

HUMANKIND AND CONSUMPTION OF RENEWABLE AND NON-RENEWABLE RESOURCES: LIMITS OF GROWTH AS A CHALLENGE OR UNLIMITED GROWTH AS A SOLUTION?

Frans C. Verhagen

*Research and Education Earth and Peace Education Associates International (EPE),
New York City, USA*

“Action does not spring from thought, but a readiness for responsibility.”

Dietrich Bonhoeffer

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Summary

In this chapter, a three-fold methodology directs the search for answers to questions that deal with strategies of growth in humanity's use of resources. The analytical part investigates how humans related to Earth and her resources in the very distant past, the medium past of the last four hundred years and the immediate past of the last one hundred years, focusing on North America. Several conclusions are drawn about the characteristics of resources, based upon the past and present situation. The theoretical part used these conclusions and related information to build towards a theory of sustainability and sustainable communities which is characterized by an interdisciplinary approach that is based upon explicitly stated valuations and assumptions. A special section deals with science, purpose and values as it relates to objectivity of the scientific enterprise. As part of such theory the new discipline of ecological economics was discussed and a summary description was presented about the sustainable communities and smart growth movements. In greater detail, environmental sociology and sociology of sustainability are used as building blocks of the sociological framework of contextual sustainability (CS) with its core value of ecological integrity, its four supporting values and its three foundational assumptions. Together with the UN

Millennium Ecosystem Assessment framework, this integrated social and ecological sustainability perspective was used to answer the various questions of the humans-resources-growth predicament. Finally, the third part deals with mobilizing individuals, societies and their major institutions towards sustaining futures, particularly by adopting the integrated set of social and ecological values of the Earth Charter, the twenty-first century counterpart of the English Magna Carta of the thirteenth century, of the French Rights of Man and Citizen of the eighteenth century, and of the Universal Declaration of Human Rights of the twentieth century.

1. Introduction

1.1. Earth Summit 1992

It was during the last press conference at the Rio Earth Summit in June 1992 that I asked the following question to Maurice Strong, UNCED Secretary-General: “Do you think that gross affluence and gross poverty within and between nations is A or THE major cause of ecological degradation?” My question was prompted by my conviction that wealth and income distribution both between and within nations is a very important factor in bringing about quality of life of people and planet AND the opinion of Third World Network economist Martin Kohr who during the preceding 4th Prep Com in New York during April 1992 was the featured speaker at an Ecology Task Force function at the Riverside Church in Manhattan. Dr. Kohr strongly argued at that time for the THE option. Mr. Strong spent seven minutes in formulating his answer, emphasizing the importance of recognizing social injustice in development theory and practice and finally coming to the conclusion that gross affluence and gross poverty was A major reason for ecological degradation

1.2. Unjust distribution of resources

Fast forwarding ten years to The World Summit on Sustainable Development in Johannesburg in September 2002 with its plan of action, and fast forwarding again another three years to January 2005 when Kofi Annan’s Millennium Project findings were reported, we see that the major challenge of the unequal and unjust distribution of wealth and resources is still far from resolved. Thus, our topic of humanity’s use of resources and the socio-economic systems and processes that determine the use of and access to these resources and by which those problems are supposed to be solved or at least mitigated is still a crucial issue to be investigated, to develop theoretical approaches about and to have people, organizations, governments and societies be mobilized about.

1.3. Questions being raised using the ATM methodology

Like in every investigation the crucial question is “What are the most important questions to be raised about humans and resources? Two of the important questions are implied in our mandatory subtitle: Are limits of growth to be pursued as a solution? Or should the strategy of no limits to growth be pursued as a solution?”

There are, however, other important questions, particularly if we pursue our query using

an ATM methodology. This methodology does not only **Analyze** the situation of humans and resources, it **Theorizes** about solutions based upon that analysis, going beyond the questions of growth and no growth and as a third leg of this methodological stool—often not included in treatises of this kind—it **Mobilizes** by asking the question: how do we get persons, organizations, societies to change their implicit or explicit theories, views, frameworks, plausibility systems, based upon the expounded theories of sustainability and sustainable communities.

Asking these kinds of ATM questions transcends the growth and growthism debate, enriches the debate by bringing to bear other than economic considerations on the important issue of resources. In that manner, what emerges, are questions of sustainable development and, more profoundly, questions dealing with visions of sustaining futures that in essence are actively normative or value questions. This was very succinctly and practically pointed out by Australian biologist and ecologist Aidan Davison, when he wrote: “...the verb sustaining holds open the actively normative questions that the idea of sustainability raises. We are required to probe: What truly sustains us? Why? And how do we know? Conversely, we must ask: What are we to sustain above all else? Why? And how may we do so?”

