do with the earth not being able to provide for them with the given level of technological development of society; rather they were hungry because they lived in a class-divided society in which the wealth of the few depended on the poorly-remunerated labor of the many. Poverty and hunger were a product of social relations, not absolute overpopulation. As will be shown below, the same holds true today.

### **Neo-Malthusianism with a green tinge**

In more recent times, overpopulation arguments have been given an ecological hue by some sections of the environmental movement. Most notably, Malthusian arguments connected to environmentalism were resurrected in Garrett Hardin’s infamous 1968 essay “The tragedy of the commons” published in the prestigious *Science* magazine. In this highly influential essay, again without any empirical data, Hardin, a noted eugenicist,<sup>10</sup> argued that people acting rationally would always denude and degrade their environment—defined as a resource and geographically limited “commons”—to the last piece of arable land or last fish. Hardin describes how “rational” herdsmen in a certain area follow behavior that leads inexorably to over-population and environmental degradation:

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another.... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.<sup>11</sup>

Hardin promotes this view of human relations with nature in the same way

Hardin promotes this view of human relations with nature in the same way as Malthus—as a trans-historical fact. Hardin's argument is that the motive for economizing on resources use disappears when everyone can take from a common pool of resources. But it is only "rational" for these herdsmen to keep expanding *if they are operating under capitalist social relations*, where land and resources are privately held and exploited for individual gain, rather than shared in common. It is only rational in a competitive, profit-driven system to fish to the last fish and continually expand your means of production, in Hardin's example this is cattle and land. But the problem is not overpopulation; it is that under capitalist social relations people are pushed to rapidly expand production for the market to realize a profit. Entirely missing from Hardin's account is why herdsmen would consider it rational to over-exploit their local environment. The truth is that this is the very thing that traditional herdsmen and peasants sharing "common" lands historically avoid.<sup>12</sup>

Nevertheless, his conclusion was that all public land and water should be privatized in order to protect the environment and that coercive restrictions should be placed on the "freedom to breed." In a 1974 paper, Hardin became much more explicit about exactly whose breeding should be restricted. It is only necessary to quote the title of his paper: "Lifeboat ethics—The case against helping the poor."<sup>13</sup>

The arguments about population in the 1960s and 1970s led to the concept of "lifeboat ethics"—that there was only so much to go around and some people (the poor) needed to be kept out and their numbers restricted by ending all aid to developing countries in need of food. This line of reasoning was expanded on in Paul Ehrlich's similarly influential book, *The Population Bomb* where he argues in the preface that by the "1970's and 80's hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now."<sup>14</sup>

Moving forward to today, we again see the resurfacing of arguments about hunger and environmental decay being presented as the result of overpopulation. These arguments come not just from Brown and Engelman, but also from people such as the eminent biologist and natural historian Sir David Attenborough and environmentalist and former director of Friends of the Earth, Jonathan Porritt. Even Cameron Diaz thinks there are too many people on the planet.<sup>15</sup>

### **Are there too many people for the available food supply?**

With the cover of *Earth 3.0* depicting a fish bowl teeming with goldfish, the symbolism is hard to miss. For many people, the global food crisis that caused huge increases in chronic malnutrition alongside food riots in over 30 countries last year only underlined the fact that there were just too many people and not enough land to feed them. Maybe Malthusian arguments have been repeatedly and self-evidently wrong in the past, but this time is different—humanity has finally reached, exceeded, or will soon exceed, the total number of humans the earth can possibly feed.

Obviously, population is not a completely irrelevant consideration when it comes to food provision. It would be anti-materialist to argue otherwise. But we are not talking about some hypothetical future population number; with almost 1 billion people suffering chronic malnutrition we are talking

about whether or not we have exceeded the capacity of the earth to feed everyone right now.

