Book Review

Ecological Meltdown: Impact of Unchecked Growth on the Earth's Natural Systems

Asheem Srivastava and Suvira Srivastava. 2015. Second Edition.
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Population explosion has been a cause of concern from long time for international organizations, governments, economists, environmentalists, conservationists, and civil society organizations. This book revisits the repercussions of unprecedented growth of human population and their actions on ecosystem in the light of present and futuristic scenario. It warns of an impending ecological meltdown and scrutinizes the causes behind it. The prominent factors identified by the authors responsible for this includes growing human population, diversion and degradation of natural ecosystems, changing consumption patterns, plummeting conservation funding, ineffective management, weak international biodiversity-related conventions, and never-ending conflicts. The authors underline that humanity has overdrawn the ecological budget, ignoring the sustainability of the environment. Due to their myopic nature, humans have failed to realize that there is no financial or technical bailout when the natural process becomes irreversible.

The book reinforces the key findings of the millennium ecosystem assessment report that human beings have made unprecedented changes to the ecosystem. Further, it is argued that these will continue to enhance, unless "we" amend our actions and behaviour. The contradictions between the process of economic development and sustainable development have been clearly outlined. Governments promote economic development but the path used to achieve that deteriorates the quality of life by destroying the natural resources which forms the very basis of sustainability. The ongoing pattern of economic development has miserably failed to value the biological resources. Such kind of development makes the natural ecosystems, infrastructure, and population vulnerable to natural and man-made disasters. The book highlights the invalid assumption that technology has a solution to every problem and natural systems can be replaced with artificial ones.

The author points to the ironic fact that the developing and least developed countries are exploiting resources in order to overcome the problem of poverty and promote development without curtailing their population growth rate. Continuous growth of human population and unsustainable exploitation of resources has an impact on the environment, thereby, triggering the vicious cycle of poverty, hunger, and destitution, that is, 'poverty breeds poverty trap'. Another important fact is that there is huge demand for products such as wood fuel, medicinal plants, fruits, etc., but the local people receive a meagre sum from the sale of these products. The major share of profits are being siphoned off by middlemen and traders. Local people have failed to realize that the benefits from such extraction is far less than the cost being imposed in terms of environmental degradation. Even international agreements, national laws,

policies, and regulations does not matter to them as they struggle everyday for survival. In stark contrast, people of developed countries are consuming more amount of resources than their counterparts in low income countries, thereby creating more ecological footprint on the ecosystem. The rate of consumption of grains by people in rich countries is nearly four times that in poor nations. Thus, the socio-economic status has an equal or more detrimental impact on the environment.

Forest resources are being exploited not only to meet the local demand but also to support the demand of consumers from far-fetched places. This is precisely the reason that ecological footprints do not coincide with the geographical location. Forests are also used as grazing ground by livestock owners as crop residues are being used to substitute for fuelwood. Decisions concerning the management of biodiversity and forestry are guided by political, economic, and other pressures instead of scientific principles. The authors note that an attempt has been made in terms of protected areas (PAs) to preserve the existing biodiversity and natural habitats but they suffer from lack of resources, trained personnel, and inefficient management plans. PAs have been seen as impediment to economic growth and hence, resulted in creation of 'paper park syndrome'. Priorities of developing countries have been human centric and have used the budget for defence, infrastructure, irrigation, food, heath, etc., without considering its ecological implications. On the other hand, the developed countries' contribution for conservation of the environment is far less than what is needed. Also, the conservation gains from global efforts are nullified by industrial and agricultural development, destruction by war and civil disorder, illegal trade in biodiversity and man-animal conflicts.

The author with the help of data clearly depicts the failure of CITES in curbing the illegal trade in wildlife. The underlying fact is that poverty is not solely responsible for illegal trade rather it is the continuous increase in demand which promotes illegal trade. Discussions related to environmental agreements and conventions reveals that none of the treaties are binding as the state possesses the sovereign right to exploit the resources. Thus, the effectiveness of the existing biodiversity-related regimes by the contracting parties largely depends on sincerity, mutual trust, openness, cooperation, and assistance by the member states. The book supplements its argument with data but majority of the data is available till the year 2005. It becomes crucial to augment the datasets in order to accurately analyse the current scenario and forecast the future.

