

Sustainable development: an answer to the zest for quick development threatening the very survival of mankind

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Abstract: *In the last few decades, we have realized that our economic activities and zest for quick development are threatening the very survival of mankind over the earth. But on the other hand, it has been seen that the zest for development has played a vital role in improving the quality of life and has helped mankind. Throughout history, technology had been part and parcel of any civilization. From a humble beginning to the industrial revolution, we have come to a stage where we have invented and built so many gadgets that our very existence revolved around them. This study deals with how Sustainable development is positively affecting the survival of mankind keeping a check on the negative impacts because of the attained development and its evolution as an answer to the zest for development threatening the very survival of mankind.*

Keywords: Industrial revolution; humanity; Sustainable development; survival of mankind.

Introduction

The statement “Zest for quick development is threatening the very survival of mankind over the Earth” raises a question that concerns the future of mankind and the survival of the human species. The development in terms of technology to improve the quality of life of mankind has been a major concern for humans. We need to understand the fact that the ‘Evolution is the fact of nature, humans have made technological advancement which has majorly affected our Environment, Population, Health, and the Landcover. The biggest threat to mankind is mankind itself (Dordrecht, 1979). The development that has taken place in the past few decades has led to various concerns that have been now realized and the entire approach for the development has changed drastically with various sustainable reforms and techniques (Godet, 1998).

Factors affecting the survival of mankind

Technological advancement has contributed to the growth of industries and has helped mankind in achieving the industrial revolution; with industrialization, the environment has been severely affected (D’Souza & Peretiatko, 2002). The ozone layer depletion, UV radiations, the rise in the sea level because of the ‘melting icebergs’, climatic change are some of the major issues that have threatened the survival of mankind on Earth (Bais et al., 2015).

The development has also affected the land cover with significant consequences to the natural resources and natural vegetation cover. Habitat is lost or fragmented as areas convert from forests,

grasslands, or wetlands to residential, commercial, or industrial land use. Generally, ecosystems are resilient, they can sustain stress and change to some degree through adaptations, and it is when change exceeds the ecosystem’s ability to adapt that detrimental environmental effects occur (Walker & Homma, 1996).

Why Sustainable Development is crucial

Environmental depletion has been on a rise with technological advancements. The modernization of the means of transport and communication has led to air, water, and noise pollution. With the worsening environment, the food chain, freshwater, coastlines and oceans, biodiversities, and forests are getting hugely affected. Concerns have already been raised upon the Global Climate Change and the release of Greenhouse gases and Chlorofluorocarbons by developed and developing countries. Public health concerns have been raised on deadly diseases like cancer and various respiratory problems faced by mankind because of the alarming rise in pollution.

The problem of unemployment as an accompanying feature of rapid technological advancement has also been evident. The growth of industries has contributed to the growth of cities. Urbanization denotes a diffusion of the influence of urban centers on a rural hinterland. Urbanization can be described as a process of becoming urban moving to cities changing from agriculture to other pursuits common to cities and the corresponding change of behavior patterns. Hence only when a large proportion of inhabitants in an area come to cities urbanization is said to occur. Urbanization has become a world phenomenon today contributing to the birth of unsustainable cities. Unprecedented growth has taken place not only in the number of great cities but also in their size (Uttara, Bhuvandas, & Aggarwal, 2012).

Sustainable Development as an answer

As the old proverb states "Necessity is the mother of invention" i.e. necessities tend to cause inventions and each invention is carried out with the need for betterment. Under the Sustainable development approach, advanced technology improves the industry by making it more effective and, what is vital today, safer for the environment (Uttara et al., 2012). Humans have realized the threats to the environment and various steps have been taken to curb these problems like the signing of the 'Montreal Protocol in 1987', in which 191 countries signed an agreement to reduce the ozone-depleting substances under the supervision of the UN. The protocol provided a stable framework that allowed industries to plan long-term research and innovation. A collaborative approach and multilateral funding from all the countries helped developing countries in restricting the production of chlorofluorocarbons. Lately, in recognition of this, 179 countries and the EU spent two weeks in Paris during December 2015 hammering out the final wording of an agreement to keep global temperature increase well below 2 degrees Celsius and if possible, below 1.5 degrees Celsius. The reduction in temperature can only be achieved through a significant reduction in the emission of greenhouse gases. Known as COP21, (The 21st Conference of the Parties to the UN Framework Convention on Climate Change), it was one of the largest of world leaders gatherings ever seen.

