The End

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The resources the earth can provide to humanity are finite and limited. The more resources that are used today, the less resources that will be available for use tomorrow, and the less resources that are available for use tomorrow, the sooner industrialized civilization will collapse.

Nonrenewable resources by definition are finite and limited.

Theoretically renewable resources are being used by humanity faster than nature can replenish them and, therefore, for the purposes of this document are finite and limited.

Since the resources the earth can provide to humanity are finite and limited, economic and population growth must cease sometime in the future. No action taken by humanity and no new technologies will convert the finite resources the earth provides humanity to infinite resources.

All actions taken by humanity, for example recycling, new technologies, substitution of one resource for another resource, and extracting additional resources from the earth will only delay the cessation of growth.

The only questions are- when and how will the cessation of both population and economic growth happen?

The economy of the planet, the economies of nations and the human population grow in a compound manner and compound growth is the most powerful force in the universe.

At an annual growth rate of 5% it would take 42 years to achieve a growth factor of 8 and 84 years to achieve a growth factor of 64. At an annual growth of 4% it would take 52.5 years to achieve a growth factor 8 and 105 years to achieve a growth factor of 64. At 3 % the years would be 70 to achieve a growth factor of 8 and 140 years to achieve growth factor of 64. And at 2% the years would be 105 for a growth factor of 8 and 210 for a growth factor of 64.

Anyone who believes that the earth can support and provide the resources necessary for the economy of the planet to be 64 times (or even 8 times) as large as the current economy must be placed into a mental institution, as that level of economic growth is impossible and will not happen.

All economists, with very few exceptions, should be viewed as fools for their arrogance, stupidity and crimes against humanity for failing to advise the leaders of humanity that economic growth must and will cease in the very near future. Any attempt to maintain economic or population growth for even a short period of time will lead to the collapse of civilization, the deaths of billion and the possibility/probability of the extinction of the human species

Economic and population growth are joined together. If one of them increases the other must increase and if one of them declines the other must decline. They are the opposite sides of the same coin.

The present (May 27,2020) population is between 7.65 and 7.80 billion (two different organizations—7.652 or 7.987 billion). The UN’s latest prediction/projection/estimate for 2100 is 10.9 billion. While the actual population could be lower or higher than 10.9 billion in 2100, I will use 10.9 billion in this document. The increase of 3.1 billion (10.9 minus 7.8=3.1) represents a growth of about 40% (3.1 divided by 7.8= 39.7%) in just 80 years

It can be stated with absolute certainty (not merely 99.99% certainty) that at some point in the near future the economic level of the planet (all the nations combined) will reach a peak and sometime after the peak is reached the economy of the planet will start to decline. That statement cannot be challenged—economic growth cannot continue forever on the finite planet and, therefore, must reach a peak and the economy must decline thereafter as humanity will be using the finite resources of the planet and at some time in the future one or more of the essential resources will no longer be available to humanity. When the economy of the planet declines, the human population will decline and no action taken by humanity will prevent that from happening.

The reduction in population that must and will occur in the very near future will be achieved in only one of two ways---the intelligence or stupidity of humanity. The stupidity of humanity will be by continual wars without weapons of mass destruction (or one or very few wars with weapons of mass destruction) over the lack of resources to support the then level of population. The intelligence of humanity requires an immediate reduction in population and an immediate reduction in the per capita usage of resources of those residing in the industrialized nations.

Humanity is in overshoot, according to the Global Footprint Network, using the resources of 1.7 earths and any species that remains in overshoot must suffer a substantial, uncontrolled, violent and horrible decline in population to the level that can be supported by the environment occupied by the species. And the environment occupied by humanity is the entire planet. That law has applied to all of the billions of species, without a single exception, that have existed on this planet since life started about 3.5 billion years ago and humanity is not exempt from that law. Anyone who takes the position that humanity can remain in overshoot, even for a short period of time, without suffering a violent decline in population is not only an arrogant fool, that person is also a mass murderer. To the best of my knowledge, no organization or any person has shown the analysis made by the Global Footprint Network to be incorrect.

Overshoot is based upon two numbers----the population of the species and the average per capita usage of resources. The multiplication of those two numbers determines the total resource usage of the species and if the total resource usage exceeds the ability of the environment to provide that level of resources for, even a short period of time that must result in a substantial, uncontrolled, violent and horrible decline population.

