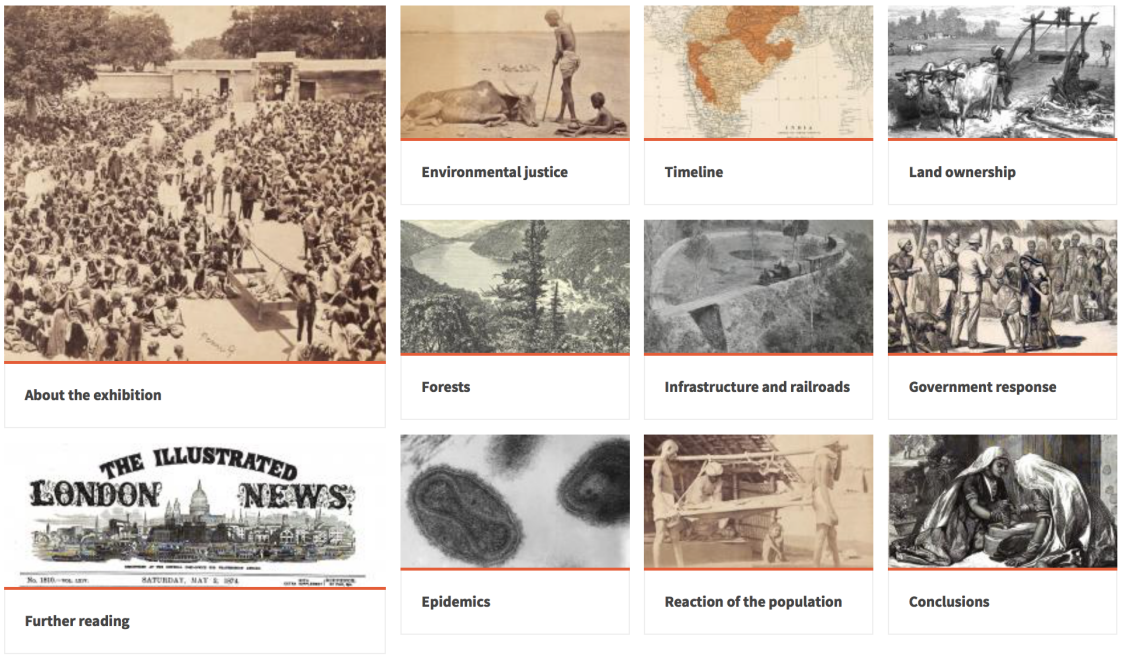
Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice

Naresh Chandra Sourabh and Timo Myllyntaus

Between 1850 and 1899, India suffered 24 major famines, a number higher than in any other recorded 50-year period, resulting in millions of deaths. This exhibition—written by sociologist Naresh Chandra Sourabh and economic historian Timo Myllyntaus—describes the environmental and social factors that contributed to these cataclysmic events, situating their causes and costs within the complex natural and cultural contexts of nineteenth-century colonial India.



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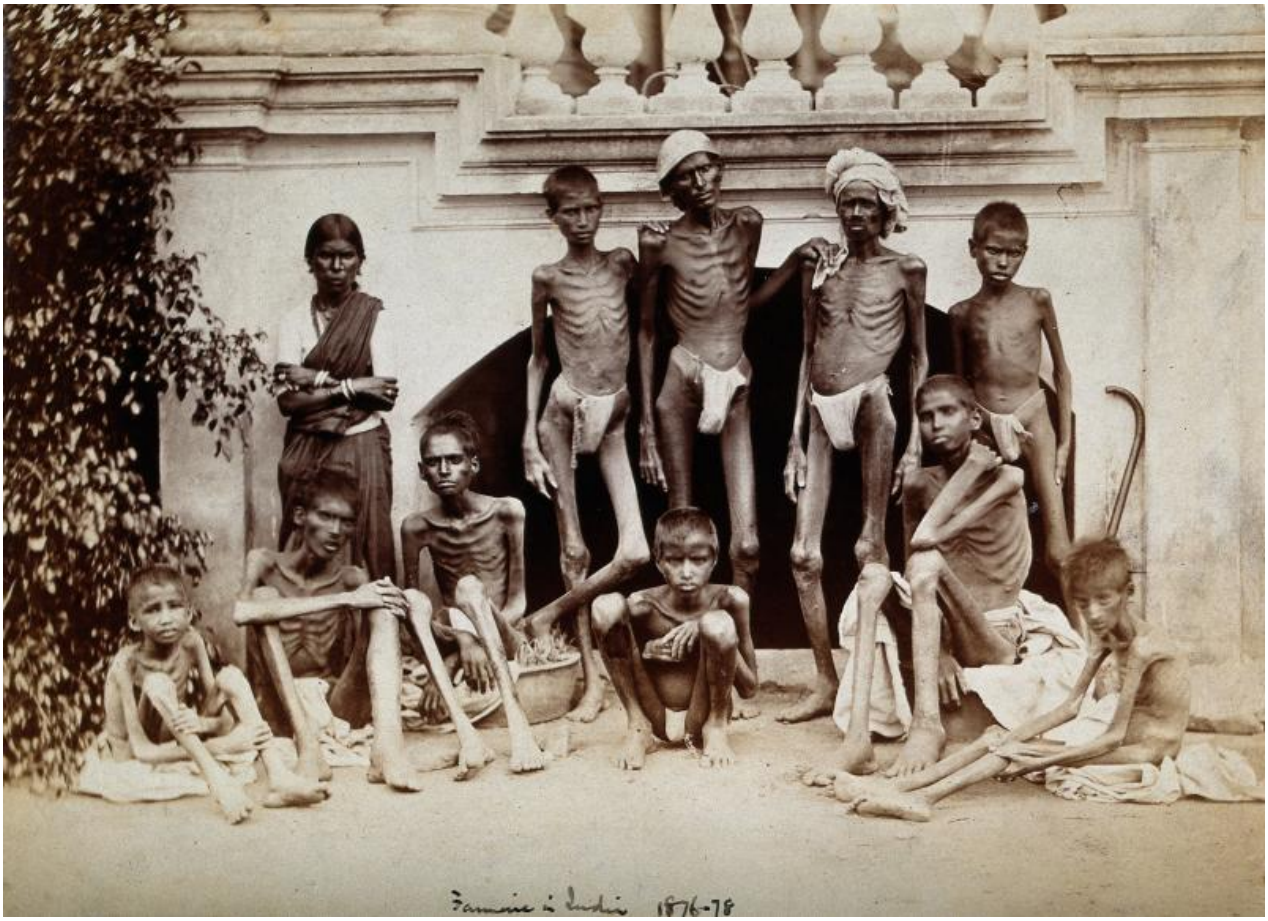
Environmental justice



A group of emaciated young men wearing loin cloths and a woman wearing a sari.

For a variety of reasons, many historians view the immense human impacts of late nineteenth century famines in India as primarily a consequence of cultural rather than environmental factors, primarily resulting from the changes implemented under British colonial rule. As a result, these famines can be seen as not only an example of environmental history, but also an issue of environmental justice. As an initial indication that British rule may have contributed to the impact of famines during this period, the number of famines between 1850 and 1899 is higher than in any other 50-year period in the pre-colonial times from the eleventh to the late eighteenth century, when Britain established its dominance as colonial power in India.

Regardless of whether British rule caused the famines, British development and policy played a role in its human impacts. For example, a large network of railroads was developed during the period in which the famines

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occurred, but the railroads were used to transport grain to coastal cities for export, rather than to relieve famine-stricken regions.

Further, under colonial agricultural reforms, many agricultural areas were converted to export crops rather than food crops. New colonial rules restricted access to forests that the native population had previously used for supplemental food in times of shortage. Finally, long-established systems of subsistence farming—in which neighboring communities would assist each other and strong harvests were stored in preparation for lean years—were unraveled due to new economic systems. Citing all of these changes, some historians—already in the nineteenth century and some contemporary voices—describe the famines as a crime perpetrated by the British rather than as a natural event.

The Gateway of India, a monument from the British Raj period (1924), welcomes arriving travellers at the waterfront in the harbour of Mumbai (formerly Bombay)

Photo by Vinay Lal
View source .

Great India Peninsula Railway Terminal in Bombay, Maharashtra, West India

Unknown photographer, 1883. © Royal Geographical Society (with IBG), No. S0001976.

Regardless of the much-studied questions of blame and injustice, the impact of famines cannot be explained by environmental factors alone. Instead, the events serve as a harrowing example of unstable interaction between natural and human systems. This exhibit focuses on some of the key elements of this interaction, including land ownership and access rules, agricultural practices, systems of domestic and international trade, transport infrastructures, changing weather, government responses to the disasters, diseases and epidemics, and cultural responses in the local population.

The original virtual exhibition includes an interactive gallery of historic photos. View the images on the following pages.

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Inmates of a relief camp during the famine 1876-1878 in Madras, Tamil Nadu, South India.

Photo by W. W. Hooper. Used with permission of the Royal Geographical Society (with IBG), No. S0002004.

Showing the plight of a starving cow with its shepherds in Bellary District, Madras Presidency, during the Great Famine, 1876-1878.
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Famine sufferers during the Madras famine, 1876–1878 - Tamil Nadu, South India.
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A double loop on Darjeeling Hill railway - West Bengal, East India

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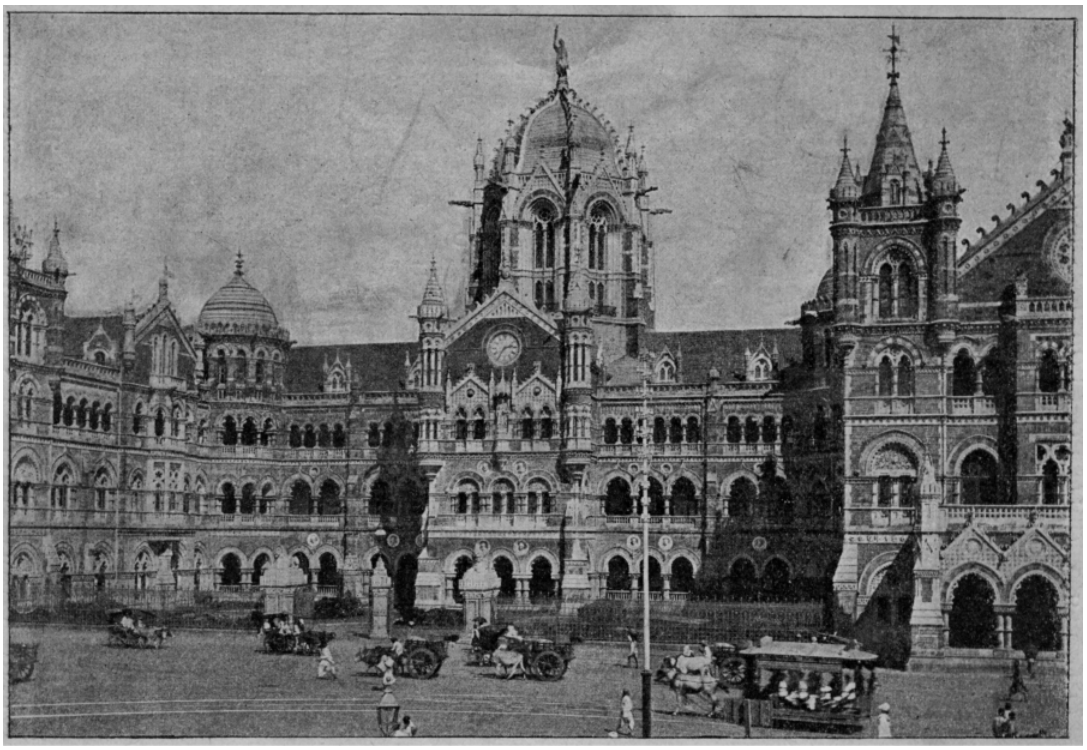

The famous Victoria Station (Chhatrapati Shivaji Terminus) in Bombay.
Uncredited Photographer.

