

“The global population is expected to reach 9.7 billion in 2050 and 10.4 billion in 2100, according to the median scenario, which assumes a decline in fertility for countries where large families are still prevalent, a slight increase of fertility in several countries where women have fewer than two births on average over a lifetime, and continued reductions in mortality at all ages. There is inherent uncertainty in population projections. At the global level that uncertainty depends on the range of plausible future trends in fertility, mortality, and international migration, which have been assessed for each country or area using demographic and statistical methods. This analysis concludes that, with a probability of 95%, the size of the global population will stand between 9.4 billion and 10.0 billion in 2050, and between 8.9 billion and 12.4 billion in 2100.”

The above paragraph is an exact quote from page 28 of the most recent report issued by the UN, “World Population Prospects 2022-Summary Results” The range for the year 2100 is 3.5 billion ($12.4 - 8.9 = 3.5$). Presently, November 2022, the best estimate is that the population is 8.0 billion. On the low side that represents a growth of 900 million ($8.9 \text{ billion} - 8.0 \text{ billion} = 0.9 \text{ billion}$ or 900 million) or a growth of about 10% ($0.9 \text{ divided by } 8.9 = 0.10$ or 10%). On the high side that represents a growth of 4.4 billion ($12.4 - 8.0 = 4.4$) or a growth of 55% ($4.4 \div 8.0 = .55$ or 55%).

Any population growth will make every major problem presently faced by humanity much more difficult to solve and will make many, if not most, of those problems impossible to solve. I am not going to list those major problems, as they should be known to every person reading this essay. Between now (2022) and 2100 there will be a substantial increase in the average worldwide per capita usage of resources due to the demands of those living in the underdeveloped and undeveloped nations of the world. While no one can predict with accuracy what that increase will be, it will be a very substantial due to the fact that the vast majority of humanity lives in the underdeveloped and undeveloped nations of the world. In addition, there will be an increase in the per capita usage of resources by those of us living in the industrialized nations of the world

According to the Global Footprint Network, a highly respected think tank, humanity presently is in overshoot and has been in overshoot for a substantial number of years. To the best of my knowledge, no individual or organization has disputed that fact. By definition, any species that remains in overshoot must suffer, at some point in time in the future, a massive, uncontrolled, violent, and horrible decline in population. The previous sentence applies to humanity. The ever-growing population and the ever-increasing per capita usage of resources is driving humanity deeper into overshoot every second of every day. No one can accurately predict when the uncontrolled reduction in the human population described above will begin. However, every second humanity goes deeper into overshoot shortens the time in the future the uncontrolled reduction will begin. Since the collapse of civilization, with the deaths of billions and even the possibility of the extinction of the human species will occur if humanity remains in overshoot, the most intelligent assumption that must be made by humanity is that the collapse of civilization will occur tomorrow and that today we must take all the necessary steps to get out of overshoot as quickly as possible. The only way to get out of overshoot is to substantially reduce the human population and substantially reduce the average worldwide per capita usage of resources.

Technology will not get humanity out of overshoot in time to prevent the collapse of civilization. Those that believe technology will get humanity out of overshoot in time are foolishly gambling the lives of billions of human beings.

There are only two ways that population growth can cease or be reduced. They are either by the stupidity or by the intelligence of humanity. The stupidity is simple--- permitting the human population to grow until overshoot causes the collapse of civilization with the deaths of billions. The intelligence of humanity can be divided into two subcategories--- either voluntary or coercive population control. Coercion can range from merely social exclusion to criminal penalties and criminal penalties can range from merely a slap on the wrist to execution for crimes against humanity for producing an excess number of children. Almost all humanity is presently violently opposed to the immediate imposition of coercive population control on all humanity. I would guess that at present at most 10 people on the planet advocate immediate imposition of coercive population control. Even worse is the fact that almost all of humanity refuses to consider coercive population control and compare it with voluntary population control. Humanity will not suffer any harm if governments and experts were to compare both methods population control to determine which method is best for the long-term survival of humanity.

Now let us examine some of the facts and concepts in favor of and in opposition to gambling the coming collapse of civilization on voluntary population control. The first fact in opposition is the prediction made by the UN, with 95% certainty, that between now and the year 2100 the lowest prediction of an increase is 900 million (or 10%), the highest prediction is an increase of 4.4 billion (or 55%) and the median is an increase of 2.4 billion (or 30%). The first fact in favor of gambling the coming collapse is that all of humanity is violently opposed to coercive population control, that it would be impossible to get all the nations on the planet to agree to the imposition of coercive population control, and even if all the nations of the world agreed on the necessity of the imposition of coercive population control, it would be impossible to get them to agree on the details of the imposition and timing of coercive population control.

There cannot be any doubt that the Catholic Church and many other religions would do all in their power to prevent the worldwide imposition of coercive population control on humanity. There cannot be any doubt that many cultures advocate and are in favor of large families and also consider women to be second-class citizens and nothing more than baby making machines.

