

Sustainable Development-A perspective

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Abstract: *Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is the economic development of a region which is conducted without diminishing the natural resources. One reason to do this is so that these natural resources can be preserved, as they are soon depleting and there can be time when there will be no resources for the future generations. The other reason could be that these resources affect the environment in one way or the other, by causing pollution and encourages the global warming effect. This is why the need for sustainable development has to be realized, where these resources can be replaced by much environment friendly ones. It is the need to ensure a better quality of life for all, now and into the future, in an equitable manner, whilst living within the limits of supporting ecosystems. Sustainable development is not just about the environment although living within our environmental limits is one of the central principles of sustainable development. The main focus of sustainable development is far broader than just the environment. It's also about ensuring a strong and healthy society. This means meeting the diverse needs of all people in existing and future communities, promoting social cohesion and inclusion, and creating equal opportunity.*

Key words: *Sustainable development, Green energy, Resources, Pollution, Equity.*

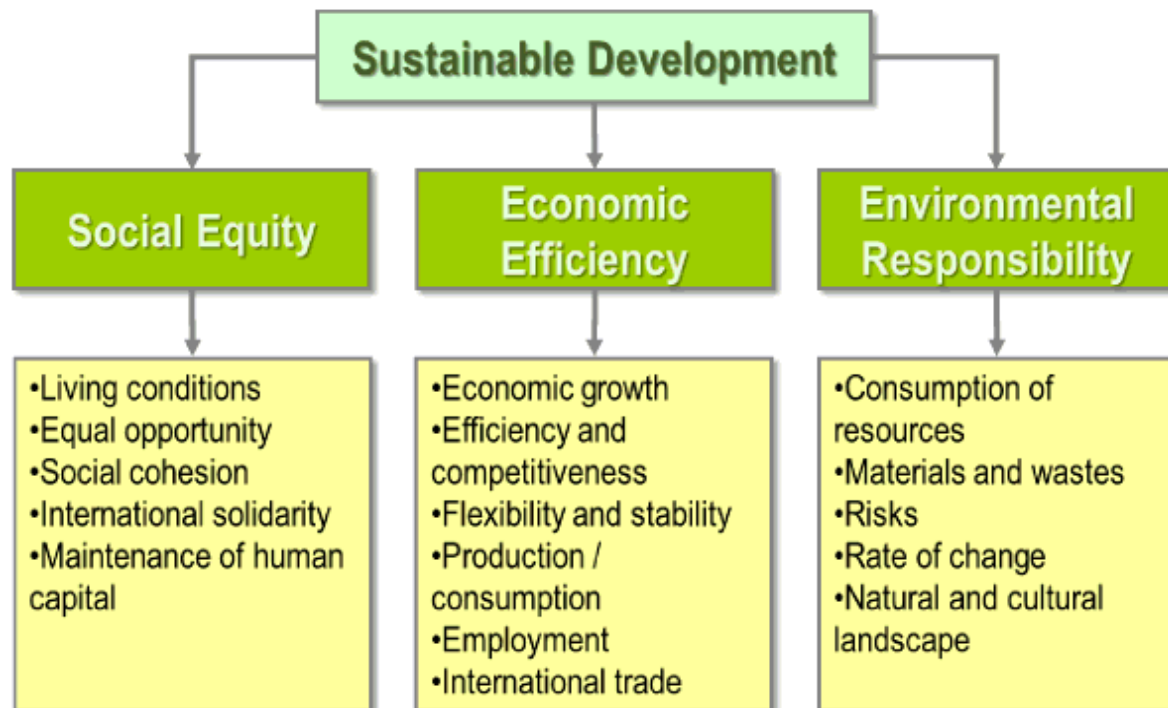
INTRODUCTION

Sustainable development today is the most canvassed slogan of international developmental conferences and programs. It is a multifaceted concept and its explanation and understanding is often content and context specific. It was actually the concern about depleting natural resources and a subsequent slowing or even closing down of much of the economic activities and production systems which gave birth to the concept of sustainable development. It is the result of ravenous misuse and overuse of earth's precious and limited resource base by those few who had a control over production systems. This concept has emerged as an extensive agenda to debate and decide on desirable course of action in social and economic systems, policies,