Disputed Empire. Queen Victoria had to face the different interests of politicians and starving people of India

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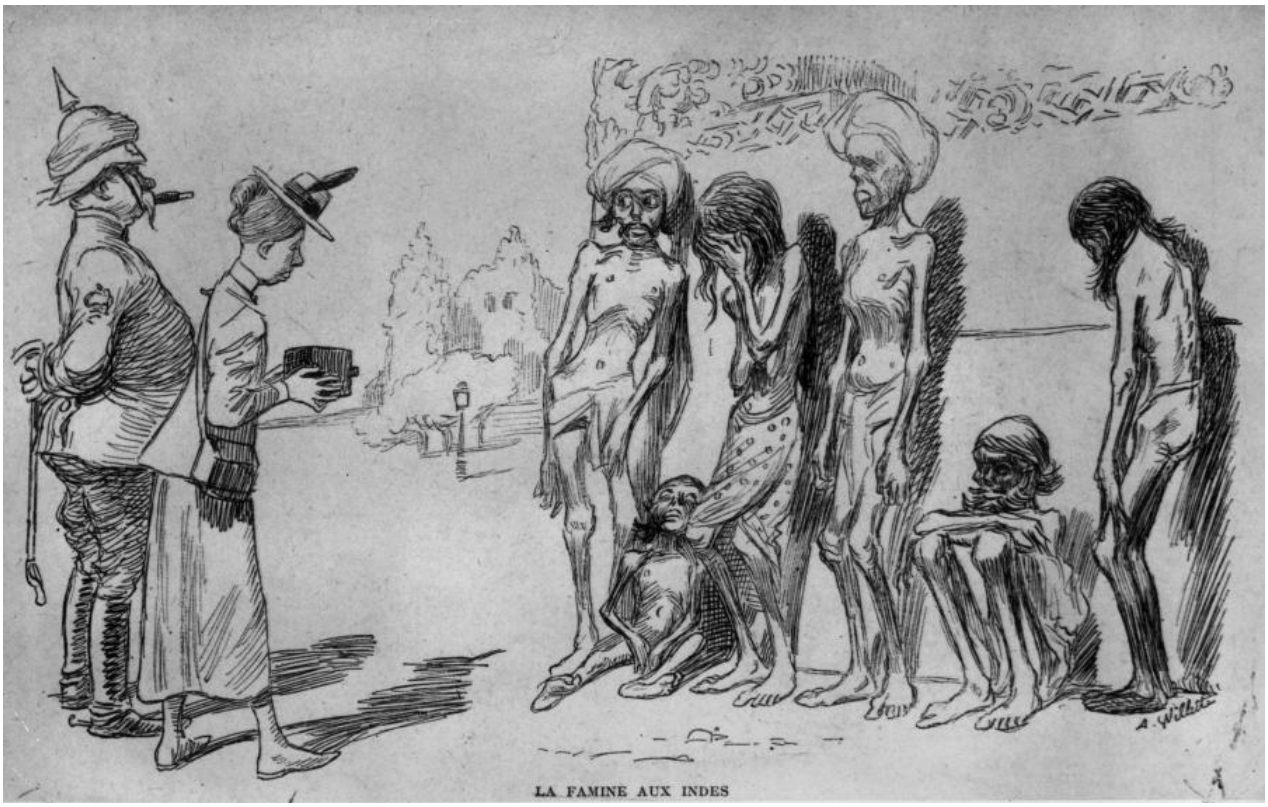

French cartoon mocking Western famine tourists in India, 1899-1900.

Websites linked in image captions:

- https://wellcomeimages.org/indexplus/image/V0029717.html
- https://www.sscnet.ucla.edu/southasia/History/British/BrIndia.html

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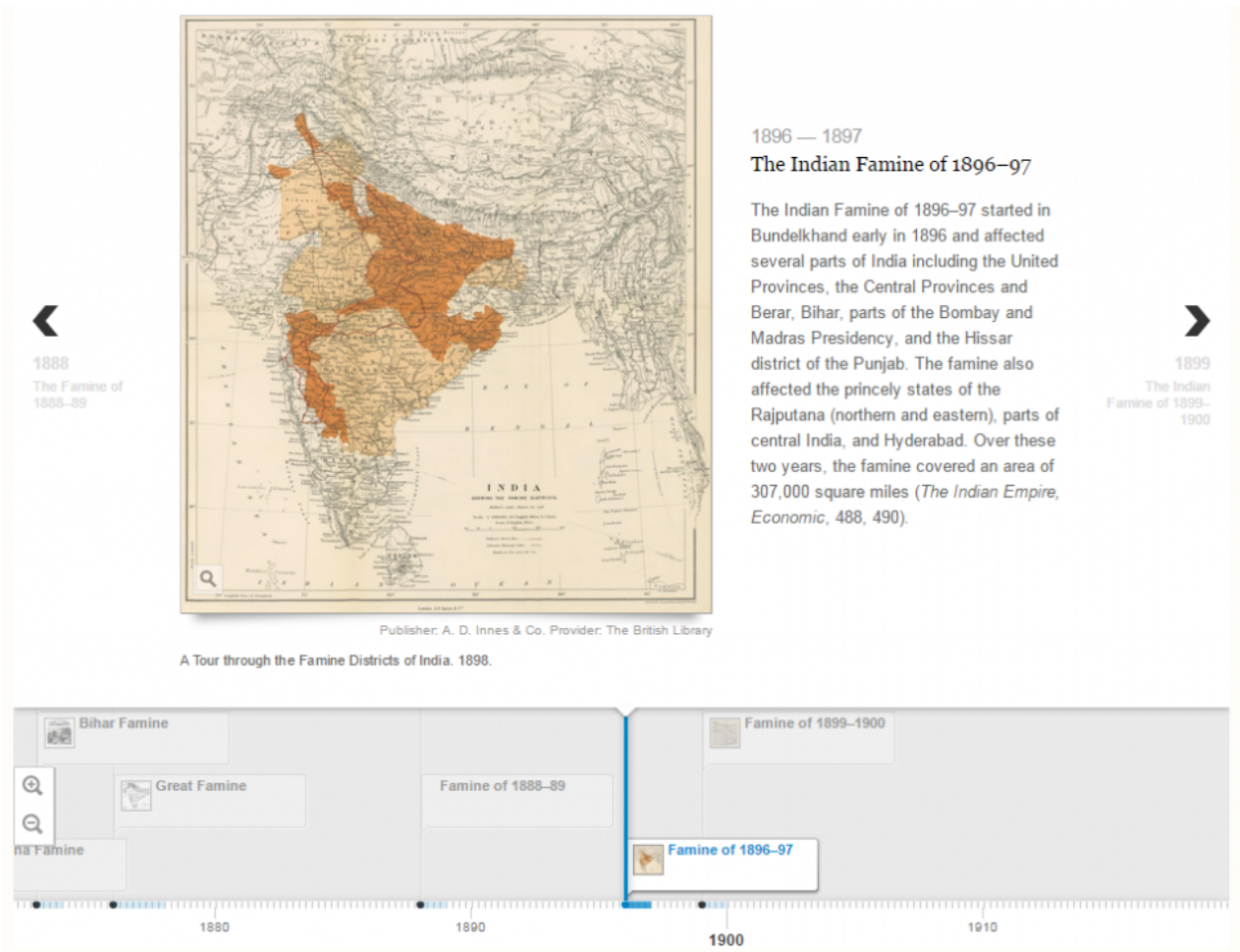
Timeline

Twenty-four major famines occurred on the Indian subcontinent (including present-day India, Pakistan, and Bangladesh) in 1850–99. Some of the most devastating of these famines are described below. Please click on the image to access the interactive timeline .

The original virtual exhibition includes an interactive timeline of historic photos. View the images on the following pages.



Websites linked in this text:

- http://www.environmentandsociety.org/exhibitions/famines-india/timeline/famines-india-timeline

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The Orissa Famine

1866 - 1867

One of the major famines happened in Orissa, a northeastern state of India; it was referred to as the Orissa famine of 1866–67. The coastal district of Balasore was one of the worst hit areas of Orissa. The famine later spread to affect a nearby northern state, Bihar; through the Madras Presidency on the southeast coast; and to inland cities of Hyderabad in the present state of Andhra Pradesh and Mysore in the Karnataka state—a total area covering 180,000 square miles.

A family was starving in a relief camp during the Madras Famine 1876-1878, Tamil Nadu, South India. A twenty-year-old man, five feet tall, weighed sixty-two and a half pounds.

Used with permission of the Royal Geographical Society (with IBG), No. S0002006. Photo by W. W. Hooper.

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The Rajaputana Famine

1869 - 1870

The Rajaputana Famine of 1869, or 1868–70, affected primarily the princely states of Rajputana and the British territory of Ajmer in the present Rajasthan state. This famine also affected Gujarat, the North Deccan districts, the Jubbulpore division of the Central Provinces and Berar, the Agra and Bundelkhand division of the United Provinces, and the Hissar division of the Punjab. The famine affected a total area of 296,000 square miles.

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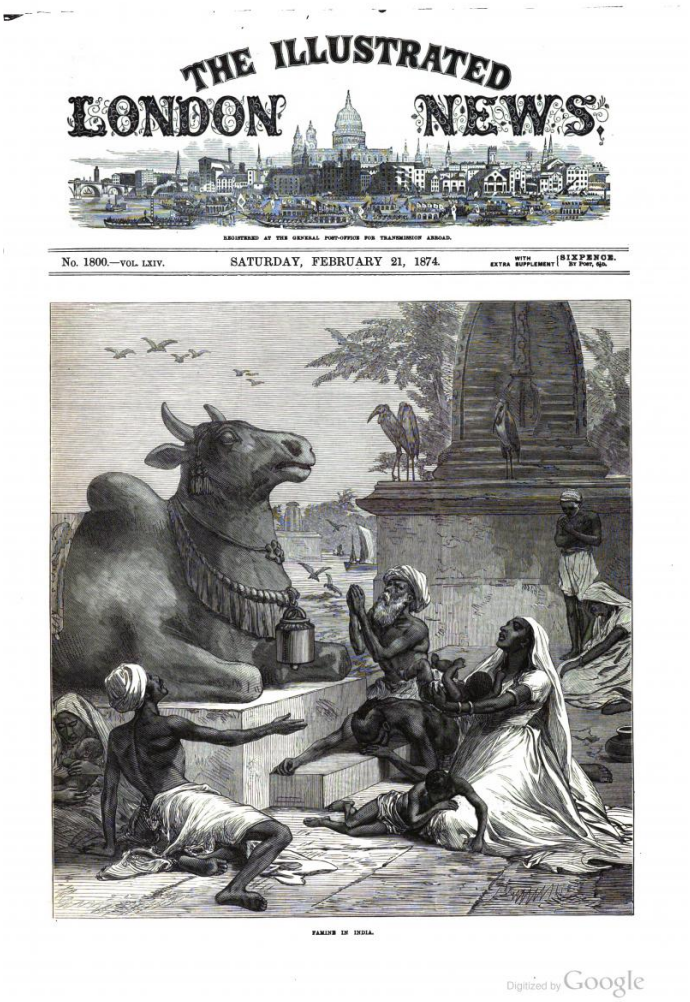
The Bihar Famine

1873 - 1874

The Bihar Famine of 1873–74, also known as the Bengal Famine of 1873–74, impacted the regions of British India covering the province of Bihar and the neighboring provinces of Bengal and the North-Western Provinces and Oudh. Monghger district was one of the worst-hit areas of Bihar. This famine affected an area of 54,000 square miles (*The Indian Empire, Economic*. Imperial Gazetteer of India, vol. III. Oxford: Clarendon Press, 1907, p. 487).


