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THE WORLD WATCH READER

ON GLOBAL
ENVIRONMENTAL
ISSUES

EDITED AND WITH A FOREWORD BY
LESTER R. BROWN

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THE
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READER
on
Global
Environmental
Issues

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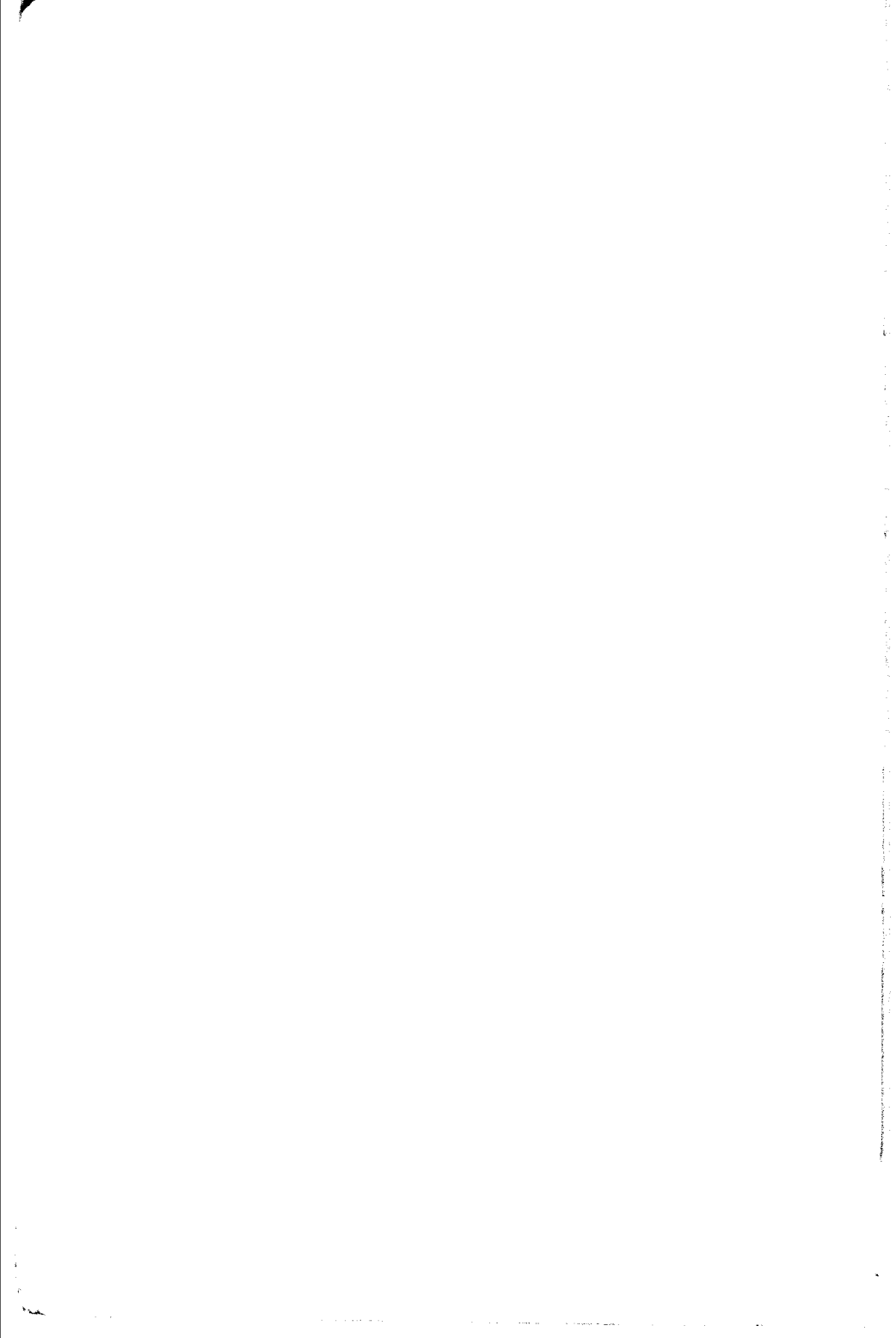
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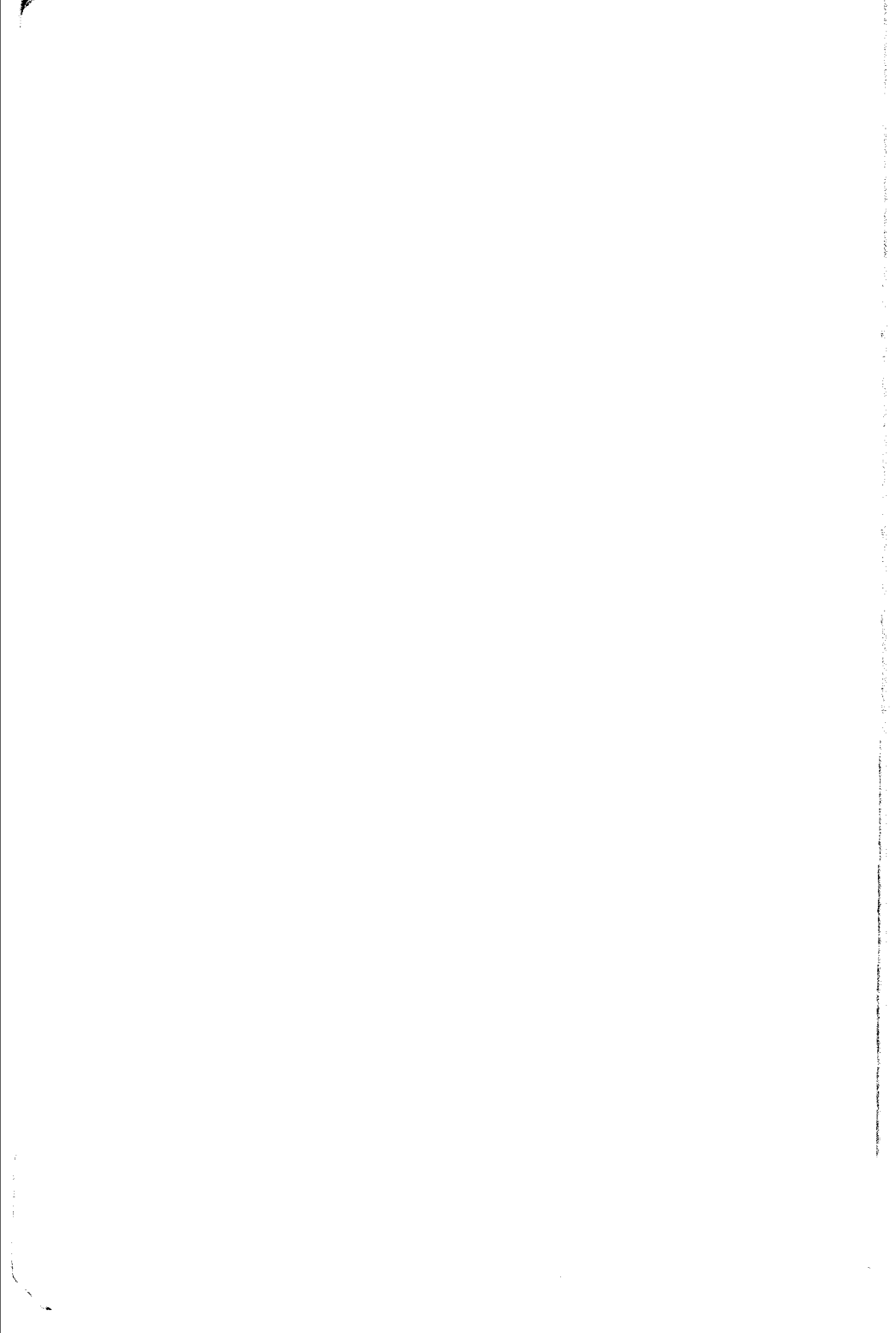
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FOREWORD