The economy of the planet and the population of the planet are opposite sides of the same coin. If the population grows, then the economy will grow to satisfy needs of the growing population. If the population decreases, the economy of the planet must decrease as there will be no one to buy the goods and services of a growing economy. If population grows, the economy will grow to satisfy the demands of the growing population, and if the population declines, the economy will decline as no one will buy the goods produced by the economy.

Everyone who is opposed the immediate imposition of coercive population control and/or refuses to compare both methods of population control has refused to set up what I call "trip wires" relating to the imposition of coercive population control. In simple terms, everyone who is opposed to the immediate imposition of coercive population control has taken the position that they will never agree to the

imposition of coercive population control in the future and/or never agree to even a discussion of coercive population control and/or never agree to a comparison of coercive population control with voluntary population control.

As set forth above, the median prediction for 2050 is 9.7 billion and median prediction for 2100 is 10.4 billion. Assume in 2050 the actual population is 12 billion and the numbers at that time predict that the population would attempt to reach 25 billion in the 2100. To be very insulting, it would be the height of idiocy at that time not to immediately impose coercive population control to prevent the collapse of civilization and the deaths of billions as the population will never reach 25 billion. A ridiculous assumption to make a point and that point is the future cannot be controlled and there are an almost infinite number of possibilities that would require the immediate imposition of coercive population control to prevent the collapse of civilization and the deaths of billions. Since it would take a very long time for the nations of the world to agree on how to impose coercive population control on humanity, and since we are considering the collapse of civilization and the deaths of billions, the conservative and intelligent action that must be taken today is to set up "trip wires" today and set up a plan how to immediately impose coercive population control on all humanity.

In the previous paragraph I used population as the determinant as to when to impose coercive population control on humanity. However, humanity must consider other items and situations as determinants as to when coercive population control should be imposed on all of humanity. For example, assume that in the year 2050 one billion people died from starvation, or that the average temperature increased by 10 degrees Celsius and was predicted to increase by 25 degrees Celsius by the year 2100. It would be the height of idiocy not to immediately impose coercive population control if either of those assumptions really happened.

In plain and simple terms, if a "trip wire" goes off humanity does not have time to debate how to impose coercive population control on all humanity. That debate probably would take many years and humanity would not have many years before civilization collapsed. The plan for the imposition of coercive population control must be made and approved today. No one on the face of the earth can guarantee that a "trip wire" will not go off before the year 2100.

To the best of my knowledge, no papers have been written examining all of the major problems facing humanity today to determine the chance that one or more of them will cause one or more major catastrophes before the year 2100. Without attempting to determine the chance that one or more of them will cause major catastrophes and the level of those catastrophes, the failure to consider coercive population control and to compare all the harms and benefits of coercive population control with voluntary population control is an act so foolish that all the words in the dictionary cannot describe it.

A few examples--- What is the chance that global warming will continue to increase causing a dramatic reduction in food production resulting in the death, due to starvation, of more than 1 billion between now and the year 2100? What is the chance that one or more aquifers providing irrigation water to grow food go dry resulting in a major reduction in food production worldwide leading to the starvation of at least a billion before the year 2100? What is the chance that the supply of fossil fuels will decrease causing a price increase in turn causes the price of food to dramatically increase which then causes starvation of a billion people who cannot afford to pay the increased price before the year 2100?

Again, in plain and simple terms, it would be an act of extreme foolishness to gamble the collapse of civilization and the deaths of billions unless it can be shown with at least a 70% degree of certainty that none of the major problems presently faced by humanity will cause one or more major catastrophes before the year 2100, the earliest year that voluntary population control could start reducing the human population based upon the UN's latest numbers that the human population will reach 10.4 billion (median prediction) by the year 2100. Even if it could be shown that none of the major problems faced by humanity today will not cause one or more catastrophes before the year 2100, it must also be shown with at least 70% certainty that the reduction in population by voluntary population control combined with a reduction in resource usage will prevent major catastrophes subsequent to the year 2100.

Let me be very clear, the problems that would be faced by humanity, if humanity chose to stabilize and/or reduce either the economy of the planet and/or the human population would be far beyond the imagination of anyone living today. No one in all the history of humanity has considered the possibility it would be in the best interest of humanity to stabilize and/or reduce the population and/or the economy. And yet neither the population nor the economy can grow forever into the future on the finite earth. Both must cease on the finite planet and anyone who disagrees with that statement is just wrong. This is a conundrum humanity must solve.

In a lawsuit each side has the burden of proof relating to one or more facts that are contested in that lawsuit. In this essay, I believe I have set forth a sufficient number of facts, supported by math and logic, such that I do not have the burden of proof. It is my position anyone disagreeing with what I have written herein, has the burden of proof to show what I have written is incorrect or not supported by the facts, math and/or logic

Almost every day almost every act performed by almost every human being destroys the ability of the earth to provide the resources necessary to support humanity. Obviously, I cannot list every act that can be performed by a human being. However, I will set forth below a number of acts that should be considered by the reader. A human being eats food and the human waste is flushed down the toilet. The resources provided by the earth to grow the food are not returned to the earth and, therefore, sometime in the future the earth will be unable to grow food. A human being buys a newspaper to read and then throws the newspaper in the garbage and the resources provided by the earth to grow the tree from which the paper is developed is not returned to the earth and, therefore, sometime in the future tree growth will stop. A farmer places fertilizer on the soil and through natural processes (in addition to human action mentioned above) some of the fertilizer is washed into the oceans and be no longer available to humanity. Since fertilizer is finite, sometime in the future fertilizer will not be available to humanity to help grow food. You buy a blouse or a shirt and after using it two or three years you throw it in the garbage. That blouse or shirt will not be recycled either today or in the future and all the resources that went into the production of that blouse or shirt will be lost forever. Therefore, sometime in the future those resources will not be available to humanity. And just as important, the earth will have to absorb and attempt to process that garbage. There is a limit to the amount of garbage that can be processed or absorbed by the earth.