programs and implementation at the international, national or individual levels. It gained importance in the 1960s when people became aware of the disadvantageous effects of industrialization on the environment. We need to understand the context in which it came about to appreciate why it has become so important to all of us. we must also recognize that sustainability offers long term planning for productive techniques, industrial processes and equitable distribution policies for the judicious exploitation of resources, such as, to name a few, coal, oil, soil, forests and water. This paradigm shift ensures their longer life span and an extensive user base so that the maximum number of people may benefit out of it for the longest possible time frame. The idea of sustainability also makes

pathway for the indispensability of technological revolution towards energy saving devices, alternate and non-conventional methods for providing comfort to citizens without bringing down their quality of life. This has revolutionized the way people and governments have started thinking and designing their developmental programs and projects. A new aspect has

emerged for the grassroots governance which fuels growth by providing land, water and forests that constitute the three basic inputs to any form of progress. Thus, sustainable development is also indicative of ‘planning stepwise’ in contrast to the concept of ‘planning whole’ in which basic ecosystems were driven by technological transformed systems.



ORIGINS OF SUSTAINABLE DEVELOPMENT

The origins of the concept of sustainable development dates back to the 1960s when, the American marine biologist Rachel Carson published her book “*The Silent Spring*” (1962). This book drew public attention to the destruction of environment by the use of synthetic pesticides. This work was a turning point in the understanding of the interlinkages among the environment, the economy and social well-being. Gradually, during this period, the fear of global environmental breakdown began to emerge. Soon after, the animal population biologist Paul Ehrlich published the book *Population Bomb* (1968) on the connection

between human population, resource exploitation, and the environment. In 1969, a non-profit organization *Friends of the Earth* was formed which was dedicated to protecting the environment from degradation and empowering citizens to have a voice in decision-making. The governments of the Northern countries began to recognize that the process of unchecked industrial development was damaging the environment to the extent out of the human reach. For example, the Swedish government had been concerned about the damage caused to their lakes by acid rain. This rain was a result of excessive pollution caused by the neighboring industrialized states. In 1971, the OECD council enacted a *Polluter Pays*

principle where it said that those (countries) causing pollution should pay the costs. The report, *Limits to Growth* (1972), published by a group of young scientists (Club of Rome) from Massachusetts Institute of Technology, immediately took the world by storm gaining massive media coverage. It predicted dire consequences if growth was not slowed down.

The United Nations Conference on Human Environment (UNCHE) was organized in Stockholm (1972). For the first time, the idea that the environment was a critical development issue was placed on the international agenda. It led to the establishment of United Nations Environment Programme (UNEP). The first director of UNEP, Maurice Strong coined the term 'eco development' which integrated development with environment protection. Since then, many milestones have marked the journey towards sustainable development. The concept of 'Sustainable Society' emerged at a study conference on Science and Technology for Human Development, convened by the World Council of Churches (1974). Interestingly, the concept did not deal with environmental conditions but started with the principle of equitable distribution, which subsequently became the cornerstone of the Brundtland Report in 1987. 'Sustainable Society' also involved the concept of democratic participation, which became important nearly twenty years later at the Rio Earth Summit (1992). Yet another term, "Sustainable Development", emerged in the *World Conservation Strategy* (WCS) (1980) published by the International Union of Conservation of Nature and Natural Resources (IUCN) by two scholars, Eva Balfour, first president of soil Association and Wek. Jackson, a geneticist from the International Institute for Environment and Development (IIED). During the UN Conference on Environment and

Development (UNCED) in 1992 at Rio de Janeiro, the term extended into a full concept of development stressing upon the collaboration of government and non-governmental organizations (NGOs), industrialists, scientists, community groups and regional organizations. It became one of the most important interdisciplinary concepts that sneaked through studies on environment, economics, sociology, political science, life sciences and gender. By 2000, the concept of sustainable development became firmly settled as a guiding document in all international organizations. Since then the UN member states have been publishing reports on the national status of sustainable development programmes and strategies and submitting them to the specially created UN body called UN Commission for Sustainable Development (UNCSD). The term is modified for different user groups as 'sustainable human development', 'sustainable economic growth', 'sustainable socio-economic development' and 'sustainable local governance' and very recently in 2004 'Information Communication Technology' (ICT) for sustainable development.

