Chapter 5 - The Problem with People

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What About Me?, Only So Much to Go Around, The Most Important Link of All, Humanities Wants and Needs, Enough is Enough, Yeah No We Can't Stay, When You Know it's Bad, Wait – What if it Works?, This Land is My Land, So Now What? References

What About Me?

Since I am, in fact, a person, and not an alien, it might seem a bit hypocritical to call down humanity in general. So, let me start out by saying that I'm fully aware of that fact, and most certainly include myself among humans that are at the root of the environmental problems on our planet. And I'm not saying it's me, and I'm not saying it's you. I'm simply saying it's all of us, it's our sheer numbers, the mass of humanity, that's overwhelming our planet. And, truth be told, I think most of us are pretty decent people, with good intentions, who want to do the right thing, at least most of the time. I think I can include myself in that category as well. We are creative, intelligent, and inventive. Myself, maybe, maybe not. We'll see.

We are an extremely successful species that has learned how to leverage natural resources with science and technology, far beyond any other living creature on this planet. We have figured out how to automate production and transportation and provide food for ourselves very efficiently, as well as protect and cure ourselves of previously fatal diseases and conditions, increasing our quality of life and our lifespans.

On the one hand, many of us enjoy wonderful lives because of all this, compared to our ancestors. On the other hand, it appears that we have taken all our comforts and conveniences so far out on a limb that we are now creating a potentially miserable future for our descendants, as well as for all other life on this planet.   To accomplish all that we now enjoy, we have squandered nearly all the fossil fuels that have been held deep within our planet for millions of years in just the past few generations, and converted all of that fuel into carbon dioxide (CO_2) that is now warming our planet faster than in any previous time in history.

Now it's time to take a good look at what's going on. Basically, we have too many people using too many resources. And, we're not only trashing the planet for future generations, we're driving other species to extinction in the process. Now is that fair? To kill off our biological brethren as a byproduct of our success? After all, we are all in the same boat. We humans are part of the animal kingdom too. We may be at the top, but we are simply animals, mammals to be specific, at the end of the day, so when we drive animals to extinction, we are killing our family, the natural family that has evolved to exist together on this planet.

As the top species, don't we have an obligation to be responsible with our immense power, to show some level of consideration for all species, and not just ourselves? Don't we have an obligation to future generations of humans, when we can make good decisions now so that they can have comfortable lives? Let me be clear about another personal point. I like my life. I like my conveniences. I simply think it's fair that my children and grandchildren should get the privilege to

enjoy a similar lifestyle because of my good choices, rather than complete crap as the world falls apart around them, because of my selfish, bad choices.

At the end of the day, we humans, as well as all life on earth, have certain basic requirements for survival. If we have access to these basic requirements, most of us will be fairly satisfied. If we have trouble getting access, or have limited access to our wants and needs, we are likely to get frustrated, even angry, and we will respond in different ways. Think about that.

What if you went to the grocery store and all the shelves were suddenly empty? I mean, think about how annoyed you might get if you go for your favorite brand of juice and they're out? Or, god help us all, the toilet paper? What if it was gone for good, because we ran out of the energy needed to scrape the forests, make the paper and then huck it to a store near you? What if you knew that your neighbors saw this coming and had a giant stash in their basement? And told you to piss off if you asked them for some? After being good neighbors for 20 years? Getting kind of ugly? Yep. And that's just the toilet paper. This kind of thing would go for anything we run out of, which would be pretty much everything, all our food and such, and it's basically what we can expect in the future if we don't get in balance with our planet. We can do it kindly and gently now, or we can delude ourselves into thinking we're fine, until it's too late, and suffer the consequences. Think about that.

Only So Much to Go Around

The cold, hard reality is that Earth's resources are limited, despite what we might want to think or tell ourselves. The success of humanity depends on three basic types of resources, what comes from the earth, what lives on or in the earth and the earth's ability to absorb and recycle our wastes. Since the mid-80's we have been consuming these resources faster than the earth can supply them naturally. We are currently running out of energy, food, water and land.

As one example, extreme water scarcity in California is one symptom of the global disaster brought on by fossil fuels. Shrinking reservoirs can occur naturally, but atmospheric levels of CO_2 are higher than they've been in millions of years. Also, California population growth is increasing wildfire threats, because the wildland-urban Interface is naturally prone to wildfires, and the population in these regions has increased by 300% in the past 50 years.

As of 2016, there were 46 million homes in California, yet the population was continuing to grow at 300,000 people/year. And the reality is that the fires are completely natural and have been going on since the beginning of time; the problem is the people, who, in reality, shouldn't be building homes there. Year after year, the news continues, as fires and mudslides take out entire neighborhoods in California.

California's population growth is expected to outstrip water conservation in coming years. A 2009 state law required urban water agencies to reduce per capita water consumption 20% by 2020, compared with use at the start of the century. Boy, when the water restrictions start, that's the first sign that the population has overwhelmed the territory! Hello? I mean, don't we need water to drink *and* to grow our food? Most agencies were able to meet the new law, but by 2030 the data show that the savings will be erased if population continues to grow at the current rate. And, while California is an obvious example of local scarcity in the U.S., several other western states, including Arizona, Utah, Nevada and New Mexico are facing severe water scarcity, and are drawing from other states for water, mainly Colorado, because they can't supply enough from within their own borders to supply their populations.

Calif. water board to monitor groundwater use in ag hub
The Associated Press

Water scarcity trends show no sign of easing NEWSWEEK

CALIF. WATER DISTRICT AGREES TO CUT COLORADO RIVER USE The Hill

Water conservation comes with a downside for Salton Sea LAist

Evaporation seen as a key drought driver in Western US The Hill

Now let's look at some global realities.[1] At this point, humans have converted about one third of the ice-free desert-free land surface of the planet to cropland or pasture. Cropland alone stands at 119 million square miles. Since 2000, humans have cut down more than 6 million square miles of primary forest. In all areas, except Oceania and Antarctica, at least a quarter of natural habitats have been converted to other land uses. In Southeast Asia, almost 50% of the natural habitat has been converted.

