

AN INTRODUCTION TO SUSTAINABILITY

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A useful term?

The term ‘sustainability’ is now looked upon with deep suspicion by many people in movements which are trying to effect environmental, political or social change. This is because the term today is used so widely, in so many different contexts, that it has lost its original specificity.

‘To sustain’ comes from the Latin root ‘sustinere’ and literally means ‘to hold up, to support from below’.. But what exactly are we trying to sustain? Ask different people and you get different answers. Some want to sustain their present lifestyle, others the environment or the elimination of poverty and injustice, yet others want to maintain present industrial and technological growth. This makes for confusion because some of these programmes are contradictory.

Why has the term become so popular? Interest in sustainability initially grew out of the modern environmental movement. This was a response to increasing concerns about the negative consequences of industrial and technological progress, one of the most important of which is the destruction and degradation of the environment. Some of the key wake-up calls were:

- 1962 Rachel Carson published *Silent Spring* in which she drew attention to the destruction of wildlife due to the use of the pesticide DDT
- 1972 researchers at MIT publish *The Limits to Growth* suggesting that present trends in population growth and non-renewable energy use will lead to ecological and social catastrophe in the middle of the 21st century
- 1984 escape of poisonous gas from Union Carbide plant in Bhopal kills thousands
- 1985 large hole in ozone layer discovered
- 1986 Chernobyl nuclear power plant disaster
- 1990 Intergovernmental Panel on Climate Change predicted global temperatures would rise by between 2-4.5 C in the next century
- 1992 *Beyond the Limits* suggested the planet is already beyond its capacity to deal with continued industrial growth

Some definitions of sustainability

Environmentalists developed a definition of sustainability which stresses that humanity must live within the natural limits set by the planet Earth. One much-respected definition is Herman Daly’s four principles of sustainability:

1. Limit the human scale (throughput) to that which is within the Earth’s carrying capacity.

2. Ensure that technological progress is efficiency-increasing, rather than throughput-increasing.
3. For renewable resources harvesting rates should not exceed regeneration rates (sustained yield); waste emissions should not exceed the assimilative capacities of the receiving environment.
4. Non-renewable resources should be exploited no faster than the rate of the creation of renewable substitutes

Or, to put it more simply, “Sustainability encompasses the simple principle of taking from the earth only what it can provide indefinitely.” (Friends of the Earth)

However, a rather different interpretation of sustainability comes from the social activist movement. This movement is concerned, above all, with ensuring that disadvantaged groups and nations have access to vital resources and stresses their inalienable right to shelter, education, health care, employment etc. This movement believes that sustainability is primarily about equity and justice and often sees continued economic growth as the means to securing this:

“Sustainable development is development which meets the basic needs of all, particularly the poor majority, for employment, food, energy, water and housing and ensures growth of agriculture, manufactures, power and services to meet those needs.”(Adishesiah)

The different interpretations of sustainability were presaged in the Stockholm Conference of 1972. There the more affluent nations of the North tended to emphasise the need for environmental protection: they called upon the South to control population and enforce strict environmental controls as a means of doing this. The Southern nations believed, as Indira Gandhi put it, that “poverty is the worst pollution”. Consequently, they argued that the Northern nations should help the developing nations grow out of the poverty trap rather than lecturing them about environmentalism. They also pointed out that the developed nations were largely to blame for massive natural resource depletion and pollution.

The term ‘sustainable development’ was partly an attempt to bridge this divide. It was first used in the World Conservation Strategy of 1980 where it was defined as “The integration of conservation and development to ensure that modifications to the planet do indeed secure the survival and well-being of all people.” The most famous definition of sustainable development is contained in the Brundtland Report published in 1987:

‘Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs’.

While such definitions are more inclusive than narrower definitions favoured by either environmentalists or social activists, they are also seriously flawed. For example, the Brundtland definition fudges a major issue by refusing to define exactly what is meant by ‘needs’, while the World Conservation Strategy definition is anthropocentric.

Moreover, many definitions of sustainable development contain serious contradictions. Most poverty-alleviation programmes continue to be based on the assumption that societies or countries have to 'grow' out of poverty through generating economic growth. However economic growth means, among other things, the production of goods and the creation of a consumer society—which are themselves prime causes of environmental devastation. In this sense, 'sustainable development' is a contradiction in terms.

In the same way, 'sustainability' and 'equity' do not necessarily go together. Equity often means that people want equal access to the lifestyle of the West, and this has shown itself to be uniquely wasteful and harmful to the environment. In fact, if everybody in the world was to enjoy the present standard of living of the U.S. we would need 5-6 more planet Earths!

Today the gulf between environmentalists and social activists has narrowed. Most environmentalists acknowledge that equity and social justice are key factors in creating a sustainable future, while social activists can see that environmental degradation is a powerful brake upon progress in other fields. However, differences remain. Environmentalists tend to favour 'strong' sustainability. This would mean, for example, that if trees are cut they would have to be replaced by the same number of trees being planted elsewhere or by the creation of equivalent carbon 'sinks'. Social activists tend to favour 'weak' sustainability. This would allow for a depletion of environmental capital as long as measures are taken to improve technological efficiency or increase human capital (i.e. through providing better educational opportunities to the disadvantaged). Again, 'deep ecologists' argue that humanity is only one of several million species on this planet and should not be accorded preferential treatment. Most social activists, and even some environmentalists, would disagree with this.

In other words, defining sustainability remains as difficult as ever. Robert Gilman's definition comes close to covering all bases:

"Sustainability refers to the ability of a society, ecosystem, or any such ongoing system to continue functioning into the indefinite future without being forced into decline through exhaustion of...key resources."

