

Foreword by  
**Lord Meghnad Desai**

# ENVIRONMENT CHRONICLES

The best of **TerraGreen**

anuradha dutt ■ arani sinha ■ archana pande ■ bhaskar hazarika ■ darryl d'monte ■ dilip  
d'souza ■ faisul yaseen ■ georgianne nienaber ■ guy noronha ■ john s moolakkattu ■  
julian crandall hollick ■ jyotsna singh ■ leena srivastava ■ malini shankar ■ nitin jugran  
bahuguna ■ r akhileshwari ■ r k pachauri ■ rajju gusain ■ rakesh agrawal ■ ramesh  
menon ■ rishu nigam ■ ritu gupta ■ roshni sengupta ■ sahana ghosh ■ sanjay sondhi  
■ subrat kumar sahu ■ sucharita sengupta ■ suparna mukherji ■ sushmita malaviya  
anuradha dutt ■ arani sinha ■ archana pande ■ bhaskar hazarika ■ darryl d'monte ■ dilip  
d'souza ■ faisul yaseen ■ georgianne nienaber ■ guy noronha ■ john s moolakkattu ■  
julian crandall hollick ■ jyotsna singh ■ leena srivastava ■ malini shankar ■ nitin jugran  
bahuguna ■ r akhileshwari ■ r k pachauri ■ rajju gusain ■ rakesh agrawal ■ ramesh



The Energy and Resources Institute

# ENVIRONMENT CHRONICLES

The best of **TerraGreen**



# ENVIRONMENT CHRONICLES

The best of **TerraGreen**



The Energy and Resources Institute

© The Energy and Resources Institute 2011

ISBN 978-81-7993-358-9

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

All export rights for this book vest exclusively with The Energy and Resources Institute (TERI). Unauthorized export is a violation of terms of sale and is subject to legal action.

**Published by**

The Energy and Resources Institute (TERI)

TERI Press

Darbari Seth Block

IHC Complex, Lodhi Road

New Delhi – 110 003

India

*Tel.* 2468 2100 or 4150 4900

*Fax* 2468 2144 or 2468 2145

India +91 • Delhi (0) 11

*E-mail* [teripress@teri.res.in](mailto:teripress@teri.res.in)

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

Printed in India

# Foreword

## A World Worth Preserving

We have been facing the challenge of sustainability for an ever better life for almost fifty years now. The economists began to formulate theories and policies that guaranteed regular GDP growth year on year for rich nations, and as much employment as each economy could manage only in the aftermath of the Second World War. As nations gradually liberated themselves from colonialism, leaders of every poor country promised development, which would industrialize the nation and eliminate poverty. It seemed that removal of poverty and unemployment and the prospect of an ever-growing economy were all within reach.

It was in this context that in the early 1960s Rachel Carson wrote *Silent Spring*—a book that made its readers aware that the side effects of modern technologies were far greater than what one had fathomed. Carson described the loss of bird life as a side effect of the use of pesticides in modern agriculture, which eliminate the insects birds feed on.<sup>1</sup> A decade later, in 1972, the Club of Rome commissioned a book titled *The Limits to Growth*, in which all were warned that the non-renewable resources were finite in supply, and will ultimately run out.<sup>2</sup> That very year, the first UN Environmental Summit was held at Stockholm, Sweden. As a result, we gradually began to realize that consumption, which was seen as the driver of full employment and growth, was an activity that also generated pollution, or transformed ‘goods into garbage’, as I had once described.<sup>3</sup>

*Silent Spring* made us realize that our actions had failed to anticipate the consequences; a sort of externality, which had not been detected by policymakers. The Club of Rome’s contention was also taken to heart, but less so by economists, who argued that alternative possibilities always existed and

---

<sup>1</sup> Carson R. 1962. *Silent Spring*. New York: Houghton Mifflin.

<sup>2</sup> Meadows D H, Meadows D L, Randers J, *et al.* 1972. *The Limits to Growth: A report for the Club of Rome's project on the predicament of mankind*. Signet.