In 2008, about 20 million people were displaced by extreme weather, compared with 4.6 million internally displaced by conflict and violence over the same period. The growth of environmental refugees has been highest in sub-Saharan Africa, but risk in other areas is likely to increase as multiple environmental stressors come into play. From these numbers, it should be painfully obvious that we're overstepping our bounds, and consuming finite resources endlessly to satisfy our endless wants and needs, at the expense of the other life, the wildlife, that also occupies this planet alongside us humans.

So, what about food? Obviously, us humans need that to survive, as a minimum. After all, it would be kind of hard to keep living if we can't eat. As of 2017, when global population had surpassed 7 billion, the malnutrition rate per capita had decreased, but with more people, there were still 800 million without enough to eat.[2] Chronic food deprivation increased from 804 million
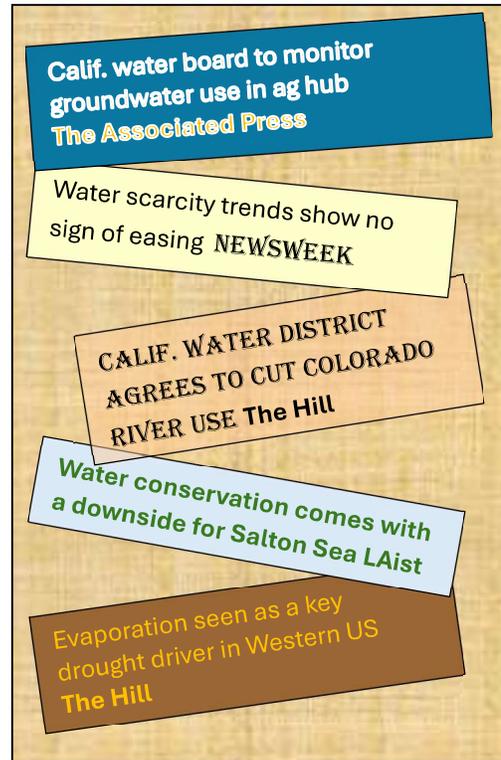
in 2016 to nearly 821 million, which works out to about one in every nine people in the world, in 2017.

The highest prevalence of undernourishment was in sub-Saharan Africa, at 23.2% of the population. The highest number of undernourished people was in Asia, at 515 million. More than one in five children globally was stunted. And 7.5% of children, 50.5 million, under the age of five suffered from wasting (low weight to weight/length).[3] Population is projected to increase to around 10 billion by 2050 if we don't get control of it. So how exactly are we going to feed all those additional people if we can't feed everybody now? Why would we continue to force women who can't feed their families in poor countries to have children who are going to, by definition, starve and suffer, by withholding birth control technology that we can well afford to provide, that could help them control their family sizes? As a supposedly responsible developed country with the means to do so, this feels unconscionable. It embarrasses me. Truly.

And it doesn't end there. According to a United Nations report,[4] one million species face extinction, more than ever before in human history, and humanity is responsible.   The report is based on the assessment of some 15,000 sources that consider the causes and consequences of environmental changes over the past 50 years. About 25% of the world's plants and animals are vulnerable to extinction. These include over a third of marine mammals and more than 40% of amphibians.

Even if you don't give a shit about wildlife, think about this. The rapid decline of the natural world endangers global food security and quality of life. For instance, an estimated 4 billion people rely on natural medicines, produced by the vanishing species, for their health care. That's about half of all humans. And losses of species that pollinate plants would threaten up to $577 billion in crops each year. I don't know about you, but that sounds like a lot of food and medicine and money to me. Just saying. All because we have more people than our planet can support.

> **How Can Humans be Decimating Wildlife?**
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> Here are five big drivers of wildlife destruction:
>
> 1. Land and sea-use change: The conversion of ecosystems to agriculture, aquaculture and other human developments.
>
> 2. Direct exploitation of organisms (overharvesting, logging, hunting and fishing)
>
> 3. Climate change, including rising sea levels and increasing extreme-weather events, wildfires, floods and droughts.
>
> 4. Pollution – especially plastics
>
> 5. The spread of invasive species, non-native organisms that can displace or kill native plants and animals.

The Most Important Link of All

With all these direct and obvious links between overpopulation and the environmental problems that are killing our planet and killing us humans as a side-gig, it absolutely astonished me when I saw the Editor's note in *Population Connection, 2019*, by Marion Starkey.[5] She couldn't find more than three quality articles linking population and climate change. That's how clueless the general public is about the connection. An entire *National Geographic Magazine* that was dedicated to the 50th anniversary of Earth Day, and how horribly we've done in terms of real environmental progress only mentioned population once, just two lines, which seemed to me the

most important lines in the entire issue: "We know how to do this: One of the most cost-effective solutions to climate change is ensuring that girls and women have access to education and birth control. Empowering women will help stabilize the global population."[6] There should have been a lot more said about population than these few lines.   They should do an entire issue about the links between population and environmental problems. But that's just me.
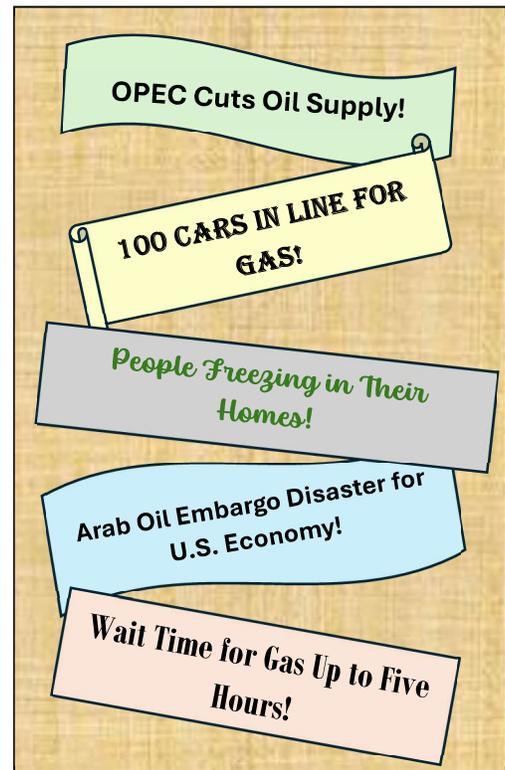
The general oversight of the obvious link between overpopulation and worsening environmental catastrophe is just silly, because the connections are undeniable. People consume fossil fuels – indeed, at very different levels individually – and people live in the homes, farm on the land, and work in the businesses that are destroyed when hurricanes come tearing through or flood waters inundate entire towns or wildfires spread faster than firefighters can contain them.

