TOUGH DECISION VS DENIAL

 Real vision demands that we make tough choices.
 Michael F. Easley

 Nobody ever did, or ever will, escape the consequences of his choices.
 Alfred A. Montapert

 One reason we resist making deliberate choices is that choice equals change and most of us, feeling the world is unpredictable enough, try to minimise the trauma of change in our personal lives.
 Hugh Mackay

 We're going to have to make tough choices and we're going to have to make them together.
 Bill Clinton 42nd US President

 Quick decisions are unsafe decisions.
 Sophocles

The food and water crises, which are closely linked since agriculture is a major consumer of water, have been developing for well over a decade. "... food scarcity will be the defining issue of the new era now unfolding, much as ideological conflict was the defining issue of the historical era that recently ended. Even more fundamentally, ... rising food prices will be the first major economic indicator to show that the world economy is on an environmentally unsustainable path" (Brown 1996).

Another major issue is the disparity in food consumption. "While nearly one billion people worldwide are overweight or obese, the same number of people – one in every seven of us – can't get enough to eat" (Roberts 2008, flyleaf). "After decades of hearing that our food system is the best, it almost seemed as if a curtain had been drawn back and we'd been allowed a glimpse of the shadowy structure behind the food system – the huge networks of production and distribution and retailing that deliver millions of tons of food to the hundreds of million of consumers – only to find those structures broken or derailed" (Roberts 2008, p. xi). "On nearly every level, we are reaching the end of what may one day be called the 'golden age' of food, a brief near-miraculous period during which the things we ate seemed to grow only more plentiful, more secure, more nutritious, and simply *better* with each passing year" (Roberts 2008, p. xi).

Efforts to anticipate how climate change will affect future food availability can benefit from understanding the impacts of changes to date. . . . in the cropping regions and growing seasons of most countries, with the important exception of the United States, temperature trends from 1980-2008 exceeded one standard deviation of historic year-to-year variability. Models that link yields of the four largest commodity crops to weather indicate that global maize and wheat production declined by 3.8% and 5.5% respectively, compared to a counterfactual without climate trends. For soybeans and rice, winners and losers largely balanced out. Climate trends were large enough in some countries to offset a significant portion of the increases in average yields that arose from technology, CO₂ fertilization, and other factors (Lobell et al. 2011).

In short, the "golden age" of food is over, and prospects will probably worsen if anthropogenic greenhouse gas emissions are not markedly reduced very rapidly. Even though many calculations and trends relating to food productivity are available, the major issue is the tough choices that must be made if humankind continues to deny reality. Some illustrative examples follow. (1) A total of 60 failed states were identified in 2011. Somalia is at the top of list, closely followed by Chad and Sudan (Failed States Index,

http://www.foreignpolicy.com/articles/2011/06/17/2011_failed_states_index_interactive_map_and_rankings). Somalia has many serious problems: "Beyond freelance gunmen, Islamist militants, cholera, malaria, measles, and the staggering needs of hundreds of thousands of starving children; aid agencies scrambling to address Somalia's famine now may have another problem to reckon with: the wholesale theft of food aid" (Gettleman 2011). Approximately 2.26 non-failed states (136 out of 196) exist for each failed state

(http://geography.about.com/cs/countries/a/number%20coutnries.htm). Even if the 136 non-failed states agreed to provide long-term, significant assistance to the 60 failed states, they could not be certain of the aid being received by the needy people. In addition, these non-failed states might stipulate certain conditions (e.g., population control) be enforced in return for the aid.

(2) Some non-failed states have been proponents of the unfettered economic free market. Should economics or values/ethics/morality determine who receives access to the global food supply?

(3) Every choice or decision has a default position. If the choice is no action, then the universal laws of biology, chemistry, and physics will be operative, and the human population will be culled by starvation, disease, and death until it is at or below Earth's carrying capacity for humans. This inability to make tough choices carries a terrible price tag. Tough choices require facing reality, which includes such issues as limits to growth and population stabilization.

(4) For most all of the 200,000 years that *Homo sapiens* has existed, resources were gathered by individuals in small tribal groups that were spread thinly over the planet. Humans are the only species with such a vast range of access to resources. Money as a means of access to resources was not important – individual fitness was. At present, vast wealth for less that 1% of the human population provides essentially unlimited access to resources while approximately 1 billion humans are starving. Some obvious questions are related to this inequitable access to resources: (a) is it compassionate/ethical to live in luxury when one person in seven globally is starving? (b) does it make any difference where the starving people are located? (c) if the starving people are given food, will they still produce large numbers of children?

(5) Tough choices are required to optimize the quality of life of the current human population and the 3 billion expected in the 21st century. How will these additional people be fed, provided with potable water, acquire shelter, be educated, and have access to health care? If starvation and misery are the probable future of these additional people, do those people presently alive have any responsibility for individuals yet to come? Should starvation, disease, and death be the primary means of population control? If not, how should the human population be kept within Earth's carrying capacity? The essential first step is to acknowledge that a finite planet has limits to growth. The unwritten taboo on discussion of maintaining the human population within Earth's carrying capacity must be transcended. Denial of limits to growth can be a very strong negative force; however, it should not be allowed to cause billions of people to live in misery, threaten the stability of social systems, and serve no useful purpose whatsoever. Humankind has lived in denial of the downside of overpopulation and must make the tough choices necessary to at least reduce misery.

(6) Climate change is having major impacts on marine ecosystems, which cover approximately 71% of Earth's surface and are being badly damaged. Can issues of national sovereignty be adjusted to protect this major component of Earth's Biosphere? Humankind's actions display little concern for the Biosphere since "the environment" is usually last, or not far from last, on the policy priority list and the human economy is almost always first. However, the Biosphere is both the planet's life support system and the source of renewable resources, without which the human economy would not function. Perhaps the view of the Biosphere as a miscellaneous collection of plants and animals (i.e., commodities and pests) is at fault; however, not acknowledging humankind's dependence on the Biosphere is suicidal. The reality of this tough choice is that it weakens humankind's sense of superiority over the planet's other life forms.

Conclusion

Since most of the global crises have been caused by aggregate individual decisions, a tough choice is to acknowledge that each person is responsible for the current problems. *Homo sapiens* will not be able to address global problems effectively unless a civil global discourse takes place. Since the future of the current and next generations of humans requires that discussion and action occur, humankind must have the faith that they can!

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