

The cover image of the estuary of the Klamath River and ceremonial site of the Yurok Indian Tribe is by Linda Tanner via Flickr. <u>CC BY 2.0</u>.

Except where otherwise noted, this work is licensed under a <u>Creative Commons Attribution-NonCommercial 4.0 International License</u>. This means each author holds the copyright to her or his work and grants all users the rights to share (copy and/or redistribute the material in any medium or format) or adapt (remix, transform, and/or build upon the material) the article, as long as the original author and source are cited, and the use is for noncommercial purposes.

*Open Rivers: Rethinking Water, Place & Community* is produced by the <u>University of Minnesota Libraries Publishing Services</u> and the <u>University of Minnesota Institute for Advanced Study</u>.

### **Editorial Staff**

Editor: Laurie Moberg, Institute for Advanced Study, University of Minnesota

Administrative Editor: Phyllis Mauch Messenger

**Editorial Assistants:** 

Lily Ryan: Master's Student, College of Liberal Arts and Institute for Advanced Study, University of Minnesota

Zoe Senecal: Ph.D. Candidate, Department of History, Northwestern University

Mikala Stokes: Ph.D. Candidate, Department of History, Northwestern University

Media and Production Manager: Joanne Richardson, Institute for Advanced Study, University of Minnesota

## **Contact Us**

Open Rivers | Institute for Advanced Study, University of Minnesota Northrop 84 Church Street SE Minneapolis, MN 55455

Telephone: (612) 626-5054

Fax: (612) 625-8583 E-mail: openrvrs@umn.edu

Web Site: https://openrivers.umn.edu

ISSN 2471-190X

## **Editorial Board**

Christine Baeumler: Art, University of Minnesota

M. Bianet Castellanos: Institute for Advanced Study and American Studies, University of Minnesota

Vicente M. Diaz: American Indian Studies, University of California Los Angeles

Tia-Simone Gardner: Department of Media and Cultural Studies, Macalester College

Mark Gorman: Policy Analyst, Retired, Pittsburgh, Pennsylvania

Simi Kang: Department of Asian American Studies, University of Illinois Urbana-Champaign

Melissa Kenney: Institute on the Environment, University of Minnesota

Emma Molls: University of Minnesota Libraries Publishing Services, University of Minnesota

David Naguib Pellow: Environmental Studies, University of California, Santa Barbara

Susannah L. Smith: Institute for Advanced Study, University of Minnesota

Wendy F. Todd: Department of Natural Sciences, University of Alaska Southeast Juneau

Andrew Wickert: Department of Earth and Environmental Sciences, University of Minnesota

Kelly Wisecup: Department of English, Northwestern University

OPEN RIVERS: ISSUE 27: FALL 2024

# **CONTENTS**

ı	١	1.			т.		- 1	13		
ı	m	IT.	r۱	١1	11	Ш	וח	П	0	n
ı	ш	ΙL	ı	Jl	ш	u١	u	ы	U	ш

Introduction to Issue 27   Prospect By Laurie Moberg, Editor	4
Features (Peer Review)	
Rivers as Creative Ecologies By Sigma Colón and Juli Clarkson	7
Big Stone Lake Stories: Crossing Borders By Jonee Brigham	21
Feature	
Fluid Impressions: Connecting Data and Storytelling in Iowa's Watersheds By Eric Gidal, Munachim Amah, Javier Espinosa, Richard Frailing, Ellen Oliver, Clara Reynen, and Kaden St Onge	46
Geographies	
Narmada Parikrama By Vivek Ji	66
In Review	
All We Can Save By Marceleen Mosher	82
Perspectives	
From Symbol of Wisdom to Inducer of Anxiety: The Ganga Dichotomy By Saloni Shokeen	86
Primary Sources	
Owámniyomni: Still We Gather By Kachina Yeager, Shelley Buck, and Sage Yeager	95
Teaching and Practice	
Do You Know Where You Are? By Laura Rockhold	109