DEFINING SUSTAINABLE DEVELOPMENT

Sustainable development was defined in the World Conservation Strategy report 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'. Development was defined as 'the modification of the biosphere and the application of human, financial, living and non-living resources to satisfy human needs and improve the quality of human life'. Development could prove to be a threat unless resources were conserved and so conservation of resources was defined in the report as 'the management of human use of the biosphere so that it may yield the

greatest sustainable benefit to present generations while maintaining the potential to meet the needs and aspirations of future generation'. This phrase attracted attention in the Brundtland Report.

The Brundtland Report: In 1983, the United Nations General Assembly set up the World Commission on Environment and Development (WCED) with the Norwegian Prime Minister Mrs Gro Harlem Brundtland as the Chairperson. The Commission's report was published as *Our Common Future* (1987). The definition of sustainable development given in this report contains within itself two key concepts:

1. The concept of 'needs', in particular, the essential needs of the world's poor, to which priority should be given.
2. The idea of limitations imposed by the state of technology and social organizations on the environment's ability to meet present and future needs. The report emphasized that sustainable development is a matter of social equity within a generation (intra-generational) and between generations (inter-generational). The Commission stressed the importance of integration of environmental decisions into central economic decision-making. It argued that a healthy environment was not possible in a world marked by extreme poverty which forced people to practice environmentally destructive activities for short term survival. Therefore it broadly stressed on economic growth. The Brundtland Report was widely accepted as it was released at a time when a large ozone hole was discovered over Antarctica (1985) and the Chernobyl nuclear accident occurred in 1986 near Pripyat in what was then part of USSR, which spread radioactive nuclear fallout across Ukraine.

CONCEPTS OF SUSTAINABILITY, DEVELOPMENT AND SUSTAINABLE DEVELOPMENT

Nature has itself pre-facilitated human societies and civilizations with basic life

support system air, water, food and a suitable climate for survival. It has also provided the physical resources that are necessary for the sustenance of economies. Nature has supported and maintained life on earth since times immemorial and should continue to do so in the future without making any excuses to the generation to come. This is known as the sustainability of nature or ecosystems or environment. However, humans have been meddling with the sustainability of the natural systems through their covetous activities. And it is a well-known fact that continued trespassing on the same pace, not only the other life forms but also the very existence of mankind will perish of which the trailers have been experienced already by the different civilizations and societies. There are limits to everything like that of nature's capacity to bear the brunt of invasion over it by the humans. Once alteration of nature's initial state occurs, it cannot quickly revert back to the original state. Nature has a limited capacity to withstand rapid change. Thus, today, the challenge before mankind is to determine the state in which we wish to live and to continue living within the limits inherent in nature's processes, within nature's carrying capacity. And that is surely for humans themselves.

Sustainability

The term 'Sustainability' has been defined variedly, such as: (1).Sustainability refers to a process or state that can be maintained indefinitely, (2). Natural resources must be used in ways that do not create ecological debts by overexploiting the carrying and productive capacity of the earth, (3).A minimum necessary condition for sustainability is the maintenance of the total natural capital stock at or above the current level.

The term 'Sustainability' is also used to establish the temporal and the livelihood

context of development strategies. The temporal context refers to the chronological standpoint in which communities maintain their cultural and economic integrity. The livelihood context of development strategies is the preservation of existing values which are under threat from external economic forces leading to the collapse of a delicate natural resource balance. The Strategy for Sustainable Living (1991) by International Union of Conservation of Nature and Natural Resources (IUCN) says that 'sustainable use means use of an organism, ecosystem, or other renewable resource at a rate within its capacity for renewal'. The economist Herman Daly has offered specifications for maintaining sustainability. He is of the opinion that:

- Rates of use of renewable resources should not exceed regeneration rates.
- Rates of use of non-renewable resources should not exceed rates of development of renewable substitutes.
- Rates of pollution emission should not exceed assimilative capacities of the environment.

Development

The term 'Development' means the social, political, cultural and economic improvement in a broad sense. It is intended to create opportunities, prosperity and choices for all inhabitants of the world and it must ensue in a way that guarantees choices for future generations too. It refers to a holistic growth of the human and natural environment towards self-sufficiency and synchronized relation. It indicates a growth pattern, which makes nations more decisive in their internal and external environment. It leads the citizens of a region to more comforts. Development is actually the better of what you had yesterday. Dudley seers while elaborating on the meaning of development suggests that while there can be value judgments on what development is

and what is not, it should be a universally acceptable aim of development to make for conditions that lead to a realization of the potentials of humans.