The more people we have on earth, the more people we have emitting CO_2 and losing their livelihoods, and even lives, due to climate change. And we can put out the fires, we can donate money to feed the children, we can save a few whales, we can bring back the condors, we can plant that milkweed and we can rip out those invasives all day long, but until we get our population under control, those actions will be mere band aides. They might be well-intentioned, but they're not going to come anywhere near to saving our planet unless we get our population under control.

Humanity's Wants and Needs

As an engineering student back in the day, I was required to take economics classes, in which I learned about the balancing of resources, demand and supply, with consumer wants and needs. I actually loved that stuff. Very eye-opening. Basically, if resources fall below wants and needs, you can expect the cost of the resources to go up. Sort of *DUH,* when you think about it. Like what happened during the Arab Oil Embargo in the early 1970's, when cheap gasoline suddenly leapt into the high double-digits at 70¢/gallon (arrgghhh if we only knew) when OPEC (Organization of Petroleum Exporting Countries) decided to put the screws to us.

Now we're facing the same type of dilemma, only worse. Much worse. Instead of a few asshole kings and dictators, the entire earth is putting the screws to us, as we continue on a path of business as usual that will run us out of pretty much everything. Which will, naturally, increase costs and piss everybody off, just like the Arab oil embargo did. Nobody had fun sitting in queues of 50 cars at gas stations for hours, dearly hoping there would still be enough gas for their 5-gallon weekly allotment when they finally reached the pump, five hours later.   Just a great way to spend an evening each week. Oh yeah.

OPEC Cuts Oil Supply!

100 CARS IN LINE FOR GAS!

People Freezing in Their Homes!

Arab Oil Embargo Disaster for U.S. Economy!

Wait Time for Gas Up to Five Hours!

Problem is, there's not really another planet to fall back on here. This means that if we run ourselves out of resources on this planet, we'll simply start dropping dead of starvation and fighting like hell over the scraps until there are just a few stragglers left. Which wouldn't really be an undeserved outcome if we don't get off our asses and deal with this proactively. Just saying.
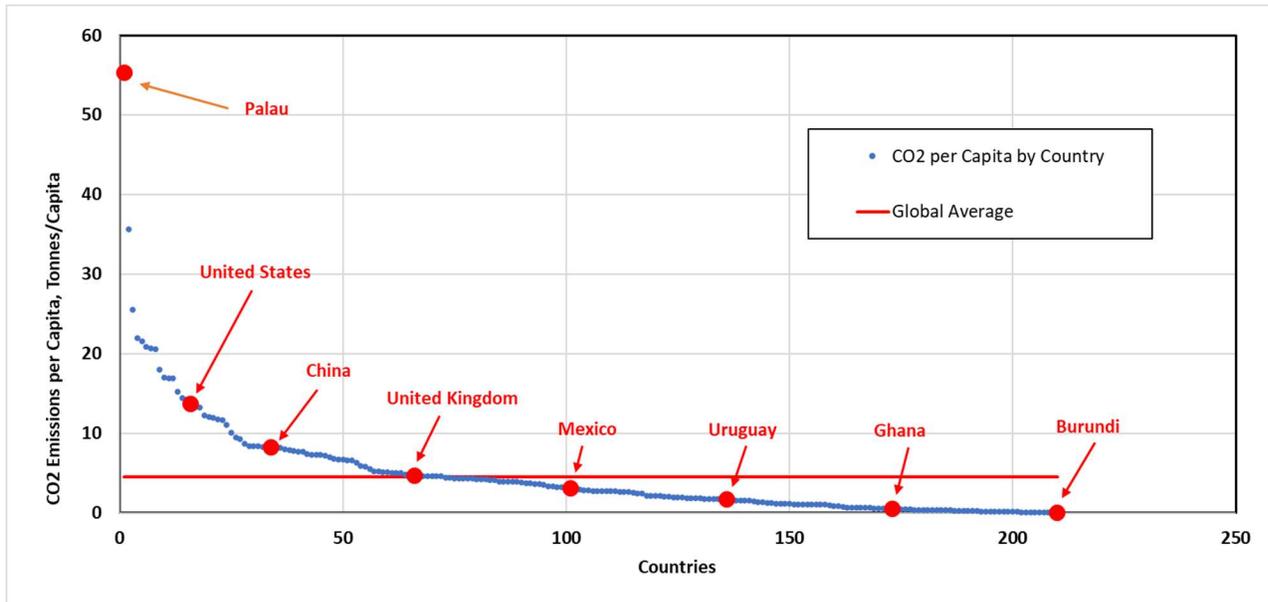

Figure 1 - CO$_2$ Emissions per Capita by Country, 2020

While per capita emissions might be low in developing countries right now, as shown in Figure 1 , many of these countries are seeing growing middle classes of people who look across the oceans and see how we live, and strive for a comparable lifestyle. A lifestyle that would obviously increase their emissions. And the sad truth is, that while everybody certainly deserves to live a lifestyle of their choosing, if we all spewed like Americans, we'd have a global disaster on our hands. We'd have long since run out of fossil fuels, and we'd be out of food because all the arable land would have gone to desert by now. Think about that.