However, it is inherently conservative to the extent that it ignores or downplays the possibility of change and evolution. For, as the Brundtland Report put it, "sustainable development is not a fixed state of harmony but rather a process of (continual) change". In this sense a more comprehensive definition would be something like:

"Sustainability is a way of living which acknowledges the fundamental and evolving needs of the individual, society and environment".

Principles of sustainability

Another way of trying to understand sustainability is through articulating some of its key principles. These include:

- life has intrinsic value and wisdom
- all life forms are interconnected and interdependent
- the Earth has limits and humanity must respect those limits
- all people have a right to the necessities of life and self-development

Applied sustainability

These principles make plain that sustainability is far more than just a programme for environmental or social progress: it is actually an ethic, a way of looking at the world and acting which touches upon not only our relationship with the natural world but also every sphere of human activity: the economy, business, governance, health and healing, energy generation, urban development, education, community-building, science and technology, media and communication, architecture and construction, personal growth etc.

Some of these principles are already embedded in various fields of research. The principle of interconnectedness, for example, is reinforced not only by research in sub-atomic physics but is also an inherent principle of systems theory. In popular parlance it is thinking and acting from an awareness of the whole rather than the parts (“think global, act local”). The fact that the Earth has limits has caused leading-edge business enterprises to develop products which are highly energy-efficient, use natural resources and can be readily recycled. Regarding the adage ‘nature works’, scientists studying natural processes often discover they are the best means of solving intractable problems: ‘biomimicry’ is an attempt to embody this natural wisdom in modern technological forms.

It is probably the environmentalists and the social activists, however, who have worked hardest on developing programmes for sustainable action. Modern environmentalists stress that the planet’s natural resources must not only be sustained but vigorously restored. The measures they promote include:

- environmental education
- protecting biodiversity
- increasing funding for environmental restoration
- improving efficiency of present technology
- minimizing pollution and waste
- maximizing recycling and reuse
- substitution of renewable energy generation for the use of fossil fuels
- adopting the precautionary principle (“when there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.”)
- carbon, pollution and waste-disposal taxes
- charging true costs on all products and services

- substituting organic farming practices for chemical agro-business
- stabilizing the world's population

The social sustainability movement favours:

- promoting universal education
- improving the provision of essential services to the disadvantaged (housing, health, education)
- encouraging participatory decision-making
- strengthening local community
- empowering women and minorities (like indigenous peoples)
- restructuring global economic relations (abolishing debt repayment etc.)
- non-violence

What's stopping us?

If, as increasing numbers of people believe, these programmes are necessary for ensuring the survival of life and civilization as we understand it, why is not more being done to make it happen? After all, much of the knowledge and many of the technologies needed for a sustainable society are already in existence.

One of the key factors required is the political will to make what may be initially unpopular decisions to guarantee long-term viability. For example, one path to a sustainable future would be for the developed nations to cut back drastically on their wasteful use of planetary resources, while assisting the developing nations to develop in ways which are environmentally and socially-sound. However, few leaders in the developed world are willing to adopt such a course. This is because most political systems and politicians are geared to the short-term (elections every four years), as well as the fact that there are massive vested interests which resist any change to the *status quo*. This trend is further reinforced by a lack of detailed information regarding the hidden costs of our present lifestyle and what we as individuals can do about the threat to planet Earth. Often people end up feeling that it is all beyond their control, or they go into denial, or they assume that science will come up with all the answers.

However, perhaps the fundamental shift which has to happen before the 'sustainability revolution' takes place is a shift in how we perceive the world. As one writer expressed it, "The need now is not simply to diminish the devastation of the planet but to alter the mode of consciousness that is responsible for such deadly activities". Einstein put it more pithily, "You cannot solve a problem with the same mindset which created it in the first place.."

What is the present mindset? With notable exceptions, human beings today still act as if:

- 1) they are separate from each other
- 2) they are separate from the natural world
- 3) the natural world exists for their benefit

- 4) the resources of the natural world are illimitable
- 5) happiness means the accumulation of more and more material possessions

Taken together, these assumptions are a recipe for global disaster.

The new paradigm requires us to understand that:

- 1) we and all other life forms are one
- 2) we are not masters of nature but one strand within it
- 3) the world has limits
- 4) happiness and, indeed, our survival depends upon us attaining a vaster wisdom, for “we are now too clever to survive without wisdom” (Schumacher).

What is that wisdom? For some it is represented by the miracle of life itself, or the organization of the cosmos, for others it is a transcendent reality to which they give the name God, Brahman or Allah. Sri Aurobindo described it as the ‘supramental’ force, a consciousness which far transcends mind. In fact, for Sri Aurobindo present humanity is inherently unsustainable to the extent that the supramental consciousness remains undeveloped. That development, however, remains a possibility, pointing to the fact that while material development may have inbuilt limits, individual development knows no such boundaries. As Condorcet put it, “Nature has assigned no limit to the perfecting of the human faculties...the perfectibility of mankind is truly infinite”.

Thus sustainability as a programme for action today acquires yet another dimension which could be paraphrased as, “The need to preserve humanity and the natural world until we possess the wisdom which allows us to truly understand our relationship to each other and to the planet which hosts us”.

The dangers of the present situation in which mankind, for the first time in history, has the ability to destroy the world are immense. But so are the potentialities, many of which remain largely untapped. Perhaps this is why we are being pushed to the edge—so that we are forced to develop the consciousness necessary for our planet’s survival.