The reality is that overpopulation arguments come at a time when enough food is produced globally, according to the UN Food and Agriculture Organization (FAO), to more than feed everyone. At the beginning of the food crisis in 2007, the world's farmers produced 2.13 billion tons of grain, which included record or near record levels of rice, wheat, and corn.<sup>16</sup> According to a World Bank report,

droughts in Australia and poor crops in the E.U. and Ukraine in 2006 and 2007 were largely offset by good crops and increased exports in other countries and would not, on their own, have had a significant impact on prices. Only a relatively small share of the increase in food production prices (around 15 percent) is

due directly to higher energy and fertilizer costs.<sup>17</sup>

The FAO's June 2009 Report states that food stocks are back from their lows last year as a result of a bumper food crop: "With the second-highest recorded cereals crop expected this year and stocks replenished, the world food supply looks less vulnerable to shocks than it was during last year's food crisis."<sup>18</sup> In a quite shocking revelation given the extra tens of millions of people thrust into trying to survive starvation last year, the report states that "even larger crops than originally forecast" were harvested making 2008 the highest production year on record.

The increased global production was sufficient to meet demand for food and other uses but also facilitated a replenishment of global reserves to pre-crisis levels. With the new 2009–10 marketing seasons commencing, prospects continue to be positive, as world cereal production is expected to be the second largest ever, after last year's record.<sup>19</sup>

Even at the height of the food crisis last year when the number of seriously malnourished people rose to 963 million, from 923 million in 2007, according to the UN—almost one in every seven people on the planet—there was more than enough food available to give every single person 2800 kilocalories per day, enough to make every person on the planet overweight. By 2030, with population growth continuing to decline and agricultural output predicted to rise, the UN forecasts enough food will be grown worldwide, despite a global estimated population of 8.3 billion, to give everyone 3050 kilocalories per day.<sup>20</sup>

Contrary to those who argue population continues to grow exponentially or geometrically, the rate of population growth peaked in the 1960s and has been declining ever since. The rate is set to decline further from the 1.7 percent it has been over the last 30 years to 1.1 percent. World population, rather than increasing exponentially, is predicted to continue to slowly rise through this century before leveling off at around 9 billion.<sup>21</sup> In fact, according to the latest report from the U.S Census Bureau, "An Aging World: 2008," the fastest growing segment of world population is the over 65 age bracket. For the first time in human history, the over 65 demographic is predicted to outnumber children under five within ten years.<sup>22</sup>

As a side point, it is noteworthy that in all the debates about curtailing

population growth, there is no campaign against the French and Australian governments *paying* women to have a third child in order to avert national population decline, even though both countries have far higher per capita environmental impacts than any developing country. It is also noticeable that these governments would rather pay women to procreate than relax ever-stricter immigration controls and allow in more workers to offset the decline.

The reason that food reserves have declined over the last 15 years is not because there is not enough land to grow crops for the extra people. The problem comes down once again to social relations. Under neoliberal deregulation, developing countries were pressured by the IMF and the World Bank's Structural Adjustment Programs to move away from food self-sufficiency and assured that the market would take care of any shortfalls. In order to keep up with their debt payments to Western financial institutions, countries of the Global South were told that they had to grow certain crops—ones that earned cash but couldn't be eaten such as coffee and flowers—that held a "comparative advantage" for them on the world market.

This meant that they could drop all their trade barriers and, in theory, still be able to compete on the world market while earning the capital to develop and pay off their debt. Quite the opposite happened. Local farmers were driven out of business and off the land into burgeoning city slums, land degradation expanded because the crops now being grown were not suited to the soil, and farmers were pushed onto more marginal land, thereby accelerating soil erosion. The farmers who remained were now in debt due to the amounts of fertilizer and pesticide they had to use (and the IMF-forced conditions for the suspension of fertilizer subsidies), and water use for the necessary irrigation of high water-demand crops shot through the roof. Some of this is documented in the excellent film *Life and Debt*, which focuses on the effects of "free trade" arriving in the Caribbean and the devastating effects on local agricultural production.

Since the 1980s, IMF- and World Bank-imposed Structural Adjustment Programs (SAPs) have been imposed on 90 developing and transitional economies. It is impossible to explain how the home of corn domestication, Mexico, could have become a net importer of U.S. corn without looking at the role of the coercively imposed SAPs and the North American Free Trade Agreement (NAFTA), which drove 15 million Mexican farmers from the land.<sup>23</sup>