If everybody spewed like Americans and other glutinous countries, like Australia and Canada, our emissions would be a whopping 108 billion tonnes/year, about 3 times higher than it is now. Ouch. Obviously, this is impossible in practice, because we flat-ass don't have enough fossil fuel for that. And never will, because when it's gone, it's gone. At least, for another lotta millions of years.

On the other hand, what if we were forced to live like somebody in Mali, after we back ourselves into a corner by running ourselves out of resources while blithely growing our population? Per capita fossil fuel usage in the US is 185 times higher than places like the impoverished African nation of Mali, for example. Mali's citizens and billions of others like them in underdeveloped countries are afflicted with "carbon starvation". Their use of fossil fuels is too low to sustain decent lives based on available technology.

Table 2 in Chapter 3 (The Next 30 Years) shows that if we continue to consume at current rates with our current population, we'll inevitably run through what's left of global oil and natural gas reserves in the next 50 years, just two more generations. Coal will last longer, about 100 years, if we choose to continue burning it, although it's far more polluting, releasing mercury into the air, in addition to toxic particulates. If our population continues to grow, we can obviously expect to run out sooner, and if everybody on the globe lived like an American, we'd be running out of fossil fuels in less than 20 years, just one more generation.

Keep in mind that it's taken nearly two centuries to burn up more than half of the original reserves, and we've been increasing the burn rate logarithmically (e.g. faster and faster) with our logarithmic population growth. This implies that the level of global warming that has already happened will double if we burn the rest of the fossil fuel in the next several decades.

It's not much of a stretch to expect more severe weather, fires, habitat loss for wildlife and humans, continued sea level rise, and more polluting and destructive wildfires in the west. Think about that. Given these realities facing us down within the next century, why would we not work on reducing our population now, while there's still time to make a difference in the quality of life for our descendants? And for many of you, depending on your age, yourselves?

Back when I was in the oil industry, about the time I began to wake up to our environmental problems, I spent some time in China. I had wondered how they managed to accommodate the needs of such a massive population, and once there it became quite clear.

In cities, the people live in fairly severe gray cement high-rises, about 10 stories or so, with families crammed into tiny efficiency flats. The elevators were only allowed for moving purposes, the rest of the time you used the stairs, even if you lived on the 10th floor.

As I recall, showers and laundry were down the hall, one for each floor, and no dryers whatsoever, they simply hung clothes to dry indoors, in a small sunroom that each apartment had, which would be more of a cold shade room if your apartment happened to be facing north. They owned just a few choices of clothes, and generally wore the same outfit every day.

Nobody had cars, bikes were everywhere, and there were buses and local vans that comprised mass transportation, along with taxis. When I hung out with my Chinese friends, they loved to practice their English on me, and the subject of how many cars I had and how big my house was always seemed to come up, and it was obvious how envious they were. I found it embarrassing and felt guilty, as if I were encouraging them to want more, and it was scary to think about what global emissions would be like if all the people in China lived like Americans.

Enough is Enough

So, if you're still here when the shit hits the fan, what are you going to do? What if you're in Highlands Ranch, Colorado, and the water supply gets so low that they have to raise prices so high you can ill afford to use more than 5 gallons per day? Then the same thing happens to the power, the cost goes through the roof, so you find ways to use less, or none at all. What if you get disconnected because you can't pay? Then the sewer plant stops operating because the city can't afford to pay for the power to run it.

Same thing with natural gas, it's just another utility that is, by the way, directly linked to electricity, since many power plants run on natural gas. So, lose one, lose the other, and then the water, since power is needed to run the water plants. Duh. And then, as touched upon above, the

food begins to run out. And the toilet paper. And the beer. And then people start looting each other for the scraps. Maybe with firearms.

And then your kid gets sick and, not only can you not get them to the doctor for lack of fuel and money, the doctor's office isn't even open because they can't afford power either. Then you start scrapping around desperately, trying to find a place where you can get help. Even if it's in a barn. Or a cave. In winter. Again, I ask, what would you do? And when? When will you have had enough? When will you decide that something big must be done? And you look at what choices you might have?

So, you might now be calling bullshit. This isn't going to happen. At least not here. Not where I live. Well, maybe not here. Yet. But it's happening now. Oh, it's definitely happening. And if it's happening anywhere on our planet, it's just a matter of time before it happens right here in the U.S.A.

England recently changed from a net exporter of food to a net importer, relative to population. This means England can no longer feed itself. Nigeria, Africa's most populated country, is also a net importer of food, even though it has 80 million acres of arable land. What if all countries couldn't feed themselves? At its core, isn't that what true sustainability is? Can we support ourselves with what we have available, indefinitely?   For at least seven generations?

Africa's animals are increasingly losing ground to human pressures. Habitat loss, especially to farming and grazing, is forcing people and wildlife to compete for finite space and resources. Farmers and pastoralists react with powerful weapons: Potent poisons such as carbofuran that can wreak havoc not just on targeted wildlife but also on the animals and humans around them.

Development of synthetic poisons, insecticides and herbicides, for agriculture, beginning in the 1980's when the human population started to explode across Africa and competition for space and food increased sharply, landowners and pastoralists found that pesticides could also be employed to kill predators, scavengers and crop raiders. At some point people also started using the deadly compounds to poach ducks and other waterfowl and then sell them as food.

> **What happens when top predators like humans become too successful?**
>
> It appears that *T. rex*, the nastiest Cretaceous carnivore of them all, turned to cannibalism, possibly due to overpopulation of its own species. "It's a type of ultra-cannibalism," says David Burnham, a paleontologist at the University of Kansas. "When the predators become overpopulated, they start killing each other. As *T. rex* became more powerful, it began reaching the limits of its capacity. It can kill and eat anything it wants. How long before they start turning on each other?"[7]

Now that these populations rely on poisons to grow their food, the poisons are spread throughout the land and water, and they're unlikely to stop using the poisons any time soon, because then they couldn't grow enough food.[8] Does that sound like too many people to feed? I mean, if you have so many people that you can't feed them without poisoning everything? With poisons that are made from petrochemicals that we're running out of? How long do you think that can go on? And truth be told it's been going on all over the planet for decades. It's a huge underlying reason that we've lost so much wildlife. It's also implicated in

many health problems in humans, particularly among children. So, here we are. Think about that. Our population is so huge that we have to poison children and wildlife to grow our food.