OPEN RIVERS: ISSUE 27: FALL 2024

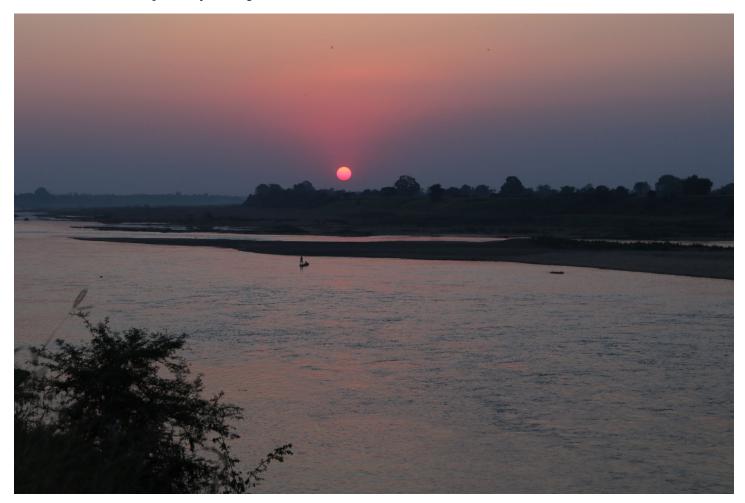
# **GEOGRAPHIES**

# NARMADA PARIKRAMA By Vivek Ji

The waters of the Narmada River flow as though carrying a divine grace, ancient wisdom, and a sense of spirituality. This mystical river, known for its sanctity in India, has witnessed countless people embarking on a journey of devotion and introspection: the *parikrama*, a sacred circumambulation that spans the length of this majestic waterway. This circumambulation, undertaken by devout pilgrims, reveals the enduring legacy of the valley and is a testament to the unwavering faith and commitment of those who embark on the journey. The parikrama not

only symbolizes their devotion, but also reinforces their spiritual connection with the valley and the significance of the river in their lives.

The Narmada Parikrama has been passed down through many generations, and I embraced it as the most challenging trip of my life. I was initially attracted to the sacred circumambulation because of the river's spiritual significance, but upon discovering the Narmada's various dimensions—social, cultural, economic, and archaeological—I now see the ways it contributes



The River Narmada in all her glory. Image courtesy of Vivek Ji.

to the foundations of Indian society and culture. As I have come to understand it, the Narmada River is more than just a spiritual river.

The Narmada Parikrama involves starting from any chosen point on the southern bank and following the river all the way to the estuary near Bharuch in Gujarat state of India. After crossing the river's mouth, the journey then continues along the northern bank back to the starting point. Traditional wisdom holds that the *Revakhanda* chapter of the ancient Hindu scripture *Skanda Purana* served as inspiration for the *Narmada Parikrama*.

Although the pilgrimage is quite demanding, it continues to gain popularity and attracts numerous individuals, including holy people (*Sadhus*) and laypersons, who travel from one sacred spot (*tirtha*) to the next each year. During each pilgrimage, pilgrims are required to carry out rituals that are unique to the local area and based on ancient stories and customs. The conditions and resources along the banks of the river are crucial for the Narmada Parikrama, ensuring that pilgrims can perform their rites, have food, and find shelter while traveling alone or in groups. Access to the necessary resources, however, has varied as the river has changed over time.



The author and others embark on the ancient pathways of the Narmada Parikrama. Image courtesy of Vivek Ji.

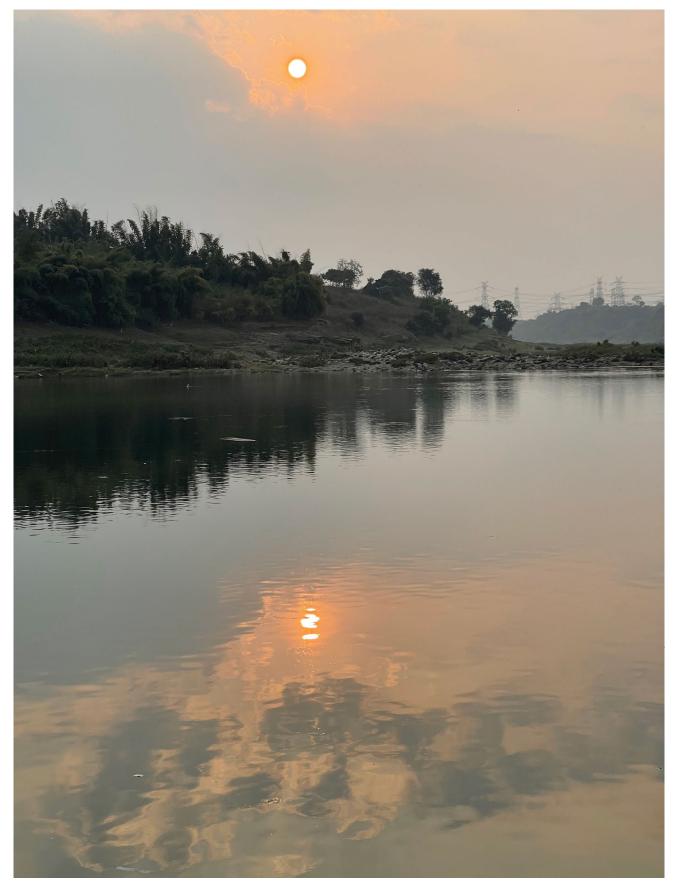
# River Narmada

To understand the value and the challenges of the Narmada Parikrama, we must first understand more about the river, its history, and its changes. The Narmada River "is the largest west-flowing river of India and one of the 13 prominent rivers of India"; the headwaters, called Narmada kund (pond) is a small pond at Amarkantak town in the Maikal hill ranges in the eastern part of Madhya Pradesh.[1] The Narmada River "forms the traditional boundary between North India and South India over a length of 1,312 km before draining through the Gulf of Cambey (Khambat) into the Arabian Sea."[2] The forest-fed Narmada is the most important source of water for drinking, irrigation, and hydropower in Madhya Pradesh and Gujarat states, and provides food, water, and livelihoods to 50 million people.