<sup>3</sup> Desai M. 1976. *Consumption and Pollution* in *The Consumer Society*, pp. 23–36, edited by I R C Hirst and W D Reekie. London: Tavistock Publications. [Also reproduced in Desai M. 1995. *Selected Essays of Meghnad Desai Vol 2*. Edward Elgar. 175–184pp.]

that there were no finite limits to resources. It was the tripling of oil prices that made us aware that while resources might not be finite, they could become very expensive. Thus, our energy needs had to be managed better to prevent inflation from becoming a permanent feature in our lives.

It was against this background that the Brundtland Commission published its report on sustainability. The Brundtland definition of sustainability emphasized the inter-generational framework by telling us that we should leave the world in as good a shape for our children as we inherited it from our forefathers. But, as Rajendra K Pachauri reminds us in his article in this excellent volume, sustainability is not just a forward-looking inter-generational problem. It is perceived better as a backward-projecting idea of us inheriting the earth from our children and grandchildren. It is what economists would call a Recursive Dynamic Programming Problem.

Why is it, as Pachauri reminds us, that “. . . environmental protection has almost always clashed with developmental initiatives”? In my view, the answer lies in an incorrect definition of ‘income’. The theoretically correct definition of ‘income’ is the one provided by John Hicks, the Nobel Laureate in Economics, in his classic work *Value and Capital* way back in 1939<sup>4</sup>. After stating that concepts like income and saving were ‘not logical categories at all; they are rough approximations, used by the businessman to steer himself through the bewildering changes of situation which confront him’, Hicks defines ‘income’, as:

“(W)e ought to define a man’s income as the maximum he can consume during a week and still expect to be as well off at the end of the week as he was at the beginning.”

This definition, though for an individual, is perfect for the collective as well. The maximum we can consume without impoverishing ourselves is what sustainability is all about. If we deplete our stock of resources without replacement, then, even if we record a positive rate of GDP growth, we shall be overestimating. Just as an individual has to conserve his assets so that his maximum consumption leaves him in the same state at the end of the period as he was before, all of us should preserve our stock of natural and manmade assets, while extracting maximum growth of income from them.

---

<sup>4</sup> Hicks J. 1939/1946. *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory*. Oxford: Clarendon Press. 171–172pp.

Unfortunately, we do no such thing. We underprice our assets—even treating them as free on many instances. We do not allow for depreciation and replacement—even of physical, ‘man-made’ assets, let alone natural assets. Also, by ignoring Carson’s admonition about the unintended consequences of our actions, we generate pollution, which has a negative output value.

The pervasive evidence we now have about the prospect of climate change has brought the conflict between current production/consumption and future needs to a climax. One way of looking at the issue is by considering the problem of global warming. This approach treats the earth as a single unit, and records the negative influence of development as given by the increase in average temperature. We have ample proof that global warming is a ‘manmade’ phenomenon that is caused by emissions of CO<sub>2</sub> and other greenhouse gases.

Even if we ignore the naysayers and the critics of global warming, we have to admit that the urgency to do something about it has not struck the world—or rather the inter-state system—as much as many believe it should have. The failure at Copenhagen in 2009 was striking when contrasted against warnings that we only had so many weeks left to save the world.

We may yet reach an agreement at Durban, but I have my doubts. The reasons are not just political in nature or due to ignorance. They are systemic. There is no unanimous agreement on how we value nature. Our stock of assets represented by the environment is a heterogeneous collection of flora and fauna, water bodies, species of insects and sea life, air and energy resources, and so on. There is no single value we can arrive at, which will tell us the size of our environment in dollar terms. If we did, then we could have followed Hicks’ definition of income, and work out the maximum amount we can consume.

But even if we could, a problem would have arisen from the fact that certain countries value certain resources more than others. This is evident in the conflict between developing nations and the rest on the need to burn coal to power industrialization to facilitate removal of poverty. There is no agreement on the relative values of different kinds of natural assets—for instance, how valuable are bird species as compared to preserving coal mines—or the trade-off between nature and development. The failure at Copenhagen was a dramatic illustration of this malaise.

