
Towards the end of the first world war it used to be said that the situation in Berlin was serious but not hopeless, whereas in Vienna it was hopeless but not serious. I have often thought that situation as an analogy when discussing India with those who 'know' it only from the press and television, and so can have no appreciation of the capacity of India and its people to survive. In fact, of course, Berlin is really the correct analogy, for India's environmental situation is serious, very serious; but it is not hopeless.

The gravity of the deterioration of land, water, forests, and air, and of the quality of life of a high proportion of Indians, has now been neatly documented by a dedicated group of non-official men and women, who have ransacked official and non-official reports and added personal observations of experts. Their achievement is part of the reason why the situation is not hopeless.

The State of India's Environment 1982—A Citizen's Report, has been produced by the Centre for Science and Environment, a recently-established private organization which operates an information service on science, technology, and development, and whose address is given in the heading to this review. The book is well summed up by the heading to this review. The book is well summed up by the Editors themselves, as 'a dramatic picture in which the misery of the human condition in our country is mirrored by the sweeping degradation of its environment.'

Each of the 11 chapters, dealing with various aspects of the environment, is preceded by half-a-dozen highlights calculated to chill the blood of anyone who cares about the future of India and its people. Here are some examples:

Land—From a quarter to a half of the lands brought under irrigation could go out of cultivation permanently because of soil salinity and waterlogging.

Water—Seventy per cent of all the available water in India is polluted. About 73 million man-workdays a year are lost owing to water-related diseases. In a 156-km stretch of the Hoogly, the average annual yield of fish in the unpolluted zone was 719.25 tonnes as opposed to only 124.94 tonnes in the polluted zones.

Forests—Although the forest department controls 23% of India's total area, only about 10–12% of the country has adequate tree-cover.

Dams—Siltation rates in the reservoirs behind major dams are from three to four times as high as the projected rates. The lifetime of the Tehri Dam may be just 30 to 40 years instead of the proposed 100 years.

Atmosphere—India's premier pollution research institute claims that 60% of Calcutta's residents suffer from respiratory diseases because of air pollution.

'Habitat'—India's urban population has doubled in the last 20 years. In the 30 years from 1951 to 1981, Calcutta and Hyderabad have doubled their populations, Greater Bombay, Madras, and Ahmedabad, have tripled, while Delhi and Bangalore have quadrupled.

People—The rapid conversion of pasture lands into farms of the type shown in the photograph has robbed pastoral nomads, who comprise almost 6% of the country's population, of their resource-base, greatly impoverishing them in the process. Many millions have already become landless labourers.

Health—Every third person who dies in India is a child below the age of five—a victim of a vicious combination of poverty, malnutrition, insanitary environment, and uncivil drinking-water.

Energy—Firewood scarcity in rural and urban areas is increasing dramatically. In mountainous Garhwal, women walk at least seven hours, three out of every four days, to bring back 25 kg of wood each time. In many cities firewood prices have nearly doubled in the last six years.

Wildlife—A little over 10% of India's flora faces extinction; many species may be lost even before their possible value is known to society. Wildlife is threatened by a flourishing illegal trade in wildlife products.

Government—In the last few years a number of environmental institutions have been established but the Government has yet to develop an explicit national policy on the environment.

That is the bad news. But the last of the above items indicates that consciousness of the problem of environmental conservation is growing in India, and there is now a Department of the Environment under the direct charge of the Prime Minister, Mrs Indira Gandhi. This adds greatly to the strength of a movement which began ten years ago with the establishment of the National Committee on Environmental Planning. The latter has sponsored projects on a whole range of subjects, including investigation of the long-term environmental impact of the Idukki Dam in Kerala and the impact of the link between the Beas and Sutlej Rivers. Guidelines have been prepared for mining activities, and another group is undertaking research on the environmental problems of the metallurgical industry.

Of special interest are the efforts which are being made to involve the universities in studies of environmental problems,* which could help to create awareness among young people. Moreover, environmental impact assessments are now frequently required, although there is the problem of lack of expertise to carry them out. One such effort was successful in dissuading the Tamilnadu Government from building a hydroelectric project in the middle of a wildlife sanctuary!

Environmental conservation, which is a directive principle of the Indian constitution, is now the subject of increasing legislation. However, implementation is handicapped because the importance of the subject has yet to penetrate deeply into Government and administration, where many officials continue to neglect environmental factors.

Past failures are officially recognized in the Draft Sixth Five-Year Plan. This gives hope that those charged with the care of India's environment will take up the challenge of the future of India and its people.
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salt marshes, covering the subject but showing only
matter-of-fact interest on the part of the Authors. It does,
however, bring out the distressing fact that these valuable
wetlands are seriously threatened practically everywhere—even where they are legally or officially protected.

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Long-distance Water Transfer. Edited by ASIT K. BISWAS,
ZUO DAKANG, JAMES E. NICKUM & LIU CHANGMING.
Tycooly International, Dublin, Ireland: xv + 417 pp.,
71 figs, 24.5 x 17 x 2 cm, stiff paper cover, £17.75, 1983.