In Uganda the population is exploding, at a fertility rate of 6.2 children per woman, and 34% of married women have an unmet need for contraception. Currently more than half the population is 15 years old or younger, and 24% of women 15 – 19 years old are already mothers or are pregnant with their first child, and one in 19 children die before their 5th birthday. Only 30% of households have safe drinking water. Large crowds of women attend family consultation days, despite resistance from husbands and rumors of not being able to have kids later if you take contraception now.

In Ethiopia the population is exploding, with 100 million people and their farm animals trampling grasslands, meadows, thickets, moors and swamps into rock and dead earth. Farms cover all the best damp, rich land, displacing native plants that once helped hold moisture in the ground. 1.5 billion tons/year of topsoil is lost to erosion, pushing subsistence farmers to even more marginal land.

Syria, where two thirds of the population rely on humanitarian aid to survive, is dealing with a years-long drought that is considered to be a threat multiplier in the political uprising that has resulted in so many refugees and casualties. In overpopulated Nigeria, more than 2 million young people enter the work force each year, and unemployment is 25%, a source of restless, aimless youth for extremist groups like Boko Haram.

> "Just as oxygen is to fire, so are unemployed youth to insurgencies", Kola Masha, a Nigerian-American entrepreneur

When young people have limited economic opportunities, it's easy to raise an army of disgruntled insurgencies. Violence, terrorism, conflict and war are typical expected outcomes when countries are so overpopulated that they run out of food and other basic necessities.

Can rapid population growth trigger a total collapse? It already has. Just ask the 9 million residents in and around Chennai, India, where the wells have run dry. Another 20 Indian cities face the same fate in the near term. More than half that nation is already dealing with high-to-extreme water stress, which results in the deaths of 200,000 people each year.[9] I mean, that's when you know it's bad.

Poor sanitation and unsafe water in highly populated countries kill more children than measles, malaria and AIDS combined. Globally, 950 million people still defecate outside, without a toilet. 569 million live in India. The land can't absorb this much feces from all these people, so it runs off into rivers that provide drinking water, and there are no water or wastewater treatment plants, so it doesn't get treated before it reaches the rivers, or before it's used for drinking.   The percentage of Indians who defecate outside has decreased, but the population is increasing so rapidly that it offsets the gain, and there's more shit than ever running into the water supplies.

Increasing population increases risk of pandemics because of crowded conditions, and a lack of clean water or sanitation. More than 100 million people live in slums of Latin America, 50 million in Brazil. Life expectancy at birth in the least developed countries lags 7.4 years behind the

global average (72.6), due largely to persistently high child and maternal mortality, as well as violence, conflict and the continuing impact of the HIV epidemic.

Diseases are spreading with climate change. One example is Valley fever, a disease that typically appears in warm and dry parts of the southwest US, that is expanding its range. With the West becoming hotter and drier, the soil-dwelling fungus that causes Valley fever is finding more places to thrive, according to new research from the University of California, Irvine.[10] Honestly, I'll be surprised if we don't die off of disease brought on by our own folly long before all other species go extinct. Or before we get hit by a meteorite.

Once again, even though it might not feel like you personally are in a resource-stressed area, they exist all over the world around you, and your area will be impacted sooner or later, one way or another. We are on a finite planet with finite resources, and it's currently morphing from a lot of regional problems into a global problem, as I write this. And has been for decades.

Yeah No We Can't Stay

By 2050, between 50 million and 350 million people are predicted to relocate because of climatic reasons – a rise in sea level, increased water scarcity, desertification, insufficient food, and extreme poverty, which is directly related to overpopulation in areas that don't have sufficient resources for their people.

Migration trends from 1990 to 2015 show that as global population increases, the numbers of people relocating to another country increases with increasing population. For example, from 2010 to 2015, about 85 million people (out of a global population of 7 billion) crossed an international border to a new home. That's compared with 69 million from 1990 to 1995, when global population was 5.2 billion.[11] Rapid onset disasters, floods and storms forced an average of 21.5 million people per year from their homes between 2008 and 2015.

> "We live in an era of the most forced migration since the second world war. We are going to need to support those who are ravaged by climate change so they can migrate with dignity." William Lacy Swing, director general of the UN International Organization for Migration.

Many more have been displaced due to slow-onset events like agricultural drought and environmental degradation. Other factors that drive displacement are weather-related disasters, including floods, storms, tornados, hurricanes, sustained droughts, wildfires, avalanches, landslides, sudden subsidence, sea level rise and extreme temperatures. These push people from their homes, when crops won't grow, livestock dies, water is scarce, living conditions become impossible and people are forced to try and find a better place in order to survive. Migration also results from violence and persecution, and vice versa.[12]

In Africa, millions of internal migrants are moving from one country to another, mainly to find work and improve their lives. Many of these people are refugees who are forced to leave their homelands that are ravaged by environmental disaster or war, which leads to threat to life, threat of arrest and violence, general risk, and harassment and intimidation. Nearly 30 million Africans have migrated to Persian Gulf countries, because of the strong economy.[13] Obviously, these people are not uprooting their entire lives for the fun of it. They are desperate people who can't support

themselves or their families, or who fear for their lives because of violence and wars in their own countries.

So, I ask, do we prefer violence caused by the stress of overpopulation or a kinder, gentler approach, like methodical distribution of voluntary birth control, where women can choose how many children to have in their environment? Where women in overpopulated regions that are warring over territory can choose to avoid having children they can't even feed? Think about that.