Ghanaian government policies of support for agriculture were reversed in the 1980s and import tariffs on food were drastically reduced on conditions set by the IMF and World Bank in exchange for development loans. The result was that Ghana, which had sufficient rice output in the 1970s for all its needs, by 2002 was importing 64 percent of its domestic supply as local farmers were unable to compete with subsidized U.S. imports. By 2003, when the U.S. government gave out \$1.3 billion in rice subsidies, mostly to large U.S. agribusiness, the U.S. exported 111,000 tons of rice to Ghana.<sup>24</sup> By 2003, 90 percent of Ghana's local poultry production had been wiped out by poultry imports from the United States, the European Union, and Brazil.<sup>25</sup> The decimation of local food production made Ghana dependent on food aid while subjecting the country's

made Ghana dependent on food aid while subjecting the country's remaining farmers to the vicious gyrations of international food commodity markets, a situation replicated in country after country.<sup>26</sup> Today, Ghana ranks 142 out of 179 in the UN's Human Development Index.

Without political change, therefore, it is undoubtedly true that there will be more hungry people even if there were no more people added. As FAO Assistant Director-General Hafez Ghanem said in presenting the organization's world hunger report in 2008, "For millions of people in developing countries, eating a minimum amount of food every day to live an active and healthy life is a distant dream. The structural problems of hunger, like the lack of access to land, credit and employment, combined with high food prices remain a dire reality."<sup>27</sup> Taken together, there is neither a shortage of food nor too many mouths to feed; there is merely a shortage of means or will to distribute the food that is already produced to those that need it.

Within individual countries, moreover, there is no direct relationship between population density and malnutrition. Japan is the third most densely populated country on the planet and, unlike Africa, has no natural energy or mineral resources to speak of; yet the Japanese do not suffer from mass starvation. In contrast, Brazil is the fourth largest food exporter but that doesn't prevent millions of Brazilians from living with food insecurity and malnourishment.

In the United States, enough food is produced for everyone to eat eight full plates of food per day—yet almost *40 million* Americans struggle to put food on the table and are classified as "food insecure."<sup>28</sup> The recent massive increase in allocation of land for the growing of agrifuel crops, including 30 percent of corn production in the U.S. going to ethanol manufacture, was, according to a World Bank report leaked to the *Guardian* newspaper, the major cause of the spike in food prices in 2008.<sup>29</sup> The other reasons were financial speculation, deliberate reduction of strategic regional and local food stores, and "just-in-time" production.<sup>30</sup>

Even having a job isn't enough to stave off hunger in the world's richest country; "Having a (low wage) job isn't enough anymore. Having two or three jobs isn't enough anymore," said Marcia Paulson, spokeswoman for Great Plains Food Bank in North Dakota, where nearly half the households receiving food stamp benefits have one or more working adults."<sup>31</sup>

At no point in the last thirty years, as hunger has increased, has world population growth exceeded growth in food production. Population growth, rather than exploding out of control, is slowing as the world goes through a "demographic transition" (i.e. low birth rates come to equilibrate with low death rates). Those regions that are still experiencing high birth rates are precisely those places described in the Francis Moore Lappé quote earlier, in which poverty itself is one of the causes of population increase.

The policies of neoliberalism that are the real root cause of the food crisis, poverty, and hunger. The unremitting capitalist hostility to small farmers must be rolled back by reintroducing state-sponsored farm subsidies at the point of production; instituting massive land reallocation to those that actually farm the land; eliminating "third world" debt and U.S. and EU subsidies to large agribusinesses responsible for food dumping; increasing

investment in sustainable agriculture research, and restructuring international trade relations and aid to benefit developing countries rather than Western banks and giant corporations such as Cargill and ADM.

### **Is ecological degradation caused by overpopulation?**

It is undoubtedly true that environmental decline, loss of biodiversity, plunging fish stocks, global climate change, and deforestation continue unabated despite the world being warned of escalating ecological and human damage as far back as 1962 with the publication of Rachel Carson's pathbreaking socio-ecological work, *Silent Spring*.<sup>32</sup> It is also true that since that time, world population has more than doubled. It might seem logical, therefore, to put the two together. In one sense, more people do necessarily mean greater use of resources. But what matters is not so much the number of people, as what resources are produced, how those resources are produced, and what they are used for. How else could we explain the fact that population is *falling* in Europe—the EU is predicted to have 50 million less people by 2050—while carbon emissions and resource and energy use are nevertheless rising? As John Bellamy Foster notes, “Where threats to the integrity of the biosphere as we know it are concerned, it is well to remember that it is not the areas of the world that have the highest rate of population growth but the areas of the world that have the highest accumulation of capital, and where economic and ecological waste has become a way of life, that constitute the greatest danger.”<sup>33</sup>

