

# ECOLOGICAL MELTDOWN

IMPACT OF UNCHECKED HUMAN GROWTH  
ON THE EARTH'S NATURAL SYSTEMS



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human growth on the earth's  
natural systems

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The Energy and Resources Institute

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ISBN 978-81-7993-278-0

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**Published by**

TERI Press

The Energy and Resources Institute

Darbari Seth Block

IHC Complex, Lodhi Road

New Delhi – 110 003

India

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**Web** [www.teriin.org](http://www.teriin.org)

Printed in India

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# Preface

**T**he current economic recession is considered the worst nightmare to hit humanity. It has ruined some of the most indestructible companies of the world. Now we are on the threshold of a graver catastrophe, the ecological meltdown: footsteps of which are getting louder with every passing day. The difference between the economic recession and the one mentioned in the book is that there are ways and means to recover from a financial crisis. However, the picture that emerges from the exhaustive analysis of international data drawn from the most reliable sources clearly indicates that we have reached a point of no return: humanity has gained access to the gateway of extinction where the other biological species will disappear first, followed by humans.

This book is a wake-up call and has been written keeping in view the impending ecological collapse due to the expanding human population, reduced funding support to environmental conservation and the impact of wars and civil disorders, as well as the economic crisis. It analyses changes in the global scenario during the twentieth and twenty-first centuries and how humans have, for their personal survival and growth, set aside scientific principles, disregarding the carrying capacity of other living forms on this earth.

## **The beginning of the end**

The book reinforces the key findings of the Millennium Ecosystem Assessment report of the UN, which states that humans have made unprecedented changes to the ecosystems and this pressure will increase globally in the coming decades, unless human attitudes and actions change. To make matter worse, the loss of services

derived from ecosystems is triggering a vicious cycle of poverty, hunger and destitution, which has become a significant barrier to the achievement of the Millennium Development Goals (MDGs). The chapters analyse and underline how the loss of biodiversity and natural habitats is attributed to the unprecedented growth of human population, consumption pattern, and survival strategies that have led to irretrievable conversion of forests to agriculture and urban land, slow poisoning of forests and protected areas, establishment of paper parks and green islands, and global decline as well as local extinction of many wild animals and plants. The authors argue that sinking conservation finance, ineffective management, toothless international biodiversity conventions and continued civil wars will intensify the destruction and degradation, as humans add 70–80 million new mouths every year, mostly in Africa and Asia, the biodiversity giants of the world. The authors challenge the technical competence and financial prowess of humans to replace natural ecosystems and wild species with artificial ones, without any side effects.

### **Worse is yet to come**

The authors remind the global civil society and national governments that they are equally responsible towards the conservation of biological diversity, and the ongoing demand-driven strategy is a sure recipe to environmental disaster, poverty, and misery. They exhort them to make adjustments in accordance with the limits of ecosystem provisioning services and to preserve the remaining natural ecosystems in near natural conditions. If not, the book cautions, we must prepare ourselves for the environmental meltdown, which will be worse than the economic meltdown.

The speedy changes in species composition and quality do not make evolutionary sense and selective removal counteracts the natural selection process and imposes genetic handicap. This eventually endangers the existence of species rather than its evolutionary transformation. With the qualitative and quantitative decline, degradation sets in once the tolerance limit of natural

selection is crossed. Most of our modified natural ecosystems and species are degenerated versions of the superior types that once existed. This remainder is now expected to supply an amount of wood, trophies, meat and other services, the demand for which exceeds the possible yield, even under the best management. Under the current circumstances, foresters and conservation biologists should avoid 'expectation overload' and make no false promises to the politicians and development planners.

The chapters in the book mention that the current economic growth is at the expense of the natural systems, and the present forests and protected areas are insufficient to meet the future needs of the growing human population. This argument is based on the comprehensive analysis of the lethal impacts of wood fuel removal and grazing by livestock, as these are largely responsible for the slow poisoning of forests and protected areas. In a world where man has developed the technology for tapping energy from the sun and water, it is shocking to note that wood fuel consumption is on the rise and close to 2 billion cubic metres of wood fuel is required each year for cooking, heating, and other purposes, particularly in the poor developing countries of Asia and Africa. Demand for domestic energy is clearly one of the most critical issues facing the forest sector in the twenty-first century. Wood fuel and grazing pressures are like sleeping giants with the capability of striking with impunity, which no one can predict with certainty. The warning signs are explicitly written: *reduce the number of human and livestock; or else be prepared to face the slow but certain extinction of wild biodiversity from natural forests.*

Many protected areas designated only for conservation of flora and fauna suffer from the 'paper park syndrome' due to lack of adequate management and financial support. A large number are undemarcated, unprotected, poorly funded, and grossly mismanaged. Many protected areas are perceived as impediments to economic growth and development; areas of high opportunity cost and green islands surrounded by sea of humanity. Growing human apathy has not spared even the protected areas listed as World Heritage property by UNESCO because of their

outstanding universal value. Wars, civil strife, poaching, mining and other undesirable acts severely impact the integrity of many such properties.