My take on all this is that local overpopulation is at the root of it all. While Western news tends to pose the underlying problems as religious or cultural differences, or, if you will, historical "feuds", I think the true underlying cause is overpopulation, and not enough to go around. We humans are a lot more tolerant of cultural differences in times of plenty than we are in times of scarcity, when we tend to panic and use any excuse we can to exterminate "others" if we begin to see them as competition rather than brethren. I'm pretty sure that if you ask most people whether they prefer peace or war, they'll answer "peace", but we can get pretty aggressive when there's not enough to go around.

When You Know It's Bad

Have you noticed how hard it is to go places these days? I mean, pretty much anyplace? I don't care where you're going. To the store. To work. Your favorite restaurant. There seem always to be so many people that it takes twice as long to go anywhere. So, then we build more to accommodate everybody. We widen roads and rework them to accommodate more people. And we can't expand some places, like national parks and forests, they're obviously a given size and aren't going to magically get bigger, so for those kinds of places, permit systems have been devised to control, to some extent, all the masses of humanity that want to go there.

I guess it depends on how old you are, and it's all in what you're used to, but at 65 years old, I remember when we could spontaneously plan a day on a weekend and take a simple mountain hike. We could enjoy the solitude and gentle quiet in the woods any time the whim hit us. Now you can expect cars parked all the way down the road, a mile from a trailhead that used to have just a few cars, which means it probably won't be long before even those are permitted. And it's obviously too many people all trying to do the same thing.

Then, when you actually get on the trail, if you've been going to favorite trails for decades like we have, you can see the trails eroding, the exposed tree roots getting drier and weaker until the trees finally collapse, and somebody goes in and clears them out, and in this way the once narrow trail becomes a muddy multilane highway for

the masses of humanity that are now on the trails. It's great that more people are getting out, I'm simply pointing out that this is just another indication of how increasing population impacts us all and leads to more and more restrictions on what we can do and how we can do it. And we can expect even more restrictions if we let our population continue to grow.

We have so many people that we're beginning to overrun our wilderness and national parks. Zion and Maroon Bells now have shuttles, and Yellowstone, famous for miles and miles of backed up traffic, is trying to figure out how to restrict usage without pissing people off. Chicago basin in the San Juans of Colorado, the access for several fourteeners that we have climbed, has been requiring permits, as well as other fourteeners like Quandary, which was always an easily accessible drive-up. Don't even think about hitting the Grand Canyon or any huge and famous park without planning at least a year in advance. Solitude-seeking trips no longer bring joy, now we get mostly frustration, annoyance and irritation. It seems like everywhere, no matter how remote, suffers from too many people and too many machines. We are literally loving our outdoors to death with our sheer numbers.

Wait – What if it Works?

Honestly, I get sick and tired of media lamenting the problems of declining population and I can't stand it when I see these kinds of headlines. They strike me as misleading, clueless, ill-informed and short-sighted, if not complete hogwash. Whenever I bring up the problems with population and our absolutely urgent need to control it, people want to know how we're supposed to support our old people in an aging economy. Which tells me that they've been influenced by media, who is encouraged and paid by big corp to marginalize population reduction. The truth is that we absolutely must reduce our population, and we're going to have to figure out how to handle the economic issues.

The inevitable horrors that will come with not reducing our population are far worse to contemplate than the relative inconveniences that we'd have to figure out with reducing our population. And the last thing we need to shove in front of the general populace is that a reduction in population would cause problems, when it would be an absolutely fantastic win for our planet and humanity. At the end of the day, we need to figure it out. Endless population growth is just as futile as infinite capitalism, and has no place in a positive future for our planet. My own observations point once again to greedy big corps who want the population to grow continuously so they can keep those new customers coming to support our runaway continuous growth capitalism, so they can just keep getting richer forever. We need to stop eating this crap, and big corp and the media need to stop cramming it down our throats.

The solutions to how we handle the economy with a slow, gradual reduction in population are as endless as our collective imaginations. And, as much as I dislike the runaway growth of humanity, I am constantly amazed, impressed and inspired by the ideas that come from the minds of our species. I mean, we did invent the birth control pill, didn't we? And the population would be a whole lot bigger by now if we hadn't. And I would likely have cranked out a lot more babies, and probably not gone to engineering school. Just saying.

In Japan, the population is reducing, and some women are actually refusing to have even one child, much less two, because life is so much easier without them. In China, the same kind of thing is happening, and the government is actually trying to encourage more children, the opposite of the one-child policy of the late 20th century. Again, we need solutions to less people, not more people to support perpetual capitalism.

In Europe, the population is decreasing in several countries, and governments are trying to figure out what the long-term looks like. In Germany, in 2015 deaths exceeded births by 200,000, and they have relaxed their immigration laws to allow immigrants in, in order to mitigate population reduction. This makes sense, as long as the region can physically support the additional humans in terms of basic needs.

Done right, emigration balanced with immigration somewhere else can potentially distribute the world population more evenly across lands that can support it, so local resources are available to all. At least, that would seem like a reasonable endpoint to strive for. If we could get there. I, for one, would feel fairly comfortable about my descendants' prospects on this beautiful earth, because I would feel a level of confidence that the earth would still be beautiful and habitable, for generations to come. Personally, I'm fine with following the wisdom of Native American ideology, to leave the world in good condition for at least the next seven generations. After that, the next generations have to handle it and call it. I can only think so far ahead.

This Land is My Land

Let's think about where we live now. Then let's think back to where we came from. Let's think about how we got there, and even further back, about how our ancestors started, at the beginning of the beginning. If you go back far enough, you'll find out that somewhere back there long, long ago is an emigration and immigration event, which may or may not have resulted in a displaced indigenous occupant, as well as some number of displaced wildlife, as human populations began to take hold, and then to gradually move into the dominant position in which it currently resides. I think it's fair to say that the lion's share of the world's livable space has been pretty well occupied by humans for about the past 10,000 years or so.