The transformation of the Narmada into this industrious river took time. The Narmada and its surrounding landscape were once spaces of tranquility and serenity, untouched by the chaos of contemporary society, where solitude reigned supreme. However, in the twenty-first century, the origin of the Narmada in Amarkantak and the surrounding area, once a peaceful haven has transformed to include a bustling city, adorned with towering structures, ashramas (holy abodes), and other establishments. In many areas, the trees have been cut down at an alarming rate, leading to a frightening decrease in forest size. The Narmada banks once boasted beautiful spots for birds to rest and the greenery of trees draping the landscape; they now have very little tree cover because farmers have encroached on the banks, cutting down trees to



Many participate in the sacred tradition of drinking river water as part of the Narmada Parikrama. Image courtesy of Vivek Ji.



Hazy sunshine reflects on a peaceful view of the Narmada River. Image courtesy of Vivek Ji.

make arable land. Within the last eight years, there has been a movement to increase tree cover, but unfortunately, the project failed because it did not involve local people or ensure their participation in providing care for the trees. One of the most challenging aspects of my own Narmada Parikrama was to locate shade along her banks. If this removal of trees continues, the Narmada could soon lose most of its forest cover.

As the Narmada River water levels increase, the banks, devoid of trees, are flooding and eroding. This poses a threat to the ancient and sacred sites located along the banks that are part of the Narmada Parikrama.

It is astonishing to contemplate how this metamorphosis came to pass. In the days of British rule in India, this land was deemed desolate, a barren expanse that only a handful of temple priests cared for, dutifully safeguarding the sacred source of the mighty Narmada River.

In the past, Amarkantak, the town at the origin of the Narmada River, had numerous winding waterways that added to the powerful Narmada's flow. However, with the development of this sacred landscape, these waterways have significantly diminished.



The deforestation is apparent here at the boundary of Madhya Pradesh and Maharashtra, where the Sardar Sarovar Dam's reservoir extends over two hundred kilometers upstream.

Image courtesy of Vivek Ji.

From the mountains of Amarkantak, the river plunges hundreds of feet through a series of falls and rapids, then it meanders around the hills of Mandla, a town not far from where it originates, and eventually passes under the remains of the palace at Ramnagar built by the Gond tribal leaders who dominated the area in the sixteenth century. By this point, nearly 150 km through its journey to the sea, the Narmada has drained a large area of hilly terrain. Its rushing waters branch out into many different channels, between the river's forested islands and the black traprock peaks and ledges that rise in the river's center. No longer do the surrounding hills and dense vegetation conceal the horizon and the banks, extending right down to the water's edge.

The river is a continuous blue ribbon of water from Ramnagar all the way down to Mandla. In this stretch, during my own parikrama, I noticed the river was framed by towering tree-lined banks which are increasingly rare along the Narmada. Further south along the river is a crossroads of the Grand Trunk Road from Jabalpur to Nagpur below Mandla at Gwarighat. This crossroads not only served as a strategic location for trade and transportation, but also held historical significance during the British colonial era. In this era, the felling and distribution of trees from this area played a crucial role in fueling the growing demand for timber across various regions of India. As I witnessed, this area remains mostly deforested. The Narmada then descends from the hills and enters into a rich valley that stretches for more than 200 km and passes through the districts of Narsinghpur and Narmadapuram of Madhya Pradesh.

The Narmada, which is known as the lifeline of the states of Madhya Pradesh and Gujrat, flows through this valley, nourishing the fertile lands and sustaining the local communities. This is the beginning of the river's journey through one of the large alluvial plains that gives the river its distinctive character: alluvial plains alternating with steep gorges. Farmers grow various crops in the alluvial plains throughout India's four seasons, and it was here that the British found India's coal belt and established coal and iron mines near Tendukheda. Traveling this section of the Narmada will lead one to the cities of Handia and Nemawar located on the river's northern and southern banks, respectively.