At every second of every day humanity is being driven deeper into overshoot caused by the fact that the human population is increasing every day and caused by the fact that the worldwide average per capita usage is increasing every day. I defy everyone on the face of the earth to present a paper showing humanity is not in overshoot and that humanity is not being driven deeper into overshoot every second of every day. I also defy everyone on the face of the earth to show that civilization will not collapse in under 200 years, if humanity were to remain in overshoot.

The only way that humanity can get out of overshoot is to reduce the human population from its current level of 7.7/7.8 billion and/or reduce the average worldwide per capita usage of resources. At some point of time, in the very near future, one or more resources (and all substitutes) that are essential to the continuation of industrialized civilization will no longer be available to humanity causing the collapse of civilization. I defy anyone to show that the previous sentence is in any manner incorrect.

To get out of overshoot human population would have to be reduced to 4.59 billion (7.8 billion divided by 1.7 earths=4.59). That means that the human population would have to be reduced by 3.2 billion (7.80 minus 4.59=3.21). That reduction does not take into consideration the average increase in per capita usage of resources that is occurring every day. If the population in the year 2100 reached the 10.9 billion projected by the UN, the reduction would have to be 6.31 billion (10.90 minus 4.59=6.31) and that reduction also does not take into consideration the average increase in per capita usage of resources that is occurring every day.

All metals, including undiscovered deposits that remain in the earth, are finite and limited. Assuming the continuous use of metals by humanity, at some time in the future they will no longer be available to humanity and humanity will return to the Stone Age. Some, or even all, metals may be recycled and used multiple times. However, the manufacturing process, the usage process, and the recycling process cannot nor will be 100% efficient. Therefore, at some point in time all metals will no longer be available to humanity. For example, assume that the entire process from original mining to manufacturing to recycling is 90% efficient, then after just 17 cycles only 16.677% of the original metal will be available for use in the future. And after 34 cycles only 2.78% of the original metal will be available for future use. Have yourself some fun and calculate how much metal would be available for future use by humanity 2,000 years from today, if the cycle efficiency was 80% and the cycle time was 100 years. The answer would be .8 times .8 times.8 for 20 times (2,000 years divided by 100 years per cycle=20 cycles) and would be very, very close to zero. Humanity must plan to exist at the Stone Age Level. 2,000 years is about the same time from the birth of Jesus until today, a very short period of time. A statement that can be made with almost absolute certainty---2,000 years from today all metals will no longer be available to humanity and 2,000 years is a very , very small period of time compared with the dinosaurs that ruled the earth for 160,000,000 years. They were stupid animals with very small brains and we are smart animals with very large brains.

Why did dinosaurs rule the world for 160,000,000 years when most likely civilization will collapse, billions will die and there is a possibility/probability that humanity will go extinct the very near future? The answer is very simple--- the dinosaurs did not produce garbage and everything was returned to the earth such that it could be used again, whereas humanity produces hundreds of millions of tons of garbage every year that is not returned to the earth and, almost certainly, will never be used again in the future. The earth’s natural processes are being overwhelmed by the amount of garbage produced by humanity. In order for humanity to survive on earth, all garbage must be processed and returned to the earth such that it could be used again the future. That cannot and will not happen.

Please do not insult my intelligence by taking a position that it would be a wise decision for humanity to gamble its survival on unforeseen technological advancements that may occur in the future. Future technologies require resources on which technologies can be applied and if there are no resources, any future technologies will not and cannot be the savior of humanity. To gamble the survival of the human species on future unknown technologies is the height of stupidity and arrogance.

In plain and simple terms, the action that would be most beneficial for humanity would be to rapidly reduce human population. In order to survive on this planet for the longest period of time, the human population has to be reduced the lowest level possible and that level is determined by the lowest level population that will permit humanity to have the amount of genetic diversity necessary to prevent the extinction of the species by some unforeseen plague or some other unforeseen event.

Now I want to discuss the only methods by which the human population can be controlled. The first fact that must be understood is that merely reducing population growth to zero is not and will not be the solution to any of the problems presently faced by humanity. The human population, in order for humanity to survive, must be dramatically reduced. Every major problem faced by humanity today will not be solved, or even ameliorated, unless human population is dramatically and immediately reduced. I defy anyone on the planet show that the previous sentence is in any way incorrect. I challenge anyone to show that Green Energy (however defined) and other substitutes will replace fossil fuels in all their uses such that when fossil fuels are no longer available to humanity, there will not be a massive and uncontrolled reduction in the human population.

There are only three ways that the human population can be reduced—a) war, disease, starvation and other horrors--- humanity must do all in its power to prevent population reduction from being caused by war, disease, starvation and other horrors and, therefore, this choice will not be considered in this essay; b) coercive population control; and c) voluntary population control.

