

CHAPTER 22

FACING REALITY ON SUSTAINABILITY



SUSTAINED ANTHROPOGENIC CHANGES ARE NECESSARY TO PROTECT AND NURTURE THE BIOSPHERE.

- 🌍 **For almost all of the 200,000 years that *Homo sapiens* has existed, the present Biosphere has been self sustaining.**
- 🌍 **In the 20th and 21st centuries, humans have caused eight interactive global crises¹ that threaten the health and integrity of the present Biosphere.**
- 🌍 **Enlightened self interest should persuade *Homo sapiens* to develop policies and conditions that would keep the present Biosphere in robust health.**




POPULATION OVERSHOOT OCCURS WHEN POPULATION EXCEEDS RESOURCES AND BILLIONS OF PEOPLE ARE LIVING IN MISERY.




- 🌐 **In the 12 years between November 1999 and November 2011, another 1 billion people were added to the global population.**
- 🌐 **Since many of these births were in poor countries, the probability that many will die while young or will live in misery if they do not is high.**
- 🌐 **Failure to have a free and open discourse on this tragic situation is due to an unwritten but effective taboo preventing discussion of population size and resource availability.**
- 🌐 **The consequences of this taboo is the control of population size by misery, starvation, disease, and death.**
- 🌐 **Exponential population growth is not sustainable!**







ECOLOGICAL OVERSHOOT IS REDUCING NATURAL CAPITAL, DAMAGING THE BIOSPHERE, AND REDUCING RENEWABLE RESOURCE REGENERATION.

- 🌍 **Failure to have a global discourse on this crises will result in a reduction in Earth's carrying capacity for *Homo sapiens*.**
- 🌍 **This situation will significantly reduce the probability of leaving a quality planet for future generations.**
- 🌍 **The decision to postpone remedial action ensures that Mother Nature (the universal laws of biology, chemistry, and physics) will determine the consequences as She does for all species that exceed carrying capacity.**
- 🌍 **This situation is not sustainable!**

 **ALL GROWTH, INCLUDING ECONOMIC GROWTH, REQUIRES RESOURCES. ON A FINITE PLANET, LIMITS EXIST TO GROWTH SINCE RESOURCES ARE NOT UNLIMITED.**

-  **The fossil fuels used for economic growth have resulted in a “*world headed for irreversible climate change in five years.*”²**
-  **Irreversible climate change would seriously impair the agricultural system and markedly reduce the regeneration of all renewable resources.**
-  **These events may represent an irreversible detour on the road to sustainability, which humanity has barely, mostly ineffectively, begun to travel.**

SPECIES ARE THE BASIC COMPONENTS OF THE BIOSPHERE, AND BIOTIC IMPOVERISHMENT AND LOSS OF BIODIVERSITY IMPAIR BOTH BIOSPHERIC STRUCTURE AND FUNCTION.

-  Extreme weather³ will also disrupt biospheric structure and function, but robust scientific information will enable humanity to anticipate catastrophes and develop goals and conditions that will reduce risk.
-  However, the scientific evidence will not result in policy changes if the assault on scientific evidence continues.⁴
-  If the attempts to cast doubt on the scientific process are successful, humanity will have lost the best source of information about the condition of the biospheric life support system.
-  Humanity cannot accept only “good” scientific information because all scientific evidence is generated by the same process.




“... THERE ARE THREE PRIMARY FACTORS THAT STAND FIRMLY IN THE WAY OF FURTHER ECONOMIC GROWTH:




- ① ***The depletion of important resources including fossil fuels and minerals;***
- ② ***The proliferation of negative environmental impacts arising from both the extraction and use of resources (including the burning of fossil fuels) — leading to snowballing costs from both these impacts themselves and from efforts to avert them; and***
- ③ ***Financial disruptions due to the inability of our existing monetary, banking and investment system to adjust to both resource scarcity and soaring environmental costs — and their inability (in the context of a shrinking economy) to service the enormous piles of government and private debt that have been generated over the past couple of decades.”⁵***




ECONOMIC GROWTH HAS BADLY DAMAGED THE BIOSPHERE AND IS CLEARLY UNSUSTAINABLE.

- 🌍 **The human economy is a subset of the Biosphere, without which the human economy could not exist.**
- 🌍 **Therefore, damage to the Biosphere cannot be viewed as an “externality.”**
- 🌍 **In living systems, an initial period of growth is followed by a longer period of maintenance (i.e., no growth).**
- 🌍 **Sustainable use of the planet (i.e., end of growth) should be culturally and psychologically rewarding since the goal is to leave a habitable planet for future generation**

 **FAILURE TO FACE REALITY (I.E., THE GROWTH ERA IS OVER) WILL ALMOST CERTAINLY RESULT IN RUNAWAY CLIMATE CHANGE AND MISERY AND DEATH FOR BILLIONS OF PEOPLE.**

-  **The vast disparity in individual wealth (i.e., access to resources) will probably be significantly reduced by either political means or revolution.**
-  **The longer redistribution of access to resources is delayed politically, the greater the probability the redistribution will be attempted by resource wars or revolution.**
-  **All wars, especially resource wars, consume vast quantities of resources, so they exacerbate the problem of resource scarcity.**



CLIMATE CHANGE IS ALREADY MARKEDLY REDUCING RENEWABLE RESOURCE REGENERATION BY THE BIOSPHERE.

- 🌍 **Exponential human population growth is also markedly reducing the available resources per capita globally.**
- 🌍 **On a finite planet, resources can only be temporarily increased by technology, and exponential human population growth ensures this solution will be temporary.**
- 🌍 **Since resource supply cannot be markedly increased, the only option is to reduce demand.**
- 🌍 **This option could be accomplished by social evolution – less consumption of resources per capita, especially in wealthy countries, and long-term reduction in population size.**
- 🌍 **If humans do not act, Mother Nature will via the universal laws of biology, chemistry, and physics.**



“I’VE LEARNED . . . THAT TO IGNORE THE FACTS DOES NOT CHANGE THE FACTS.”

(Andy Rooney)

- ① **The scientific process is under assault by believers in two quite different ideologies.**
- ① **One holds that scientists are engaged in a conspiracy on climate change to perpetuate a hoax on the general public.**
- ① **The other believes that perpetual economic growth is sustainable on a finite planet with finite resources.**
- ① **All growth requires resources, so resources limit growth.**
- ① **Curiously, most of those attacking the scientific process benefit from scientific research daily.**

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