Everything (except perhaps the pyramids and other similar things made out of stone) built, constructed, made, or designed by humanity has a lifetime. At the end of their lifetimes many items cannot be recycled and the resources that went into their production will no longer be available to humanity. Even

if everything made by humanity could be recycled that would not prevent the return to the Stone Age sometime in the future. Recycling cannot be 100 percent efficient. A little math--- assume that a machine is constructed and it lasts 100 years and at the end of 100 years that it can be recycled with 95% efficiency. In 100,000 years, there would be 1,000 cycles and the amount of material that could be used by humanity after 100,000 years would be 0.95 times 0.95 for 1,000 times or 0.95 to the thousandth power and that amount would be essentially zero. In plain and simple terms, no action by humanity and no technologies will prevent humanity from returning to the Stone Age sometime in the future. Just look at the trillions and trillions of tons of garbage that humanity has produced since about 1800. Even if humanity became dramatically more efficient and reduced its annual garbage production by 90%, in 100,000 years humanity will still return to the Stone Age. Nothing can or will prevent humanity from returning to the Stone Age sometime in the future. While no one can predict how many people Stone Age could support, I would guess that it would be substantially less than 100 million.

Notwithstanding what is written above, the future of humanity can be described with 100% accuracy in just a very few sentences. Since the earth is finite, both economic and population growth must cease sometime in the very near future. There cannot and will not be infinite growth on the finite planet. No action that can be taken by humanity can change that fact, The longer the human population continues to grow, the sooner civilization will collapse. The larger the population, the greater the chance of the increase in violence when population growth ceases. The greater the chance of violence, the greater the chance of the use of weapons of mass destruction. The larger the population, the more of the finite resources the earth provides to humanity will be used today and the more of those resources used today, the less of those resources will be available to humanity for future use. The more humanity uses theoretically renewable resources today, the sooner those resources will become non-renewable. Recycling will almost never become 100% efficient and it would be extremely stupid for humanity to gamble the collapse of civilization on increasing the recycling efficiency. Economic growth must use physical resources. The larger the economy, the more of the earth's resources will be used by humanity. Any increase in the population and/or any increase in the economy will make every major problem faced by humanity today more difficult to solve and will make some (or even most) of those problems impossible to solve. No one has shown, and no one can show, a single benefit to humanity that would or could be caused by the predicted increase, made recently by the UN, in population of 2.4 billion, or 30%, between now (2022) and the year 2100. The best estimate is that it took from the time humanity evolved from the ape (best guess about one million years ago) to the year 1950 to reach 2.5 billion and it will take only 78 years (from 2022 to 2100) to grow by 2.4 billion. While no one can predict with any accuracy the average increase in world-wide per capita usage of resources between now and 2100, a very strong argument can be made that it will be very substantial due to the demands of the billions living in the underdeveloped and underdeveloped nations of the world. We must not forget the increasing demands of those of us that live in the industrialized nations of the world. The increase in world-wide per capita usage of resources will make every major problem faced by humanity more difficult, if not impossible to solve. A very strong argument can be made that the increase in population combined with the increase in resource usage will result in the world-wide collapse of civilization resulting in wars with weapons of mass destruction causing the deaths of billion and even the extinction of humanity. No one has shown, and no one can show, that voluntary population control will reduce the population and/or the per capita increase in resource usage in time to prevent the collapse of civilization. Humanity by causing the population to increase by 2.4 billion by the year 2100 is committing

an act of mass stupidity and mass suicide. Population and economic growth will cease and the only questions are when and how?

AN AFTER-THOUGHTS

The quote in the first paragraph used the worlds "median scenario". My dictionary defines the word "median", as "designating the middle number in a series containing an odd number of items" or "the number midway between the two middle numbers in a series containing an even number of items" My dictionary defines the word "scenario" as "an outline for any proposed or planned series of events, real or imagined". My interpretation of those words is the 50th percentile. In plain and simple words—there is a 50% chance the population will be below the median number of 10.4 billion and a 50% chance that the number will be higher than the medium number of 10.4 billion. Again, in plain and simple words—there is a chance that the population will reach 10.9 or 11.4 or 11.9 or even 12.4 billion. Any increase in the population above 10.4 will dramatically and substantially increase the chance of one or more major catastrophes happening resulting in the collapse of civilization. Those opposed to any discussion of coercive population control fail to consider the fact that there is, according to the UN, a 50% chance that the population in 2100 will be greater than 10.4 billion