Given that the EOLSS Theme *Peace, Peacekeeping, Security, Education, Gender and the Environment*” has a broad focus, this contribution on humans and resources which is part of the Topic entitled “*Natural Resources, Environment, Security and Peace*” and which is subdivided into twelve Articles, also has a broad focus. It makes many basic connections that emerge given the raising of the ATM questions in the foregoing paragraph. Perhaps, the main value of this contribution consists of presenting a unified synthesis and vision that is needed in order to answer the basic query about how humans have to use renewable and non-renewable resources, i.e. how humans have to inhabit planet Earth in order for her life supporting processes and systems to survive and thrive. In essence, what has to be done is to raise the profound issue of humanity’s relationship to Earth or Nature which contains these resources, and to investigate this relationship both historically and futurologically in its various dimensions, particularly its ethical dimension.

For readers who want to have a global notion of the author’s position in respect to the two main questions as phrased in the subtitle, I will argue that limits to growth is the approach to take, particularly by the establishment of limits on global corporate activities and on global competition which British sustainability consultant John Elkington has labeled as “cannibals with forks”. The argument emphasizes the need for strengthening of bioregional economic activities, particularly local food production and consumption, of preservation of local cultural and biological diversity within a context of free, fair and frugal trade. Such trade does not do damage to people and planet because of the enforcement of international standards of ecological integrity, equity and accountability. This position will be theoretically undergirded by the framework of contextual sustainability with its practical application in the sustainable communities approach and the socially and ecologically integrated vision of the Earth Charter.

1.4. Organization

The organization of this contribution is straightforward: humans and resources are analyzed in part one, humans and resources are theorized about in part two, particularly by a discussion of theory and practice and, in part three, humans are mobilized about the efficient, sufficient and equitable use of resources, which, in the last instance, means a counter-cultural, paradigmatic attitude change or metanoia towards sustainable and sustaining futures of the Earth community in an evolving cosmos.

Being an encyclopedia article, it does not have references or footnotes in the text, but an annotated bibliography and a glossary. The latter two could become part of a free-standing, UNESCO-sponsored, full-fledged resources guide on sustainability, similar to the one constructed by Sandy Irvine in the mid 1990s on environmentalism, consisting of both hard-copy, electronic and visual resources.

1.5. Information and readiness for responsibility

Fully applauding the boldness on the part of UNESCO in pursuing this ambitious encyclopedia of the Earth's Life Support Systems, I also want to point out that information is important as a first step in mobilizing people, organizations and societies, but, equally important or even more important perhaps in motivating people, organizations and societies is developing a readiness for responsibility, as Dietrich Bonhoeffer so well expressed in the quote at the beginning of this article. His experience in the German resistance that led to his execution at the very end of the Nazi regime will have led him to make this profound observation. The latter way of motivating consists, to a great extent, in developing values and an ethical system upon which people, organizations and societies want to pursue those sustaining futures in the face of a most profound climate crisis. This, ultimately, means a strategy of moral development, the final stage of which is not external, but internal motivation as Harvard psychologist Kohlberg has pointed out.

2. Humankind and Resources: Analyzing

“The environmental crisis is an outward manifestation of a crisis of mind and spirit. There could be no greater misconception of its meaning than to believe it to be concerned only with endangered wildlife, human-made ugliness, and pollution. These are part of it, but more importantly, the crisis is concerned with the kind of creatures we are and what we must become in order to survive.” Lynton K. Caldwell.

2.1. The historical view

2.1.1. The long view

Like other organisms, species, or Earthlings humans live in the planet and need her resources to survive and thrive. They, like the other species, live in a state and process of dependency rather than interdependency on Gaia's life-support systems, particularly her watery and aerial oceans. Taking the long perspective, i.e. before the last ice age of some 10 000 years ago, human existence was one that was based on hunting and gathering, very similar to the immediacy of the food chain that now exists between predator and prey in the animal kingdom. During that time and immediately after the ice

ages, humans used resources that were amply available because of their small number. The use of these resources led to a quality of life that according to anthropologist Marshall D. Sahlins, was not as brutish as is generally believed. In his opinion history was not only made up of great men and collectivities as Thucydides believed but also of culture. Jared Diamond's recent work that is widely used in this treatise can be considered to build on Sahlins' view of history.

Clive Ponting, who might be considered one of the first major ecological historians describes this stable and sustainable period of hunting, herding and gathering that covered thousands of years or about 99% of human history. "In nearly every case people lived in small, mobile groups. It was without doubt the most successful and flexible way of way of life adopted by humans and the one that did the least damage to natural ecosystems." His chapter on "Foundations of History" points to the influence of the physical world of "how human history has been affected by the action of large scale geological and astronomical forces over long periods of time". He proceeds to explain plate tectonics and continental drift, and he considers climate as "a fundamental force in shaping human history."