Carson herself was clear that the primary blame for destruction of the natural world lay with the “gods of profit and production” as the world lived “in an era dominated by industry, in which the right to make a dollar at any cost is seldom challenged.”<sup>34</sup> Capitalism is a system predicated on continual expansion with an ever-increasing throughput of energy and resources—hence generating ever more, and increasingly toxic, waste. For those corporations that do act to reduce their energy or resource use, the purpose is not to decrease their impact on the environment, however much money they spend touting their newfound green awareness. Rather, the objective is to lower production costs so as to maximize profit in order to reinvest in expansion of production to corner market share, thereby negating the original reduction.

We see today with the economic crisis that if the economy is not permanently expanding at around 2–3 percent, the whole system goes into a tailspin of layoffs, budget cuts, and mass unemployment. This expansion is unrelated to whether population is growing, as is evident in Europe, Russia, Australia, and Japan, where economic growth is still required despite falling populations. Capitalist crises are not caused by shortages of food or overpopulation. As mentioned earlier, capitalist crises are crises of *overproduction*.

Because of its inherent short-termism, its unrelenting obeisance to the profit motive, and inter-imperial conflict, capitalism, in contrast to all

other modes of production, has a historically unprecedented tendency toward planetary biospheric crisis, regardless of the total number of humans living on earth. Neoliberal globalization has been the accelerating force behind the vast economic expansion of the last three decades that has

brought us to the cusp of environmental catastrophe. The German revolutionary Rosa Luxemburg's comment that ever-expanding capitalism "ransacks the whole world" is even truer today than when she wrote it almost 100 years ago.<sup>35</sup>

Contrary to all claims of capitalist efficiency, the amount of senseless waste and pollution under capitalism is enormous. This includes not only the toxic byproducts of the production process that are routinely dumped into the surrounding environment, but also the production and distribution of useless products, the preponderance of inefficient transportation systems based on cars rather than effective public transportation, the wasted labor and materials spent on military spending, the explosion of redundant bureaucracy, and the creation of mounting piles of garbage as a result of planned obsolescence and single-use products.

According to a recent report, at the various stages of production, transportation, retail, and consumption, 50 percent of all food is wasted.<sup>35</sup> As 70 percent of fresh water goes to crop irrigation, this corresponds to wasting an enormous quantity of water. In the U.S., up to 30 percent of food, worth \$48.3 billion, is discarded. This is equivalent to pouring away 40 trillion liters of water; enough to meet the household needs of 500 million people.<sup>36</sup>

Because industrialized cows are fed a high protein diet of grain and soya for faster growth to maximize profit, they produce far more methane burps—a greenhouse gas 20 times more potent than CO<sub>2</sub>—than if they were eating what they were evolutionarily adapted to eat, grass and clover. Nevertheless, such is the overriding drive for profit that rather than switch them back to eating what their bodies can cope with, research is underway to make them more "environmentally friendly" by adding other supplements to their feed such as garlic pills to cut down on their greenhouse gas emissions.

Intensively farmed industrial cows, milked three times daily rather than two, are virtually at the end of their physiological capacity when kept in conditions of maximum productivity: they spend 50 percent of their time inside being force fed, artificially inseminated and relentlessly milked. This massive increase in per cow milk productivity breaks the machine-cow down within two to three lactation cycles rather than the nine to ten traditionally raised cows live. European dairy cows are now so genetically different to cows raised for beef that they are unsuitable to be slaughtered for meat. The result is that when a dairy cow gives birth to a male calf, something that occurs 50 percent of the time, the calf is considered worthless and is usually destroyed at birth, often to be cannibalistically fed back to their female brethren. Subsidies averaged across all the OECD countries in the year 2000 accounted for half the cost of milk, allowing for large scale dumping of over-production in developing countries and immense profits for the large producers and retailers at the expense of small farmers, consumers, the environment, and the cows.<sup>37</sup>

For a final example of how degraded our food system has become nutritionally and environmentally, while creating new and more virulent diseases as a result of it being controlled by multinational corporations, one only needs to look at the pork industry.



