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Vishwambhar Prasad Sati

The Ganges

Cultural, Economic and Environmental
Significance

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Vishwambhar Prasad Sati

The Ganges

Cultural, Economic and Environmental
Significance

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Preface

The Ganga River is believed to be an embodiment of Goddess Shakti, and the Hindus call it 'Mother Ganga'. The Ganga has both natural and cultural importance. On one hand, it feeds above 50% of India's population—in its upstream and downstream basin; on the other, it is considered as a folk deity, aspiration of Hindu devotees. Ganga is the only river that flows both in heaven and on earth. Our religious wisdom/scriptures mention that the Ganga River descends from heaven to earth on the matted hair of Lord Shiva thus, the Ganga is also called the 'River of Heaven'. At present, it originates from the Gaumukh (named after cow's mouth) glacier of the High Himalaya. The cow is one of the most important creatures for the Hindus, worshiped on various occasions. Hence, the importance of the Ganga touches another height. Throughout its course, from Gaumukh (source area) to the Ganga Sagar (where it joins the Bay of Bengal), the Ganga is worshiped as a folk deity. Its water is crystal clear (pure), believed by people as nectar, used during all the auspicious occasions.

The Ganga River, being about 2,525 km long, is one of the longest rivers in India. It has numerous tributaries both glacial fed and non-glacial. It makes the worlds' largest river system. The Ganges Alluvial River Valley Plain, the largest in the world, is densely populated. The Ganga and its tributaries flow through several states of North, Central, and East India. These states are Uttarakhand (where it originates), Haryana, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, and West Bengal. It is a transboundary river system, flowing in India, Tibet, Nepal, and Bangladesh. However, a major part of it flows within India, making it to be known as an Indian river. The Yamuna, Ramganga (W), and Kali Rivers originate and flow from Uttarakhand; Saryu, Gomati, Gandak, Ghaghara, Kosi, and Rapti originate and flow from Tibet, Nepal and Bihar; Chambal, Betwa, Ken, Son, Hooghly, and Damodar originate and flow from Central states such as Madhya Pradesh, Chhattisgarh, Jharkhand, and West Bengal, forming the large Ganga system. Further, these river systems have numerous sub-tributaries. Most of the sub-tributaries are glacial fed, therefore, the volume and velocity of the Ganga River is very high.

Several world-famous cultural cities/towns are situated on the bank of the Ganga River, stretching from Uttarakhand to West Bengal. These cities/towns are the centres of spiritual attainment, where hundreds of thousands of pilgrims visit every

year, worship the Goddess Ganga, and take a holy dip. Among them, the famous cultural cities/towns are Gangotri, Uttarkashi, Devprayag, Rishikesh, and Haridwar in Uttarakhand; Prayagraj and Banaras in Uttar Pradesh; and Ganga Sagar in West Bengal. Further, several other world-famous cultural cities/towns are situated on the bank of its tributaries. Some of them are—Bageshwar on the bank of the Gomati River, Jageshwar on the bank of the Jataganga River, Katarmal on the bank of the Kosi River, Yamunotri on the bank of the Yamuna River, Kedarnath on the bank of the Mandakini River, Badrinath on the bank of the Alaknanda River, Ujjain on the bank of the Kshipra River, Ayodhya on the bank of the Saryu River, and Budha Gaya on the bank of the Falgu River.

Many fairs and festivals are celebrated in all cultural places along the Ganga River. They are celebrations ranging from days to months. Kumbh Mela, celebrated in Haridwar and Banaras along the Ganga River, is a two-month-long festival, celebrated by sages and saints. It starts in the month of Magh (January) and ends in the month of Chetra (April). The hundreds of thousands of pilgrims visit Kumbh Mela in Haridwar and Banaras. Ujjain, which is situated on the bank of Kshipra River, one of the tributaries of the Ganga system, celebrates Kumbh Mela. Ganga Dussehra is celebrated all along the Ganga River, mainly in Gangotri, Uttarkashi, Haridwar, Prayagraj, Banaras, and Ganga Sagar, on the mark of Ganga's descent on earth on the 10th day of Jyeshtha (Hindu calendar). Makar Sakranti and Uttarayani are celebrated in Uttarkashi, Bageshwar, Haridwar, Prayagraj, Banaras, and Ganga Sagar. Besides this, Baishakhi is celebrated in the river valleys of the Ganga and its tributaries. All these fairs and festivals are associated with Ganga because on every occasion, the pilgrims take a holy dip in the Ganga River in all cultural places situated on its bank.