Once we had a presence pretty much everywhere, we began multiplying, first in more hospitable regions with favorable weather, food and water, and then gradually into less hospitable regions as we overpopulated the better land. We moved gradually into places that couldn't support significant life, like the deserts of Arizona, Utah and Nevada, where we had to rely mainly on imported goods and water, and then we overpopulated those areas too as we sucked natural resources from more plentiful regions, essentially overdemanding from other areas.

What used to be regional overpopulation problems is rapidly expanding to a global population problem, as we deplete once plentiful regions. The problem with that is that eventually we'll run out of those, and we don't really have another planet to expand to or import from. And if we did find a livable alternate planet, it would likely be occupied also, by an indigenous population of some sort who likely would not exactly embrace our presence. And who could blame them, given our history?

Personally, I am approximately half Dutch, a quarter Scottish and a quarter Belgium. According to my dad, there may be an Irish grandma in there somewhere as well. My earliest ancestors in America arrived around 1635, Jan Pieterson Slott and his wife, Annetje, from Holland. The Dutch came over largely to gain territory, since they had overpopulated their own country, and for religious freedom, as well as the bounty of trade goods such as furs in this land of plenty. The Slotts settled on Manhattan Island in New Netherland, what was later to be called New York, and there was a street located where Wall Street is now, called "Sloat's Alley", which was later sold by our family, and renamed by the Board of Aldermen in 1850. Our original ancestral name had been changed to "Sloat", which is my maiden name.

Of course, in the 1600s America wasn't the United States of America. It was America, the colonies of England, wholly owned by the King of England. We also know that, at that time, the entire lands of this great country were in reality wholly owned, and had been for millennia, by indigenous populations that already lived here. Specifically, approximately three million natives occupied 3.5 million square miles of land. That's about 1 human per square mile. They lived in relative balance with the land, though it's true that when they first arrived on this land, they displaced some number of wildlife, competing for space of their own.

Now we're at a population of more than 300 million in this country, which is 100 times the density of the original natives, who were in balance with the land. In the Netherlands, the population density is now at a whopping 1,114 people per square mile, more than 10 times the population density of the U.S. Belgium is almost as high as the Netherlands, at 993 people per square mile, and Scotland is about double that of the U.S., at 183 people per square mile.

When I went to school, history taught that the original invaders were American heroes, and now I view them differently, because the truth has finally come out. And the truth of how I and my ancestors came to occupy this land literally makes me feel guilty about it all. I was actually born in Tulsa, Oklahoma, on land that is now acknowledged as Muscogee (Creek) Nation territory. I've thought about moving back to where I came from, mainly I guess the Netherlands. But I question whether that would really alleviate very much at this point. In the Netherlands, they're already packed to the gills with people and can't support their population, with basic necessities often coming from long distances, especially in winter, which is long in that part of the world. So, here I am.

My point is that, ultimately, we are all emigrants and immigrants to and from somewhere or the other, or our ancestors were. And we'll keep moving and shifting around as we run out of resources in one place and move to the next. The thing we should think about next is our current population density on planet Earth, and the technology developed by us humans, that has allowed us to grow our population as large as we have. And think about how much the technology will have to improve and expand somehow to feed us all, when we can't even feed ourselves now. And how technology will have to deal with increasing water scarcity somehow, when 2 billion, or a quarter of our global population, already have no access to potable water.

Think about how we're running low on natural resources needed for the needed technology for the needed improvements to cover the added people and increasing population density on the same, finite area of arable land available on our planet. And then decide for yourself if this math

works for you. If it does, if it seems to indicate to you that we're just fine and dandy growing our population forever, then you might want to review your 4th grade math.

At the end of the day, I am just another Caucasian European whose ancestors invaded and took over land that wasn't ours. We white folks in the US were squeezed out of Europe because we overran the land over there due to our rampant uncontrolled population growth. Our desperate need for more land and our greed overruled any semblance of ethical considerations or concern for the indigenous population that was already here. And we've been glossing it over ever since, not wanting our children to know how ugly we are, what we did to the Americans who already occupied this land, the land that is rightfully theirs. California is an example. If teachers want to teach the truth, they have to buy the teaching materials with their own money, because the school system won't fund it. Seems kind of backwards for California. Anyway.

Still, we never seem to learn. We didn't learn from that atrocity. Now we've overrun this land, and our government is resisting further immigration because we don't have room for more, we have too many already. And if we continue to ignore runaway population growth in other parts of the world, we will continue to see terrorism and wars as unhappy people who can't get basic resources to live lash out and try to grab more land that isn't theirs, including "ours".

Again, taking California as an example, it turns out that the indigenous occupants were much better stewards of the land than we are, by a long shot. Native Americans lived by foraging their land, in balance. Then we came along, took over the land, grew our population to unsustainable levels, and now there are so many of us that foraging is illegal, since if everybody did it, there'd be nothing left. We trash the environment, so nobody can do anything. We did this to the natives, who were in balance, overpopulated California, and now people are leaving because it's too crowded and expensive, and coming to my home state of Colorado, where it's only about half-trashed at this point, to finish the job by overpopulating here. That's when you know it's bad.[14] What are we going to do when all the states are overpopulated?

The Chumash are just one of the coastal Native communities who were in balance with the environment, and have historically been sustained by Abalone, the rich meat and the shells that they used for ornaments. Now, a "perfect storm" of overfishing and climate change is driving the abalone perilously close to extinction, pushing the California Department of Fish and Wildlife to cancel annual abalone fishing seasons.

The abalone ban could spell subsistence and cultural disaster for the tribes. Poachers are estimated to take more than legal fishing, due to the value of the abalone, now that it's so scarce.[15] Do you think this would have happened if we hadn't overpopulated the region and overconsumed the abalone with our sheer numbers? This is also happening with pretty much every other saltwater fish in the ocean. The salmon are almost gone. As much as I love salmon, these days I don't eat it more than maybe once a year, yet another example of our sheer numbers and associated demand on resources forcing individual restrictions.