Smithfield Foods is a notoriously anti-union company convicted on multiple counts of health and safety violations. Its massive lagoons full to overflowing with pig shit have repeatedly burst, inundating surrounding rivers and water courses with millions of gallons of highly toxic drug-infested fecal matter. The largest spill to date, in 1995, was more than twice as big as the Exxon Valdez oil spill; the toxic brew killed every living creature downriver on its way to the ocean. Smithfield was subject to one of the largest EPA fines in history for thousands of violations, \$12.6 million, yet this still only amounted to 0.035 percent of sales. The company slaughters more than 26 million pigs a year that produce enough pig slurry to fill more than 90,000 swimming pools. According to Jeff Tietz, writing in *Rolling Stone*, industrial pig waste

contains a host of other toxic substances: ammonia, methane, hydrogen sulfide, carbon monoxide, cyanide, phosphorous, nitrates and heavy metals. In addition, the waste nurses more than 100 microbial pathogens that can cause illness in humans, including salmonella, cryptosporidium, streptococci and giardia. Each gram of hog shit can contain as much as 100 million fecal coliform bacteria.<sup>39</sup>

As of 2006, Smithfield controlled a quarter of the U.S. hog market, had operating profits of \$421 million, and last year a turnover of over \$11 billion. The company has been expanding into Eastern Europe where low wages and fewer environmental restrictions augment its profit margins.<sup>40</sup> According to the New York Times, since Smithfield has moved into Eastern Europe, the number of hog farmers in Romania has plunged by 90 percent to 52,100 in 2007 from 477,030 in 2003. This mirrors a long-term drop in hog farmers in the U.S. where the number of American hog farms dropped 90 percent to 67,000 in 2005 from 667,000 in 1980. It is clear that no worker, north or south, let alone the consumer or the environment, benefits from the corporate control of agriculture.

In western Romania, where Smithfield has numerous large-scale industrial pig farms and is the leading source of air and soil pollution, the company has built enormous metal manure containers to inject the massive amounts of waste it produces into the soil. Because of EU subsidies, Smithfield can afford to export pork scraps as far away as Africa—with all of the attendant transportation pollution—and still undercut and drive local African pig

farmers out of business. In Ivory Coast, fresh local pork sells for under \$2.50 a kilo while Smithfield's frozen offal can be had for a mere \$1.40.<sup>41</sup> In line with other manufacturers, Smithfield would far rather sell processed products—after “value” has been added—rather than fresh ones, because profits are always higher. This explains the disease-laden shift to high-fat, high-sugar, high-salt, nutritionally dubious processed foods prevalent in the west.

Planetary destruction is not limited to land; the oceans too are deteriorating. At current rates of exploitation there will be no wild fish left by 2050. This is not because fish stocks couldn't be regenerated to cope with world demand and fished sustainably. Rather it is due to the hugely destructive, unsustainable, and wasteful manner in which fish are caught in order to maximize profit. Huge factory ships do all the processing,

freezing, and canning at sea so that they can stay out for weeks at a time. The fine mesh of massive strings of gill nets, which can be left in the water for several weeks, often see *half to three quarters* of their catch unusable by the time the boats return to port. Bottom trawlers with enormous nets that scour the ocean floor typically throw out 20 kilograms of “by-kill” for every kilogram of desired catch. In the process, 55 percent of coral (i.e., fish breeding grounds and coastal defense systems) and 67 percent of sponges are destroyed in a single tow. The seafloor that has been “altered” by U.S. trawlers alone is equal to the surface area of the state of California.<sup>42</sup>

Cod caught off Norway is shipped to China where labor is cheap, only to be turned into filets and shipped back to Norway for sale. Britain imports—and exports—15,000 tons of waffles a year, and exchanges 20 tons of bottled water with Australia.<sup>43</sup> The average food product—it’s hard to describe much of what we eat today as food—travels a distance of 1,500 miles to get to a grocery store.<sup>44</sup> Eighty percent of fish sold in Europe is caught in non-EU waters because fish stocks in the EU have already gone into precipitous decline. West Africa has become a favorite hunting ground for fleets of European ships out-competing local fishermen, which drives them to privation or piracy. Huge prawn trawlers in this region throw away 10 kilograms of by-catch for every kilogram of prawns they catch.<sup>45</sup>