The Narmada River then winds its way through the formidable Satpura and Vindhya ranges, as if it has been dutifully safeguarding these majestic mountains since time immemorial. Recent findings have shed light on the ages of these geological landmarks, revealing that the Vindhya Mountains have stood tall for a staggering 1.4 billion years while the Satpura Mountains, though slightly younger, boast an impressive age of approximately 1 billion years.[3]

The hills on each side of the river begin to converge again just before the town of Handia. The Narmada, having descended from the hills above Mandhata, then flows through the state of Madhya Pradesh for the next 160 km, with the Satpura Mountains to the south and the Vindhya Mountains closer to the north. The river flows from Shulpani forest, which is inhabited by the Janjatis (people living and sustaining themselves in the forest) at the edge of Madya Pradesh and subsequently enters Gujarat via the town of Rajpipla, flowing on to Bharuch about 300 km further downstream. As it enters the Gulf of Kambhat below Bharuch, the estuary reaches a maximum width of 25 km and drains into the ocean.

# Narmada in Hindu Religious Scriptures

The varied landscapes and terrain that are part of the Narmada's journey to the ocean were also part of my journey, my Narmada parikrama. Throughout this journey, I reflected on the ways that the Narmada holds great importance in Indian social heritage and is one of the foundations of Indian society. The river is a site for offering to ancestors, offering charity, and self-realization. For example, the epic tale of the *Valmiki's Ramayana*, which chronicles

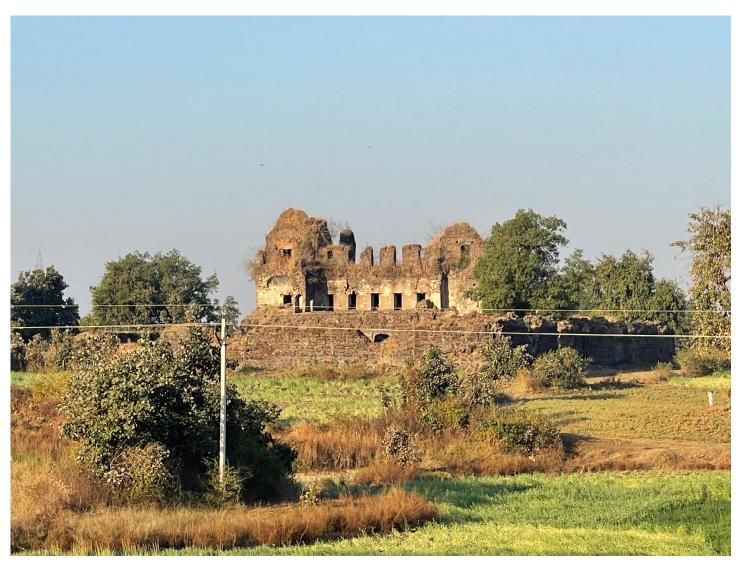
the life of Lord Rama, the one of the divine Incarnation, shares the captivating narrative of Lord Rama's journey. It includes a glimpse into the enchanting world of the Narmada River and provides a meticulous account of the diverse array of creatures that undoubtedly inhabited the enchanting forests surrounding Narmada: tigers and lions alongside buffalo, deer, bears, elephants, and birds all coexisted harmoniously amidst the verdant foliage.[4]



Despite being mentioned in many ancient holy books, the ancient sacred sites of Koteshwar in Madhya Pradesh are now underwater and inaccessible for most of the year. For the few months of the year when they are visible, pilgrims travel there by boat to pray. Image courtesy of Vivek Ji.

From Valmiki's Ramayana to the Mahabharata to the Puranas, the Narmada appears time and time again as a rich and lush landscape, a site of blessing, redemption, and temptation, and as a nexus for holy pilgrimages. For example, the *Vana-Parva* of the *Mahabharata* serves as a guide for those embarking on a pilgrimage, emphasizing the importance of visiting specific *tirthas* (sacred pilgrimage sites) surrounding the Narmada to attain spiritual merit. In the enchanting chronicles of the *Narada Purana*, a vivid depiction emerges of the myriad *tirthas* on the banks of the Narmada River. These *tirtha* remain significant

for pilgrims even today. One passage discusses the 108 *tirthas* or holy places of importance at each *sangama* (confluence) of the Narmada. During my own pilgrimage, I engaged with many of these *tirtha*, noting their spiritual significance in the past as a connection to the present and the future. Looking at these tirthas, or discovering them on my travels, is like reliving the stories, learning the past, and uncovering the significance of these holy heritage sites. The process is similar to that of archaeologists discovering priceless artifacts: heritage sites are like gems of history waiting to be discovered.



This Gond tribal fort is one of many important historical sites along the Narmada River. Image courtesy of Vivek Ji.

