

CHAPTER 12

A Social Contract for Preserving and Nurturing the Present Biosphere

When sorrows come, they come not single spies, but in battalions.

William Shakespeare, *Hamlet*

The good we secure for ourselves is precarious and uncertain until it is secured for all of us and incorporated into our common life.

Jan Addams

Men exist for the sake of one another. Teach them then or bear with them.

Marcus Aurelius Antoninus

The natural world is the larger sacred community to which we belong. To be alienated from this community is to become destitute in all that makes us human. To damage this community is to diminish our own existence.

Thomas Berry

The German Advisory Council on Global Change [WBGU] (2011) has proposed “A Social Contract for Sustainability.” The key elements follow.

- *The aim of the new social contract is to preserve natural life-support systems for present and future generations.*
- *The social contract combines the ‘proactive state’ with more participation by civil society in a framework of local, national and global cooperation. Science has an important role to play in this contract.*
- *The social contract should have a global reach. It should not be purely national in focus, as the major impacts of environmental change are transboundary in nature.*
- *In light of the inequalities in resource consumption, levels of development and development capacities within world society, the social contract must show due consideration for fairness, justice and equity.*

Sustainability becomes unsustainability when humanity uses natural capital to maintain economic growth instead of living on renewable resources at a level the Biosphere can replace. Reason, scientific evidence, and ethical values should eventually prevail, and ecological overshoot/debt clearly should not.

Default Position

All plans have a default position, even if nothing is done. If, for example, a social contract for preserving and nurturing the present Biosphere is developed and the contract never progresses beyond the conference stage, the default position is that the universal laws of biology, chemistry, and physics will produce severe penalties since living unsustainably violates these laws. Even though these laws will never be fully understood, many are now identified but lack the attention they deserve because they are viewed as threats to some corporate profits and some individual lifestyles. For this reason, science is under assault, as it has been for hundreds of years. Ultimately, science prevails as it *almost* has with smoking tobacco, ozone depletion, and Earth as a sphere. Some indications exist that various present risk management methodologies may not be suitable at the biospheric level of organization (e.g., Cairns 2011). Caution is advisable until the issue of appropriate risk management is resolved.

Elements of the Social Contract of *Homo sapiens* and the Biosphere

- (1) *Homo sapiens* is one of the 30+ million species that collectively comprise the present Biosphere and is a part of, not apart from, the Biosphere, although this relationship is not often evident in humanity's actions.
- (2) Protecting and, more important, nurturing the Biosphere will require continually operating feedback loops that provide information on biospheric health and integrity.
- (3) The Biosphere must be regarded as a single system with continually interacting components. A global perspective is mandatory.
- (4) The Biosphere constitutes Earth's life support system and must be treated accordingly.
- (5) The oceans comprise about 71% of the Biosphere and, except for coastal areas, are not under the control of any nation or individual. Treaties to protect oceanic fisheries have not yet been successful. As a consequence, brood stocks of most commercially valuable species are not thriving. In addition, excessive atmospheric carbon dioxide is absorbed by the ocean water, which has changed from mildly alkaline to mildly acidic. If present trends continue, especially in cooler water that absorbs more carbon dioxide, the acidity will reach corrosive levels.
- (6) Earth's atmosphere transcends political boundaries, and hazardous materials (e.g., radioactive substances) may be transported by air currents for substantial distances as they also are by ocean currents.
- (7) Terrestrial biospheric components are under the control of both nations and individuals, and efforts to protect them have not been successful. The right of sovereign nations and individual property rights will be thorny issues in developing a social contract for a global life support system, although a global social contract is the only way to protect a global life support system.
- (8) Economic growth is a major goal for most nations, although such growth on a finite planet with finite renewable resources is unsustainable. Economic growth requires natural capital, which produces renewable resources and ecosystem services. On a finite planet, resources are inevitably finite, placing limits to growth. Another 3 billion people are expected on Earth in the 21st century. With a total population of 7 billion in 2011, where will the resources come from for another 3 billion?

