

**DISCIPLINE SPECIFIC ELECTIVE COURSE– 4 (DSE): Environmental History of the Indian Subcontinent**

**Credit distribution, Eligibility and Pre-requisites of the Course**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/Practice		
Environmental History of the Indian Subcontinent	4	3	1	0	12 th Pass	NIL

**Learning Objectives**

This course aims to introduce the students to the environmental historiography of the Indian subcontinent. The idea is to familiarize the students to the recent interventions in the methodologies, theories, and concepts of doing environmental history. The course has the following broad objectives: To introduce historical studies that explores the long-term trajectories of man-nature interactions and revise the political history-based periodization of the sub-continent's past as self-contained ancient, medieval, and modern periods. The course also introduces inter-disciplinary approaches- cartographic, geological, zoological, ecological knowledge -that helps historians study the crucial role played by ecology in the shaping of past societies. The themes and issues discussed in this course familiarizes the students to the methods of using archaeological, bio and geo-archival sources, artistic depictions and oral history sources to study the past relationship between human and environment. This will also enable students to situate the environmental historiography that revises the colonial notion of depicting pre-colonial India as an unchanging landscape.

**Learning outcomes**

After completing this course, students should be able to -

- Understand the historical methodologies and concepts to explain the environmental contexts of the past social and cultural transformations.
- Develop a historical perspective on the complex relationship between society and nature from prehistory to the present in the context of the Indian subcontinent.
- Discuss how societies developed technologies, sources of energy, and modes of organising lives to adapt to varied ecological landscapes.
- Discuss environmental issues within a socio-cultural framework.

- Examine the social, political and economic contexts of creating inequalities in resource use, with reference to the case studies regarding water rights, forest rights, and the right to have liveable cities.
- Locate solutions to environmental problems within a framework of greater democratisation of resource use.

## SYLLABUS OF DSE

### **Unit 1:** Introduction to the Environmental History of the Indian Subcontinent

1. Doing Environmental History: Issues and Perspectives, Historiography
2. Sources: Archaeological, Bio and Geo-Archives, Arts and Crafts, and OralHistory

### **Unit 2:** Living with Nature

1. Environment and Early Urban Societies: Harappan Civilization
2. Beliefs, Practices, and Natural Resources

### **Unit 3:** Environment and Livelihood in Medieval Times

1. Pastoralism, Animal Husbandry, and Agriculture
2. Forests and Tribal Groups

### **Unit 4:** Colonial Capitalism and Natural Resources

1. Changing Energy Regimes; Railway and Deforestation, Dams and HydroelectricPower
2. Rivers, Canals, and Embankments

### **Unit 5:** Environmental Crisis and the Future

1. Factories and Urban Spaces; Bombay, Calcutta and Delhi
2. Industrial Agriculture; Biodiversity Loss; Species Extinction

## **Practical component (if any) - NIL**

### **Essential/recommended readings**

**Unit 1:** This unit provides an overview of environmental historiography of the Indian subcontinent. The first rubric introduces the methods, theoretical concepts, and the major sub-fields of environmental history. The second rubric explores how archeological records, bio-mass, artistic depictions of nature, and oral history sources are integrated into environmental history narratives. **(Teaching time: 9 hrs. approx.)**

- Mann, Michael (2013), “Environmental History and Historiography on South Asia: Context and some Recent Publications,” South Asia Chronicle, Vol. 3, pp. 324-357.
- Rangarajan, Mahesh (2015), Nature and Nation: Essay on Environmental History. Ranikhet: Permanent Black, pp. 1-45 [Chapter 1: “Introduction: Issues in the Writing of Environmental History”]

- Rangarajan, Mahesh (2002), "Polity, Ecology and Landscape: Fresh Writing on South Asia's Past," *Studies in History*, Vol 17, No. 1, pp. 135-48.
- Arnold, David and Ramachandra Guha (1995), "Themes and Issues in the Environmental History of South Asia," In David and Ramachandra Guha, eds, *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*. Delhi: Oxford University Press, pp. 1-20.

**Unit 2:** This unit gives a synoptic overview of human interaction with the animals, plants, and natural elements that sustained life. It shows how from the times of gathering, scavenging and hunting to the beginning of agriculture, humans adapted to the environment even as they tried to manipulate it, and maintained harmony with it and advocated conservation of earthly resources. **(Teaching time: 9 hrs.approx)**

- Mishra, V. N. (2008), "Climate, a Factor in the Rise and Fall of the Indus Civilization: Evidence from Rajasthan and Beyond," In Rangarajan, Mahesh, *Environmental Issues in India: A Reader*. Delhi: Pearson, pp. 7-16.
- Lal, Makkhan (2008), "Iron Tools, Forest Clearance and Urbanization in the Gangetic Plains," In Mahesh Rangarajan, *Environmental Issues in India: A Reader*. Delhi: Pearson, pp. 18-32.
- Thapar, Romila (2008), "Forests and Settlements," In Mahesh Rangarajan, *Environmental Issues in India: A Reader*. Delhi: Pearson, pp. 33-41.
- Gosling, David L. (2001), *Religion and Ecology in India and Southeast Asia*. London: Routledge.
- Hughes, Donald J. (1998), "Early Ecological Knowledge of India from Alexander to Aristotle to Aelian," In Richard Grove, Vinita Damodaran, and Satpal Sangwan, *Nature and the Orient: The Environmental History of South and Southeast Asia*. Delhi: Oxford University Press, pp. 70-86.