# Historical Literature on the Narmada

The Narmada River is held in high esteem not only in religious and spiritual books, but also in many works of literature. Mother Narmada, whose presence is described as "awe-inspiring" in Kalidasa's Raghuvansha is a real place.[5]

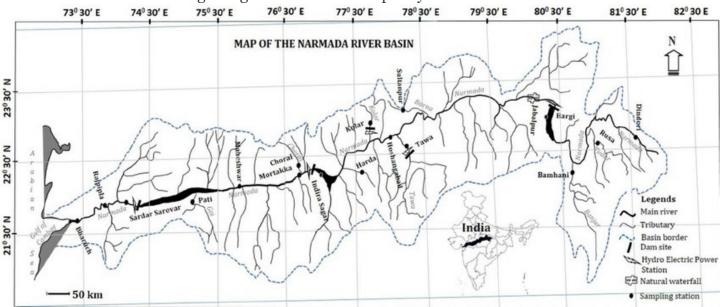
Bharuch, historically known as Bhrigukaccha, was an essential stopping point for adventurous travelers as they made their way across India. Crossing the mouth of the Narmada was one of the most difficult obstacles to reach the Bharuch, and as such, the crossing was frequently mentioned in stories about this bustling city.[6]

Even within the ancient manuscripts of the Krityakalpataru of Bhatta Lakshmidhara, one can find numerous references to the Mother Narmada. These books, meticulously crafted, bear within their pages to the names and *tirthas* associated with the Narmada.[7] This ancient manuscript, penned nearly a millennium ago, unveils a vivid portrayal of the majestic river and the enchanting land of Amarkantak. It leaves one pondering over the ethereal beauty possessed by Mother Narmada, a beauty so captivating that it enticed even those residing along the banks of

the revered Ganges to embark on this spiritual journey along her hallowed shores.

Whether chronicled in written accounts or passed down through generations via oral tradition, the essence of the Narmada resonates deeply within the hearts and minds of its people. It is this resonance that drew me to the river, too, and into the Narmada Parikrama. I pursued this practice as a way of honoring the river and of connecting to these deep and rich histories.

Throughout the centuries, writers have been captivated by various texts that exist even after hundreds to thousands of years have passed. From Virasimha, the late sixteenth-century ruler of the town of Orcha, sharing insights on the river from his own expedition and engagement with earlier texts to Dalapatraya, a member of a royal family in the mid-1500s who penned 172 verses to the river, writers draw us into this place. [8] These texts, whether derived from ancient *Puranas* or inspired by the meandering path of the River Narmada, continue to hold a prominent place within the Indian cultural tapestry.



Map of the Narmada basin by Khedkar, Jamdade, Nayk, and Haimer via PLOS ONE at <a href="https://doi.org/10.1371/journal.pone.0101460">https://doi.org/10.1371/journal.pone.0101460</a>. CC BY 4.0



Because of the dams, many sacred palaces and sculptures that line the Narmada River are underwater for much of the year. Image courtesy of Vivek Ji.

# The Narmada River's Current State

The Narmada River I encountered during my Narmada Parikrama is both the same and different from the river captured in these spiritual and historical records. Nowadays, the Narmada River continues to flow, with numerous dams constructed along its course to fulfill the requirements of society for water and energy. The river now closely resembles a lake for most of her course as a result of these dams and other infrastructures that significantly alter the natural course of the river. As a consequence, countless ancient sites (sacred *tirthas*) have been submerged, and villagers have been forced to abandon their ancestral lands due to the rising waters caused by these dams.[9]

The Narmada River and its tributaries have been the subject of plans to develop dams of various sizes, with some plans calling for almost 3,000 small dams, 130 medium dams, and 25 big dams. The Narmada Valley Development Project currently comprises five mega-dams, with the four largest ones currently finished and in use. The Mandleshwar Dam is the sole dam that remains under construction, nearing completion. Collectively, the five dams are projected to inundate an area of around 1850 square kilometers. [10]

Not only have dams forced countless people from their homes, but they have also flooded numerous archaeological sites and culturally important *tirthas*. Tragically, not enough is known about the cultural loss of heritage in India. While on my Narmada Parikrama, I found that out of over 300 sacred sites mentioned in India's ancient texts, only about 200 are still intact. Among the rest, over 30 are inaccessible due to danger or are close to ruin, while the remaining 70 have vanished completely.

