

A STUDY ON HABITATION PATTERN IN AND AROUND THE EMBANKMENT OF RIVER GANGA WITH REFERENCE TO AGRICULTURE PRACTICES

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ABSTRACT

The Gangetic Plain, one of the most ancient cradles of human civilization, has a rich and vibrant pottery culture that reflects its long history, diverse traditions, and deeply rooted artistic practices. The present study reveals that a rich pottery culture has developed time to time with reference to Human habitation in and around Gangetic Plain. From the utilitarian earthenware of early settlers to the intricate and symbolic pottery of later periods, the evolution of pottery in this region offers a fascinating glimpse into the cultural and socio-economic fabric of the Gangetic Plain. Early settlers used simple handmade pots for storing grains, water, and food. In addition to replenishing the groundwater table throughout their path, the Ganges and its tributaries offer a consistent supply of irrigation to a sizable region. By promoting river-based tourism, agriculture, animal husbandry, and fisheries. Over time, with the advancement of technology, particularly the invention of the potter's wheel, pottery techniques evolved significantly.

Keywords: Human Settlement, Cultural Adaptation, Gangetic Plain, Agriculture, Commercial aspects

1. INTRODUCTION

The Ganges (or Ganga) River, revered as a sacred waterway in India, is not only a spiritual lifeline but also a source of sustenance for millions. Its fertile banks have been a cradle of civilization, supporting agriculture, trade, and settlements for centuries. However, habitation along the embankments of the Ganga presents a complex interplay of environmental, social, and economic dynamics (Kumar, 2017). The Ganga is deeply woven into the cultural and religious fabric of India. Cities like Varanasi, Haridwar, and Allahabad (Prayagraj) have thrived along its banks, attracting pilgrims, traders, and settlers for millennia. The river not only supports livelihoods through agriculture and fishing but also fosters spiritual tourism, which remains a significant source of income for many local communities (Mandal, 2018).

The development of agricultural practices along the banks of the Ganga River has a deep historical and cultural significance, shaped by the region's fertile soils, abundant water supply, and diverse climatic conditions. From its glacial source at Gaumukh to its delta at the Bay of Bengal, the Ganga has shaped the agricultural practices of millions. The fertile lands, coupled with access to water, make the Ganga basin one of the most agriculturally productive regions in the world.

2. AGRICULTURAL PRACTICES IN UTTARAKHAND

In the upper reaches of the Ganga, the terrain is mostly mountainous, with terraced farming being the predominant practice. Crops like millets (finger millet and barnyard millet), wheat, barley, and buckwheat are cultivated. Traditional organic methods of farming are still common, as farmers rely on animal manure and compost. While in case of Plain regions (Terai and Doon Valley), areas like Haridwar and Dehradun, closer to the plains, modern farming methods are more prevalent. Major crops include rice, wheat, sugarcane, and pulses. Vegetables, fruits (e.g., litchis, mangoes), and oilseeds are also cultivated extensively.

Agriculture along the banks of the Ganga River, from its source at Gaumukh in Uttarakhand to its mouth at the Bay of Bengal, reflects the diverse geographical, climatic, and cultural conditions of the region. The Ganga supports millions of farmers, providing fertile soil, abundant water, and a variety of crops along its course. The Gangetic Plain, one of the most fertile and densely populated regions in the world, has been a hub of human habitation for thousands of years. It extends across northern and eastern India, parts of Nepal, and Bangladesh, following the course of the Ganges River and its tributaries. The Gangetic Plain has been central to the development of ancient civilizations, including the Indus Valley Civilization and later Vedic civilization (Rattan, et.al., 2021). The Ganges River is considered sacred in Hinduism and has been a centre for pilgrimage and spiritual practices for millennia. Cities like Varanasi, Haridwar, and Prayagraj are major religious and cultural hubs developed alongside these riverine ecosystems.