Sustainable development

The concept of Sustainable development was envisaged to bring ideas environmentalists into the central theme of economic development strategic framework. Sustainable development combines the two terms of 'sustainability' and 'development' to indicate a pattern of growth, which strengthens both the national capabilities to care for their people in relation to their total relationship with the resources of the earth. The most widely used definition of Sustainable Development was given by the Brundtland Commission in its report Our Common Future (1987). It defined Sustainable development as 'development, which meets the needs of the present without compromising the ability of future generations to meet their own needs'. Since then, several interpretations of Sustainable Development have emerged, for instance:

- Improving the quality of human life while living within the carrying capacity of supporting ecosystems.
- Economic growth that provides equality and opportunity for all the people, not just the privileged ones, without further destroying the world's finite natural resources and carrying capacity.
- Sustainable development comprises of economic and social development that protect and enhance the natural environment and social equity.

Thus, sustainable development focuses upon a interdependence between humans and their environment and indicates a warning that humans cannot push development, which is against nature as in the end it is always the nature, which is going to win. Sustainable development craves for the goal of conservation and preservation of natural

resources and of the environment and the management of energy, waste and

transportation.



Sustainable development is development based on patterns of production and consumption that can be pursued into the future without the lessening the human needs and degrading natural environment. It involves the fair distribution of the benefits of economic activity across all sections of society, to enhance the wellbeing of humans, protect health and alleviate poverty. If sustainable development is to be successful, the attitudes of individuals as well as governing agencies with regard to our current lifestyles and the impact they have on the environment will need to be changed. Sustainable development is not something where we can achieve prosperity without engaging all the factors together. None of the factors can be overruled as each has its part to play. It is an equity based concept, where deception will lead to disaster.

Objectives of sustainable development

Sustainable development has some clear and broad based objectives, which go beyond class, caste, language and regional barriers.

These objectives are a charter for rescuing one's economy from the holds of exploitative outlook, which has depraved nations and defied their immense wealth. These objectives are:

1. To maintain the standards of living of the largest number of people with equity and justice. The consideration of Trans-boundary and collective impressions in decision-making has to be realized.
2. To conserve and protect earth's natural resources from misuse and inefficient consumption. This demands respect for the land and its diversity as the foundation for healthy communities.
3. To embrace, innovate and implement new technology and scientific techniques, which work in unanimity with laws of nature and are not opposed to it. There needs to be a consideration of sharing the risks and benefits from developmental policies undertaken by different nations.
4. To endorse diversity and involve local and indigenous communities for a more grassroots oriented and relevant developmental policies. This would involve

consideration of economic viability, cultural and environmental values, as policies and programmes are developed.

5. To decentralize governance institutions and make them transparent and accountable to common people. They should have an open, inclusive and participative decision-making.

6. To plan international institutions, which recognize the requirements of poor nations and support them to achieve their growth targets without destroying their natural wealth and environment.

7. To seek peaceful coexistence of all nations of the world because only peace can allow them space to innovate for the larger interests of humanity. This may demand honoring of treaties and fiduciary obligations and international agreements.

Sustainable development is a value-based concept, which appeals to the universal themes of mutual coexistence and respect for others. Interdependence is the key component and one cannot rule out any one from the whole process. It is a constantly progressing phenomenon bringing together cultural, social, economic, environmental and political concerns. It is a preplanned effort of change and provides a framework to decide developmental actions by nations, communities and individuals.

Industrialization

The Industrial Revolution began in England sometime after the middle of the 18th century and transformed Great Britain from a largely rural population making a living almost entirely from agriculture to an urban society engaged gradually in mechanized manufacturing works. A series of inventions transformed the manufacture of cotton goods in England and gave rise to a new mode of production - the factory system.

During the period 1750 to 1830, other branches of industry affected comparable advances, and all these together, mutually reinforcing one another, made possible

further gains on an ever widening front. The abundance and variety of innovations may be included under three principles:

1. The substitution of machines - rapid, regular, precise, tireless- for human skill and effort.

2. The substitution of inanimate for animate sources of power, in particular, the introduction of engines for converting heat into work, thereby opening to man a new and abundant supply of energy.

3. The use of new and far more abundant raw materials, in particular, the substitution of mineral for vegetable or animal substances.