Water is an essential component for human survival
which, seen as an environmentally 'clean' and renewable
resource, has been intensively exploited during the past
two decades. Severe droughts in many regions of the
world, the increasing costs of thermal power, and
accelerated industrialization within developing countries,
provided the impetus for water developments. Food and
energy self-sufficiency are perhaps the most important
objects for any nation, not least the countries of the
Third World; yet increasing water pollution imposes
growing management problems. A fundamental impedi-

ments for long-distance water-transfer in China which, when carried out, will
certainly be one of the largest water projects ever
undertaken in the history of Mankind.

Unlike the north-to-south transfers of North America
and the Soviet Union, where both the exporting and
importing regions are sparsely populated and have only
limited industrial or agricultural development, the
Chinese proposals will affect densely-populated indus-
trial and agricultural centres. Nevertheless, it is perhaps
surprising that important water-transfer schemes such
as the California aqueduct, USA, and the planned
2,500-km-long Ob–Amu-Darya transfer in the Soviet
Union, are not examined in detail. Instead, we have
rather brief discussions of past, present, and planned,
water-transfer projects in Egypt, India, Japan, and
Texas, USA.

Despite the lack of detailed evaluations, the first part of
the book emphasizes the need for the balanced planning
of any proposed transfer schemes. China's proposals
involve the south-to-north transfer of water from the
Chang Jiang to the Huang-Huai-Hai Plain, but the
extensive discussion presented by the forty-five contribu-
tors lacks adequate editorial control: basic descriptive
information is duplicated, much of the discussion is
repeated, and the individual papers do not appear to be
organized in any meaningful way. Nevertheless, the
'Chinese Experience' contains a large amount of valuable
hydrological and ecological data, and raises many
questions pertaining to the assessment of economic and
environmental values. It is recognized that the project will
have a tremendous impact upon the natural and social
environments, and on the productive activities of society.

The diversion of water will alter the riverine, flood-
plain, delta, estuarine, and even near-shore, habitats not
only within the yielding drainage basin but also within the
receiving basin. In the Huang-Huai-Hai Plain, one special
concern is for the salinization of soils, and salt-water
intrusion in the Chang Jiang estuary has already affected
industrial and agricultural production in Shanghai. For
nearly five-thousand years, dams have been constructed

probably no other country has produced a report to
match this one, which is soundly based and has an
excellent annotated list of sources for each chapter; it is
also well illustrated with charts, diagrams, and photo-
graphs. There may be some weaknesses in the Report, but
it provides a sound base on which to build successive
editions.

PETER F. R. JACKSON
Haut Verger, 1171 Bougy-Villars, Switzerland.

Saltmarsh Ecology, by STEVEN P. LONG & CHRISTOPHER
F. MASON. Blackie, Glasgow & London, UK: 160 pp., figs
& tables, 20 x 14.6 x 1 cm, paperback [no price indicated],
1983.

This little book is a good, brief summary or 'state-of-
the-art' treatment of the distribution, ecology, dynamics,
and importance, of salt marshes—ostensibly of the world,
primarily of England. The writing is uninspired, but
reasonably clear—except for, in some chapters, an undue
dependence on mathematics and pseudo-mathematics.

The book is amply illustrated with diagrams, tables,
maps, drawings, and photographs, though many of those
last are badly reproduced.

This is neither an elementary nor a popular book, but
will be useful for advanced students and professional
ecologists. Others may find it dull or hard reading. The
subject is broadly covered, though some topics are only
briefly treated. The last chapter is on the conservation of
salt marshes, covering the subject but showing only
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Long-distance Water Transfer focuses upon the econ-
omic and environmental issues associated with large-scale
artificial mass-transfers of water from a water-surplus to a
water-deficient region in order to further the economic
development of the latter, mainly through agricultural
and industrial development. Such transfers are achieved
by diverting the course of a river, or by constructing a
large canal or pipeline which could carry a significant
portion of the available water. This book is a direct result of
discussions on China's water-transfer plan between an
international team of experts, Academia Sinica, and
appropriate Chinese water management agencies. It seeks
to present generalized conclusions from case-studies
which could be used as broad guidelines for other
devellopments.

The first five chapters outline the general consider-
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The State of India's Environment 2019 in Figures is an exclusive data-driven analysis of major developmental and environmental sectors. The datasets can be used by the media to investigate compelling stories, ask better questions to policymakers to drive them to come up with better policies for sustainable development agenda. SoE 2019 in Figures is an annual quantified statement of environmental statistics and analysis put together by Down To Earth magazine, which Centre for Science and Environment (CSE) helps publish. While our annual State of India's Environment in print is a descriptive mining, environment, sustainability, India. Copyright: Attribution Non-Commercial (BY-NC). Download as PDF, TXT or read online from Scribd. Flag for inappropriate content. Download. save


FOREWORD

This State of India's Environment report began by chance. It also began with a question. In early 2004, we had visited Nimmalapadu in Andhra Pradesh where tribals had fought and won a significant battle against mining by a big corporation. The first State of India's Environment report, published in 1982, had built the foundations of India's green concern. It had provided us with the insights to understand why a poor nation as ours needed to care for its environment.