The alternative is not to abandon the search for a better world, but to redefine the problem. Global warming is an aggregative, super-macro concept. What we are experiencing is climate change at the local level. Climate change is occurring across the world, but it takes different local forms. People do not experience

global warming; what they do encounter is climate change. Unpredictability of climatic variation has been increasingly experienced during the last decade—be it on the Mississippi, in Queensland or during the tsunami in Japan.

It is when climate change is encountered at the local level that people have to prioritize their needs, and start valuing their environment. *Environment Chronicles* comprises many contributions that record our neglect of the negative consequences of development. It also contains accounts of how a little straight thinking can repair the damage that has already been done. These accounts not only pinpoint how deterioration has occurred in many places—in water bodies, in land quality, and so on—but also tell us how determined local efforts can mend the situation.

What we have here is a collection of the myriad ways in which our environment impacts on us, and how we, in turn, impact our environment. There are cautionary tales of damage caused by careless neglect, and optimistic accounts of how we can do better. They talk about small changes that add up to something big.

It is by inspiring us to undertake concerted efforts at redressing the damage we have inflicted that this volume will fulfil its purpose. The task is urgent, and so should be our perusal of the lessons mentioned in the pages that follow.

**Lord Meghnad Desai**

Professor Emeritus

Centre for the Study of Global Governance

London School of Economics, London

# Contents

<i>Foreword</i>	<i>v</i>
<i>Introduction</i>	<i>xiii</i>

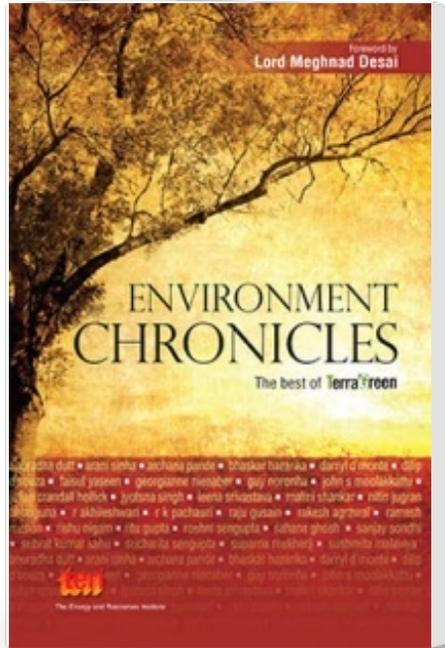
## Sustainable Development

<b>Is Sustainable Development an Oxymoron?</b>	<b>3</b>
<i>R K Pachauri</i>	
<b>Lessons from Akkarbaid</b>	<b>7</b>
<i>Dilip D'Souza</i>	
<b>Can Global Poverty be Eradicated?</b>	<b>11</b>
<i>Leena Srivastava</i>	
<b>Rural India Shining</b>	<b>14</b>
<i>Roshni Sengupta and Sucharita Sengupta</i>	
<b>Dignity Regained</b>	<b>24</b>
<i>Sushmita Malaviya</i>	
<b>Is Development Passé?</b>	<b>27</b>
<i>Darryl D'Monte</i>	
<b>Growing Cotton Naturally</b>	<b>33</b>
<i>Nitin Jugran Bahuguna</i>	
<b>Roadmap to Sustainable Cities</b>	<b>39</b>
<i>Roshni Sengupta</i>	

## Ecology

<b>The Dying Dal Lake</b>	<b>51</b>
<i>Faisul Yaseen</i>	
<b>Death of the Chinar</b>	<b>55</b>
<i>Faisul Yaseen</i>	
<b>Conservation in the South Garo Hills</b>	<b>59</b>
<i>Sanjay Sondhi</i>	

# Environment Chronicles : The Best of TerraGreen



Publisher : **TERI Press**

ISBN : **9788179933589**

Author : **TERI**

Type the URL : <http://www.kopykitab.com/product/6096>



**Get this eBook**