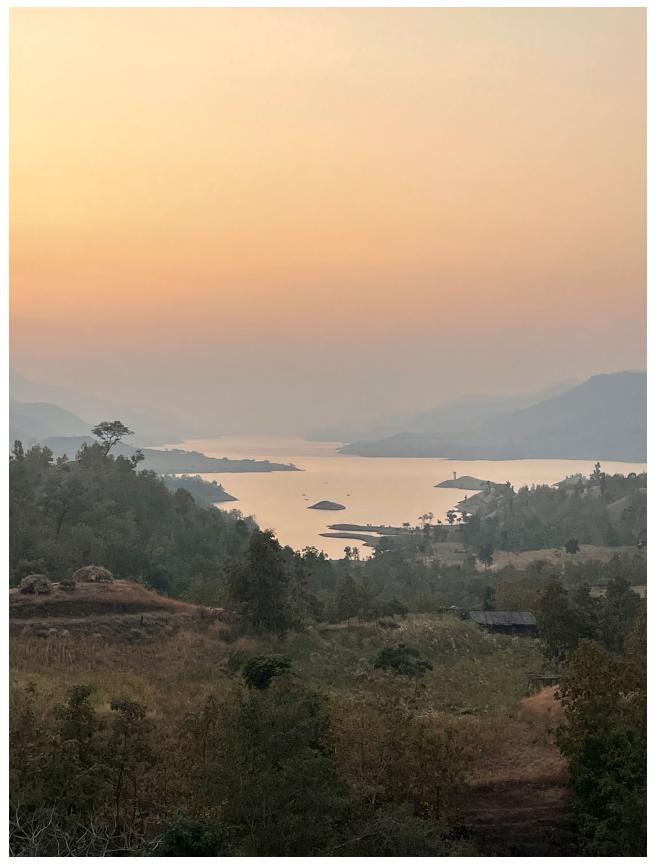
The reservoirs behind the dams significantly impact the Narmada Parikrama. Indira Sagar, the largest human-made lake near Punasa, has

flooded an area of 913.48 sq km, resulting in the loss of a significant portion of the *parikra-ma* path. The Sardar Sarovar dam further downstream blocks a narrow and steep valley, leading to backwaters that extend up to 214 kilometers upstream. This has caused the disappearance of more of the original *parikrama* path, which spanned almost 430 km. The distance of the Narmada Parikrama is much longer now because of these changes; I estimated the contemporary journey to be around 3,000 kilometers, which differs from previous accounts that placed it at approximately 2600 kilometers, covering both banks of the river.

In order to avoid artificial lakes and sections of the ancient river that have been altered by regulation, pilgrims like me are following a significantly altered path. The reservoirs are now included in the pilgrims' route; the peaceful waters there are treasured just as much as the rushing waters of the original river.

Despite these changes, the Narmada Valley has recently been recognized as a unique cultural unit by archaeologists, art historians, and experts from related fields. In the annals of history, the true importance of the valley has remained shrouded in mystery until relatively recently, when archaeological discoveries shed light on its significance. These findings have revealed that the valley served as a hub for ancient civilizations, fostering cultural exchange and technological advancements that shaped the course of human development. It is only through the diligent efforts of archaeologists that the veil has begun to lift, revealing the valley's profound historical significance.

Numerous recent studies, both in the realm of scientific research and geographical exploration, have unveiled a captivating revelation: the Narmada Valley has been a site of uninterrupted human habitation for an astonishing span of



Sardar Sarovar Dam in Gujarat has a reservoir that runs over 200 kilometers, past the borders of Maharashtra and Madhya Pradesh. Image courtesy of Vivek Ji.

150,000 years. [11] In the vicinity of Hathnora (a village in Sehore district of Madhya Pradesh), a place of tranquil beauty where the Narmada River flows gently, an extraordinary revelation took place. It was there that the ancient remnants of a hominid skull, the oldest ever found in peninsular India, were unearthed.[12] Schoolchildren learn about the Java Man and the Peking Man, but the Narmada Man (as it is called) is almost unknown. The Narmada Human, originally known as the Narmada Man, is a member of the *Homo erectus* group that lived before contemporary *Homo sapiens sapiens*. The Narmada fossil could be 500,000 to 600,000 years old based on

morphological features compared to other fossils from known antiquity, palaeomagnetic dating tests, and accompanying fauna.[13]

Damage to fossil research has occurred as a result of development initiatives including dams, mining and oil drilling operations, intensive farming, and population pressure. Across the subcontinent, hundreds of sites pertaining to palaeoanthropology and the Stone Age are being destroyed.[14]

Throughout my 3000-kilometer Narmada Parikrama along the river, I witnessed significant



The Devaptha Tirtha in Madhya Pradesh is submerged and unreachable for most of the year. During the few months it is visible, pilgrims make the journey by boat or by walking through knee-deep water to pray at the site. Image courtesy of Vivek Ji.

