

India: A Foreword

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In attempting to explain India's daunting array of environmental problems, most authors point to the enduring effects of colonialism.¹ A standard environmental narrative traces a downward spiral over the past 150 years from an era of ecological harmony, distributive justice, and material abundance to the present era of ecological disruption, massive social inequity, and widespread poverty. According to this narrative, between 1830 and 1850 foreign rulers shattered the traditional rural economic system, forcing market capitalism on self-contained villages, exacting taxes beyond the capacity of cultivators to pay, draining wealth to Europe through fiscal trickery, closing avenues for indigenous entrepreneurship, and wresting away ancient commons by appropriating rivers, wildlife, and forests. The long-term effects have included rural flooding, waterlogging, and desiccation, the cultivation of marginal soils, the ruinous monoculture of cash crops, and the collapse of village self-sufficiency and moral concern for the local environment—in short, the disappearance of the subsistence arrangements upon which India's well-being had depended for centuries.

This narrative describes a wise peasantry whose once-instinctive respect for natural processes resulted from a richly detailed knowledge of crops, animals, and wild plants. Such knowledge was codified in vernacular taxonomies, proverbs, and songs and found its expression in myths and rituals that celebrated natural forces and enjoined the worship of a nature goddess, Prakriti, and her epigones. Material welfare in this precolonial world was in equilibrium with nature, markets were only a marginally significant economic feature, and every caste and tribe was ensured minimal subsistence.

Although historical evidence shows this standard environmental narrative to be accurate in many specifics, it is erroneous in large matters: its vision is too nostalgic (there is little evidence for pervasive precolonial social harmony and self-sufficiency), its hostility to the market system is misplaced (it was India's trade goods and merchant capital that caught Europe's attention in the first place), its chronology is undoubtedly mistaken (the impact of foreign investment was felt in rural India well before the Victorian era), and it fails to acknowledge the powerful spiritual bonds (or at least nostalgic longings) that still connect Indians to animals, water, and woods. The relationships among colonial practices, peasant-level social and economic responses to colonization, and current environmental crises are too complex to allow us to attribute all virtue to one party and all evil to another. Indian environmental history is thus in a state of active revision as researchers continue to dig in the archive.

Reflection on the origins of India's urgent environmental problems needs to be supplemented by thinking about ways in which these problems can be addressed in practice. The burden of human demands weighs heavily over all of India—in the forests, wetlands, deserts, coasts, and hill areas as well as in Bombay (Mumbai), Calcutta (Kolkata), Delhi, and the thirty-two other cities with more than a million inhabitants. In the Americas and Africa, large tracts have been cleared of their inhabitants for national parks that sustain the illusion of wilderness, but in India people and environment are fused into a single complex object of concern. While India has nearly six hundred million square kilometers of forest (and is home to 7 percent of the world's wild animal species and 13 percent of the world's plant species), inside this forest there are thirty-five million tribal hunters, fishers, cultivators, and herders pursuing their livelihoods—and millions more non-tribal people work steadily at the edge of the forest to open new ground to rice, millet, cotton, and sugar cultivation. Similarly, India's substantial desert in Rajasthan is thoroughly peopled and routinely crisscrossed by herders and traders.

Further, 74 percent of India's more than one billion people live in rural and coastal areas, where hybrid seeds, pesticides, chemical fertilizers, fishing trawlers and other motorized boats have enhanced the ancient practices of cereal cultivation and net fishing. Yet while cereal and fish productivity have shot up in the last four decades, and India has become a net exporter of food grains and fish (including shellfish), the prices paid to actual producers are predictably meager, and their engagement with unpredictable world markets both raises and dashes their economic prospects for reasons that are rarely evident. In addition, for small farmers and fishermen economic liberalization means that the subsidies they were once offered to adopt new technologies, such as high-yielding grains or outboard engines, or to enter new markets in East Asia and Europe are disappearing. Meanwhile, the externalities of the new agriculture and fishing methods, such as the contamination of water, soil, and air, along with changes in groundwater salinity and a loss of biodiversity, are noxious new realities to be borne. Water for drinking and irrigation is scarce everywhere, and most workers have only minimal shelter because of the scarcity of timber for fuel and construction—hundreds of workers and their dependents freeze to death each winter during the coldest nights. A sizable portion of the Indian populace is exquisitely sensitive to even slight reversals of weather, food and fuel prices, or their own health, and this group is chronically mired in debt, disease, and underemployment. While outright famine hasn't occurred for four decades, Indian economists agree that at least 30 percent, and probably 35 percent, of the population is chronically undernourished.²