THE ILLUSTRATED LONDON NEWS

No. 1800.—VOL. LXIV. SATURDAY, FEBRUARY 21, 1874. WITH EXTRA SUPPLEMENT | SIXPENCE.

FAMINE IN INDIA.

The Illustrated London News. (Illustrated by Ingram, William and Charles eds. [24 January 1874]). *The Illustrated London News* (24 January 1874). Cover.

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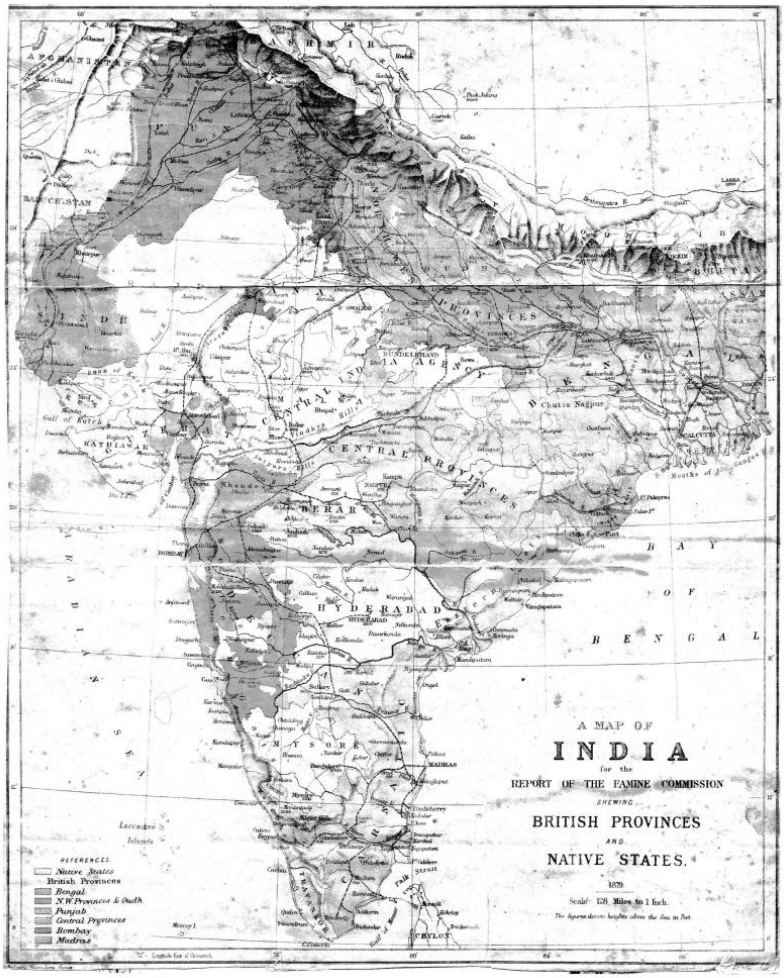
The Great Famine of 1876–78

1876 - 1878

The Great Famine of 1876–78, also known as the Southern India Famine of 1876–78 and the Madras Famines of 1877, resulted from the dearth of monsoons in 1876–78. The famine began in 1876 and affected south and south western India—Madras, Mysore, Hyderabad, and Bombay—for a period of two years. During its second year, the famine also spread north to some regions of the central provinces and the United Province, and to a small area in the Punjab to the northwest, covering a total area of 257,000 square miles.



A map of India for the report of the famine commission shewing British provinces and native States, 1879.

Public Domain. Map by the Indian Famine Commission. *Report. Part I. Famine Relief.* London, 1880.

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The Famine of 1888–89

1888 - 1889

The famine of 1888–89 caused damage in North Bihar and the Ganjam district as well the region of Orissa on the northeast coast.

Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society.
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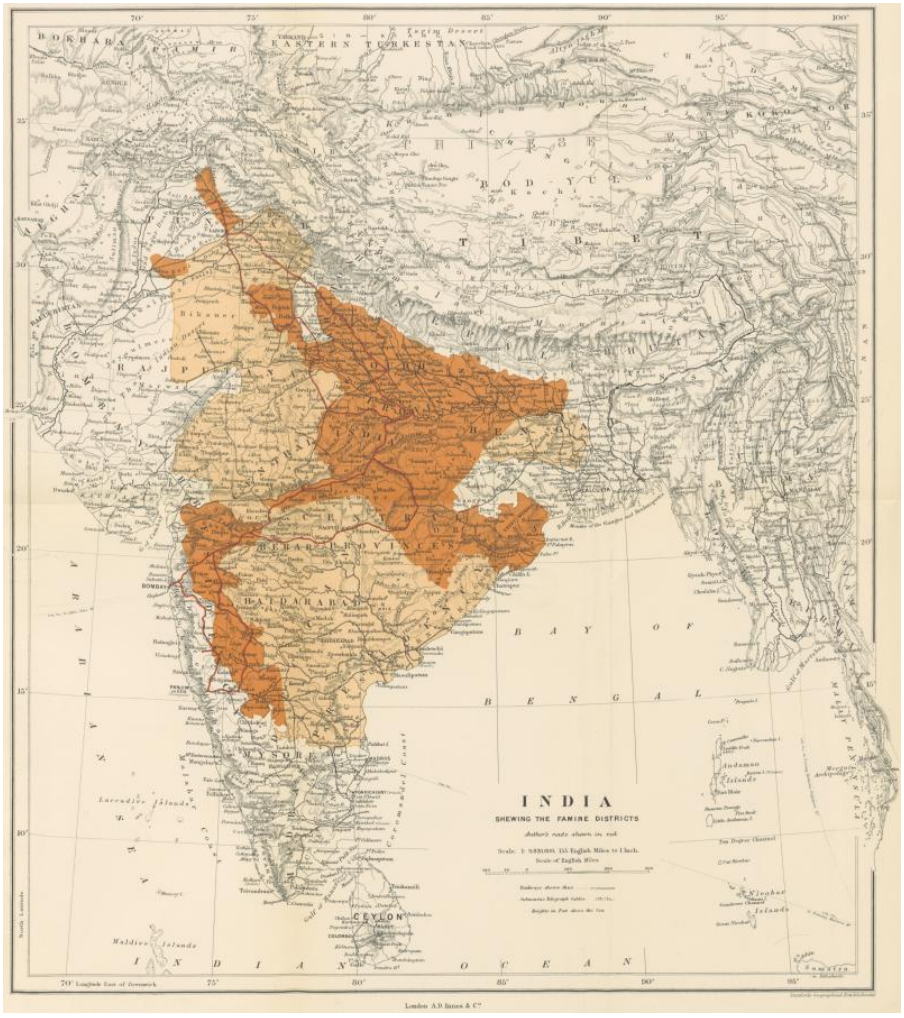
The Indian Famine of 1896–97

1896 - 1897

The Indian Famine of 1896–97 started in Bundelkhand early in 1896 and affected several parts of India including the United Provinces, the Central Provinces and Berar, Bihar, parts of the Bombay and Madras Presidency, and the Hissar district of the Punjab. The famine also affected the princely states of the Rajputana (northern and eastern), parts of central India, and Hyderabad. Over these two years, the famine covered an area of 307,000 square miles (*The Indian Empire, Economic*, pp. 488 and 490).



A map of the famine districts in India in 1898.

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The Indian Famine of 1899–1900

1899 - 1900

The Indian Famine of 1899–1900 affected an area of 476,000 square miles (1,230,000 km²). The famine was acute in the Central Provinces and Berar, the Bombay Presidency, the minor province of Ajmer-Merwara, and the Hissar District of the Punjab. It also caused great distress in the princely states of the Rajputana Agency, the Central India Agency, Hyderabad, and Kathiawar Agency. Further, a small area of the Bengal Presidency, the Madras Presidency and the North-Western Provinces were severely affected in this series of famines (*The Indian Empire, Economic*, p. 486).

1893 map of Bengal

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Changing land ownership, agricultural, and economic systems

Changes in land ownership and control affected how crop failures impacted human lives. Before the British colonial period, Indian agriculture was dominated by subsistence farming organized in small village communities. The farmer usually only grew enough food to feed himself and the non-agricultural people of the village community. When his crop production exceeded consumption because of favorable climatic conditions, he stored the surplus for use in lean years. The storage of food grains constituted the only remedy against famines and other crises.

At the end of the eighteenth century, village communities began to disband under the pressure of new forces. The permanent land settlement of Lord Cornwallis in 1793 impacted Bengal, Bihar, and Orissa, and later extended to North Madras, forming a class of zamindars, a social elite group with the right to collect tax. The zamindars became landlords in perpetuity and were the intermediaries between the colonial rulers and the peasantry. Peasants were required to pay fixed amounts of money to the zamindars. Most of the cultivators became landless laborers: the magnitude of rural poverty was graphically described in the adage that the Indian is born in debt to the moneylender.[1] To pay taxes to the government, the peasants had to borrow from the moneylender, compounding the problem because indebted peasants could not be agricultural producers.

A zamindar's palace in Puthia district is being restored

2011 Courtesy of Lamentable
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Grain cart drawn by hired labourers, Madras (during the famine 1876-1878), Tamil Nadu, South India

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Economic Theorists and British Colonialism in India

Karl Marx saw colonial India as a good example for his critique of modern capitalism. In "The Consequence of British Rule in India," Marx described the forced transformation of Indian

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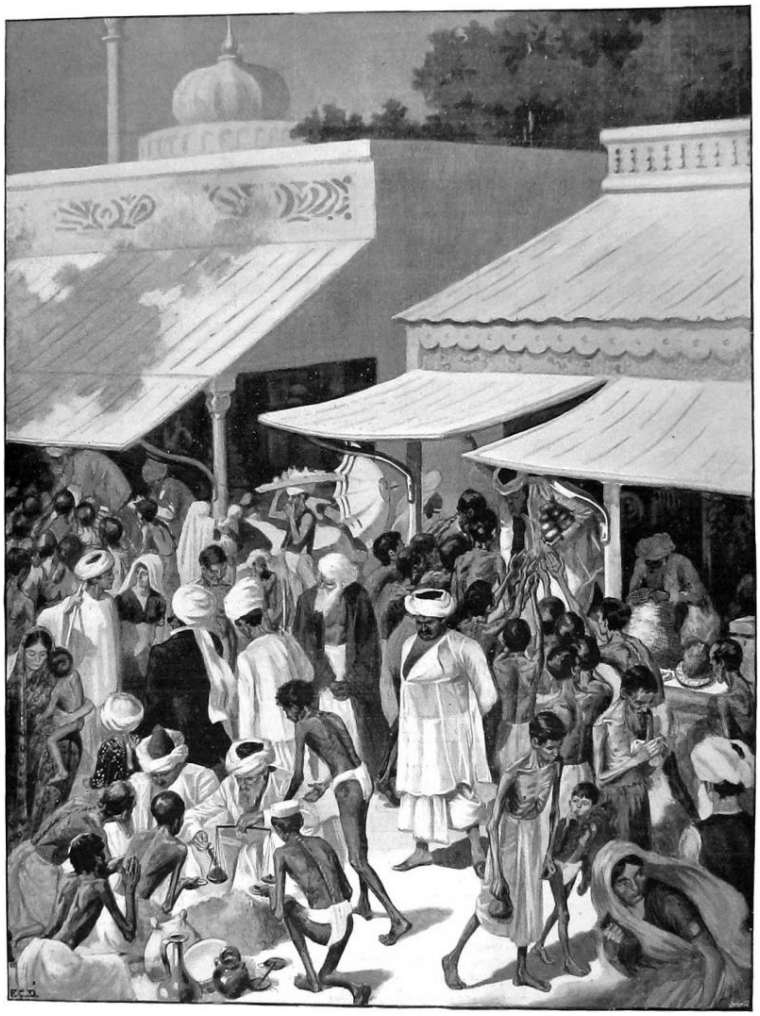
agriculture and the resulting "destruction of the self-sufficient village society of India. Under this simple form of municipal government, the inhabitants of the country have lived from time immemorial. These small forms of social organization have been for the most part dissolved, and are disappearing, not so much through the brutal interference of the British tax-gatherer and the British soldier, as to the working of English steam and English free trade."[2] Marx is not the only economic theorist often cited in discussions of Indian famines. Scholars frequently emphasize laissez-faire capitalist theories stemming from Adam Smith's *Wealth of Nations*; as well as Malthusian ideas about population, whereby famine was regarded as a natural check to overpopulation (with the unspoken benefit that it relieved imperial government from the responsibility of expenditure on relief).[3]



Shortages in food supply led to rising prices – to bunniahs', grainsellers', advantage.

