GUEST EDITORIAL

Sustainable Development: Viable Concept and Attainable Goal?

Ambiguity of the phrase 'sustainable development' allows for numerous and differing interpretations. Without an understanding of its origins and implications, the phrase risks becoming a *cliché* of the 1990s. There are possible approaches to this understanding: one is *via* political–conceptual analysis; another is through semantic-linguistic deconstruction. These approaches are complementary and lead towards the same conclusions — namely that 'sustainability' is only partially attainable, but its limited possibilities may be highly beneficial to humanity-in-The-Biosphere. Yet even a limited, selective sustainability exacts a price which human society may be unwilling or unable to pay.

When 'sustainability' modifies 'development', understanding is complicated by the different meanings that may be given to both 'sustainability' and 'development'. Taken together, each word modifies the other to give the phrase its particular meaning; but taken apart, the two words may have contradictory implications. Where 'sustainability' implies maintenance of the *status quo*, and 'development' implies growth, 'sustainable development' may become an oxymoron — a contradiction in terms, depending on the kind of growth implied. Thus, the meaning of sustainable development as a viable, workable concept cannot be fully clarified by probing their separate meanings. Joined together, each term potentially affects the meaning of the other. But the operational significance that is attached to these meanings depends upon the what and how of sustainability and the what and how of development. Only when applied to specific processes or conditions do these words have implementable content.

Origin of the Concept

Sustainable development as a concept emerged out of a recognition that the goals of international economic development pursued after World War II could not be universalized in the so-called underdeveloped or Third World. As pursued during the First UN Development Decade and thereafter, the goals were seldom attained. Under present circumstances, living standards of the so-called developed countries (*i.e.* in Western Europe, North America, and Australasia) could not be attained throughout the world without depleting the planetary resource-base and creating intolerable pollution of air and water.

Analysis of possibilities, limitations, and consequences, of conventional international development, has raised questions about the durability of the patterns of consumption and life-style in the developed countries, and especially with their obsessive commitment to unbridled growth. Publication in 1972 of a Report to the Club of Rome on *The Limits to Growth*, opened a debate about the sustainability of contemporary Western-style economic material growth that has led to the sustainable development movement, described initially as 'ecodevelopment' (*i.e.* ecologically sustainable development). In *The First Global Revolution: A Report by the Council of the Club of Rome*, Alexander King & Bertrand Schneider (1991) offered a prescriptive analysis for attaining a sustainable global economy and environment. They laid great stress on the process of social learning — no less than a reorientation of human society towards The Biosphere.

Ambiguity of the sustainable development concept may be attributed, in part, to the implications of each of its respective terms (implications which should be reconceptualized when those terms are joined together). A common confusion is the assumption that development means overall continuous material growth. Under some circumstances, development of the quality of life may require appropriate forms or degrees of *selective* growth. There may also be circumstances where development of the quality of life requires cessation or reversal of certain forms of growth. Under some interpretations sustainable development may, or may not, require growth; but it need not always imply it. To dissociate growth from development is difficult, because of the almost universal commitment among the political and economic leadership in advanced, developed economies to largely undifferentiated perpetual growth. The proposition that no form of growth can be sustained indefinitely is rejected by pro-growth advocates as unrealistic, short-sighted, defeatist, and elitist. Innovative technology and the indomitable human spirit are invoked as assurance that growth need never end. Adherents to this opinion regard 'sustainable development' either as a denial of human ingenuity and creativity or as a call for sustaining the development (*i.e.* growth) process with little regard for its coincidental effects.

In the absence of specified goals, the concept of sustainability offers the prospect of a continuing expansion of economic and technological trends without reference to the quality of life or the cost of maintaining it. The World Commission on Environment and Development (1987) declared 'a sustainable society to be one that meets the needs of the present without compromising the ability of future generations to meet their own needs'. But who defines needs? Donella H. Meadows *et al.* (1972 *cf.* 1992) define 'a sustainable society as one that can persist over generations, one that is far-seeing enough, flexible enough, and wise enough, not to undermine either its physical or its social systems of support.' But there appears to be a conceptual difficulty with these definitions. Each conceptualizes a sustainable society as having the characteristics of a steady or homeostatic state. Yet each definition implies (and would seem to require) a degree of unity, coherence, and steadiness, that is not generally characteristic of advanced developed societies today.

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Problems of Definition

Sustainability linked to development modifies the meaning of sustainability because development implies action of some sort, and hence change. But even without an explicit commitment to developmental change, sustainability, if implying a *status quo* or steady-state society, would require maintenance and protection of the environment, however defined. In a world that is ever-changing, even under natural circumstances sustainability implies resistant action — not stasis. In *status quo* environmental circumstances, sustainability signifies preservation of existing conditions and prevention of deteriorating change. In a developing environment, however, sustainability is sought so to direct the course of events that the quality of life will not be diminished. Sustainability in a steady state might be less difficult to attain than where the goal is *sustainable development*, inasmuch as the *steady state* (whatever its level of quality) is by definition sustainable through reactive maintenance, *i.e.* it is homeostatic, although this may require undoing the damaging effects of past development. Sustainable development, however, is directed towards future plans, projects, objectives, and ambitions. It may therefore generate contention over the amount and kind of developmental action that is sustainable, and for how long and to what effect.