Everyone who attended COP21 made emission-cutting pledges. These are known as "intended nationally determined contributions", or INDCs for short. The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement signifies years of work in trying to combat climate change. In 1992, countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC). In 2005, the Kyoto Protocol became a legally binding treaty. It committed its parties to internationally binding emission reduction targets. It ends in 2020, and COP21 is designed to take its place.

With the concerns raised on the melting icebergs and with the rising sea levels, the low lying cities like Miami, Mumbai, London, New York, etc. the humans have learned through experience the floods of 1953 in river Thames, took the life of 1835 people in London. Then the great Thames barrier was constructed with technological and architectural advancement. What had happened could not be changed but the development did not halt. Understanding the need, humans have started forming the 'Impact Assessment Teams'; these provide useful information for different sectors such as ports and infrastructure development near the coastlines and enabled the planners and policymakers to develop long-term adaptation measures. Adaptation of Sustainable

Drainage Systems (SuDS) is a result of such studies. In natural environments, rain falls on permeable surfaces and soaks into the ground; a process called through infiltration. In urban areas where many surfaces are sealed by buildings and paving, natural infiltration is limited. Instead, drainage networks consisting of pipes and culverts divert surface water to local watercourses. In some cases, this has resulted in downstream flooding and deterioration in river water quality caused when foul sewers are overwhelmed by surface water leading to a release of dirty water into rivers. Sustainable Drainage Systems aim to alleviate these problems by storing or re-using surface water at the source, decreasing flow rates to watercourses, and by improving water quality. Sustainable Drainage Systems (SuDS) aim to control surface rainfall run-off by controlling the rate and volume of runoff from the site, relieving pressure on sewerage systems, and mimicking natural drainage as closely as possible. Used effectively, SuDS can help local authorities, planners, architects, and developers deliver greener infrastructure.

Because 'Today's floods are tomorrow's high tides' (Selvaraj, 2016), various sustainable measures have been taken up like:

- Prioritizing Drainage Improvement projects based on benefits and affordability.
- In Redevelopment or New Development projects, taking due measure considering an increase in the frequency of future floods.
- Creating Barriers and polders.
- Sustainable techniques to reduce the impact of rising water along with coastlines protection through engineering by constructing polders, which reclaim inundated coastal regions and coastal defenses.

Meanwhile Sustainable development techniques like 'Conservation Development', an approach for development that seeks to protect and preserve natural resources from development impacts keeping in mind the existing site topography, soil, vegetation, natural drainage patterns, and other landscape features is an answer towards preserving the land cover. Alongside 'Sustainability' is defined as development that meets the needs of present generations without compromising the ability of future generations to meet their own needs. As evidence of the harm to health and well-being from widespread environmental degradation and global climate change grows, communities and Governments are placing greater emphasis on assuring that economic development is achieved sustainably. It encompasses compact development through Infill development, Brownfield development, and Cluster development (Qian, 2014).

Inferences

As the decades have passed, natural resources are under increasing pressure, threatening public health, and development. Water shortages, soil exhaustion, loss of forests, air and water

pollution, and degradation of coastlines afflict many areas. As the world's population grows, improving living standards without destroying the environment is a global challenge. But now we have realized that our economic activities and zest for quick development are threatening the very survival of mankind over the earth. Our survival depends on the realization that we have to live in harmony with the various elements of the environment which are interconnected. This realization of the relationship between man and the environment has given hope to mankind which establishes that the mistakes done in the past cannot be rectified but it has to be seen that these mistakes are not repeated in the future with proper rules and regulations, development control and Sustainable development under strict surveillance with the idea of sustainability and conservation development.

Conclusion

The development, therefore, is similar to a double-edged sword which on one hand can threaten the survival of mankind while on the other hand can help in welfare and advancement. However, the decision to use it proficiently in a proper perspective is one's own decision and wisdom. If advancements are put in the best uses, it further inspires the development but at the same time, its negative use can create mayhem in humanity or the world. The development has, and will, affect the future of humanity; it is up to the present generation to pay attention to this warning and not allow such harm of immense proportions ever to occur again. Human development will continue to advance rapidly as we move into the future. What is important is to ensure that the sustainable approach is adopted and practiced religiously for the healthy survival of mankind.

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