Drawn by F. C. Dickinson, *The Graphic* 27 Feb 1897, p. 248.

Changes in land ownership were followed by the commercialization of agriculture, which started to emerge around the 1860s. This brought a shift from cultivation for home consumption to cultivation for the market. Cash transaction became the basis of exchange and largely replaced the barter system. The exported items in the first half of the nineteenth century included cash crops like indigo, opium, cotton, and silk. Gradually, raw jute, food grains, oil seeds, and tea replaced indigo and opium. Raw cotton remained in demand throughout. There was phenomenal growth in the export of agricultural commodities from India: the value of India's exports is estimated to have risen by more than five hundred percent from 1859–60 to 1906–1907.

The greater portion of the profits generated by the export trade benefitted British business families, big farmers, some Indian traders, and moneylenders.

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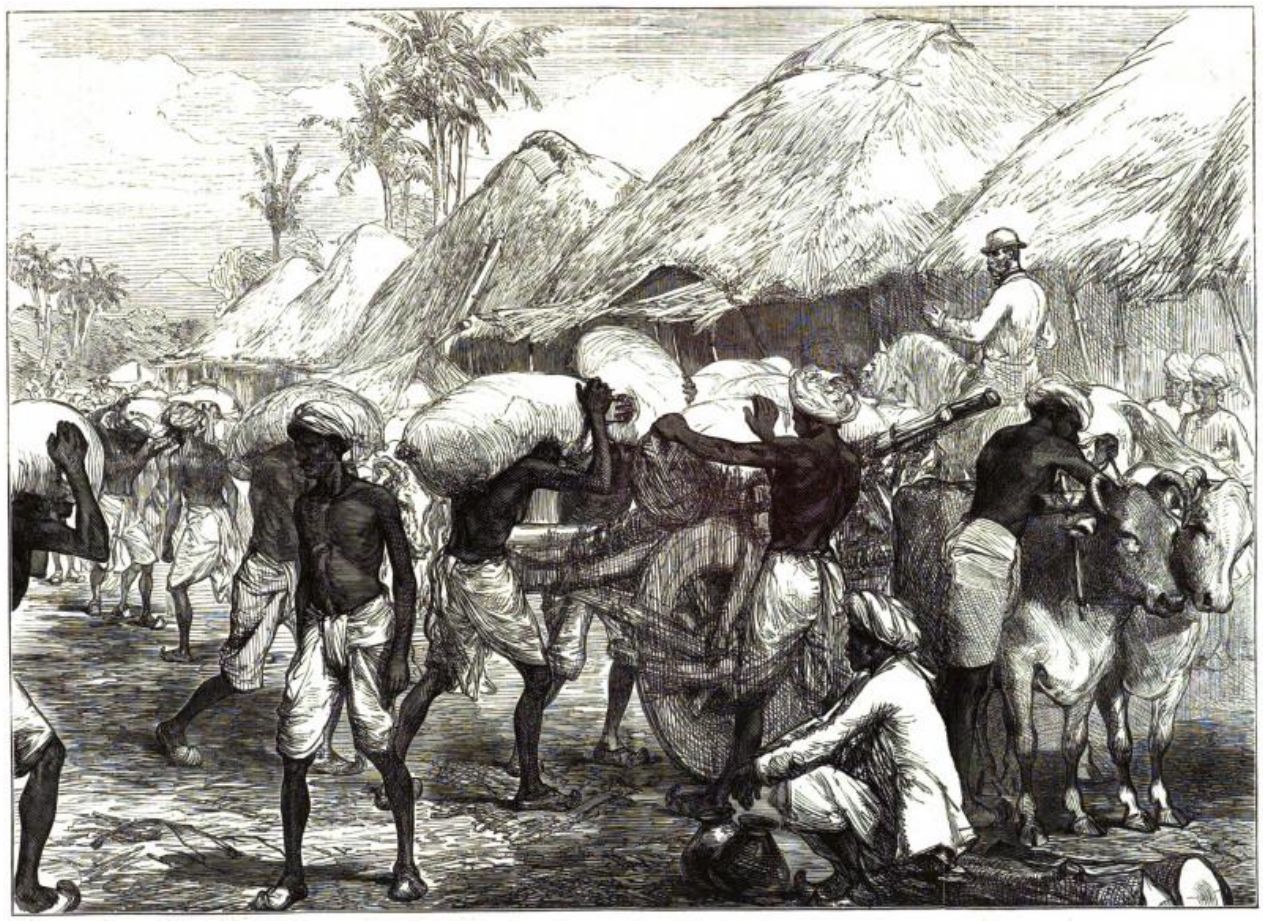
This put rural Indian communities at greater risk of damage due to famine because agriculture, which had previously been used to meet local needs, was now controlled from afar with the goal of profit rather than subsistence.[4] Further, the shift from food crops like jowar, bajra, and pulses to cash crops contributed to disaster in famine years.[5] Many scholars argue a close link between food exports and famine in India. In fact, there was an increase in agricultural exports from Indian farmers during the British colonial time.[6] Even in 1876–77, just before one of the century's most severe famines, exports continued to grow to meet Land Revenue demand.[7] And again in 1897–98, in the midst of widespread famine and starvation in India, the system continued: 17 million sterling of land revenue was collected; cultivators raised the money largely by selling food grains for export.[8]



The famine in Bengal: Loading grain-carts near Calcutta

Drawing by unknown author. *The Illustrated London News* 25 April 1874. Digitized as part of the Google Book Search project.

Reports made by the Famine Commission in 1880, 1898, and 1901 provide useful evidence to examine these events and suggest that food grains were present even during years of famine. The Famine Commission of 1880 provided the first attempt to measure the food supply in the country and the food requirements of the people.[9]

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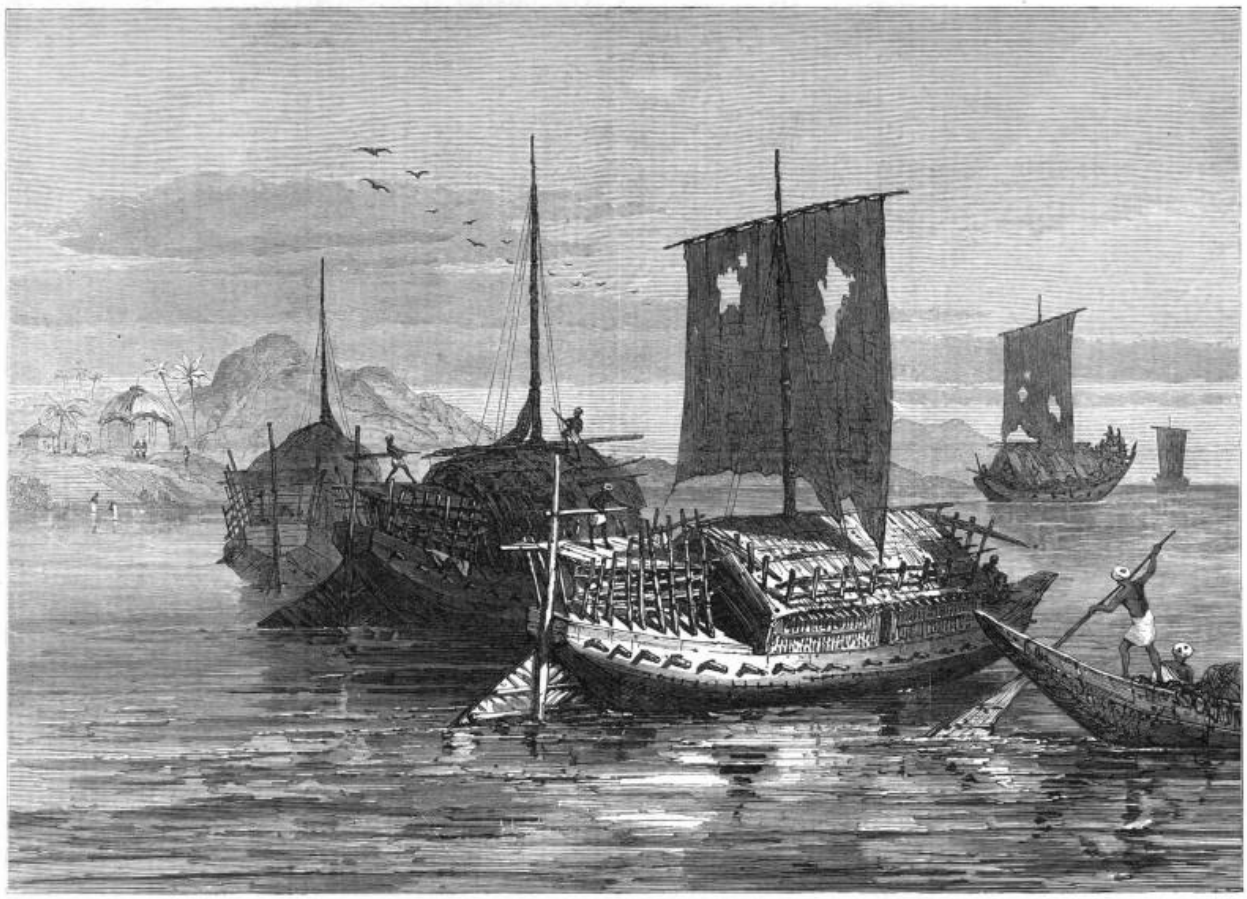
According to these measures, British India around 1880 produced a surplus of 5 million tons of food grains that were available for storage, export, or luxury consumption. Further, each region of India grew surplus food grains.[10] The Famine Commission of 1898 again made fresh estimates of food supply near 1880, and considered the growth of population and acreage under food grains during the period 1880–98. The report concluded that "the surplus produce of India, taken as a whole, still furnishes ample means of meeting the demands of any of the country likely to suffer from famine at any one time, supposing such famines to be not greater in extent and duration than any hitherto experienced."[11] The measures of surplus production given by the Famine Commission of 1880 show that food grain exports did not actually wipe out the surplus in normal years.

Moreover, food grains export continued throughout the years of severe famine. Many observers have thus concluded that if there was an absolute shortage of food in those years, then this was largely a created shortage and cannot be attributed to natural disasters.[12]



The famine in Bengal: Grain-boats on the Ganges

The Illustrated London News 21 March 1874. pp. 281. Digitized as part of the Google Book Search project.