By the way, our occupation wasn't pretty. It was ugly and nasty. Like any other unwelcome occupation throughout the course of history, we barged in and proceeded to kill most of the indigenous people, either directly murdering them or by infecting them with our diseases, then corralled the survivors onto reservations, pathetically small parcels of their original land, which was

not nearly enough for them to live in balance. Then, we literally dragged their children to distant boarding schools as they tried to cling to their anguished parents in order to coerce the adults into ceding over native land to the US government. Many children died far away from their homes and parents because of us.[16]

Now we're blowing out of the US, and others want to come here because it's miserable where they live. We can find endless examples of the ugly impacts of overpopulation and what desperate people will do to survive. What our own ancestors did to survive. Obviously, ethics and conscious go right out the window. There are plenty of overpopulated countries with disgruntled occupants who view the U.S.A. with envious eyes. What will we do if they choose to take over our land? Where will we go next? I'm pretty sure the Mars terraforming project isn't quite ready for us yet, and Antarctica won't be completely melted for another century or so.

So, Now What?

So, now the question becomes, what are we going to do? Are we going to continue to ignore the impacts of population growth on our planet, on our descendants, on our planet's wildlife? Forever? Until we hit the impenetrable wall that even human ingenuity and technology can't break through? When all we really have to do is help women who would like to control their family size get access to some form of preventive birth control? When that only costs a couple hundred dollars for every prevented birth?

Yes, we all know we're a wildly successful species, we are able to murder any species we want, any time, and we've figured out how to out-compete every other species on our planet in order to feed ourselves and provide shelter for ourselves, also to make our lives more convenient with automation. Our awesome technology lets us prolong our lives and get through many forms of sickness with our astonishing health care systems. No other species on earth has that ability.

I ask you, is it fair for us to constantly push aside the wildlife, drive them to extinction, into the corners of the earth, take their food for ourselves and sicken them with our poisons, just because we can? Why not turn this "problem" that's killing our planet and ourselves into a win? We are intelligent, and capable of solving seemingly insurmountable problems, as we've proven time and again in history. We are capable of ethical behavior, and we need to leverage that, and be ethical when it comes to saving our world. We have the ability to respect our planet and its diversity, and back that up with our behavior, in order to save this planet. We just need the will. We have to care enough to want to do it.

If we choose to do nothing, our population could be 10 billion by 2050, driving us even further out of balance with our planet.[17]   According to the United Nations, there's a 95% probability that the global population will be between 9.4 and 10.0 billion in 2050 and between 8.9 and 12.4 billion in 2100.[18] The population of sub-Saharan Africa is projected to double by 2050, while most other regions will grow from 20 – 50%. The only region that is expected to decrease is Europe, by about 5%.

The U.S. is expected to increase by 15%, which means an increase in population of more than 50 million people. That's 50 million more people needing housing, heating and cooling,

transportation, food, jobs, education, health care, and so on. All this means that we can expect the planet to get hotter as we spew more and more CO_2 with more consumption and construction, faster destruction of wildlife, more disease and more scarcity, which will lead to continued increases in costs for essentially everything. Obviously, this in turn will lead to more discontent and violence as we fight over the last scraps of resources. When all we need to do is provide birth control to women who want it. Seriously. Can we at least do that much?

Many of the fastest growing populations are in the poorest countries, where population growth brings additional challenges in the effort to eradicate poverty, achieve greater equality, combat hunger and malnutrition, and strengthen the coverage and quality of health and education systems. Does that feel like we're between a rock and a hard place? It does to me. We're already at a point where we will have to make some compromises in our thinking, and if we continue down this road without changing our ways, we'll find ourselves in ever more precarious positions. Compromises will become ultimatums as the planet begins to force change, whether we like it or not. We are currently in a position to mitigate some of the impending disaster, but we have to change now. Not in 10 years. Not in 20 years. Or 50 years. NOW.

We're an adaptable species, but only within biological limits, per Columbia University's Professor Radley Horton who reports that vast swaths of our planet, from Mexico to Southeast Asia, are racing toward levels of heat and humidity where "it's no longer possible to be able to sweat fast enough to prevent overheating." Death ensues. We're engaged in planetary anarchy by ignoring the rules of nature as we pack ever more people into Earth's closed system. What's truly maddening about overpopulation is that we know what to do: Remove all barriers that prevent women from choosing smaller families, and we could achieve zero population growth and then begin to lower our numbers.[20]

"There is a strong correlation between the risk of pandemic and human population density. We've done the math and we've proved it," said Dr. Peter Daszak, a disease ecologist and the President of EcoHealth Alliance, who examined the link in a 2008 study published in the Journal Nature.[19]

Billions will suffer as climate warms – A new study in the Proceedings of the National Academy of Sciences[21] warns that as the earth's average temperature rises, increasing numbers of people will be living in climate conditions most similar to those seen in the Sahara Desert today. The study's authors concluded that 50 years from now, depending on population growth and how extensively the world embraces climate mitigation strategies, up to 3.5 billion people could be living in places so hot they would historically have been considered uninhabitable by humans.

Personally, I think that the reality is that they can't live there at all, because there's no way to access food and water without having it transported in, and those opportunities will be long depleted by then if we continue on our current destructive path. More realistically, all those people will scramble toward the habitable areas that are left, which are already packed to the gills. So why would we let that happen? Especially if we know what we're doing, and how to mitigate it. Now that we know, we really have no excuses.

I'm typically a fairly optimistic person, or at least I started out that way, though these days the realities of the world we live in can leave me a bit jaded and cynical. I actually continue to believe that there's still hope for our beautiful planet, with all its amazing diversity, that we can get

back in balance. Our descendants can enjoy a wonderful quality of life and joy, as we do now. However, we must act now. We must get our population in control before it's too late.