The indirect impact of globalization and rapid economic changes causes millions of rural Indians to flee to India's great cities each year, adding to the existing urban hazards. Industries spew out streams of pollutants; drinking water, clean air, and open spaces for leisure activities are conspicuously absent; animal and human wastes are trodden into particulates that foster asthma and other lung diseases. Municipal governments struggle with these problems but never solve them; no large city in India meets global air quality standards or has a comprehensive sewage treatment system.

In sum, the survival needs of huge numbers of people shape and are shaped by India's physical environment, which is the determining context for popular welfare. Poor people's responses to ever-worsening price inflation and a deteriorating natural environment add up to what notably Joan Martinez-Alier and Ramachandra Guha call the "environmentalism of the poor." These responses, some barely noticed such as stripping leaves and bark from trees in public spaces without ever quite cutting down the trees, some very loud and public like blockading contractors' access to groves and ponds that are vital to local survival, have to be distinguished from those of environmental movements based on esthetic preferences or scientific values—by default, the environmentalism of the rich—which all too often force tribals, poor cultivators, and proletarians to defend their livelihoods: for example, *your* biosphere reserve versus *my* lost source of fodder, herbs, and grazing. In these contests, the poor nearly always are the losers.

But the environmental situation in India, while challenging, is hardly hopeless. The country has a surprising array of official, NGO, and popular mechanisms for preserving natural diversity and ensuring that air, food, and water are safe for humans. For example, the Indian constitution calls on the government to "endeavour to protect and improve the environment and to safeguard the forests and wild life of the country" (section 48A), while citizens are obliged by the same document "to protect and improve the natural environment, including forests, lakes, rivers and wildlife and to have compassion for living creatures"(section 51A). A Central Pollution Control Board monitors air, water, and solid-waste contamination and sets the standards that are intended to trigger abatement measures. Since the 1970s dozens of laws have criminalized poaching and trading in rare species, fostered biodiversity, constrained the release of hazardous chemicals and industrial wastes, restricted air and water pollution, and even regulated noise pollution. While these laws and regulations are rarely enforced, from time to time the Supreme Court, acting on its own or in response to public interest litigation, compels bureaucrats to address particularly offensive hazards or to enforce environmental rules that government otherwise cannot bring itself to face, as we see in the Delhi case study that follows. Meanwhile, nearly half the forested area in the country's twenty-eight states is still under public control, and a central Ministry of Forests and Environment oversees 450 national parks, biosphere reserves, and sanctuaries that make up Asia's largest protected area network. The venerable Forestry Research Institute (founded in 1906) and the Wildlife Institute of India (founded in 1982) train highly competent forestry professionals and conservation biologists, and key academic institutions like the Centre for Ecological Sciences (founded in 1982) train ecologists and conduct field research.

There are also professionally staffed NGOs—for example, the Bombay Natural History Society (BNHS, founded in 1883), the Centre for Science and Environment (CSE, founded in 1980), and the Ashoka Trust for Research in Ecology and the Environment (ATREE, founded in 1996)—which use the courts to push back against heedless poachers, resource-grabbing contractors and industrialists, and malfeasant officials. These NGOs use the media effectively, and their websites, videos, and journals, mod-

els of green conviction, are consulted around the world. Finally, the Indian press is alert to environmental crises and regularly berates the government when public welfare is threatened.

Yet despite all its environmental legislation, technical expertise, and media and citizen commitment, India at the beginning of the twenty-first century shows an unmistakable will to rush headlong into unregulated development and modes of "first world" consumption that will cause ever greater harm to the environment and the public's health and welfare. After enduring for decades what an economist sardonically dubbed the "Hindu rate of growth," the country's middle class and business elite are enjoying explosive GDP growth that has averaged 6 to 7 percent annually since 1993. Accompanying this growth has been a jump in the number of collaborative agreements with foreign governments and corporations, many of them aimed at extracting minerals, timber, and other forest products and at opening the Indian market to foreign firms in accord with WTO agreements. Even in cases where official motives were once welfarist in intent, as in the 1950s agreement between Norwegian donors and the state of Kerala to improve both the productivity of fisheries and the well-being of fishers, which we read about in the chapter to follow, the government has proven incapable of ensuring the sustainability of marine resources or of preventing their looting by entrepreneurs.