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These Famine Commission Reports suggest that impacts of famine in British India were not due to lack of food, but were instead caused by inadequate food supply; one expert has thus distinguished between two types of famine: a "grain famine" and a "money famine." In a money famine, it is a lack of capital—not crop failure—that makes it impossible for peasants to procure food. In another formulation that has been used, famine is the characteristic of some people not *having* enough food to eat; it is not the characteristic of there not *being* enough food to eat.[13] Famines also are triggered by a lack of rainfall, but their impact is largely a result of chronic poverty. With greater wealth, people could compensate for crop failures in one area by buying food from elsewhere; crop failure would thus not necessary lead to starvation. Without financial resources, however, this is not possible and local crop failure can have deadly consequences for a large number of people.[14]

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[1] R. Dutt, *The Economic History of India* (New Delhi: Publication Division, Ministry of Information and Broadcasting, Government of India, 1960), vol. 1, 1–11, 127–75, 255–75, and vol. 2, 22-70; R. C. Majumdar, H. C. Raychaudhary, and K. Datta, *An Advanced History of India* (Madras: Macmillan India Limited, 1981), 794–6.

[2] K. Marx. "The British Rule in India." *New-York Daily Tribune*, June 25, 1853.

[3] J. Caldwell. "Malthus and the Less Developed World: The Pivotal Role of India," *Population and Development Review* 24, no. 4 (December 1998): 675–96; E. Stokes, *The English Utilitarians and India* (Oxford: Oxford University Press, 1959).

[4] Ibid.; Dutt. *The Economic History of India*, vol. 1. 284–92, and vol. 2. 90-101, 252, 385; D. Naoroji. *Poverty and British Rule in India* (London: Swan Sonnenschein & Co, 1901); B. N. Ganguli, *Dadabhai Naoroji and the Drain Theory*, (Bombay: Asia Publishing House) 1965.

[5] See note 4; M. Davis, *Late Victorian Holocausts: EI Niño Famine and the Making of the Third World* (London: Verso Books, 2001).

[6] Ibid., 63, 31–32, 290, 319.

[7] Dutt. *The Economic History of India,* vol. 2.

[8] Ibid.

[9] K. C. Ghosh, *Famines in Bengal, 1770–1943* (Calcutta: India Associated, 1944), 374, Table 1.

[10] Ibid., 374.

[11] The Indian Famine Commission, *Report* (Calcutta: Office of the Superintendent of Government Printing, India, 1898) 358, cited by A. K. Ghose, "Food Supply and Starvation: A Study of Famines with Reference to the Indian Subcontinent," *Oxford Economic Papers, New Series* 34, no. 2 (1982): 376.

[12] Ibid.

[13] This mode of description is used by Nobel laureate Amartya Sen in the book *Poverty and Famine: An Essay on Entitlement and Deprivation* (Oxford: University Press, 1981) 1.

[14] Ibid; Dutt. *The Economic History of India*, 34; D. Arnold, *Famine: Social Crises and Historical Change* (London: Basil Blackwell, 1988), 44–5 and 85.

Websites linked in image captions:

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Chapter: Changing land ownership, agricultural, and economic systems

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Forests

While the transition to commercialized agriculture under colonial rule clearly exacerbated food shortages in late nineteenth century India, other government policies such as British forestry law played a role as well. The colonial rulers may have intended to restrict forest access simply in order to protect timber resources. Yet these rules had the effect of cutting off natives' access to forest ecosystems that had previously served as a buffer when agricultural crops failed. British authorities enacted a series of forest acts beginning 1860. These laws began to convert open forest areas into reserved forest areas, where colonial government permission was required to enter to collect timber and non-timber forest products.[15] Forest dwellers and local people lost access to resources they had traditionally used as a cushion in times of crisis.[16] The colonial regulation of forests posed a particular threat to the Adivasi people, the aboriginal people of India, endangering both the natural resources from which they derived sustenance, and the geographic sites that were central to their culture and religion.[17] Contemporary voices saw this happening: in 1880, Valentine Ball pointed out that "the reservation of forest tracts which prohibits the inhabitants from taking a blade of grass from within the boundaries, has resulted in the people being cut off from these food sources throughout wide areas, and many have been forced to migrate in consequences to other regions...where they can continue to supplement their scanty cultivation with the productions afforded to them by nature."[18]

In spite of restricted access, the forests continued to serve as a valuable resource to some native groups in India. In his observation of the famine-affected regions in 1867, Ball learned that people living in forest villages were more independent and less affected by famine than those who reside in centers of cultivation and had no access to forests. The forests were a life-saving resource for the lower classes, supporting them with products such as fruits, honey, and tubers. Those who were excessively dependent on rice were more prone to succumb to hunger.[19] The forests thus served as a valuable resource at the periphery of the agricultural system of colonial India, impacting human survival during times of famine.

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[15] M. Gadgil and R. Guha, *The Fissured Land: An Ecological History of India* (Delhi: Oxford University Press, 1992); B. Weil, "Conservation, Exploitation, and Cultural Change in Indian Forest Service 1875–1927," *Environmental History* 11, no. 2 (2006): 319–43; S. Ghosal, "Pre-Colonial and Colonial Forest Culture in the Residency of Bengal," *Human Geographies* 5, no. 1 (2011): 111.

[16] M. Fried, *The Notion of Tribe* (Melo Park: California, Cummings Pub. Co., 1975); Ghosal, "Pre-Colonial and Colonial Forest Culture," 107.

[17] D. Sinha, "Proletarization of a Hunting and Gathering Tribe: The Case of Hill Khera of Purulia," in *Changing Land Systems and Tribals of Eastern India in the Modern Period*, ed. R. Banerjee (Calcutta : Subarnarekha, 1989), 73–74; N. K. Mahato, "Environmental Change and Chronic Famine in Manbhum, Bengal District, 1860–1910," *Global Environment* 6 (2010): 83–84.

[18] V. Ball, "On Jungle Products Used as Articles of Food in Chutia Nagpur," in *Tribal and Peasant Life in*

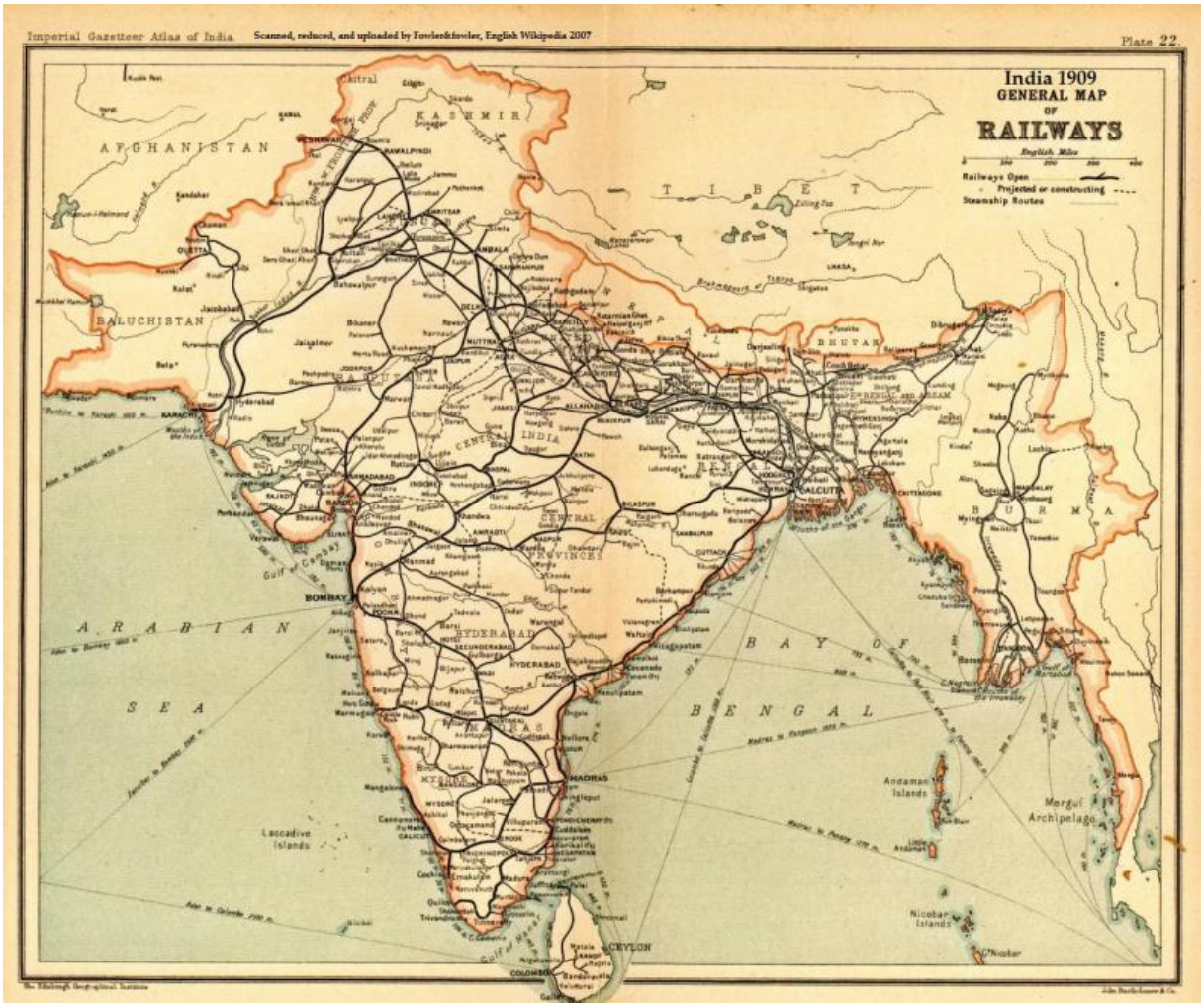
Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6812.
Chapter: Forests
Source URL: http://www.environmentandsociety.org/node/6816
PDF created on: 10 June 2021 09:48:52

Nineteenth Century India, ed. The General Secretary (New Delhi: Usha Publication, 1880), 695; Mahato "Environmental Change and Chronic Famine," 84–85.

[19] V. Ball, "On the Products Used as Articles of Food by the Inhabitants of the District of Manbhum and Hazaribagh," *Journal of the Asiatic Society of Bengal 36*, no. 2 (1867): 73–82; Ibid, "Notes on the Kherias, an aboriginal Race Living in the Hill Tracts of Manbhum," in *Proceedings of the Asiatic Society of Bengal*, ed. The General Secretary (Calcutta: Baptist Mission Press, 192); Mahato, "Environmental Change and Chronic Famine," 88.

Infrastructure and railroads

Railroads were introduced to India for quicker and more efficient access to trade. Unfortunately, they had the unintended consequence of exacerbating both environmental and economic conditions that proved damaging in times of famine.



Map of India Railways, 1909

Imperial Gazetteer Atlas of India, vol. 25, Oxford University Press, 1909.

Prior to the advent of railways, Indian transportation was conducted by two systems: road and water. Constructed roads were few and poorly maintained, with many being inaccessible during monsoon season. On roads, goods were carried in bullock carts or carried manually on the heads of porters. Water transportation was

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Chapter: Infrastructure and railroads
Source URL: http://www.environmentandsociety.org/node/6817
PDF created on: 10 June 2021 09:48:53

limited to the coast and the Indus and Ganga river basins. These important commercial arteries connected the north to the western and eastern coasts respectively. In comparison to the north, river transportation in the south was less reliable because the rivers relied heavily on rainfall. Thus, for British trading ambitions, transport costs were high outside of the great river routes. Also, the Grand Trunk Road, which had been constructed by Shershah Suri, only connected Calcutta to Peshawar. In this situation, the initial advocates for developing railways were mercantile firms in London and Manchester with trading ambitions in India.[20]

The goals of the plan to introduce railways were to lower transport costs and to give English merchants easier access to raw cotton from India. Also, the railway would simultaneously open the Indian market to British manufactured products such as cotton textiles. Initially, neither the railways promoter nor the East India Company envisioned much of a demand for passenger traffic. Railway construction started in 1853, with two "experimental" lines beginning in Bombay and Calcutta, and accelerated quickly following the Indian Mutiny, the first Indian war of independence, and the transfer of the government of India from the East India Company to direct rule by the British Crown.