sand mining activities. This activity is crucial for preventing the dams from becoming clogged. Despite the ban on sand mining by heavy machinery in Madhya Pradesh, I noticed numerous sand mines continuing to use heavy machinery for extraction during my walks. This presents a danger to the fragile ecological balance and needs urgent action. There are individuals who have spoken up, but what is lacking is a fundamental change in the system so that rivers are appreciated as more than a resource.[15] A recent study found that the diversity of fish species is reducing at an alarming rate in the Narmada; one of the visible impact of sand mining is that in the past 50 years a total of 56 species of fish have been lost in the river Narmada in central India.[16]

The ecology of the Narmada, which was once celebrated in ancient Hindu scriptures, is currently deteriorating. The banks, once adorned with a variety of trees, have now lost their beauty and are in decline. Several banks have been cleared

and trees uprooted for farming or sand mining, leading to significant soil erosion that poses a threat to nearby villages.

Analyzing the changes to the river, a recent study explains that

the biodiversity-rich region has lost 11.63 percent dense mixed forest (DMF), 2.11 percent of sal mixed forest (SMF), and 5.08 percent of water bodies (WB) from 1980 to 2018, while open land (OL) area has increased by 7.52 percent; agriculture has further spread by 7.10 percent and the areas under human habitation/commercial buildings have increased by 4.18 percent.[17]

I initially wanted to do the Narmada Parikrama for spiritual reasons, but as I learned more about her history and the many references to her in Indian religious and spiritual texts, I began to see her as a river, but also as a cultural hub for the



Pilgrims traverse farmland that used to be forested but it is now completely cleared.

Image courtesy of Vivek Ji.

social and spiritual development of India. I feel incredibly fortunate to have walked the full 3,000 kilometers, but my heart sinks whenever I think about the ecological destruction she is currently experiencing, the flooding of her old *tirthas*, and the disappearance of her traditions. Because of her serene beauty, the banks of the Narmada River were once the dwelling places of many philosophers and thinkers who contributed to the canon of Indian philosophy. However, as

the river experiences ongoing transformation, these histories have all but disappeared. India as a nation continues to disregard the Narmada's history, as evidenced by the deterioration of its heritage sites. I wonder at this juncture what will happen to this river which is known as Mother Narmada and the great circumambulation known as Narmada Parikrama if the trends continue the way they are.

## **Footnotes**

- [1] Vipin Vyas, Salma Yousuf, Shilpa Bharose, and Ankit Kumar, "Distribution of Macrophytes in River Narmada near Water Intake Point," *Journal of Natural Sciences Research* 2, no 2 (2012): 23, <a href="https://core.ac.uk/download/234653747">https://core.ac.uk/download/234653747</a>. <a href="https://core.ac.uk/download/234653747">pdf</a>.
- [2] Vyas et al., "Distribution of Macrophytes," 23.
- [3] K. Sankaran Unni, Ecology of River Narmada (New Delhi: A.P.H. Publishing Corporation, 1996).
- [4] Srimad Valmiki-Ramayana, *Srimad Valmiki-Ramayana* (with Sanskrit Text and English Translation) Part I & II (Gorakhpur: Gita Press, 2008).
- [5] Kālidāsa, The Raghuvaṃśa of Kālidāsa: With the Commentary of Mallinātha, 1869.
- [6] The Periplus of the Erythraean Sea: Trave and Trade in the Indian Ocean by a Merchant if the First Century, trans. Wilfred H. Schoff (Longmans, Green, and Co., 1912).
- [7] K. V. Rangaswami Aiyangar, ed., *Krityakalpataru of Bhatta Lakshmidhara*, (Oriental Institute: 1941), <a href="https://archive.org/details/in.ernet.dli.2015.277449/mode/2up">https://archive.org/details/in.ernet.dli.2015.277449/mode/2up</a>.
- [8] Pandita Vishnu Prasād, ed., *Vīramitrodayaḥ Tīrthaprakāśaḥ*, in The Chowkhambâ Sanskrit Series, Nos. 239, 240, 241, 242, 247 & 248, (Benares: Chowkhamba Sanskrit Series Office, 1917); Surya Narayan Shukla, ed., *Narsimha Prasada, Dalpati Raja, Varanashi*, 1936; Pandurang Vaman Kane, *History of Dharmaśāstra*, vol. I, part II, 2nd ed. (Poona: Bhandarkar Oriental Research Institute, 1975).
- [9] Dam construction began with Bargi, then Punasa, Omkareshwar, Sardar Sarovar, and finally, another dam near Mandleshwar that is nearing completion.
- [10] The calculation of this figure is based on official information regarding the extent of submergence, which has often been found unreliable. The officially calculated numbers of villages to be submerged by individual dams were consistently lower than the actual numbers once the reservoirs were filled. Discrepancies may arise from efforts to minimize costs for resettlement/rehabilitation of those impacted by the dams. When all the proposed dams of the project are combined, they are estimated to submerge approximately 4000 sq. kms. For more information see, Arundhati Roy, "The Greater Common Good," in *The Algebra of Infinite Justice* (Penguin Books India, 2002), 43–141.
- [11] S. Kumar, "Loneliness of Narmada Human," *Down to Earth*, December 14, 2012, <a href="https://www.downtoearth.org.in/coverage/loneliness-of-narmada-human-39817">https://www.downtoearth.org.in/coverage/loneliness-of-narmada-human-39817</a>.
- [12] Dilip K. Chakrabarti, *The Oxford Companion to Indian Archaeology: The Archaeological Foundations of Ancient India*, (Oxford University Press, 2006), 10–14.