The capitalist answer to wild fish stock depletion is not to put in place meaningful regulations to rejuvenate stocks but to invent an even more pollution-intensive industry that is nutritionally inferior and leads to a host of negative side-effects: the fish farming industry. Farmed fish have lower levels of omega-3 fatty acids and other compounds connected to improvements in human physical and mental health, produce huge quantities of concentrated fish waste, have to be repeatedly doused with pesticides to prevent outbreaks of disease and to keep parasites in check, and continually escape in large numbers to breed with wild fish where they negatively impact the genetic stock of wild populations.

None of this stupendous waste of resources, with its attendant destruction of ecosystems and voluminous waste production, is related to an increase in the number of people. It is simply the most profitable method of operation for a social system based on profit maximization.

### **Acceptance of the imperial status quo**

In a more progressive set of objectives, Lester Brown does argue for a massive effort to cut carbon emissions, eradicate poverty, and restore forests, soils, and aquifers. However, it is impossible to see how these things could happen without a radical transformation of the geopolitical status quo, something Brown refuses to acknowledge.

Brown argues that governmental collapse in developing countries increasingly prone to water and food shortages as a result of overpopulation and climate change will lead to more “failed states” that will then become leading exporters of “refugees, terrorism, disease, illicit drugs and weapons” thereby destabilizing the whole of world civilization. Brown states:

Unable to buy grain or grow their own, hungry people take to

the streets. Indeed, even before the steep climb in grain prices in 2008, the number of failing states was expanding. Many of their problems stem from a failure to slow the growth of their populations. But if the food situation continues to deteriorate, entire nations will break down at an ever increasing rate. We have entered a new era in geopolitics. In the 20th century the main threat to international security was superpower conflict; today it is failing states. It is not the concentration of power but its absence that puts us at risk.

Thus he shifts the blame for environmental crisis from the leading economic and military powers to regions that are the victims of these powers' policies. Even a cursory glance at U.S. foreign policy shows that it is not so-called "failed states" that are responsible for exporting terrorism, disease, weapons, refugees, and illicit drugs. The United States is by far the biggest arms supplier as well as the largest market for illicit drugs in the world. It spends more on arms than all other countries *combined* and happily sells them to any state with enough cash in order to maintain its geopolitical dominance. Moreover, as already noted, the neoliberal policies driven by Washington are responsible for destroying subsistence farming in poor countries and creating the food insecurity that so alarms Brown.

By invading, occupying, and decimating first Afghanistan and then Iraq (two countries Brown highlights as failed states), the U.S. has been integral to the creation of "failed states" that have become a breeding ground for poverty, disease, soaring drug production, racial tensions, and the resentment that can lead directly to terroristic acts. Are we meant to take seriously the idea that Afghanistan and Iraq became "failed states" because they suddenly became vastly overpopulated? And how can we not classify

dropping 500-pound bombs on villages in Pakistan—a supposed U.S. ally—as "terrorism"?

With the U.S. responsible for 25 percent of global emissions of climate-changing gases, and the West more generally almost exclusively responsible for their build-up over the last hundred years, Western countries are by extension responsible for the growing number of climate refugees.

Brown writes, "Our global civilization depends on a functioning network of politically healthy nation-states to control the spread of infectious disease, to manage the international monetary system, to control international terrorism and to reach scores of other common goals." In short, his assumptions are those of the dominant world imperialist powers, who claim to represent world "civilization" and the needs of humanity, but whose activities are in fact responsible for destroying it.

## **Conclusion**

It should be clear from all of the above examples that it isn't population growth that is causing food scarcity or is primarily responsible for the many accelerating global environmental crises. Even if population growth were to end today, worsening rates of starvation, the growth of slums, and ecosystem collapse would continue more or less unabated. Food

...system collapse would continue more or less unabated. Food production continues to outstrip population growth, and therefore cannot be considered the cause of hunger.

Clearly, there are very serious planetary problems of soil erosion, overfishing, deforestation, and waste disposal, to name only a few, which are putting pressure on the sustainability of food production over the long haul. However, these are all inextricably bound to questions of power and a system run in the interest of a small minority where profit continually outweighs issues of hunger, waste, energy use, or environmental destruction. Concentrating on population confuses symptoms with causes while simultaneously validating apologists for the system—and in some cases actively updating and perpetuating Malthusian anti-poor, nationalist, and racist arguments.