The original virtual exhibition includes an interactive gallery of historic photos. View the images on the following pages.

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The Central Railway Station at Madras, Tamil Nadu, South India.
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Railway with one loop, Darjeeling Hill region.
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Chapter: Infrastructure and railroads
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In Bengal, grain was transported to the inland areas by heavy carts pulled by young bulls in 1874.
The Illustrated London News 4 April 1874. pp. 316. Digitized as part of the Google Book Search project.

A British plan for railway development in India was first initiated in 1832, but the core of the pressure for building railways came from London in the 1840s. In the year 1844, private entrepreneurs were permitted to launch a railway system by Lord Hardinge, who was the Governor-General of India. The railway age dawned in India on 16 April 1853, when the first train ran from Bombay's Bori Bunder to Thane, a distance of 21 miles, marked by a 21-gun salute. The mileage of India's rail network grew from 838 miles in 1860 to 15,842 miles in 1880, mostly radiating inland from the three major port cities of Bombay, Madras, and Calcutta.[21] Most of the rail construction was made by Indian companies under the supervision of British engineers. They built a railway system of strong bridges and a mixture of broad-meter and narrow-gauge tracks. By 1901 India had a rail network covering 25,373 miles.[22]

The common people of India did not see the railroad as a wonderful invention or great convenience; they even referred to it as the Great Rakasha or Rakas (ghost). While the railway conveyed the huge might and power of the British and boosted India's efforts at commercial modernization, it did little to help local people in times of famine.

Indeed, scholars point out that the railroads were designed to serve altogether different goals than the needs of

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Chapter: Infrastructure and railroads
Source URL: http://www.environmentandsociety.org/node/6817
PDF created on: 10 June 2021 09:48:53

the local population, and as an unintended side effect, they created a trade system that boosted grain prices beyond what poor workers could afford. Instead of feeding the population of inland provinces, the railroads served to carry grain away from the regions where it was needed most, so that it could be stored near port cities for export. Beyond all of this, railways were noted as the carriers of epidemic diseases such as cholera and influenza.[23]

Madras beach during the famine 1876-1878, Tamil Nadu, South India

Heaps of sacks between the railway and the Madras Beach during the famine 1876-1878, Tamil Nadu, South India

Their greatest impact of railroads on the famines, therefore, may have been neither the ability to transport commodities over long distances nor their impact on the Indian economy, but rather the way they catalyzed the natural processes of the spread of diseases, a process magnified immensely in the context of famine. Indeed, railroads serve as a telling example of the misalignment between colonial development and the environmental factors of famine. For while railroad development was undertaken with enthusiasm by colonial industrialists, irrigation projects drew comparatively little investment. Until March 1902, large tracts of country were without irrigation facilities. Irrigation was only carried out by means of canals in Bengal, Agra and Oudh, Punjab, Bombay, and Madras provinces, and expenditures on irrigation were much lower than major industrialization projects. While 226 million sterling was spent on railroads in India in 1902, only 24 million sterling was spent on irrigation.[24]

Sourabh, Naresh Chandra and Timo Myllyntaus. “Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice.” Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6812.

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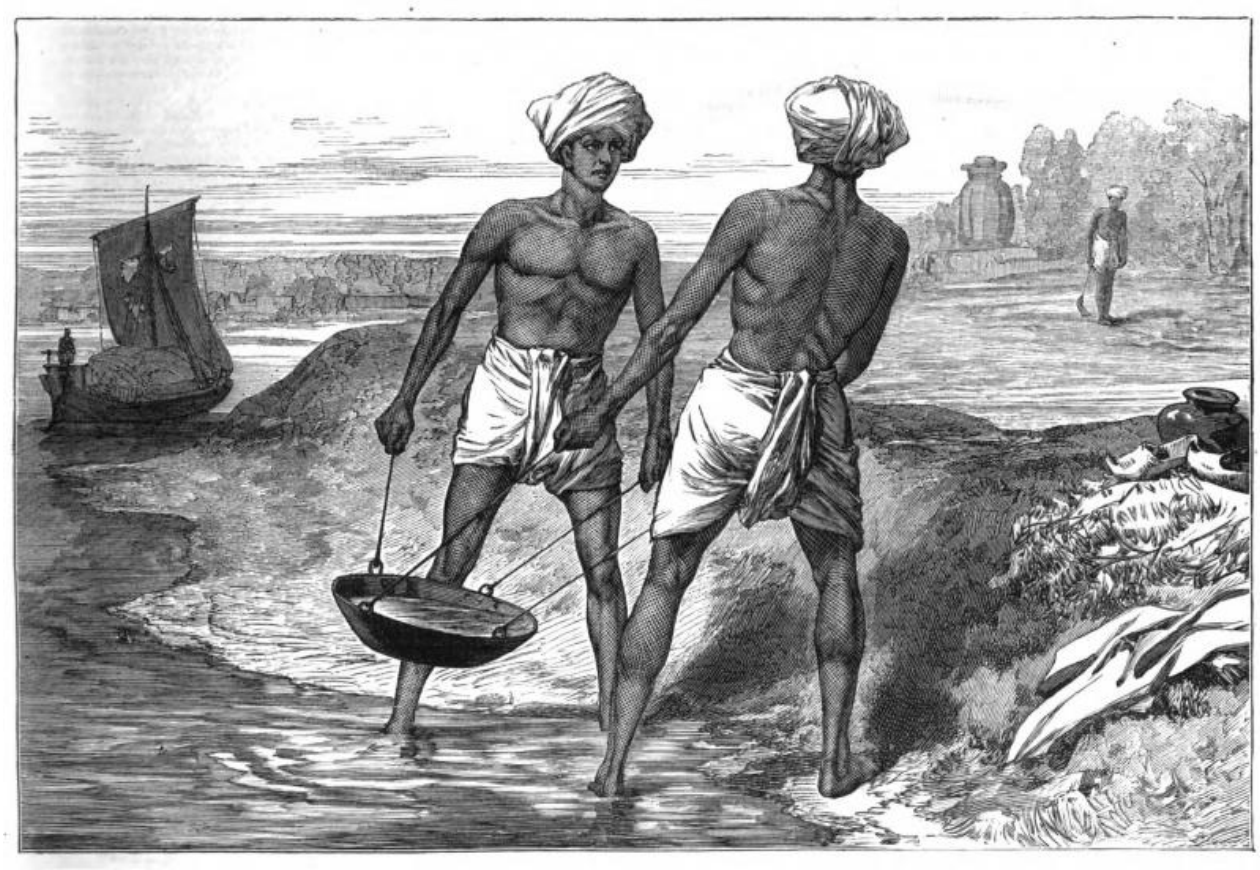

The famine in Bengal: Indian mode of irrigation

The Illustrated London News 24 Jan. 1874. pp. 73. Digitized as part of the Google Book Search project.

British colonial authorities argued that it was the climate and failure of rains that caused failure of crops and famine. Similarly, some scholars have argued, for example, that the famines were caused by environmental factors such as scarcity of water and poor soil quality, and that this guaranteed that investments in agriculture were excessively risky.[25] Seen through the lens of economic goals, this comes as little surprise, just as the enthusiastic development of railroads appears as a logical means for pursuing colonial economic goals. But infrastructure development always involves a process of overlaying human technologies upon natural systems and landscapes. The combination of robust investment in railroads and meager development of irrigation systems, together with natural systems involving repeated droughts and opportunistic disease vectors, contributed to the destruction of India's nineteenth century famines.

Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6812.
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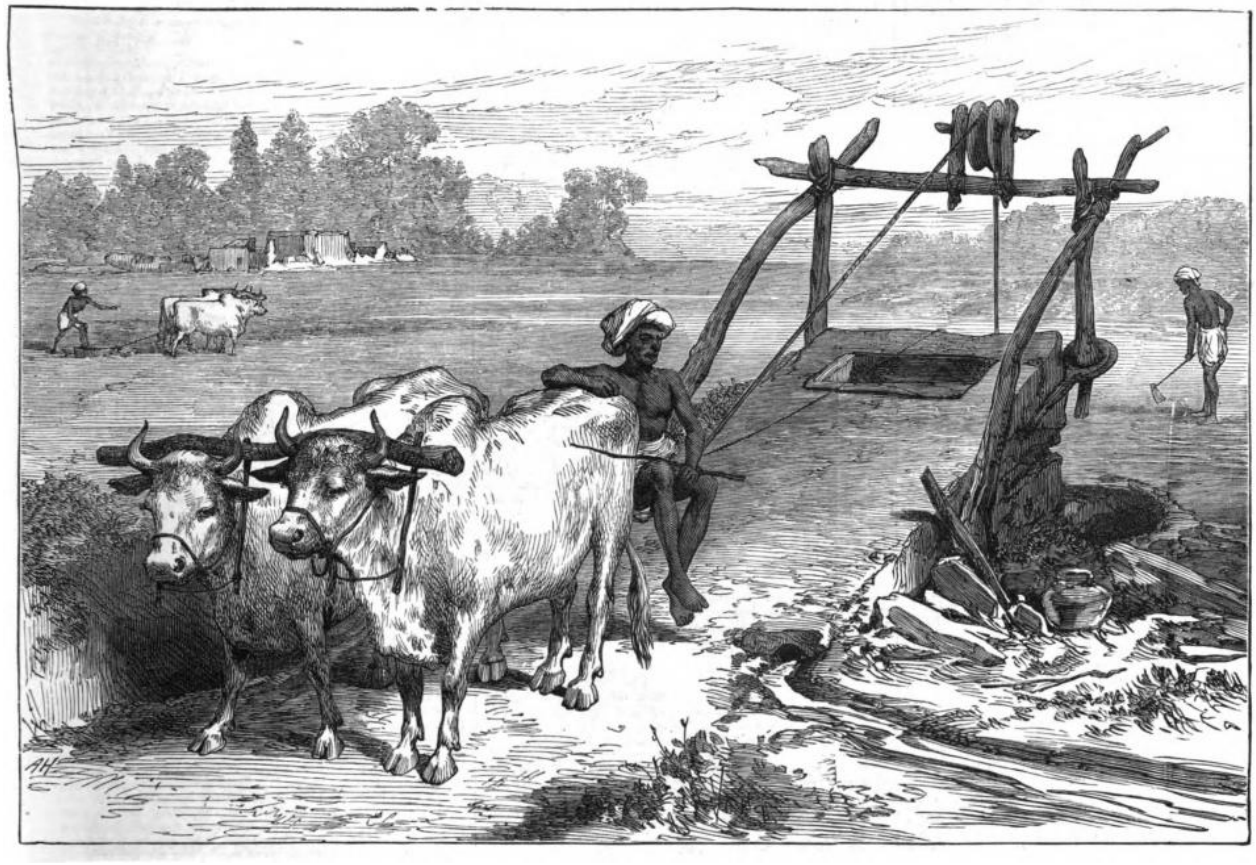

The famine in Bengal: Indian mode of irrigation

The Illustrated London News 24 Jan 1874. pp. 73. Digitized as part of the Google Book Search project.

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[20] D. Thorner, "The Pattern of Railway Development in India," *Far Eastern Quarterly*, no. 14 (1955): 201–206; J. Hurd, "Railways," in *Cambridge Economic History of India* vol. II, ed. D. Kumar (Cambridge: Cambridge University Press, 1983).

[21] Dutt, *The Economic History of India*, vol. 2. 399–403; J. Hurd, "Railways."

[22] Dutt, *The Economic History of India*, vol. 2. 400; D. R. Headrick, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism*, 1850–1940 (Oxford: Oxford University Press, 1988), 78–79.