Because sustainability is a very general term of indefinite applicability, its practical meaning requires specificity. An example of specific and hence limited application is offered by Robert J.A. Goodland (1993), of the World Bank, who defines sustainability from an economic perspective as the 'maintenance of capital'. He identifies three forms of capital: human-made, human, and natural. Environmental sustainability in his definition refers to *natural* capital (*i.e.* natural resources). Human-made capital includes houses, roads, buildings (*i.e.* the *built* environment). Human capital comprises people, their abilities, knowledge, and information. Environmentally sustainable development encompasses all three forms of capital as identified by Goodland. But there are aesthetic, ethical, and preferential, aspects of development which an essentially economic perspective may affect, but does not include. Goodland offers three environmental sustainability rules or guidelines that are limited to his natural capital or economic perspective and could be applicable to either a *status quo* or a developing society:

Output Rule:

Waste emissions from a project should be within the assimilative capacity of the local environment to absorb, without unacceptable degradation of its future waste-absorptive capacity or other important services.

Input Rule:

(a) *Renewables:* harvest rates of renewable resources' inputs should be within the regenerative capacity of the natural system that generates them.

(b) *Non-renewables:* depletion rates of non-renewable resource inputs should be equal to the rate at which renewable substitutes are developed by human invention and investment. Part of the proceeds from liquidating non-renewables should be allocated to research in pursuit of sustainable substitutes.

This economistic interpretation of sustainability falls substantially short of the full scope of the concept in relation to development as a process of change. Goodland's interpretation is essentially utilitarian. I do not regard its 'rules' as sufficient to cover all aspects of the environment which humans might wish to sustain.

For example, the Output Rule for waste emissions does not define 'unacceptable degradation' — unacceptable to whom, and by what criteria? The assumption that the 'assimilative capacity' of the local environment should be utilized to optimality, is inconsistent with the pollution prevention rule which would be to reduce emissions to the lowest possible quantity and to use recycling wherever possible in preference to 'assimilation'. The proposition that 'the answer to pollution is dilution' belongs to a very skewed economics, inconsistent with ecological or societal environmental quality *. Goodland's Output Rule could be interpreted to aim for zero pollution, but that hardly seems to be the implication of the rule as stated.

The Input Rule seems also to fall short of consistency with environmental quality. Harvest rates (for renewables) might be more consistent with environmental quality if 'not exceeding regenerative capacity' instead of being within regenerative capacity. The two expressions might mean the same thing, but to be within regenerative capacity could imply harvesting (forests, for example) up to the limits of renewability. 'Not exceeding' would allow for restraint well below regenerative limits — as in the little or no harvesting in ancient forests. Non-renewable depletion rates should not necessarily 'equal' the discovery of renewable substitutes. Reserves of non-renewable resources might be kept for certain advantages that would not be as easily obtained through substitution, or in order to avoid the necessity of exploiting areas of environmental quality.

From Economic Growth to Sustainability

How difficult might it be to manage a transition from an economy that had long been dependent on undifferentiated growth to a relatively steady-state sustainable society? The costs and limits of economic growth have been analysed by Edward S. Mishan (1967), Frederick Hirsch (1976), and others, and the

* Or with the finite reality of The Biosphere. — Ed.

ecological economists are now developing alternatives to conventional neo-classical economic theories. Nevertheless it is uncertain whether many people are prepared to pay the price of transition to sustainability. Different people would be affected in different ways. Such a transition would be most plausible under the duress of economic collapse and resource depletion. But by the time the growth economy reaches the point at which it can no longer be sustained, irreversible impairment of the environment and degradation of the resource-base will probably have occurred. The biggest challenge to advocates of sustainability is to make the realities of a finite world credible to a people who have long been committed to belief in a cornucopian future!

The most difficult problem of attaining a consensus on a societal paradigm for environmental quality and sustainability, is obtaining agreement on its socio-economic implications. At the heart of the problem is the substance of environmental ethics. The terms ethics, equity, and justice, are frequently joined to the sustainability concept, but their meanings and implications in practice are seldom made explicit. The assumptions underlying these terms need to be made explicit if their meanings and implications are to be understood. How safely might we assume that the poor — if enriched and empowered — would behave more altruistically than the currently advantaged classes? How deeply ingrained is the oft-claimed harmony between indigenous people and Nature? What has been the behaviour of so-called primitive people when they acquire guns, chain-saws, off-road vehicles, and market incentives?

This is not to suggest that environmental equity and justice are contrived issues. Transgenerational injustice, in particular, can be clarified by historical example. Sustainability, by any definition, has transgenerational implications. But to understand the ethical aspect of sustainable development, more than summary moral judgement is needed. The foundation of a viable sustainable development concept is grounded in an ethic of the relationships between humanity and its environment. But the foundation, to be firm, must rest upon an ethic that is consistent with the real and possible. Principles that are no more than rhetorical will not suffice as guidelines to the future.

In Summation

This commentary has not attempted to analyse or compare the range of opinion regarding the sustainability of the present global economy in a world of widely divergent states of development. It accepts as probable the proposition that the trends which are now dominant in modern society cannot be sustained for ever. But it offers no estimate regarding the duration of existing socio-economic conditions. Nevertheless, the Author agrees with the proposition that history is accelerating and that the time is often 'later than we think'. Present socio-economic arrangements and behaviours may survive the 21st century, although I regard that possibility as highly improbable. The increases in human populations which are projected as inevitable in the coming decades presage a 'time of troubles' which could check or reverse the course of human achievement towards a higher and sustainable quality of life.

The attainment of sustainability at present or higher levels of existence will require some fundamental changes in the assumptions, beliefs, values, and behaviours, of large numbers of people. This conversion would require the sustainability issue to be addressed effectively at all levels of education and sources of influence, including the news media. Leadership in the economy, in politics, and in the institutional domain of education and ethics, would be necessary to accomplish the transition. Unlikely as such redefinitions of human expectations and purposes seem today, we have no warrant to pre-judge the future. Humanity may experience global catastrophe or ecodisasters before a transition to sustainability can be achieved. The Biosphere may be irretrievably impoverished before efforts to sustain what remains can become effective. But beyond tragedy, if the survivors learn from experience, a less destructive and more durable future may well be attained.

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