Brown and others' continual emphasis on population growth dovetails with the ideological needs of the system rather than challenging them and is the primary reason that they receive so much publicity. It is completely acceptable to capitalism to place the blame for hunger and ecological crises on the number of people rather than on capitalism.

A central concept within the ideological armory of capitalism is the idea that there isn't enough to go around. Hence we are confronted with the idea that there isn't enough food, aren't enough jobs, isn't enough housing, or aren't enough university places because there is a certain fixed amount of all these things. We then compete in the "free market" where the victory of

one person necessarily comes at the expense of someone else. This is the implicit framework that progressives adopt when they acquiesce to the specter of Malthus haunting their thoughts. Such reasoning is wrong, however, because it is precisely the impressive developing of the productive capacity of humankind under capitalist social relations that creates the conditions for ending privation and inequality, as Engels recognized so many years ago:

It is precisely this industrial revolution which has raised the productive power of human labor to such a high level that—for the first time in the history of humanity—the possibility exists, given a rational division of labor among all, to produce not only enough for the plentiful consumption of all members of society and for an abundant reserve fund, but also to leave each individual sufficient leisure so that what is really worth preserving in historically inherited culture—science, art, human relations—is not only preserved, but converted from a monopoly of the ruling class into the common property of the whole of society, and further developed.<sup>46</sup>

Those committed to fighting for a better world should focus their attention not on curbing population growth, but on the real cause of mass starvation and ecological crises: the capitalist system itself. Doing this necessitates a fight against inequality, exploitation, poverty, environmental degradation, racism, and the oppression of women.

Socially just, sustainable agriculture is not only far less destructive to the environment, but, contrary to common perception, produces higher yields than corporate monocultures.<sup>47</sup> If we got rid of the warped priorities of

capitalist accumulation with all its gargantuan waste of resources, the environmental “footprint” of humanity, even with nine billion of us, would be far less than it currently is with six.<sup>48</sup> Accomplishing this would bring down population and reassert the integrity of the earth for the benefit of future generations while advancing rather than attacking the interests of workers and peasants from all countries.

The fact that people have taken to the streets by the tens of thousands around the globe to demand that their governments provide what should be regarded as a human right—access to food—should be welcomed, not fretted over. Fighting for a reduction in the extreme levels of poverty that exist in the Global South as well as the hunger that exists in the North, means fighting alongside the workers and peasants of the developing world to confront the entrenched corporate power of the multinationals and their paid enablers in government that exploit and oppress all of us.

Rather than seeing the poor as some kind of demographic threat, as neo-Malthusians such as Brown do today, we should recognize them as our allies in struggle. Indeed, some of the most inspiring struggles to preserve livelihoods, decent jobs, environmental integrity, and indigenous cultures over the last 15 years have come from peasants and workers in the developing world fighting against water privatization, deforestation, and the strip-mining of local resources and food supplies by Western multinationals and financial institutions. We need to categorically reject the argument that population growth is at the heart of world hunger or that people in the developing world are not producers of wealth as well as consumers—that they are somehow not part of the struggle for a better world. To do otherwise is to accept that the division of rich and poor is an eternal law of nature, whereby there are always destined to be “too many” poor. To quote Engels, Malthus claims that:

the earth is perennially over-populated, whence poverty, misery, distress, and immorality must prevail; that it is the lot, the eternal destiny of mankind, to exist in too great numbers, and therefore in diverse classes, of which some are rich, educated, and moral, and others more or less poor, distressed, ignorant, and immoral... The problem is not to make the “surplus population” useful, to transform it into available population, but merely to let it starve to death in the least objectionable way and to prevent its having too many children, this, of course, is simple enough, provided the surplus population perceives its own superfluousness and takes kindly to starvation. There is, however, in spite of the violent exertions of the humane bourgeoisie, no immediate prospect of its succeeding in bringing about such a disposition among the workers. The workers have taken it into their heads that they, with their busy hands, are the necessary, and the rich capitalists, who do nothing, the surplus population.<sup>49</sup>

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