#### ISSUF 27 : FALL 2024

[13] Kumar, "Loneliness of Narmada Human."

[14] Anek Sankhyan, "Hominin Fossil Remains from the Narmada Valley," In *A Companion to South Asia in the Past*," eds. Gwen Robbins Schug and Subhash R. Wallmbe (John Wiley & Sons, 2016), 72–82, DOI: 10.1002/9781119055280; Rajeev Patnaik, Parth R. Chauhan, M. R. Rao, B. A. B. Blackwell, A. R. Skinner, Ashok Sahni, M. S. Chauhan, and H. S. Khan,"New Geochronological, Paleoclimatological, and Archaeological Data from the Narmada Valley Hominin Locality, Central India," *Journal of Human Evolution* 56, no 2 (2009): 114–133.

[15] Joshi Hridayesh, "Dammed and Mined, Narmada River Can No Longer Support Her People," Mongabay, September 2, 2019, <a href="https://india.mongabay.com/2019/09/dammed-and-mined-narmada-river-can-no-longer-support-her-people/">https://india.mongabay.com/2019/09/dammed-and-mined-narmada-river-can-no-longer-support-her-people/</a>.

[16] Muslim Ahmad Shah, Vipin Vyas, and Shalini Yadav, "Fish Biodiversity and its Periodic Reduction: A Case Study of River Narmada in Central India," In *Environmental Pollution, Water Science and Technology Library*, eds. Vijay P. Singh, Shalini Yadav, and Ram Narayan Yadava, vol. 77 (Singapore: Springer, 2017), 193–206, <a href="https://doi.org/10.1007/978-981-10-5792-2">https://doi.org/10.1007/978-981-10-5792-2</a> 16; Rajesh Kochara, and Meenakshi Solanki, "Fish Biodiversity—A Case of River Narmada in Central India," *BioGecko* 12, no. 2 (2023): 753–758, <a href="https://biogecko.co.nz/admin/uploads/Paper-3%20(1).pdf">https://biogecko.co.nz/admin/uploads/Paper-3%20(1).pdf</a>.

[17] Tarun Kumar Thakur, D.K. Patel, Joystu Dutta, Anirudh Kumar, Sandeep Kaushik, Arvind Bijalwan, Mohammed S. Fnais, Kamal Abdelrahman, and Mohammad Javed Ansari,

"Assessment of Decadal Land Use Dynamics of Upper Catchment Area of Narmada River, the Lifeline of Central India," *Journal of King Saud University – Science* 33, no. 2 (2021): 101322, <a href="https://doi.org/10.1016/j.jksus.2020.101322">https://doi.org/10.1016/j.jksus.2020.101322</a>; Nivedita Khandekar, "Ecological degradation at Narmada's origin in Amarkantak spells more trouble," Mongabay, Febbruary 3, 2021, <a href="https://india.mongabay.com/2021/02/ecological-degradation-at-narmadas-origin-in-amarkan-tak-spells-more-trouble/">https://india.mongabay.com/2021/02/ecological-degradation-at-narmadas-origin-in-amarkan-tak-spells-more-trouble/</a>.

### **Recommended Citation**

Ji, Vivek. 2024. "Narmada Parikrama." *Open Rivers: Rethinking Water, Place & Community*, no. 27. https://doi.org/10.24926/2471190X.11739.

DOI: https://doi.org/10.24926/2471190X.11739

## **About the Author**

Vivek ji, a writer, poet, and foremost a humanitarian, founded the Ananda hi Ananda foundation to further the causes of spirituality, peace, meditation, and inner well-being. In addition to helping with river and water conservation, the foundation bridges the gap between the past and the future by preserving different parts of Indian culture. The two cities that Vivek ji frequently splits his time between are Delhi, and Nagpur (Maharashtra) in India. His most recent book, *Narmada Parikrama: Walking 3,000 Kilometers Along the Sacred Narmada River* recounts his journey along the river's length.