**Unit 3:** This unit explores the patterns and processes of the expansion of agrarian landscapes, pastoralism, and forest economies in India up to the eighteenth century. Providing an overview of the dynamics of human-nature interaction during the medieval times will help students to challenge the notions of considering pre- modern environments as a timeless continuum. **(Teaching time: 9 hrs. approx.)**

- Murty, M. L. K, (2012), "Sheep/Goat Pastoral Cultures in the South Decan: The Narrative as a Metaphor," In Rangarajan, Mahesh and K. Sivaramakrishnan, eds (2014), *India's Environmental History: A Reader*. Ranikhet: PermanentBlack.
- Guha, Sumit (2008), "A Historical Study of the Control of Grass and Fodder Resources in Eighteenth-Century Maharashtra," In Rangarajan, Mahesh, *Environmental Issues in India: A Reader*, pp. 97-106.
- Singh, Chetan, (1995), "Forests, Pastoralists and Agrarian Society in Mughal India," In David Arnold & Ramachandra Guha, eds., *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*. Delhi: Oxford University Press, pp. 21-48.

- Murali, Atluri (1995), “Whose Trees? Forest Practices and Local Communities in Andhra, 1600-1922,” In David Arnold & Ramachandra Guha, eds., *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*. Delhi: Oxford University Press, pp. 86-122.

**Unit 4:** This unit explores how colonial capitalism as a powerful agent of environmental transformations made fundamental changes to the land use patterns and livelihood resources. The first rubric explores the environmental history of the colonial appropriation of forests as raw material for railways expansion and rivers as dams and other hydraulic infrastructures for industrial production and long-distance transportation. The second rubric elaborates how the colonial appropriation of waterbodies and common lands through the new revenue policies, acts and regulations affected indigenous fishing and other livelihood patterns based on hydraulic resources. **(Teaching time: 9 hrs. approx.)**

- Gadgil, Madhav and Guha, Ramachandra. (1992). “Conquest and control.” In Madhav Gadgil and Ramachandra Guha, eds., *This Fissured Land: An Ecological History of India*. Delhi: OUP, pp. 113- 145.
- Guha, Ramchandra (1983), “Colonialism, Capitalism and Deforestation,” *Social Scientist*,
- Vol. 11, No.4, pp.61-64.
- Das, Pallavi (2013), “Railway fuel and its impact on the forests in colonial India: The case of the Punjab, 1860– 1884”, *Modern Asian Studies*, Vol.47, No.4, pp.1283-1309.
- Morrison, Kathleen D. (2010), “Dharmic Projects, Imperial Reservoirs, and New Temples of India: An Historical Perspective on Dams in India,” *Conservation and Society*, Vol. 8, No. 3, pp. 182-195.
- Singh, Vipul (2018), *Speaking Rivers: Environmental History of a Mid-Ganga Flood Country, 1540-1885*. Delhi: Primus Books, pp. 122-158 [Chapter 6: “Decommonization of the River”].
- D’Souza, Rohan, (2012), “Damming the Mahanadi River: The Emergence of Multi-Purpose River Valley Development in India (1943-946),” In MaheshRangarajan & K. Sivaramakrishnan, eds., *India’s Environmental History: Colonialism, Modernity, and the Nation*. Ranikhet: Permanent Black, pp. 550- 583.
- Rao, G. N. (1988), “Canal Irrigation and Agrarian Change in Colonial Andhra: A Study of Godavari District, c. 1850-1890, *Indian Economic and Social History Review*, Vol. 25, No. 1, pp. 25-60.
- Hardiman, David (1996), ‘Small-dam Systems of the Sahyadris,’ in David and Ramachandra Guha, eds, *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*. Delhi: Oxford University Press, pp. 185- 209.
- Gilmartin, David (1996), “Models of the Hydraulic Environment: Colonial Irrigation, State Power and Community in the Indus Basin, In David Arnold & Ramachandra Guha, eds, *Nature, Culture, Imperialism: Essays on the*

**Unit 5:** Historical thinking and writing on climate change help to provide a long-term perspective on contemporary social, ecological, economic crisis with the question of socio-environmental justice as a central concern. By focusing on the specific contexts of Bombay, Calcutta and Delhi, the first rubric provides a historical perspective to the contemporary urban problems of air and water pollution, and issues related to access to energy sources as social issues of urbanized environment. The second rubric explains how the issues of biodiversity loss, species extinction, and the industrialization of agricultural production transforms livelihood patterns and cultural landscapes. **(Teaching time: 9 hrs. approx)**