Humanity has been warned! In 1798, Thomas Malthus published his "Essay on the Principle of Population," in which he concluded that, unless family size was regulated, man's misery of famine would become globally epidemic. In 1968, Paul Ehrlich published the *Population Bomb*, and in 1972 the first edition of *Limits to Growth* put resources and population into a global context. Population growth/resource availability remains a matter of deep concern. For years, the United States, with 4% of the global human population, has consumed approximately 25% of the planet's resources. This statistic is certain to change because of increased affluence in developing countries and because of reduced productivity of the Biosphere. Even in the wealthier countries, this change will result in less resources per capita, which will worsen due to exponential population growth. Strong opposition to the concept that resources limit either population or economic growth has been the hallmark of economist Julian Simon, who published *The Ultimate Resource* (Simon 1981) and *The Ultimate Resource 2* (Simon 1996).

Reduction of Biospheric Resources

Biospheric health and ecological integrity have been badly damaged by human activities so that continued production of renewable resources and ecosystem services at their present level would be astonishing.

As societies become more complex they become inevitably more precarious. They become increasingly vulnerable. And as they begin to break down there is a strange retreat by a terrified and confused population from reality, an inability to acknowledge the self-evident fragility and impending collapse. The elites at the end speak in phrases and jargon that do not correlate to reality. They retreat into isolated compounds, whether at the court of Versailles, the Forbidden City or modern palatial estates. The elites indulge in unchecked hedonism, the accumulation of vaster wealth and extravagant consumption. They are deaf to the suffering of the masses who are repressed with greater and greater ferocity. Resources are more ruthlessly depleted until they are exhausted. And then the hollowed-out edifice collapses (Hedges 2011).

The ecological overshoot/debt alone, at 150% in 2010, is enough to cause a biospheric collapse even in the unlikely event that the overshoot/debt remains at this level.

"The World Bank forecasts slowdown in global [economic] growth as rising commodity prices hit the poorest nations" (Elliott 2011). In addition, serious ecological problems exist in many parts of the planet. Three illustrative examples follow.

- (1) "The current Southwest drought [United States] is exceptional for its high temperatures and arguably the most severe in history" (MacDonald 2010).

(2) "Long after the political uprisings in the Middle East have subsided, many underlying challenges that are not now in the news will remain. Prominent among these are rapid population growth, spreading water shortages, and ever growing food insecurity" (Brown 2011a).

(3) "A new scramble for Africa is under way. As global food prices rise and exporters reduce shipments of commodities, countries that rely on imported grain are panicking. Affluent countries such as Saudi Arabia, South Korea, China and India have descended on fertile plains across the African continent, acquiring huge tracts of land to produce wheat, rice and corn for consumption back home" (Brown 2011b).

Environmental Refugees

The global problems in all parts of the planet are destined to produce large numbers of environmental refugees in the 21st century. In fact, the numbers are likely to worsen dramatically if humanity continues to burn coal and replace petroleum with tar sands and tar shale. Worse yet, humans cannot even discuss with civility these and other issues essential to a sound social contract. "The century has constantly reminded us that civilization is a thin veneer of civility, stretched across the passions of the human heart" (Moyers 2009, p. 25). "These virtues [compassion, empathy, and reason] are not yet impossible to find, but the stitches in our social fabric are showing. In order to strengthen our social bonds, we must come to a definition of what is acceptable behavior" (Connelly 2011).

Conclusions

In order to establish a social contract for preserving and nurturing the present Biosphere, humankind must value it more than economic growth and regard the Biosphere as a functioning system rather than an assortment of commodities. The present assault on science and scientific evidence must cease because only science can provide knowledge about the universal laws of biology, chemistry, and physics. However, scientific knowledge must be used with compassion, empathy, reason, wisdom, and civility. Above all, other life forms with which humans share the planet must be regarded as far more than commodities. If humans assign a low priority to the biospheric life support system, no social contract to protect and nurture the Biosphere will work!

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