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Sustainable Development in India

Review Article

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Abstract

Environmental problems in developing countries originate from the struggle to overcome extreme conditions of poverty. Environmental degradation impoverishes those dependent directly on the natural environment for survival, and conversely, that development must be environmentally sound if it is to be permanent. Sustainable development, frequently being interpreted as simply a process of change that can be continued forever. Environmental quality and economic development are interdependent and in the long term, mutually reinforcing, and the question is no longer whether they contradict each other but how to achieve environmentally sustainable development. This paper attempts to tackle and explore the issue of sustainable development in India. It also tries to give long term solutions to solve the problems plaguing the system so that sustainable development can be promoted and practiced.

Introduction

Environmental degradation is already affecting millions in Third World, and likely to severely reduce human well-being all across the globe within the next few generations. India has been witnessing a blinding pace of growth and development in recent times. But this growth has raised concerns from sundry quarters as regards its basic texture and health. Environmental degradation is very often caused by poverty, because the poor has no option but to exploit local resources for short-term survival. The interlinked nature of most environmental problems is such that environmental degradation ultimately affects everybody, although poorer individuals/nations may suffer more and sooner than richer ones. In the last few years, it had seen a dramatic transformation in the environment-development debate. The question being asked is no longer, "Do development and environmental concerns contradict each other?" but "How can sustainable development be achieved?" It appears to have gained the broad-based support that earlier development concepts such as "ecodevelopment" lacked, and is poised to become the developmental paradigm of the 1990s. Most people use the phrase "sustainable development" interchangeably with either "ecological sustainable" or "environmentally sound development" [1].

Interpreting Sustainable Development: This interpretation is characterized by:

- (a) "Sustainability" being understood as "ecological sustainability" and
- (b) A conceptualization of sustainable development as a process of change that has (ecological) sustainability added to its list of objectives.

Sustainable development would simply mean "development that can be continued-either indefinitely or for the implicit time period of concern". When development is taken to be synonymous with growth in material consumption—which it often is even today— Sustainable development would be "sustaining the growth in material consumption" (presumably indefinitely). But such an idea contradicts the now general recognition that "*ultimate* limits {to usable resources} exists" [2]. Sustainable Development is understood as "a form of societal change that in addition to traditional developmental objectives, has the objective or constraint of ecological sustainability."

Sustainability: The concept of sustainability originated in the context of renewable resources such as forests or fisheries, and has subsequently been adopted as a broad slogan by the environmental movement. Ecological sustainability means "the existence of the

ecological conditions necessary to support human life at specified levels of well-being through future generations". Since ecological sustainability emphasizes the constraints and opportunities that nature presents to human activities, ecologists and physical scientists frequently dominate its discussion. But what they actually focus on are the ecological conditions for ecological sustainability---the biophysical laws or patterns that determine environmental responses to human activities and humans' ability to use the environment. The major contribution of the environment-development debate, is the realization that in addition to or in conjunction with these ecological conditions, there are social conditions that influence the ecological sustainability or unsustainability of the people-nature interaction.

Evolution of the Concept of Sustainable Development

The term sustainable development came into prominence in 1980, when the International Union for the Conservation of Nature and Natural Resources (IUCN) presented the World Conservation Strategy (WCS) with "the overall aim of achieving sustainable development through the conservation of living resources" [3]. The WCS had really addressed only the issue of ecological sustainability, rather than sustainable development.

Buttel and Gillespie contend that such co-optation has already taken place [4]. Agencies such as the World Bank [5], the Asian Development Bank [6] and the Organization for Economic Cooperation and Development have been quick to adopt the new rhetoric [7]. The absence of a clear theoretical and analytical framework, however, makes it difficult to determine whether the new policies will indeed foster an environmentally sound and socially meaningful form of development.