After describing the significance and role of ecosystems and of humanity's two main distinguishing characteristics from other animals—its capability of destroying ecosystems and its spread into every terrestrial ecosystem and, through the use of technology, dominating them—he concludes the following about humans and resources. "The most important task in all human history has been to find a way of extracting from the different ecosystems in which people have lived enough resources for maintaining life—food, clothing, shelter, energy and other material goods. Inevitably, this has meant intervening in natural ecosystems. The problem for human societies has been to balance their various demands against the ability of the ecosystems to withstand the resulting pressures." Like later ecological economists he does not emphasize growth, but balance and equilibrium, similar to the equilibrium that is often found in changing ecosystems.

How human societies fared from that time of the last ice age onwards is explained by Ponting by pointing to the First Great Transition which involved the slow transition to agriculture and to the Second Great Transition of the use of non-renewable energy sources, i.e. the fossil fuels of coal, oil and natural gas. Within these two great transitions American geographer and evolutionary biologist Jared Diamond expounds in his highly acclaimed 1997 book *Guns, Germs and Steel* how and why the human societies of different continents followed widely divergent pathways of development. He argues that this was not a question of racial capabilities, but a question of how societies dealt with the resources at hand, thus demolishing the grounds for racist theories of history, his main purpose of writing the book. He also examined how and why western civilizations developed the technologies and immunities that allowed them to dominate much of the world.

In his 2005 sequel entitled *Collapse—How Societies Choose to Fail or Succeed*, Diamond probes the other side of the equation of why some of the great civilizations of the past collapsed into ruin and what we can learn from their fates. This is sustainable development research in the long view! Diamond traces a fundamental pattern of catastrophe that is very much related to our topic at hand, i.e. of humans and resources

and which meshes with Ponting's ecological view of history though, surprisingly, he does not mention the latter's work. He spells out "what happens when we squander our resources, when we ignore the signals our environment gives us, and when we reproduce too fast or cut down too many trees. Environmental damage, climate change, rapid population growth, unstable trade partners, and pressure from enemies were all factors in the demise of the doomed societies, but other societies found solutions to those problems and persisted."

2.1.2. The medium historical view

Taking the medium time perspective, we now ask the question of how humans have related to resources or Earth or Nature during the last 400 years. Two basic positions on resources can be identified, the Neo-Malthusian or pessimistic position and the Cornucopian or optimistic one. Perhaps one of the best ways to clarify those positions is to describe humanity's attitude toward Nature during these years, that saw the beginning of the Scientific Revolution and of the modern era, is to point to the metaphors that were being used.

The Earth was seen as a machine that could be controlled, a storehouse of resources, a factory whose resources can be used for human well-being; Francis Bacon even considered Earth a harlot that was at the service of humanity. While this mechanistic view and its dominance paradigm prevailed during these last four centuries, the holistic biocentric view and its associated partnership paradigm never disappeared, as becomes clear in the ecological histories written by historians such as Worster (1977), Ponting (1991), Bowler (1993) and Marshall (1994).

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Biographical Sketch

Frans C. Verhagen, M.Div., M.I.A., PhD. is an environmental/sustainability sociologist with Earth and Peace Education Associates International (EPE) where he directs the sustainability research and education section using EPE's contextual sustainability framework. See www.globalepe.org. Being a resident of the New York City county that hosts both the JFK International and the LaGuardia Airports one of his main

interests as an environmental/sustainability sociologist is to apply a sociology of sustainability to the aviation industry. As such he teaches sustainable aviation at a local college and directs a local coalition of some two dozen civic groups www.metronyaviation.org that works for a sustainable, equitable and accountable aviation industry. In 2003 he became the president of the national organization, Citizens Aviation Watch, USA, Inc. www.us-caw.org. Another major application of his applied sociology discipline deals with the development of sustainable communities which he teaches at Pace University in Manhattan. He applies this approach to his local community, the metro New York area and for two very poor West African countries. The latter application consists of the development of a model of rural development in Sierra Leone and Togo, called the Sustainability and Peace Institute (SPI) model. For that program he uses his experience from his five year work in Ghana in the early 1960s and his later studies in African development at Columbia University. In both these two major activities he stresses the importance of values and valuation employing his graduate training in divinity from Dutch schools, the sociology of religion and the principles of Earth ethics and spirituality, mostly derived from the Earth Charter. He has been instrumental in having the Earth Charter's integrated vision of social and ecological values being considered for endorsement and adoption by several professional and other organizations. He continues to present workshops internationally on the ethics of the climate crisis and the CS framework-based evaluation of the four sustainability movements: ecovillage, new urbanism, smart growth and sustainable communities .