The insatiable hunger of humans is responsible for the emergence of wildlife trade, which was once an obscure preoccupation limited to local and indigenous communities, who relied on locally obtained food, medicines, and other basic needs. Demand for natural products and derivatives surged with the rise in income, side effects of allopathic medicines and cosmetics, and faith in aphrodisiacal properties of wild plants and animals. Eighty per cent of the human population today relies on animal-and-plant based products and a substantial part of the trade is illegal and has the capability of wiping out species in the shortest possible time. If not checked, the trade may lead to 'empty forest syndrome', where we will be left with forests and protected areas without the key species.

### **Finally, the way forward!**

The process of degradation and species loss can be slowed down through effective implementation and enforcement of multilateral environmental agreements (MEAs) and ensuring adequate and timely funds for conservation. Unfortunately, many of the existing 500 international environmental treaties are seen as paper agreements only. Millions of dollars of contributions from state parties are spent on the secretariats, meetings and conferences, travel of staff and producing reports. Decisions and resolutions are adopted but implementation and enforcement have been weak, largely driven by political and economic consideration rather than scientific parameters. Both developed and developing countries are guilty of violating the legal and other norms in favour of economic development. The book describes the current status of five major biodiversity-related multilateral environmental agreements (CBD, WHS, CITES, CMS, and Ramsar) and suggests that there is an urgent need to merge these agreements. The money and time saved through this merger will also help in resuscitating the dying ecology.

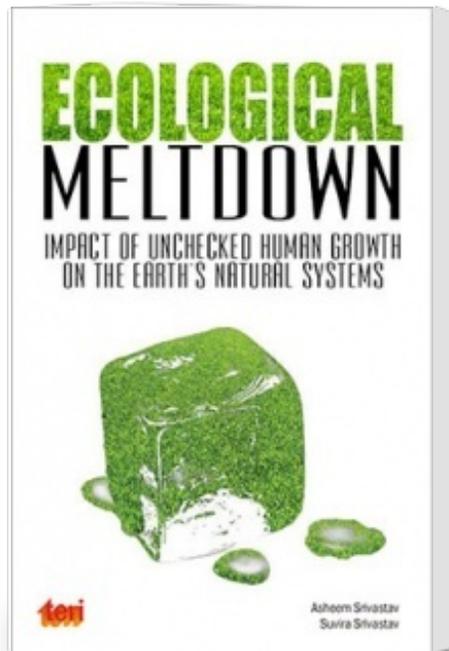
## *Preface*

Effective management of forests and protected areas requires long-term and assured financial support, which greatly depends on national governments and international funding agencies. Evidences, direct and indirect, suggest that forests and protected areas fail to receive adequate and assured funds, particularly in developing countries. There is a strong feeling that the current spending on biodiversity and protected area conservation is grossly inadequate. Setting aside all rhetoric and commitments, many nations, including developing countries, continue to increase their military budget knowing well that the ecological impacts of war, though not assessed deliberately, far exceed any other damage caused to ecosystems in a limited time frame. Unfortunately, humanity is still not willing to bring to justice, people responsible for ecocides.

The future does not hold many promises for ecological restoration. The economic depression will deepen the ecological crisis as more funds will be required for public investment in infrastructure and essential services such as roads, irrigation, water harvesting, fertilizer, storage, fishing harbour, health, education and credits. This means further decline in conservation funds, more vulnerability to environmental disasters, and consequential ecological shocks. A 10%–20% decline in global military budget can substantially improve the global conservation scenario but this is a wishful thinking.

The book goes on to add that the concept of sustainable development, conceived by the Brundtland Commission needs to be revisited and the nations have to devise mechanisms for developing indicators for species conservation. If sustainability has to succeed, then we need, along with the Human Development Index, the plant and animal development index as well. Unless these three are adopted at the national and international levels, the chances of human survival will be in peril. For, we are now entering a point of no return as far as ecological meltdown is concerned, so it is actually now or never. Either we agree to a paradigm shift, or we will be one species that will trigger the

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Publisher : TERI Press

ISBN : 9788179932780

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Type the URL : <http://www.kopykitab.com/product/6084>



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