Thus, present-day India suffers from repeated crises where the survival needs of the landless and the urban poor, the hopes of small farmers, fishers, and micro-entrepreneurs, the rational calculations of foreign development agencies and the ecological dreams of NGOs and conservation biologists, the relentless ambition of global capital, and the vacillations of judicial and regulatory agencies all jostle together in environmental free-for-alls. These collisions of opposing values and interests are often accompanied by lawsuits, demonstrations, and media campaigns, as well as behind-the-scenes political threats and feints, and it is usually impossible to know who all the players are. The best-organized middle class environmental groups frequently go to court or appeal to public opinion to demand that the government take responsibility for the evident chaos. But they have met with repeated setbacks, in which the state and central governments themselves wheel and deal to seize the best surface water, give away mineral deposits, and open up biomass reserves, and the highest elected officials launch highly dubious public works projects, such as the damming of the Narmada River network in western India and the more recent and highly controversial proposal to link together many of India's major rivers for navigation and irrigation. Private interests, too, move aggressively to claim choice sites for industrial parks, tourist hotels, open pit mines, hydroelectric plants, port facilities, and so on, inducing politicians to put back into play prime lands and waters once thought safely within protected areas.

Neither the government nor the mainstream NGOs can articulate the threats hanging over the environment-survival nexus as forcefully as the numerous peasant- and worker-based movements that have sprung to life in the past fifteen years. Arising from tribal people's, untouchables', landless laborers', women's, and industrial work-

ers' day-to-day struggles and building on the methods and traditions of the anticolonial movements of earlier generations, organized protest groups have stirred India and attracted world attention—not least because their elite supporters have made skillful use of new communication technologies. The most famous of these groups, the gender-based Chipko movement of the 1970s and 1980s, which strove to protect timber resources and forest livelihoods, and the tribal- and peasant-driven Save the Narmada anti-dam movement along the Narmada River in the 1980s and 1990s, paved the way for the current National Alliance of People's Movements, which advocates humane development from below and worker unity and opposes WTO-led globalization. In these movements thousands of activists of both sexes have shown the capacity to endure physical punishment and imprisonment, after which most of them promptly return to the struggle for land, work, and full political rights. Indian officials and corporate interests have become wary of these “people's movements,” which in recent years have found external allies through global networking and have sometimes even grasped political power, as in the case of the tribally based movement that since 2000 has controlled the new mineral- and timber-rich state of Jharkhand.

India is too large, too varied, and too populous for one to capture in a few pages the changing relation of its people to their environments. Competing needs and values have resulted in two distinct forms of globalized environmentalism—first, a well-organized movement from above of middle class environmental NGOs with strong links to leading Euro-American conservation groups; and second, a more dispersed array of justice-seeking survival movements that are impelled from below and also have supporters in the global North and among similar movements in the global South. Blowing against both like a strong wind is India's laissez-faire surge, aided and abetted by state and national governments whose many branches and agencies seem all too often divided against themselves in their efforts to protect and punish the poor. Meanwhile, the legal and political frames for effective environmental regulation and meaningful sanitary and subsistence reform are shifting rapidly, so that the outcomes of ongoing environmental struggles are unpredictable and will only emerge piecemeal in the courts, in the streets, and in village enclaves. Case studies like those that follow, by Amita Baviskar, Subir Sinha, Kavita Philip, and their co-workers, are the best sources of insight we have as India does not so much resolve its environmental predicaments but wobbles along its distinctive environmental path.

Notes

1. See Vandana Shiva, *Ecology and the Politics of Survival: Conflicts over Natural Resources in India* (New Delhi: Sage, 1991); and Madhav Gadgil and Ramachandra Guha, *Ecology and Equity: The Use and Abuse of Nature in Contemporary India* (London: Routledge, 1995).

2. See Jaya Mehta and Shanta Venkatraman, “Poverty Statistics, Barmecide's Feast,” *Economic and Political Weekly*, July 1, 2000; and J.H. Cassen, “Well-Being in the 1990s, Towards a Balance Sheet,” *Economic and Political Weekly*, July 6, 2002.