Apart from exploitation of forest and wildlife, the book also focusses on the dependency of countries on fossil fuels as a source of energy. The usage of fossil fuels have impacted the ecosystems to such an extent that even if we stop all fossil fuel burning, it will still take several thousand years to restore the normal health of the ecosystem. The authors emphasized both on the need to make transition from conventional to non-conventional sources of energy and also on the shortcomings in making such a transition. The cost of renewables is still prohibitive and the technology transfer and national capacity enhancement are an expensive and time-consuming process. Even the rich countries are seized with the dilemma of opting between green energy policies and conventional ones. Thus, countries will continue to use non-renewable sources irrespective of climate consequences which makes it highly unlikely that developed countries will be able to achieve their carbon emission reduction targets. Also, energy demand will continue to expand as the countries will climb up the development ladder.

In order to provide the complete picture of exploitation of resources, there is also a need to highlight the food-feed-fuel competition which was not adequately emphasized in the book. As income grows, people change their consumption basket from plant to animal protein. Animal stomach is an inefficient convertor of protein. In order to provide the same amount of protein, indirect consumption demands more amount of cereals than direct consumption.

This is precisely the case with developed countries like US where per capita grain requirement is much higher. This has a dual impact—on one hand, it reduces the availability of food grain for poor population and on the other hand, it results in more and more conversion of forest land into agricultural land.[1] The food crisis brings to light another component in food–feed competition, i.e., fuel. Countries like US diverted corn from consumption to fuel production and have declined their exports of corn. Such decline raised the price of corn and had significant impact on those countries which are completely dependent on imports.[2] Thus, shift from non-renewables to renewables energy should be carried out by following the holistic approach.

For ecological restoration, the authors recommend ecological revolution whereby a balance is struck between people and the ecosystem. The revolution needs to be compressed into few decades. Rich nations should bring about change in their consumption behavior, keeping in mind the limits of the ecosystem while biodiversity rich poor countries need to curtail their population growth rates. There is also a need to recognize that focus should not be on energy per se but the work which energy performs and the services it provides. The new paradigm promotes efficiency in energy management and energy saving measures. Such energy saving measures are equivalent to bringing an increase in energy supply. The book clearly underlines the need to undertake reforms at the international level to deal simultaneously with economic and ecological aspects in ways that allow the world economy to stimulate the growth of developing countries while giving greater weight to the ecological concerns. There is also need to have a strategy for controlling the demand of the consumers, otherwise trade, illegal or legal, will continue no matter how stringent national laws and MEAs are. They suggested the merger of five major biodiversity related multilateral agreements (CBD, WHS, CITES, CMS, and RAMSAR) as money and time saved through merger can be used in rejuvenating the dying ecology. The crucial recommendation of the book is to integrate environmental concerns in HDI and thereby defines the concept of 'sustainable development index'. Global civil society needs to get organized, coordinate their work across disciplines, divert their resources, energy and technology in maintaining the population at the sustainable level at the earliest.

The book fails to recognize the predominance of rich nations in international agreements which promote their economic agenda at the expense of the poor countries. There is also a need to examine how the formation of organizations such as WTO made environmental reforms in individual countries far more difficult. These factors also contribute to the failure of environmental agreements.

Given the worsening situation of ecosystem, the book will be an important tool for policy makers and institutions, concerning biodiversity and the ecosystem, to formulate policies for economic development which are in synchronization with the sustainability of environment. It is equally useful for conservationists, scientists, researchers, and students, by providing them a glimpse of the deteriorating condition of ecosystem as a result of past and current actions of human beings. They bring to light the loopholes in various conventions, reasons for the delay in achieving targets, and also suggest solutions in order to bridge the gap between targets and actions. Thus, the book is a wake-up call that human actions are setting the stage for an eventual sixth extinction where other biological species will disappear first, followed by humans.

1 Yotopoulos (1985)
2 Banerjee (2011)

References

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