Despite towering cultural and socio-economic importance, the Ganga River is facing acute impediments. Its course in the source area, i.e. the Uttarakhand Himalaya, is drying. There are many hydroelectricity power projects constructed along the Ganga River, causing the mainstream water to divert. The second stalwart problem faced by the Ganga River is water pollution. Many industries are established along the Ganga River, mainly in Uttar Pradesh, Bihar, and West Bengal. The industrial effluent drains into the Ganga River without filtration. India's metropolitan industrial cities are situated along the Ganga River, accentuating the pollution in the Ganga. As a result, water in the downstream Ganga River has been contaminated, affecting the faunal, floral, and human health severely.

The Ganga, Gai (cow), Geeta (religious scripture), Guru (teacher), and Gayatri (folk deity) are deep-rooted in the culture, customs, and rituals of Hinduism. Among them, the Ganga is a prominent figure. Further, the four river systems—the Ganga, Yamuna, Narmada, and Tapti have a unique place in Hindu culture and custom. The Ganga is known for Snan (holy bath), the Yamuna is known for Achman (intake of a sip of water before a Puja), the Narmada is for Darshan (the meeting of a devotee of Hinduism with the holy Narmada), and the Tapti for Smaran (Remembrance). The other entities associated with the Ganga are its Ghats and Lord Shiva. I have a deep affinity with the Himalaya. I believe that the Ganga and the Himalaya are synonymous, the embodiment of Goddess Parvati and Lord Shiva, respectively. I got aspiration to compose this book from my lifelong experiences about the Ganges system,

particularly the Ganga and its tributaries that originate and flow from the Uttarakhand Himalaya. Although, I already had the idea to compose a treatise on the Ganga, yet, the final idea was cultivated immediately after the outbreak of the COVID-19 pandemic and consequent lockdowns, mainly in the last week of March 2020. The main purpose of conducting this study was to illustrate the natural and socio-cultural aspects of the Ganga comprehensively and to disseminate its historical and spiritual importance at the global level. I have visited the major cities/towns and villages that are situated along the Ganga and trekked the upper Ganga course from Haridwar to Gangotri in the second and third week of January 2021. This study is mainly empirical (a case study of 10 villages), based on my knowledge and observations, discussions with religious teachers, and collection of historical archives. I have used Google Earth Imageries (GEI) and Geographical Positioning System (GPS) for the physical description of the Ganga and its course and presented them through figures and diagrams. Saurav Kumar Dubey, a Ph.D. Scholar of Mizoram University accompanied me during the visit to the Gangotri pilgrimage. I acknowledge my gratitude to him. I acknowledge the contribution of Roma Purohit and Vishwani Sati for editing the book thoroughly. Finally, I dedicate this work to my parents—my beloved mother Smt. Saradi Devi and father Shri Shiv Dutt Sati, and Grandmother Smt. Savitri Devi.

Gangotri, India
September 2021

Prof. Vishwambhar Prasad Sati, D.Litt.

About This Book

‘The Ganges: Cultural, Economic, and Environmental Significance’ is a geographical, cultural, economic, and environmental interpretation of the Ganga River. The Ganga River originates from Gaumukh- situated in the high Himalaya, flows through the world’s biggest fertile alluvial plain, and inlets into the Bay of Bengal at Ganga Sagar. It makes a unique natural and cultural landscape and is believed to be the holiest river of India. The Hindus called it ‘Mother Ganga’ and worship it. The towns/cities, situated on its bank, are world-famous and are known as the highland and valley pilgrimages. The water of the Ganga is pious, and the Hindus use it on different occasions while performing the rituals and customs. This book is unique because no previous study, which presents a complete and comprehensive geographical description of the Ganga, has been composed. This book presents the natural and cultural significance of the Ganga and its tributaries. Empirical, archival, and observation methods were applied to conduct this study. There are a total of 10 chapters in this book such as ‘Introduction’, ‘the Ganga Basin’, ‘Geography of the Ganga Basin’, ‘the Ganges System: Ganga and its Tributaries’, ‘Ganga between Gaumukh and Uttarkashi’, ‘the Major Cultural Towns’, ‘Major Fairs and Festivals’, ‘Economic Significance of the Ganga’, ‘Environmental Issues’, and ‘Conclusions’. The contents of the book are enriched by 89 figures, 15 tables, and substantial citations and references.