There were resentments to this worldwide phenomenon throughout the globe but other adjacent nations endorsed the same process soon thereafter, followed by others during the 19th century and others (such as Russia and Japan) in the first half of the 20th century. The Industrial Revolution was not merely a sequence of changes in industrial techniques and production of goods and commodities, but a social revolution with social causes as well as profound social effects bringing in great social transformation. The Industrial Revolution implied that man now had not only the opportunity and the knowledge but also the physical means to completely pacify nature. Because until 18th century the nature had an upper hand. The philosophy of determinism was quite prevalent. Human beings hardly intruded with the natural settings. But, while it brought its blessings, there was also much misery. If we can thank the Industrial Revolution for giving us internal combustion engines and laser guided radial arm saws, we can also condemn it for the threatening effect it has had on social and ecological relationships.

The Industrial Revolution needed the resources, especially the raw materials, which were concentrated mainly in the

underdeveloped nations. While the resources were extracted from the Southern countries (presently the developing countries), the value addition was done mostly in the Northern countries (presently the developed countries), thus creating an economic imbalance. The colonization process also was responsible for exploiting natural resources of 'South' for export, and established large monocultures and opened up a largely unexploited domain. After independence, the newly established governments frequently paid more attention to rapid economic development than to fair and equitable access to natural resources. As these developing nations were caught in a situation where they either had to stepped up their advancement or stay back with what they were going through. Thus, such nations tried their level best to compete with those who had made strides already by in-fact using their resources. They over ruined their natural resources.

From the 1950s onwards, Northern countries sought fast economic growth through state-managed industrialization plans that led to excessive resource use and waste. The legacy of these forms of industrial production in the former Soviet Union and Eastern Europe has not only seen economic dislocation but also daunting environmental problems such as the death of the Aral Sea, nuclear contamination, and high levels of air and water pollution. Since 1989, most such regimes have begun to move towards market-based systems of economic organization and economic liberalization, often accompanied by democratization. While market systems have been inherently efficient at economic organization, environmental costs have traditionally been excluded from the decision-making process. This has allowed unsustainable exploitation of natural resources as well as unsustainable demands on natural pollution sinks, like the tropical rain forests.

In 1991 the annual 'product' of the global economy was valued at \$29,000 million, which meant it produced, in just 17 days, the equivalent of the entire annual global product a hundred years before. This has increased all forms of industrial activities such as energy generation, transportation, mechanical equipment's and chemicals in agriculture, waste and effluent discharges and release of harmful and hazardous gases in the air. This has led to high pollution levels and extinction of several species from the earth. The United Nations Environment Program's (UNEP) Red Data Book estimates that 25 percent of species are about to face extinction as more than 100 species are becoming extinct every day. Careless industrialization has also led to fatal accidents as seen in Bhopal, Chernobyl and Exxon Valdez. Sustainable development, therefore, is a reaction to the threatening speed of industrial activity undertaken by states, both rich and poor. Industrialization on one hand made some economically acceptable advancement but socially it kept man in dilemma.

Urbanisation

Urbanization refers to the increasing number of people that live in urban areas. It predominantly results in the physical growth of urban areas, be it horizontal or vertical. The UN projected that by 2050 almost 64% and 85% populations of the developing and developed world respectively will be urbanized. The relation of urbanization with industrialization is very close. The expansion of industrialization has resulted in the expansion of cities. This has rather meant expansion into rural lands that grow food and nurture cattle and village forests and provide several forms of sustainable occupations to the communities in these areas. The spread of cities and industrial towns on one hand leads to the loss of agricultural land including forest resources and intense and unmanageable migration

towards the cities on the other. The level of urbanization in India has increased from 25.4 % in 1970 to 32.8 % in 2017 and is expected to rise to 49% by the year 2050. Uncontrolled and unplanned expansion of towns and cities with large populations has overwhelmed transport, communication, water supply, sanitation and energy systems resulting in a growth of urban poor and unemployed population with precarious health problems. There are three distinct types of poor urban dwellers; the homeless, those living in slums, and squatters occupying illegal shantytowns. The basic services such as water supply and sanitation remain inaccessible to the urban poor. The lack of these services along with malnourishment and diseases like diarrhoea, malaria, dengue and tuberculosis etc. make them suffer always. Large numbers of cities have become dump yards of garbage and industrial waste. This has given rise to environmental problems like air and water pollution with fatal consequences. Today, there are serious social, economic and environmental problems within these urban centers. The impact of urbanization is that the inhabitants consume raw materials from surrounding regions and generate waste and pollution. For example, fuel wood consumed in Delhi comes from the forests of Madhya Pradesh. Thus the commercialization and greater demand of fuel wood in a city leads to deforestation in a far-off area. The untreated dumping of the wastes generated by the cities into river and other water sources results in their contamination. And it silently creates serious repercussions on the aquatic life as well as downstream human settlements. The vegetative cover of the surrounding areas is also affected. For example, the acid rains, which are detrimental to the vegetation and aquatic life in any area, are the result of severe air pollution caused by the industrialization of the neighboring regions. Further, the