At this point I want to make it absolutely clear that I understand the vast majority of humanity and the vast majority of all leaders of humanity, perhaps as high as 99%, are violently opposed the imposition of coercive population control. I also understand that to impose coercive population control on all of humanity would most likely require the execution of a substantial number of people who would violate any law that would impose coercive population control. However, as shown in this essay humanity has at present only one choice--- the imposition of coercive population control to rapidly reduce the population or the very near term collapse of civilization with the deaths of billions and even the possibility/probability of the extinction of the human species. There are some experts who believe that even if coercive population control were imposed today on all of humanity limiting each couple to the production of one child it would be too late to prevent the collapse of civilization and the deaths of billions. It is their position that humanity has already used such a large proportion of the nonrenewable resources provided by the earth to humanity that the collapse of civilization will start no later than 2050.

I hate the concept of coercive population control and I am aware of all the social, political, economic, and moral problems that will be created by limiting each person to one child. However, based on all the evidence and facts that I could develop, it is my belief and conclusion the only chance that humanity has of surviving for a reasonable time into the future is coercive population control. Some people claim that nature will reduce the population and that humanity does not have to worry about the future. Assume that some future plague reduces the human population from the current 7.8 billion to 1 billion. If after that reduction population were to grow at an annual rate of 1%, it would double about every 70 years-- three doublings would take 210 years and would result in a population of 8 billion—2,4,8-- and that population would be larger than the current population of 7.8 billion. Every solution to the problems of economic and/or population growth requires that growth cease, due to the power of compound growth and the fact the earth is finite and limited. No action taken by humanity will convert the finite and limited earth into an infinite unlimited earth. Every person who advocates growth is a fool. More importantly, every person who fails to condemn and attack the concept of growth is also a fool.

Almost all intelligent people understand population growth cannot continue forever into the future and that in order to prevent the collapse of civilization population reduction has to start today, or in the very near future. However, except for an infinitely small number of people, all of them are gambling the collapse of civilization on voluntary population control. They take the position that family planning will succeed in preventing the collapse of civilization and do not have the guts use the proper words -- birth control. Almost all of those by gambling on voluntary population control refuse to consider, debate, understand, or compare voluntary population control with coercive population control. That refusal is an act of mass stupidity, arrogance and potential murder.

Voluntary population control has some chance of failure, and by failure I mean that the human population will continue to grow until war, disease, starvation or other horrors reduces the population. Anyone who believes that voluntary population control has zero chance of failure is an idiot. Since this essay is about the collapse of civilization and the deaths of billions, the chance of failure of voluntary population control must be very low for humanity gamble on it and not even consider, debate, discuss, compare or evaluate coercive population control. People can disagree about the level of the chance of failure, but they cannot disagree about the fact that the chance of failure must be very low. To gamble the collapse of civilization on a chance of failure greater than 15 or 20% is, in my view, a gamble that humanity cannot afford to make. I challenge anyone to show that the chance of failure of voluntary population control is less than 20%. If you disagree with my choice of 20%, write a paper setting forth what higher chance of failure you believe should be acceptable to humanity and show why to believe the number you have chosen is the correct level.

Anyone who is prepared gamble the collapse of civilization on voluntary population control has a duty to present a paper as to what level of chance should be acceptable by humanity and why voluntary population control as he/she sees it developing would be below that level of chance. Anyone gambling the collapse of civilization on voluntary population control who fails to present such a paper is a fool. His/her response could be that coercive population control has a very high chance of failure and anyone who favors that method of population control is also a fool and mass murderer. Population growth not only must cease, the level of human population must be dramatically reduced and if both methods, coercion or voluntary, have a very high chance of failure then humanity is doomed. Humanity today must make a choice between voluntary or coercive population control. The choice cannot be delayed as humanity is going deeper into overshoot every day.

Your response to of one the above paragraphs could be that coercive population control also has a chance of failure. To that I respond, if properly implemented and if the leaders of humanity have guts to do what is necessary, the chance of failure of voluntary population control is zero. After providing all humanity with the necessary tools and education to limit production by each person to only one child and after advising each person that he/she would be executed if he/she produced a second child, then continuing to execute anyone who produced a second child, eventually all of humanity would understand the only one child could be produced. Number of executions could, and most probably would, be quite large. However, the number of executions would be substantially less than the deaths caused by the collapse of civilization or the extinction of the human species.