[23] Davis, *Late Victorian Holocausts*, 1; J. Dreze, "Famine Prevention in India," in *The Political Economy of Hungry: Famine Prevention*, eds. J. Dreze and A. Sen (Oxford: Oxford University Press, 1991); M. B. McApline, "Dearth, Famine, and Risk: The Changing Impacts of Crop Failures in Western India, 1870–1920," *The Journal of Economic History* 39 (1979): 150; I. Klein, "When the Rains Failed: Famine, Relief, and Mortality in British India," *The Indian Economic and Social History Review* 21, no. 2 (1984): 190–91.

[24] Dutt, *The Economic History of India*, vol. 2, 403–404.

[25] T. Roy, "A Delayed Revolution: Environment and Agrarian Change in India," *Oxford Review of Economic Policy* 23 no. 2 (2007): 239–50 and 243–4.

Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6812.
Chapter: Infrastructure and railroads
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PDF created on: 10 June 2021 09:48:53

Government response

While the British authorities devoted significant effort and money to their attempts to relieve famines in India, the relief efforts were often insufficient, and frequently faced obstacles from natural or cultural systems on the ground. In a very simple but damaging example, cultural factors from the colonized population led British aid to be refused: some groups refused to accept alms or beg for food, and instead tried to fall back on the resources in the forests that they had used in times of scarcity prior to British rule.[26]

A corner of the Pettah Kitchen in Bangalore (over 3000 people waiting for feeding time), Madras, South India, 1877

Initially, British relief efforts proved inadequate to the environmental obstacles in India. In one significant example, a severe drought hit Orissa in 1865–66. By the time assistance from the British authorities arrived, nearly a million Indians had died. Efforts to transport food by ship to the affected province were hampered by

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Chapter: Government response
Source URL: http://www.environmentandsociety.org/node/6818
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bad weather, and when shipments did reach the coast of Orissa, they could not be transported inland. The costs of the relief efforts were very high, with critics pointing out that these excessive costs were in large part due to the high price of the supplied grain. In the two years of the famine, the British Indian government spent nearly 9.5 million rupees on famine relief for 30 million units (one day's food for one person).[27]

Carrying out the dead in the relief camp during the Madras Famine 1876-1878, Tamil Nadu, South India

Used with permission of the Royal Geographical Society (with IBG), No. S0002008. Photo by W. W. Hooper.

Children preparing prickly pear as food for cattle in Madras during the famine 1876-1878, Tamil Nadu, South India

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Subsequent relief efforts showed only slow improvement. Following criticism for the badly bungled relief during the Orissa famine of 1866, the British authorities discussed and revised their famine relief policy. In early 1868, Sir William Muir (Lieutenant Governor of Agra Province) made a famous announcement that "every district officer would be held personally responsible that no deaths occurred from starvation which could have been avoided by any exertion or arrangement on his part or that of his subordinates."[28] When the Rajputana famine of 1869 spread through the British territory, the British authorities organized famine relief works in the British territory of Ajmer and in the neighboring Agra British India. In Ajmer, 900,000 rupees were used in the relief effort: 500,000 rupees in revenue remission, and 2.1 million rupees for agricultural credit. In Agra 3 million rupees were spent in relieving 29 million units. In the princely States of Rajasthan, Udaipur State spent 500,000 rupees.[29] Still, these efforts fell far short of Muir's goal: it is estimated that more than 1.5 million people died from starvation in this famine in the princely States of Rajasthan and the British Indian territory.

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Chapter: Government response
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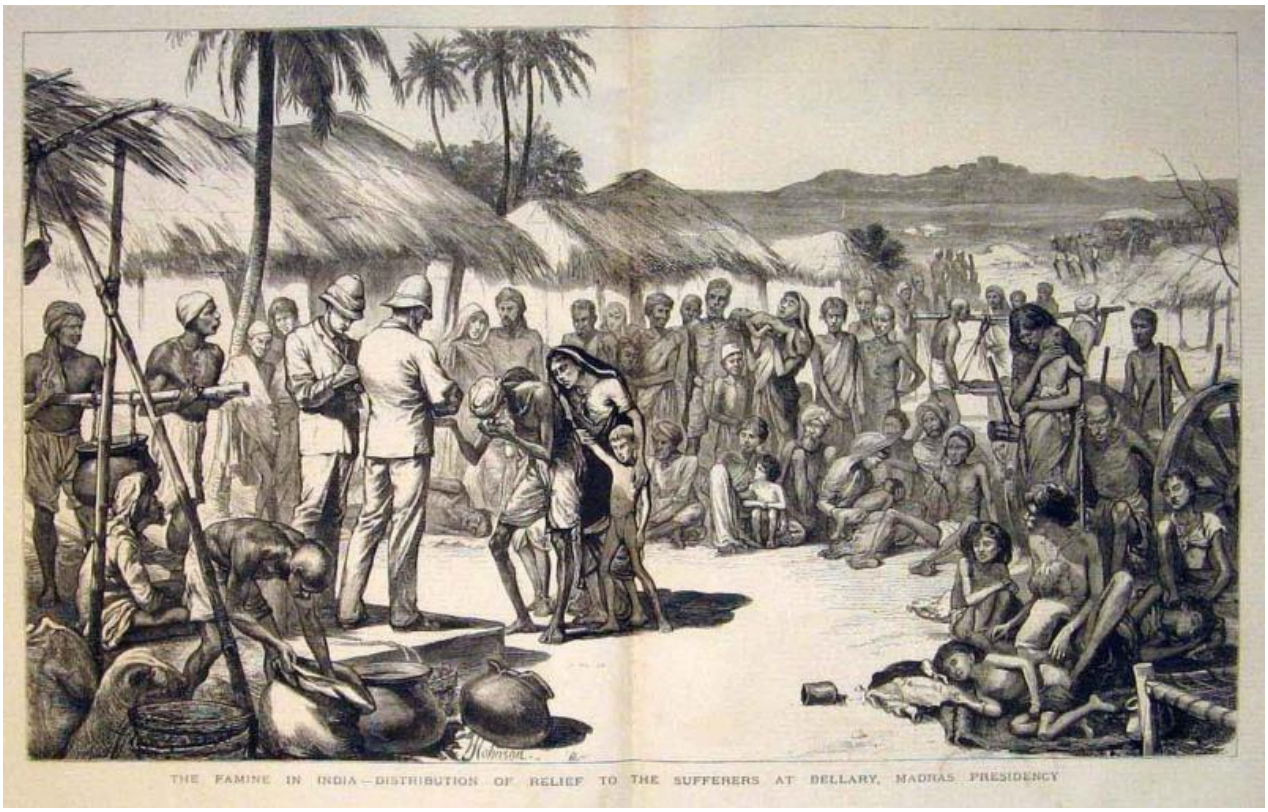

Colonial officials distributing famine relief to distressed people in a temporary aid camp

In the Bihar Famine of 1874, the response from the British authorities was more successful and there was little or no mortality.[30] However, Sir Richard Temple, Lieutenant-Governor of Bengal, was criticized by many British officials for excessive expenditure on relief work. Taking the criticism to heart, Temple implemented stricter standards of qualification for relief and more meager relief rations. As a result, two types of relief were practiced: relief work for able-bodied men, women, and working children; and free, charitable relief for small children, the elderly, and the indigent.[31] In January 1877, Temple reduced the wage for a day's hard work in the relief camps in Madras and Bombay. After the wage reduction, workers were given one pound (0.45 kg) of grain plus wages for a full day of labor: one anna (four pennies) for a man and a slightly reduced amount for a woman and working child.[32] This was justified under the thought that excessive pay might promote dependency.

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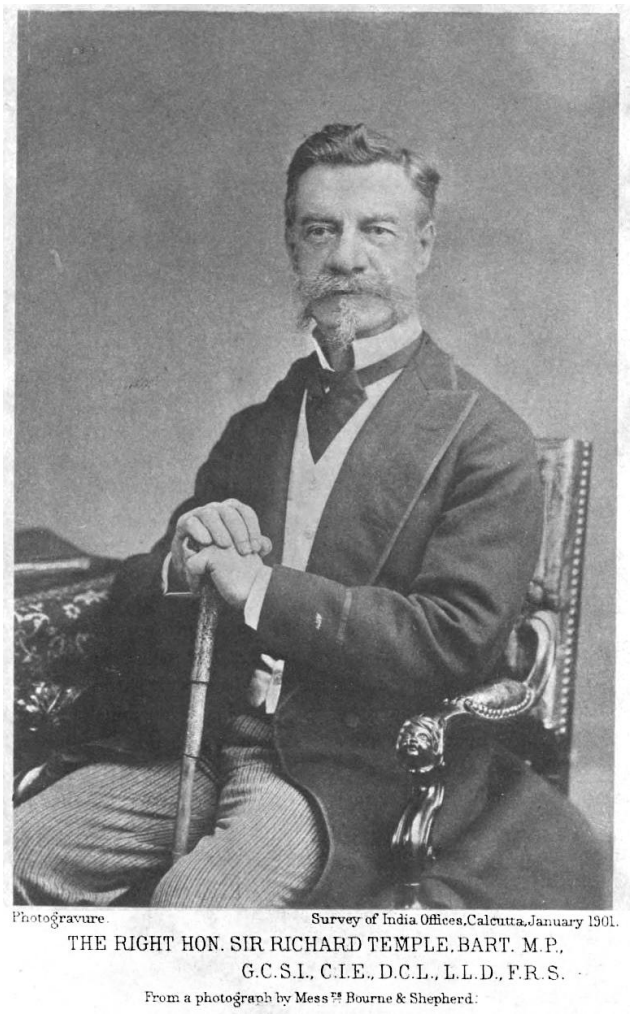

Sir Richard Temple, who framed difficult famine relief policy

Photo by Bourne & Shepherd - Buckland, C.E. 1901.

Temple's recommendations were opposed by a number of officials; however, Temple enjoyed the confidence of Lord Lytton, the Viceroy of India, who supported his relief policy.[33] By early 1877, Temple declared that the famine was under control, not without dissenters. William Digby countered that "a famine can scarcely be said to be adequately controlled which leaves one fourth of the people dead."[34] The Government of India spent about 800 million rupees on 700 million units in British India and 7.2 million rupees on 72 million units in the princely States of Mysore and Hyderabad.[35]

In the Indian famine of 1896–97, the relief was offered throughout the famine-stricken regions in accordance with the Provisional Famine Code of 1883. All in all, the relief was arranged for 821 million units at a cost of 72.5 million rupees. In addition, 12.5 million rupees of revenue were remitted and 17.5 million rupees of credit were offered. A charitable relief fund gathered a total of 17.5 million rupees, of which 12.5 million rupees were

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Chapter: Government response
Source URL: http://www.environmentandsociety.org/node/6818
PDF created on: 10 June 2021 09:48:57

collected in Great Britain. In spite of all this, millions of people died of starvation and accompanying diseases during this hunger crisis. Although the famine relief was organized efficiently in the United Province, it failed in the Central Province, particularly among tribal people who, according to Famine Code Guidelines, did not qualify for relief.[36]

After public criticism of the response to this previous famine, during the Indian famine of 1899–1900 an improved famine relief action was organized. By July 1900, one-fifth of the Central Province's population was on some form of famine relief. After abundant rainfall, most famine relief works were consequently closed by December 1900.[37]

Scene in a relief camp during the famine 1876-1878 in Madras, Tamil Nadu, South India

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[26] Mahato, "Environmental Change and Chronic Famine," 85–86.
[27] Klein, "When the Rains Failed," 185–214; *The Indian Empire, Economic*, 486.
[28] Ibid., 478.
[29] Ibid., 478, 487–8.
[30] Ö. Ertem, "British Views on the Indian and Ottoman Famines: Politics, Culture, and Morality," In *RCC*

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Perspectives: The Imagination of Limits. Exploring Scarcity and Abundance, edited by F. Felcht and K. Ritson, 17-29. Munich, 2015.