The Indo-Gangetic Plain has been instrumental in influencing the historical and archaeological landscape of India. This extensive plain is categorized into three primary regions: the Upper Ganga Plain, the Middle Ganga Plain, and the Lower Ganga Plain. With the exception of the northern foothills of the Himalayas, the entire Ganga basin is characterized by its flat terrain (Valdiya, 2016). From a geographical perspective, the Indo-Gangetic Plain is largely uniform and devoid

of significant features, consisting mainly of Pleistocene and contemporary alluvial deposits deposited by the Ganga River and its tributaries. The examination of this area has been notably affected by human activities, alterations in river pathways, and riverbank erosion (**Gangal et al., 2010**).

The observable effects of human activity on the physical landscape, resulting from cultural presence since the dawn of civilization, are largely attributed to colonization. The establishment and expansion of a settlement in a specific area are shaped by the interplay of local ecological conditions, the cultural and social values of the residents, technological advancements, management strategies, and the evolution of settlement patterns over time (**Singh, 2017**). The concept of "settlement" refers to a structured human community, which can vary from simple agricultural land to intricate urban centers, or from transient encampments for hunters or miners to more stable residences for city dwellers and farmers (**Ahlawat, 2017**). Components of a settlement encompass streets, thoroughfares, parks, religious sites, and recreational facilities, alongside a wide array of buildings serving various functions. In their early stages, the features of settlements are closely tied to their environment and display basic designs. However, as society progresses and knowledge expands, there is a notable increase in the variety of their sizes and architectural forms (**Jha, 2014**).

The Upper Ganga Plain serves as a representative example of India's extensive cultural development, encompassing a timeline that stretches from prehistoric adaptations to the establishment of sophisticated communities and urban centers in the early historic period (**Kosambi, 1965**).

Settlement pattern studies in archaeology cover a wide array of topics, including ancient habitation trends, historical demographic analyses, migration, trade, exchange, and resource distribution. The Gangetic Plain laid the groundwork for agriculture in India, being home to the first agricultural communities. This region features the Upper Gangetic Plain (UGP), characterized by its vast sedimentary soils and perennial rivers, including the Ganga (Ganges), Yamuna, Ghagra, Gomati, Gandak, and various tributaries. Furthermore, it is regarded as the origin of much of the agricultural practices found throughout the country. The fertile soil and favorable climate of the river valleys and plains have historically attracted a significant human population, as these conditions are crucial for agricultural productivity and the advancement of both agriculture and civilization. The Upper Gangetic Plain, located in the western section of the larger Gangetic Plains, has been a pivotal area for agricultural development in India since the Neolithic period (**Fuller, 2008**). The region's unique climate and geography have encouraged local inhabitants to engage in the domestication of plants and animals, leading to a transition from a pastoral nomadic lifestyle to settled agricultural practices. These factors have significantly contributed to the region's swift economic growth and the enhancement of genetic diversity among various crops. Today, India's economy is largely reliant on agriculture, driven by population growth, the establishment of new settlements, and the exchange of products and knowledge with other regions.

3. SUMMARY

Research indicates a significant transformation in settlement patterns, evolving from semi-nomadic or nomadic communities that relied on natural rock shelters and riverine environments for sustenance, water, and raw materials to established, permanent settlements, particularly in the lush alluvial plains of the Upper Ganga Plain. This period was marked by advancements in technology, including hunting and gathering practices, the use of quartzite tools such as hand axes, cleavers, and scrapers, and a focus on megafauna and plant resources. Environmental and cultural factors played a crucial role during the era of settlement and cultural evolution in the Upper Ganga Plain. The availability of water from the Ganga and its tributaries, along with the fertile alluvial soil, significantly shaped land utilization and agricultural methods. As tool-making progressed from stone to copper and iron, there were notable changes in trade, architecture, and agricultural practices. The interplay between indigenous customs and external influences, such as those from the Indo-Aryans and Mauryans, fostered a dynamic cultural and social landscape.

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