In contrast to the aforementioned, the currently popular definition of Sustainable Development—the one adopted by the World Commission on Environment and Development (WCED, 1987) [2] is quite brief:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

The critical objectives which follow from the concept of sustainable development are:

- 1. Reviving growth
- 2. Changing the quality of growth
- 3. Meeting essential needs for jobs, food, energy, water and sanitation
- 4. Ensuring a sustainable level of population
- 5. Conserving and enhancing the resource base
- 6. Reorienting technology and managing risk
- 7. Merging environment and economics in decision making
- 8. Reorienting international economic relations

Sustainable development has become a bundle of neat fixes: technological changes that makes industrial production processes

less polluting and less resource intensive and changes that use local non-governmental organizations (NGOs) so as to ensure grassroots participation, agriculture that is less harmful, less resource intensive and yet more productive.

During a United Nations (UN) summit in September 2015, 193 nations adopted Sustainable Development Goals (SDGs), a new set of indicators to shape and measure development for next 15 years. The SDGs – comprising 17 goals and 169 associated targets- aim at taking the global development initiative forward from the Millennium Development Goals (MDGs) adopted in 2000 and cover all possible aspects of development. The leaders are especially determined to end hunger and poverty by 2030. They are also committed to ensure sustainable food production and consumption systems; ensure sustainable management of land and water; scale up renewable energy; build resilient infrastructures and make human settlements more safe and sustainable; and ensure healthy lives, education for all, gender equality and women's empowerment.

What is to be Sustained?

The value of the concept of sustainable development, however, lies in its ability to generate an operational consensus between groups with fundamentally different answers to these questions, i.e., those concerned either about the survival of future human generations, or about the survival of wildlife, or human health, or the satisfaction of immediate subsistence needs (food, fuel, fodder) with a low degree of risk. It is therefore vital to identify those aspects of sustainability that do actually cater to such diverse interests, and those that involve tradeoffs.

In the case of ecological sustainability, a distinction needs to be made between renewable resources, non-renewable resources, and environmental processes that are crucial to human life, as well as to life at large. In the context of sustainable use of renewable resources, it is necessary to go beyond the conventional simplistic notion of "harvesting the annual increment," and take into consideration the dynamic behavior of the resource, stochastic properties and uncertainties about environmental conditions (e.g. climatic variations), the interactions between resources and activities (e.g. between forests, soils and agriculture), and between different uses or features of the "same" resources (e.g., tree foliage and stem wood).

Perspectives and Approaches towards Achieving a Sustainable Future

Poverty Eradication and Sustainable Livelihoods: Poverty and a degraded environment are closely inter-related, especially where people depend for their immediate environment. Restoring natural systems and improving natural resources management practices at the grass root level are central to a strategy to eliminate poverty. Poverty magnifies the problem of hunger and malnutrition. The problem is further compounded by the inequitable access of the poor to the food that is available. It is therefore necessary to strengthen the public distribution system to overcome this inequity.

While conventional economic development leads to the elimination of several traditional occupations, the process of sustainable development, guided by the need to protect and conserve the environment, leads to the creation of new jobs and of opportunities for the reorientation of traditional skills to new occupations.

Literacy and a basic education are essential for enabling the poor to access the benefits offered by development initiatives and market opportunities. Basic education is therefore, a pre-condition for sustainable development.

Gender Equality, Sustainable Farming and Food Security: The goal of achieving gender equality and empowering women and girls under Goal 5, of Sustainable Development Goals (SDGs) adopted during United Nations (UN) summit in September 2015. Women play a key role in rural agriculture. When they have equal access to credit, land tenure, farm inputs and markets, local agricultural production increase, improving food availability for all, thus making a critical contribution to food security and setting a path towards zero hunger.

Another important goal is making agriculture sustainable, which is essential for future food security as well as for achieving several of the other sustainable development goals, such as ending hunger and improving nutrition, especially in the face of climate change. Climate change, land erosion and water scarcity are affecting food production, especially in developing countries. The rural poor, most of whom depend on agriculture, are disproportionately hit by prolonged droughts, frequent floods, more intense storms and other factors associated with climate change. They are less resilient to cope with the consequences of weather shocks and environmental degradation. Poverty and hunger cannot be eradicated without addressing these vulnerabilities. Current agricultural practices are main causes of environmental risks. It is contributing to almost a third of the global greenhouse gas emissions, causing loss of biodiversity and putting high demand on scarce water resources.