proximity of rural settlements to urban centers results in spin-offs for the rural economy. The migration of labors and entrepreneurial skills to the city, and industrial towns and commercialization of the land in these rural areas may have positive outcomes in terms of employment, but it also results in the change of type of productive activities and even expulsion of farmers from their lands. In other words we can say that this whole process imbibes both positives as well as negatives also.

Inequalities

The studies carried out by different agencies have been successful in highlighting the outcomes of development. The new indices, e.g., Human Development Index (HDI) developed by the United Nations Development Programme (UNDP) to study the standard of life has brought into focus the widening gap between the countries of the developed and the developing nations. On one hand, a wealthy minority of the world's population is consuming at an unsustainably high level, causing disproportionate damage to global ecosystems, while protecting only their local environment. On the other hand, a poor, larger and rapidly-growing proportion of the world's population is being forced by poverty to degrade the natural resource base on which it is directly dependent. In addition, a vast global 'middle class' is emerging by continued economic growth and globalization. The developing countries with 77 percent of world population generate only 15 percent of world income. The average GNP per capita in the North is US\$ 12510 which is more than 18 times the average in the South which is US\$710. The UNDP estimated in the last decade that the number of poor is going to increase in the coming decades. This increase is largely related to the unfair developmental policies being pursued by international trading institutions. The key issues are how to add

value to agriculture and cottage industries produce at the production site itself as also how to provide welfare funding to institutions catering to the poor children, destitute women and *dalits* who have remained marginalized and reduce the gap between the haves and the have-nots that is increasing in the process of economic globalization.

Resource Utilization

The four major resources of this earth, which are taken care of by every nation individually, as well as through international agreements are land, water, air and forests. The industrialized countries such as the G8 (United States [US], Japan, Germany, United Kingdom, France, Italy, Canada and Russia), Organization for Economic Cooperation and Development (OECD) and European Union (EU) which have less than 23 percent of the world population have been consuming resources that are several times more than that being consumed by the whole of Asia, Latin America and Africa taken together. The energy consumption of one US citizen is equal to more than 160 Tanzanians or 900 Nepalese. This affluence of the North has led to an irresponsible release of chlorofluorocarbon (CFC) gas into the environment to the extent of 28 percent by US alone. On the contrary the poor countries are so laden with debt that to repay the debt are forced to over-extract their resources and sell it to the rich nations.

Sustainable and Non-sustainable Activities

The concept of sustainable development is not just about the environment, but about the economy and our society as well. Sustainability is a concept, which deals with mankind's impact, through development, on the environment. Today's environmental problems are largely the consequence of the unsustainable consumption of natural resources and the mismanagement of waste

products. Sustainability is about environmental protection, sustained economic growth and social equity. Sustainable development focuses on improving the quality of life for all. It also offers different things to different persons. From sensitive environmentalists to liberal marketers the concept has been interpreted and used to suit their needs. It is like the concept of democracy and justice, which are never contested but are interpreted, to suit ideologically opposed groups. However, the baseline agreement which is undebated in its meaning can be given in a nutshell as sustainable activities are those which:

- Use materials in continuous cycles.
- Use reliable sources of energy continuously.
- Use the positive and just side of human personality.
- Want growth to last longer without being slower.

Activities are unsustainable when they:

- Overuse natural resources in a wasteful manner.
- Consumption is faster than renewal.
- Overkill life forms leading to the extinction of species.
- Cause cumulative degradation of the environment.

Conclusion

Sustainable development is largely about people, their well-being, and equity in their relationships with each other, in a context where nature-society imbalances can threaten economic and social stability. Development is a changing phenomenon with the change of human numbers. There is a sea change in the use of both non-renewable and renewable resources. Sustainable development depends on the scientific and efficient use of the resources (natural and manufactured). Future is on the

hands of people. More researches are needed for finding policy and tools of sustainable Development.

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