- Awadhendra B. Sharan. In the City, Out of Place: Nuisance, Pollution, and Dwelling in Delhi, c. 1850-2000. Delhi: Oxford University Press, 2014 [Introduction; Chapter 4: Pollution]
- Agarwal, Ravi (2010), "Fight for a Forest," In Seminar, No. 613, pp. 48-52.
- Riding, Tim (2018), "'Making of Bombay Island': Land Reclamation and Geographical Conception of Bombay, 1661-1728, Journal of Historical Geography, Vol. 59, pp. 27-39.
- Klein, Ira (1986), "Urban Development and Death: Bombay City, 1870-1914", Modern Asian Studies, Vol.20, No.4, pp.725-754.
- Mann, Michael (2007), "Delhi's Belly: The Management of Water, Sewerage and Excreta in a Changing Urban Environment during the Nineteenth Century, Studies in History, Vol. 23, No. 1, pp. 1-31.
- Shiva, Vandana (2016), Stolen Harvest: The Hijacking of the Global Food Supply. Kentucky: The University Press of Kentucky, Chapter 1: "The Hijacking of the Global Food Supply", pp. 5-20.
- Adve, Nagraj (2022), Global Warming in India: Science, Impacts, and Politics. Bhopal: Eklavya Foundation.

**Suggested Readings:**

- Bhattacharya, Neeladri (1992), 'Colonial State and Agrarian Society,' In Burton Stein, ed. The Making of Agrarian Policy in British India, 1770-1900. Delhi: Oxford University Press.
- Bulliet, Richard. (2005). Hunters, Herders and Hamburgers: The Past and Future of Human-Animal Relationships. New York: Columbia University Press. pp. 205 -224.
- Chakravarti, Ranabir, (1998), "The Creation and Expansion of Settlements and Managements of Hydraulic Resources in Ancient India," In Richard Grove, et al, eds, Nature and the Orient: The Environmental History of South and Southeast Asia. Oxford: Oxford University Press, pp. 87-105.
- D'souza, Rohan (2006), Drowned and Dammed: Colonial Capitalism and Flood Control in Eastern India. New Delhi: Oxford University Press.

- Erdosy, George (1998), “Deforestation in Pre and Proto Historic South Asia,” In Richard Grove, Vinita Damodaran, and Satpal Sangwan, *Nature and the Orient: The Environmental History of South and Southeast Asia*. Delhi: Oxford University Press.
- Fisher, Michael H. (2018), *An Environmental History of India: From Earliest Times to the Twenty-first Century*. New York: Cambridge University Press.
- Gadgil, Madhav and Ramachandra Guha (2000), *The Use and Abuse of Nature*. Delhi: Oxford University Press.
- Grove, Richard (1997), *Ecology, Climate and Empire*. Delhi: Oxford University Press.
- Hughes, Donald (2006), *What is Environmental History?*. Cambridge: Polity Press. Chapter 1: Defining Environmental History: pp. 1-17
- Malamoud, Charles (1998), *Village and Forest in Ancient India*. Delhi: Oxford University Press.
- Meadow, R. H. (1981), “Early Animal Domestication in South Asia: A First Report of Faunal Remains from Mehrgarh, Pakistan,” In H. Hartel, ed. *South Asian Archaeology*. Berlin: Dietrich Reimer Verlag, pp. 143-79.
- Rangarajan, Mahesh (2008), “The Forest and the field in Ancient India,” In Rangarajan, Mahesh, *Environmental Issues in India: A Reader*. Delhi: Pearson, pp. 42-48.
- Rangarajan, Mahesh and K. Sivaramakrishnan, eds (2014), *India’s Environmental History: A Reader*. Ranikhet: Permanent Black [Introduction]
- Rodrigues, Louiza (2019), *Development and Deforestation: The Making of Urban Bombay, C. 1800-1880*. Delhi: Primus Books.
- Satya, Laxman D. (1997), *Cotton and Famine in Berar, 1850-1900*, Delhi: Manohar Publishers.
- Thapar, Romila, (2008), “Perceiving the Forest: Early India,” In Rangarajan, Mahesh and
- K. Sivaramakrishnan, eds (2014), *India’s Environmental History: A Reader*. Ranikhet: Permanent Black.
- Shiva, Vandana. (1988). “Women in the Food Chain” (Ch.5) in Vandana Shiva, *Staying Alive: Women, Ecology and Survival in India*. New Delhi: Kali for Women. pp.96-178.
- Singh, Satyajit K. (1990), “Evaluating Large Dams in India,” *Economic and Political Weekly*, Vol. 25, No. 11, pp. 561-574.
- Singh, Vipul (2018), *Speaking Rivers: Environmental History of a Mid-Ganga Flood Country, 1540-1885*. Delhi: Primus Books.

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**