Adapting to climate change and building resilient agricultural and food security systems are the need of the hour. Globally, rainfed agriculture, which supplies two-thirds of the world's food, is practiced on 83% of cultivated land. In water scarce regions, rainfed agriculture is practiced on more than 95% of the crop land. Since rain-fed agriculture is particularly susceptible to weather, governments need to help small landholders boost productivity in a sustainable manner so that they become commercial viable in a competitive world. For this, governments must ensure better training via agricultural extension services, improved irrigation and water harvesting facilities, and easy access to improved seeds, fertilizers, credit and other inputs. Social protection also has a pivotal role to play in safeguarding and sustainable livelihoods in case of prolonged bad weather or natural disasters.

Sustainable agriculture must also nurture healthy ecosystems and support sustainable management and use of land, water and natural resources while ensuring food security for all.

Changing and Unsustainable Patterns of Consumption and Production: With increasing purchasing power, wasteful consumption linked to market driven consumerism is stressing the resource base of developing countries further. It is important to encounter this through education and public awareness. In several areas, desirable limits and standards for consumption need to be established and applied through appropriate mechanisms including education, incentives and legislation.

Several traditional practices that are sustainable and environment friendly continue to be a regular part of the lives of people in developing countries. Those need to be encouraged rather than replaced by more 'modern' but unsustainable practices and technologies.

Subsidies often lead to wasteful and sustainable consumption by distorting the value of a resource. All pricing mechanisms must be evaluated from a sustainable development point of view.

Protecting and Managing the Natural Resource Base of Economic and Social Development: The integration of agriculture with land and water management, and with ecosystem conservation is essential for both environmental sustainability and agricultural production.

An environmental perspective must guide the evaluation of all development projects, recognizing the role of natural resources in local livelihoods. This recognition must be informed by a comprehensive understanding of the perceptions and opinions of local people about their stakes in the resource base.

To ensure the sustainability of the natural resource base, the recognition of all stakeholders in it and their roles in its protection and management is essential.

Water governance arrangements should protect ecosystems and preserve the ecological integrity of all natural water bodies and their catchments. This will maintain the wide range of ecological services that healthy ecosystems provide and the livelihoods that depend upon them.

Biomass is, and will continue for a long time to be, a major source of fuel and energy, especially for the rural poor. Recognizing this fact, appropriate mechanisms must be evolved to make such consumption of biomass sustainable, through both resource management and the promotion of efficient and minimally polluting technologies, and technologies which will progressively reduce the pressures on biomass, which cause environmental degradation.

On Forests and Climate Change: Estimates show that even though the forest cover will begin increasing from 2020, the primary forest cover will continue to recede. Since biodiversity is concentrated in primary forests, an increase in the total forest cover can still mean a continual loss of biodiversity in forest ecosystems. The Goal 15 thus aims to "sustainably manage forests", along with protecting, restoring and promoting sustainable use of terrestrial ecosystems; combating biodiversity loss. According to the Convention on Biological Diversity (CBD), about 40% of the world's degraded lands are found in areas with the highest incidences of poverty.

Goal 13, which recognizes the need to build capacity for tackling climate change in Least Developed Countries and Small Island Developing States (SIDS), emphasizes on mobilizing US\$100 billion in climate finance annually by 2020 to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation.

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The traditional approaches to natural resource management such as sacred groves and ponds, water harvesting and management systems, etc., should be revived by creating institutional mechanisms which recapture the ecological wisdom and the spirit of community management inherent in those systems.

There is need to establish well-defined and enforceable rights (including customary rights) and security of tenure, and to ensure equal access to land, water and other natural and biological resources. It should be ensured that this applies, in particular, to indigenous communities, women and other disadvantaged groups living in poverty.

Conclusion

We should accept the existence of structural, technological and cultural causes of both poverty and cultural causes of both poverty and environmental degradation; develop methodologies for estimating the relative importance of and interactions between these causes in specific situations; and explore political, institutional and educational solutions to them. We should understand the multiple dimensions of sustainability, and attempt to develop measures, criteria and principles for them. We should explore what patterns and levels of resource demand and use would be compatible with different forms or levels of ecological and social sustainability, and with different notions of equity and social justice.

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