[31] *The Indian Empire, Economic*, 489.

[32] Ibid.; D. Hall-Matthews, "Inaccurate Conceptions: Disputed Measures of Nutritional Needs and Famine Deaths in Colonial India," *Modern Asian Studies* 42, no. 6 (2008): 1189–212.

[33] Davis, *Late Victorian Holocausts*, 36–37.

[34] Davis, *Late Victorian Holocausts*, 39–40.

[35] *The Indian Empire, Economic*, 489.

[36] *The Indian Empire, Economic*, 491.

[37] T. Dyson, "On the Demography of South Asian Famines, Part I," *Population Studies* 45, no. 1 (1991): 5-25.

Epidemics

British relief efforts certainly had their flaws, but one of the cruel ironies of these famines is that the success or failure of the British to provide enough food was only indirectly related to the events' appalling death tolls. Instead, recent scholarship has shown that while starvation did happen, epidemic diseases wielded the scythe most destructively.[38] Diseases attacked people without regard for social class or economic status, as climatic and sanitary factors supported the breeding of disease vectors.[39] Further, transformed social and economic networks and altered social behavior patterns contributed to the transmission and spread of diseases. For example, population mobility led to the spread of malaria, with migrants moving in and out of endemic malaria zones and malaria carriers moving back into areas where the diseases had not previously been endemic.[40] These epidemics were then intensified by overcrowding, poverty, and malnutrition.

Past studies have shown that famine mortality occurred in two phases. First, in the less lethal stage, the fundamental causes of death were cholera, dysentery, and smallpox, all of which were spread by migration, unsanitary conditions, close contact between people in relief camps, and consumption of decayed old food. Then, in the far more lethal phase, the main cause of death was malaria. This happened, somewhat paradoxically, in the second year of famine—when rain had fallen, food cost had declined, supplies had increased, and food nutrition among the working poor had risen gradually. However, the development of epidemic malaria was aided by torrential rain, which favored the breeding of the anopheles mosquito, the vector responsible for transmitting the malaria parasites, *Plasmodium falciparum*.[41]

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[38] T. Dyson, "On the Demography of South Asian Famines, Part I," *Population Studies* 45, no. 1 (1991): 5-25. Ibid, "On the Demography of South Asian Famines, Part II." *Population Studies* 45, no. 2 (1991): 279-97. D. Arnold, "Social Crises and Epidemic Disease in the Famines of Nineteenth-Century India," *Social History of Medicine* 6 (1993): 385–404.

[39] B. M. Bhatia, *Famines in India: A Study in Some Aspects of the Economic History of India* (London and New Delhi: Asia Publishing House, 1967); S. Abhirajan, "Malthusian Population Theory and Indian Famine Policy in the Nineteenth Century," *Population Studies* 30 (1976): 5–14; Klein, "When the Rains Failed," 185-214; Davis, *Late Victorian Holocausts*; D. Hall-Matthews "The Historical Roots of Famine Relief Paradigms," in *A World Without Famine? New Approach to Aid and Development*, eds. H. O'Nell and J. Toye (Basingstok: Macmillan, 1998), 107–27.

[40] Arnold, "Social Crises and Epidemic Disease," 401.

[41] Ibid; Dyson, "On the Demography of South Asian Famines, Part I," 14, 22; E. Whitecombe, "Famine Mortality," *Economic and Political Weekly* 28, no. 1 (1993): 69–79.

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Reaction of the Indian population

Children born of famine stricken mothers in Madras (during the famine 1876-1878), Tamil Nadu, South India

Indian responses to the famines, and to the British response to the crises, took a number of different forms: these included crime, organized resistance and protest, and migration. Some of the increased crime took the expected form of theft or robbery in order to obtain food.[42] Such acts were often met with harsh punishment from the police.[43] But other responses emphasize just how complex the environmental consequences of colonial policies could be, especially when complicated by the weather patterns that lead to famine.

For example, a report of the Administration of Bihar and Orissa complained of serious loss to the neighboring village population by the wholesale clearing of timber. The villagers had lost their free or cheap supply of wood, reducing their grazing land and causing their cattle to suffer severely. Wood being no longer available for fuel, cow dung replaced it and was then lost as natural manure. This led to a negative impact on soil fertility. It is the sum of these overlapping consequences that led to sustained protest from the local population.[44]

During famines and starvation, people were compelled to migrate to other regions within the country or to other

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Chapter: Reaction of the Indian population
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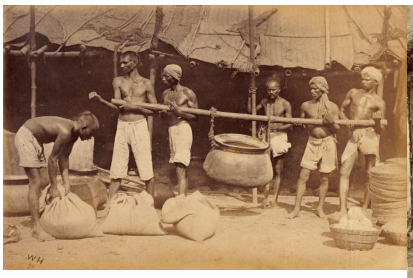
countries in order to survive, becoming ecological refugees. For example, as a result of starvation within India, hundreds of thousands of Indians signed up to leave their homeland and work as indentured laborers on plantations in Sri Lanka, Mauritius, Guyana, and Nata.[45]



Famine relief camp cook room in Madras during the famine 1876-1878, Tamil Nadu, South India

Used with permission of the Royal Geographical Society (with IBG), No. S0002002. Photo by W. W. Hooper.

Famine in Mysore, India: six emaciated men wearing loin cloths, five sitting and one lying on a mat

Photo by Willoughby Wallace Hooper, 1876-1878.

Famine in Bangalore, India: a group of emaciated women and children

Photo by Willoughby Wallace Hooper, 1876-1878.

Of course, migration does not only involve leaving familiar environments and social networks behind, but it also produces a sense of loss, dislocation, alienation, and isolation. Indian migrants in these countries still remember India as their original home, often telling stories of how their ancestors came to the particular country. Their story is full of pain, misery, and horror, repeatedly emphasizing that they miss their original home and love their Indian culture, despite the fact that their ancestors migrated one hundred years before.

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[42] V. Damodaran, "Famine in a Forest Track: Ecological change and the Causes of the 1897 famine in Chotanagpur, Northern India," in *Nature and the Orient: Essays on the Environmental History of South and Southeast Asia*, eds. R. Grove, V. Damodaran, and S. Sangwan (New Delhi: Oxford University Press, 1998), 853–90; Mahato "Environmental Change and Chronic Famine," 86. One of the protests, the Deccan Riots, later took on symbolic status during longer protests launched by two prominent nationalist organizations, the Poona Sarvajanik Saabha and the Indian National Congress.

[43] Klein, "When the Rains Failed," 196.

[44] Mahato, "Environmental Change and Chronic Famine," 84; R. Kumar, "The Deccan Riots of 1875," *The Journal of Asian Studies* 24, no. 4 (1965): 613–35.

[45] Mahato, "Environmental Change and Chronic Famine," 82–85; Davis, *Late Victorian Holocausts*, 112.

Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society. doi.org/10.5282/rcc/6812.
Chapter: Reaction of the Indian population
Source URL: http://www.environmentandsociety.org/node/6820
PDF created on: 10 June 2021 09:48:58

Conclusions

All told, scholars now agree, just as British administrators and Indian nationalists at the time recognized, that the late-nineteenth century famines in India were not purely food shortages, but rather were complex crises resulting from the impacts of drought and crop failure on market systems within the colonial Indian society and economy.[46]

Orphaned children during the Madras famine 1876-1878, Tamil Nadu, South India

Used with permission of the Royal Geographical Society (with IBG), No. S0001997. Photo by W. W. Hooper.

The famine in India: The village well

Drawing by H. Johnson. *The Illustrated London News* 15 June 1874. Digitized as part of the Google Book Search project.

Recovery from famines' consequences in India was achieved unevenly across society, and there were severe impacts on population growth, life expectancy, and political, social, and economic security. The study of these events reveals famine to be a catastrophic event marked not only by failure of rains; rather, it is a consequence of a complex matrix of environmental and cultural factors including changes in weather, disease vectors, infrastructure development, economic systems, social relations among colonizers and colonized people, and specific actions by individuals and governments.

Sourabh, Naresh Chandra and Timo Myllyntaus. "Famines in Late Nineteenth-Century India: Politics, Culture, and Environmental Justice." Environment & Society Portal, *Virtual Exhibitions* 2015, no. 2. Rachel Carson Center for Environment and Society.
doi.org/10.5282/rcc/6812.
Chapter: Conclusions
Source URL: http://www.environmentandsociety.org/node/6821
PDF created on: 10 June 2021 09:48:59

The famine in India: Women grinding corn

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[46] Davis, *Late Victorian Holocausts*, 112 and 19.

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Chapter: Conclusions
Source URL: http://www.environmentandsociety.org/node/6821
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About the exhibition

Between 1850 and 1899, India suffered 24 major famines, a number higher than in any other recorded 50-year period, resulting in millions of deaths. This exhibition describes the environmental and social factors that contributed to these cataclysmic events, situating their causes and costs within the complex natural and cultural contexts of nineteenth-century colonial India.

The deadly impacts of the famines were in many ways exacerbated by policies of British colonial rule. For instance, commercialized agriculture and landlordism removed local control over harvests. This eliminated the practice of balancing out lean years with stored food from past harvests, as had been done under the earlier system of subsistence farming. India's infrastructure developed rapidly in the late nineteenth century, especially in the form of railroad networks. But these developments were aimed at transporting crops for export, not feeding local populations, and therefore did not prevent mass starvation. Finally, British relief efforts were frequently inadequate to meet the huge challenge of famine relief.

Indian famines in the nineteenth century attest to the complexity of humans' interactions with the natural world. For example, while it is not surprising that food shortages were exacerbated by the transition to commercialized agriculture under colonial rule, the fact that British forestry law also led to starvation is less obvious. While the colonial rulers might have thought that they were simply restricting forest access in order to protect timber resources, these rules in fact cut off natives' access to forest ecosystems that had previously served as a buffer zone when agricultural crops failed. Further, in hindsight, it is evident that a railroad system designed only to take food away from rural areas would be a problem, given that the rural farming communities were frequently plagued by famine. It is more surprising, however, to note the ways in which these railroads also served to transport disease, thus contributing to malaria outbreaks, which were most severe once the food shortage had ended, rains had fallen, and crops had recovered. In fact, these epidemics—only indirectly caused by the famines—proved more deadly than the starvation directly caused by food shortages.

Considering political, social, economic, and environmental factors of famines in nineteenth-century India, this exhibition gives a brief introduction to these complex and catastrophic events.

About the authors

Naresh Chandra Sourabh is professor and founder Director at the Institute of Social Research and Development, Patna, India. He received his M.A. degree in Sociology from Jawaharlal Nehru University, New Delhi, in 1982 and his Ph.D. also in Sociology from the University of Helsinki in 2008. He is the author of the socio-ethnographic work *The Culture of Women's Housework.* Previously, Dr. Sourabh lectured "Food in Indian History- Production, Consumption and Culture from the Colonial Times to the Present" at Turku University, where he was a fellow with the project *Finnish Harvest Failures and Famines in the International Context,* funded by the Academy of Finland.

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Chapter: About the exhibition
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Timo Myllyntaus is Professor of Finnish history at Turku University. He earned his first two degrees at Helsinki University and a Ph.D. in economic history at the London School of Economics. His research interests stretch from economic and social history to environmental history. His edited volumes include *Thinking through the Environment: Green Approaches to Global History* (2011) and *Invisible Bicycle. New Insights in Bicycle History* (co-edited with Tiina Männistö-Funk, forthcoming in 2016). He has also published around one hundred scientific articles and fifty popular articles. Myllyntaus has directed more than a dozen research projects, participated in activities of various scientific organizations including the European Society for Environmental History, and acted as a peer-reviewer for several journals.

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