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About the Author



Vishwambhar Prasad Sati (b. 1966), D.Litt. and Ph.D., Professor of Geography and Resource Management, is currently working at the Mizoram University (A Central University), Aizawl, India. With a teaching career of about three decades, he has served in several higher education institutions within and outside India, some of them being ‘Eritrea Institute of Technology’, Asmara, Eritrea (NE Africa), ‘Institute of Mountain Hazards and Environment’, Chengdu, China, ‘Madhya Pradesh Higher Education’, and ‘HNB Garhwal University’, Srinagar Garhwal. In the same field, he has deeply been involved in research, and has worked as a Visiting Professor and Visiting Scholar in the world’s various renowned research and academic institutions, including ‘The World Academy of Sciences’, ‘Chinese Academy of Sciences’, ‘Indian National Science Academy’, ‘Indian Council of Social Science Research’, and ‘Indian Institute of Advanced Studies’. Besides, he has travelled widely—36 countries and all over India. He has impactful expertise in the fields of Natural Resource Management, Environment-Development Interface, Climate Change, Rural Livelihoods, Disaster-Related issues, and Culture of the Himalayan region. He has developed several models and action plans for environmental conservation and economic development of the fragile Himalayan ecosystems/landscapes. More than a dozen of national individual projects and projects with international collaboration have been conducted by him. With more than 150 research papers and articles, and more than 31 books published, his academic contribution is well-documented at national and international levels.

Acronyms and Abbreviations

Acronyms

<i>Amrit</i>	Nectar
<i>Arghya</i>	An offering of water
<i>Asthi</i>	Ashes and bones of a dead person
<i>Ashram</i>	Hermitage
<i>Bangar</i>	The old alluvial plain
<i>Daan</i>	Alms
<i>Dev-Devi Naach</i>	Dance of the gods by descending on a human vessel
<i>Dham</i>	Pilgrimage
<i>Diyas</i>	Lamp
<i>Doli</i>	A wooden palanquin
<i>Doab</i>	The land between the two rivers
<i>Ganga Dwar</i>	Gateway to the Ganga
<i>Ganga Snan</i>	A holy bath in the Ganga
<i>Ghat</i>	The place, situated on the bank of the Ganga River where people take bath and perform all the rituals and meditation
<i>Gurukul</i>	A centre for traditional learning—culture, custom, and rituals
<i>Garbha Griha</i>	The place where idol of Gods/Goddesses installed
<i>Jatayen</i>	Matted hair of Shiva
<i>Kapat</i>	Temple gates
<i>Khadar</i>	Newly formed alluvial plain
<i>Kumbh Mela</i>	Celebrated on every six and twelve years in four places in India, including Haridwar and Banaras
<i>Kul</i>	Clan
<i>Magh Mela</i>	Celebrated on the first day of Magh month
<i>Makara</i>	A creature with the head of a crocodile and the tail of a dolphin
<i>Moksha</i>	Salvation
<i>Moksha Dwar</i>	Gateway to salvation
<i>Parv</i>	Festivals
<i>Pind</i>	Food offering made of wheat

<i>Puja</i>	Worship
<i>Puranas</i>	Hindu religious scriptures/wisdoms
<i>Shila</i>	Big stone
<i>Roli</i>	Colours, mainly red and yellow, which are used during <i>Puja</i>
<i>Rudra</i>	A form of Lord Shiva
<i>Samskara</i>	Cultural legacy
<i>Shraadh</i>	Worshiping forefathers
<i>Swarga</i>	Heaven
<i>Taluk</i>	Sub-administrative division
<i>Tarpan</i>	Offering milk, Gangajal, and grains to forefather
<i>Tilak</i>	Red or yellow colour mixed with water and rice seeds wear on the forehead on auspicious occasions
<i>Tirtha</i>	A highest spiritual/cultural place
<i>Yagna</i>	Performing puja around the fire pod

Abbreviations

ASI	Archaeological Survey of India
BRO	Border Road Organization
CI	Conservation International
COI	Census of India
CPCB	Central Pollution Control Board
CSE	Centre for Science and Environment
FSI	Forest Survey of India
GAP	Ganga Action Plan
GEI	Google Earth Imageries
GOI	Government of India
GPS	Global Positioning System
MOA	Ministry of Agriculture
MOEF	Ministry of Environment and Forests
MOWR	Ministry of Water Resource
MW	Mega Watt
NRCDD	National River Conservation Directorate
PTI	Press Trust of India
SCI	Supreme Court of India
SOI	Survey of India
UNESCO	United Nations Educational, Social, and Cultural Organization
WHO	World Health Organization
WWF	World Wide Fund

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