Everyone knows that our current way of life is environmentally unsustainable. The global economy is literally destroying the natural systems that support it. Yet a coherent blueprint of a sustainable economy—where it will get its energy, how it will produce goods and services, how it will transport and feed its population—does not exist in official circles.

Unfortunately, there is not even a vision of an environmentally sustainable economy—not in the White House, not at United Nations headquarters in New York, not at the World Bank, and not in corporate boardrooms. Recognizing this void, the Worldwatch Institute has used the principles of ecological sustainability to design a global economy that could satisfy human needs without destroying its support systems. The *World Watch Reader* aims to provide a vision of the environmentally sustainable society that is now within our grasp.

This anthology—like *World Watch* magazine, on which it is based, and Worldwatch's annual *State of the World*—reflects the Institute's research approach. Working from a vantage point that is both global and interdisciplinary, Worldwatch specializes in identifying trends that would be missed by

those concentrating on a particular geographical region or working in a specialized discipline.

For example, Worldwatch's analysis of national transportation systems reveals a fact that startles many people, particularly Americans: The bicycle is the world's leading form of personal transportation. Americans own some 95 million bicycles, but only a tiny fraction of these provide basic transportation. The rest are relegated to weekend recreational use.

However, in "Pedaling into the Future," (p. 246), Marcia D. Lowe tells us that in Asia, home to half the Earth's human population, the bicycle reigns supreme as a transportation machine. In China, where more than a fifth of the world's people live, bicycles outnumber automobiles 540 to 1. The bicycle is becoming an increasingly attractive transportation option worldwide since it addresses many of our environmental problems—increases in greenhouse gases, air pollution, and acid rain—not to mention traffic congestion. The bicycle also satisfies a need for exercise for those who live in more-sedentary societies. For these reasons, more and more bicycles are being produced relative to cars. By 1987, world bicycle production topped 105 million, compared with 33 million for automobiles. To say that the bicycle is the transport vehicle of the future is not a bold projection. It is simply the recognition of an existing reality.

For water use, as for transportation, the global view reveals emerging trends that may not otherwise be obvious. In "Emerging Water Scarcities" (p. 127), Sandra Postel tracks the changing relationship between water supply and demand and observes that water scarcity is hardly a local issue. Since world population is growing by nearly 2 percent a year and the global economy is increasing even faster, demand for water is starting to outstrip supply on every continent.

We see water tables under parts of the North China Plain, where some 200 million people live, falling by 3 to 5 feet a year. In the Soviet Union, a continuation of the recent

diversion of water for agriculture will drain the Aral Sea dry within the next 20 years. We see more than one-fifth of the irrigated land in the United States watered by drawing down water tables. And we see a growing competition between cities and farms for fresh water supplies, with farmers almost always losing in this uneven competition. The rapid growth in world irrigation from 1950 to 1980—a near tripling within a generation—came to an abrupt end in 1980. Almost overnight, the volume of irrigation water used per person started to decline—a fall that will probably continue as long as world population continues its rapid growth.

When Worldwatch looks at nuclear power, it analyzes the cost of plant construction and operation as well as the “back-end” costs of waste disposal and decommissioning of worn-out nuclear power plants. It considers nuclear power’s threats to public safety and health, plus the link between nuclear power and nuclear weapons proliferation.

In “The Case Against Reviving Nuclear Power” (p. 205), Christopher Flavin seriously questions whether nuclear power belongs in our future. For example, some consider France’s nuclear industry a success story. However, Chris points out that the national electricity utility, Electricité de France, has developed a debt of \$39 billion, roughly the size of Argentina’s foreign debt. He looks at the United States and sees a country where utility executives, responding to market forces, have not ordered a nuclear reactor in 12 years. As older plants begin to close down, we can expect U.S. nuclear power generation to dwindle—starting perhaps as early as 1991. The country that led the world into the nuclear age may well lead it out.

When Worldwatch studies the world food situation, it again uses a global, interdisciplinary perspective. During the early and mid-eighties, most economists surveying world agriculture saw surplus production capacity, mounting stocks, and depressed farm prices. Worldwatch saw these trends too, but it also saw extensive overplowing and over-

pumping, both of which are by definition unsustainable over the long term.

Today Worldwatch sees a world in which discontinuing the unsustainable use of land and water would drop output far below world consumption. In "Feeding Six Billion" (p. 147), it notes that the effects of environmental destruction are now showing up at harvest time. Nearly every form of environmental degradation—soil erosion, air pollution, acid rain, ozone depletion, the loss of biological diversity, deforestation, and hotter summers as a result of greenhouse gases—are taking their toll on the world food prospect. It sees that the world's farmers are having trouble expanding their output fast enough to feed the projected record 960 million people the nineties will add to today's family of 5.3 billion.

In the final article of this volume, "Vision of a Sustainable World," (p. 299), we summarize the Worldwatch Institute's vision of an environmentally sustainable society. The principal finding: When we are no longer enmeshed in an economic system that is sowing the seeds of its own demise, life will be far more pleasant and satisfying than it is today.

Worldwatch created this book in response to the international hunger for information on global environmental issues, a hunger that reflects the gap between the concern about the future of our planet and the availability of data on its changing condition. Thousands of action-oriented groups are springing up every year throughout the world: Rubber tappers organize to protect the Amazonian rain forest; residents of a Soviet city cooperate to close down an ill-designed nuclear power plant; villagers in India protest the construction of a large dam; and residents of any number of American communities demand the cleanup of a toxic waste site. These groups want information to help them act intelligently.

Governments are having difficulty supplying these grass-roots needs because they themselves lack information