So far, the best of my knowledge, no person or group of people have attempted to determine the chance that voluntary population control will fail. So far, the best of my knowledge, no one has set forth a detailed plan as to how voluntary population will reduce the human population over time—for example, in the year 2030 population would be X, in 2040 population would be Y, and in 2050 population would be Z. A schedule similar one set forth in the previous sentence would be necessary to determine if the reductions predicted by voluntary population control were being achieved. Any plan to gamble the collapse of civilization on the use of voluntary population control would require steps to be taken if the population was not being reduced in accordance with the plan. For example, if the plan stated in year 2060 population was the be level T and if the population was level T plus 2 billion, then humanity would be required to take the steps A, B, and C that would bring the population down to level T.

It is, in my view, an act of madness and stupidity to gamble the collapse of civilization on voluntary population control without knowing, as best as it can be known, the chance of voluntary population control will fail. Some facts that cannot be ignored by those that are willing gamble the collapse of civilization on voluntary population control are---a) the UN’s projection that population will increase by 3.2 billion between now in the year 2100; b) the fact that many religions are violently opposed to the use of the most modern means of birth control and abortion, and refuse to advise members of the religion having more than one child is an act of mass murder; c) the fact that more than one of the political leaders of Islam have openly stated that they will use the power of the penis and womb to take over the world; d) the fact that many cultures of humanity determine the position of a male in society by how many children he has produced; e) the fact that political climate in the United States makes it clear that the United States will not provide money to any institution, either in the United States or in other countries, that even discusses or considers abortion and without aid from the United States voluntary population control has an exceedingly high chance of failure; f) the fact that many women desire to have more than one child; and g) the fact that many couples believe an only child will be selfish and/or needs a sibling.

So far, the best of my knowledge, no person, or group of people, who are prepared the gamble the collapse of civilization on voluntary population control have stated to what level population should be reduced and related that level to every problem presently being faced by humanity. For example--- to prevent one or more major catastrophes that will be caused by global warming the human population has to be reduced the level X by the year 2050 and that level will be achieved by voluntary population control. Since the human population, according to the UN’s latest numbers, will reach 10.9 billion by the year 2100, the chance that voluntary population control will prevent any major problem presently faced by humanity today from causing the collapse of civilization is very close to zero.

The fact that some nations have reduced their TFR (Total Fertility Rate) to replacement level or below and that some nations in the future will reduce their TFR to replacement level or below does not mean that humanity should gamble the collapse of civilization on voluntary population control. The UN’s demographers are not fools and they considered the fact that some nations have and additional nations may in the future reduce their TFR at the time they issue their projection for 2100 of 10.9 billion

According to the math set forth above (and assuming the fact that humanity is presently in overshoot using the resources of 1.7 earths and assuming that the UN’s projection for the year 2100 of 10.9 billion is reasonably accurate) to get out of overshoot the human population will have to be reduced by about 6.3 billion. I defy any person who is prepared the gamble the collapse of civilization on voluntary population control to write a paper showing that voluntary population control will reduce the human population by 6.3 billion in time to prevent the collapse of population and the deaths of billions.

On page 1 of this essay I wrote about relationship between compound growth and the inability of the resources the earth provides humanity to support that growth. Based upon the power of compound growth and based upon the fact that the resources that the earth can provide humanity are finite and limited, any attempt to maintain economic growth for even a relatively short period of time must lead to the collapse of civilization, the deaths of billions and even the extinction of humanity. I defy any person show that previous sentence is incorrect in any manner. If the position set forth above that economic growth must lead to the collapse of civilization, any leader of humanity who attempts to maintain economic growth is not only a fool, but also a mass murder. All humanity must understand that economic growth will not only cease, the economy of the planet and the economy of the nations of the planet will contract in the near future and no power on earth will prevent that contraction. I defy any person to show at the previous sentence is incorrect in any manner.

Who has the burden of proof? Since this essay is about the coming collapse of civilization and the deaths of billions, it is my view that those that disagree with me have the burden of proving that my position is incorrect.

This document is not intended to be intellectual/academic discussion, but rather a call to immediate action. Any leader of humanity that does not understand that both the economy of the planet and the number of human beings on the planet must start to decline today and take all the actions necessary to make that happen must be immediately removed from office. In simple terms, the fact that humanity is presently in overshoot is a death sentence for industrialized civilization and billions of people. The failure of the leaders of humanity to get humanity out of overshoot as quickly as possible is an act of mass murder. The position of those who are prepared to gamble the collapse of civilization on voluntary population control and who refuse to consider in, any manner, coercive population control cannot be supported. If their position cannot be supported, and if they still refuse to consider coercive population control in any manner, they are fools.

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