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VASANT SAHASTRADHARA : AN INTERDISCIPLINARY JOURNAL

Volume : 5, No. 2 (August 2021),

RNI No. : UPBIL/2017/75813

# VASANT SAHASTRADHARA : AN INTERDISCIPLINARY JOURNAL

(Bi-annual & Bi-lingual)

Volume : 5, No. 2 (August 2021)

ISSN : 2581-7205



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# **VASANT SAHASTRADHARA:**

***An Interdisciplinary Journal***

**(Bi-annual & Bi-lingual)**

**Volume : 5, No. 2 ( August 2021)**

**Editor**

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अप्य दीपो भव

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## *Editor's Note*

It gives us immense pleasure to bring out the Vol. 4 No. 2 (August 2021) issue of Vasant Sahastradhara: An Interdisciplinary Journal (Peer Reviewed) of Vasanta College for Women, Rajghat, Varanasi. The present volume is a scholarly collection of seven articles from different disciplines of Humanities and Social Sciences. The first article is on the concerns of nutritional deprivation among muslim children in India with some suggestive measures to curb them. The second article deals with conceptual relationship between corporate social responsibility, activities and sustainable development by using a descriptive research methodology to analyze qualitative data obtained from relevance sources. The third article talks about perceiving happiness, the need of the contemporary hour. The fourth article takes under discussion the use of ICT in education and how it has played a pivotal role in the development and management of curriculum at various levels. The fifth article is an attempt to study and record the household attributes and socio-economic patterns of the two villages, Bhangar and Moarcch in Kangra District. The article dwells on how people survived in the narrow valley of Himalaya and created their livelihood amidst odd geographical and climatic conditions. The sixth article has the issue of the Income tax department and tax deduction under discussion for salaried people with a view to encourage savings and investment amongst the taxpayers. Most importantly 80C is relevant which is beneficial for them to reduce the tax liability. The seventh article ponders on the archaeological importance of around ten newfound sites of Brahmapur in Bihar. The eighth article talks about coins and how the coins amalgamated the concept of religion into practice. The vivid nature among the articles have settled in a way that Vasant Sahastradhara has looked forward to forming an interdisciplinary collaboration through the volume and it would be appropriate to state that everything is subjective in the human mind; nevertheless, our emotions, our opinions and our objectives are all relative. Hence, we look forward to the continued support of our readers and are hopeful to receive their responses.

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# CONTENTS

## *Editor's Note*

1. ***Nutritional Deprivation among Muslim Children in India: A Cause for Concern*** 1-12  
*G. Thavasi Murugan*
2. ***Corporate Social Responsibility – A Tool for Sustainable Development*** 13-20  
*Indra Pratap*
3. ***Perceiving Happiness as a Pre-condition for Productive and Fruitful Human Living*** 21-26  
*Nandita Kaushal*
4. ***ICT and Curriculum*** 27-40  
*Rathindra Narayan Das*
5. ***Selected Attribute of Households and Socio-Economic Pattern: A Case study of Bhangar and Moarcch Villages (Boh Valley), TehsilShahpur, District Kangra, Himachal Pradesh, India*** 41-66  
*Sanjay Singh Pathania, Reena Bala*
6. ***Income Tax Deductions for Salaried Individuals / HUFs / Companies Section 80 Deductions For F.Y. 2020-21, A.Y. 2021-22 (Including Budget 2021 amendments)*** 67-76  
*Shashi Yadav*
7. ***ब्रह्मपुर प्रखण्ड (जिला-बक्सर, बिहार) के नव-अन्वेषित पुरास्थलों का महत्त्व*** 77-90  
*चन्द्र भूषण गुप्त*
8. ***स्थानीय सिक्कों के आधार पर धार्मिक इतिहास*** 91-100  
*दुष्यंत कुमार शाह, कीर्ति गौड*

## **Nutritional Deprivation among Muslim Children in India: A Cause for Concern**

**G. Thavasi Murugan\***

### **ABSTRACT**

*Nutrition is the cornerstone of socio-economic development and that nutritional problems are not just medical problems but are 'multi-factorial' with roots in many other sectors of development as well as development of Nation. It is expected that minorities, especially Muslims are at higher risk in terms of under-nutrition. Keeping this view, the present study aims to figure out the prevalence of anthropometric failure in terms of stunting, wasting and under-weight. Along with this the study also tries to understand the socio-economic factors affecting nutritional status of Muslim children with the help of National Family Health Survey 2005-06 (NFHS – 3) data using Bivariate, Multi-variate, and Composite Index of Anthropometric Failure (CIAF) analysis. GIS technique also has been used for spatial variation of under-nutritional level in India. Policy makers and public health workers are always on chore to edify and stimulate people for abstaining from under nutrition, which will be most effective and efficient intervention to cope from burden of under nutrition. Inclusive development, urgent proactive nutritional intervention and supplementation programmes are also imperative to address this problem.*

**Key Words:** *Nutrition, Malnutrition, Health, Religion, Deprivation, CIAF*

### **Introduction**

Nutrition is a fundamental pillar of human life, health, and development across the entire lifespan. Since children are the most valuable asset of a nation, their welfare and health is the edifice of sound and sustained economic development. The most neglected forms of human deprivation are malnutrition. According to the first International Conference on Nutrition organized by FAO in 1992, "Hunger and malnutrition are unacceptable in a world that has both the knowledge and resources to end this form of catastrophe" (Sundaram et. al, 2015). India is one among the many countries where child malnutrition is severe and malnutrition is a major underlying cause of child mortality in India. Malnutrition is associated with more than half of all deaths of children worldwide (Pelletier et. al, 1995).

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Healthy mothers are fundamental to the growth and development of their children. Many nutrition programmes target expecting and parenting mothers to ensure children are born healthy and receive the nutrition they need early in life. The earlier literature says that malnutrition is not the result of a single cause; the problem is multifaceted, the causes acting singly or in combination with other complex factors like poverty, purchasing power, health care, ignorance of nutrition and health education, female illiteracy, social group, religion, mother's occupation etc.

Several studies have cited malnutrition during childhood can also affect growth potential and risk of morbidity and mortality in later years of life. Undernourished children are more likely to grow into undernourished adults who face heightened risks of disease and death (Mishra et al, 1999).

### **Objective**

The main objective of the study is to uncover the prevailing differences in child under-nutrition among Muslim's and non-Muslim across India.

### **Data Source and Methodology**

The paper uses the National Family Health Survey (NFHS – 3) third round data (2005-06) for the study. NFHS-3 was designed to provide estimates of important maternal and child health indicators including nutritional status for young children (less than five years).

Many of the factors associated with child nutrition are also associated with each other. Consequently, any apparent effect of one factor on child nutrition may be due to the confounding effects of one or more of these other factors. Therefore, when assessing the effects of any one factor on malnutrition, a multivariate analysis is necessary to control for the effects of other potentially confounding factors. The bivariate (cross tabulation), Multivariate (logistic regression) and Composite Index of Anthropometric Failure (CIAF) analysis are also used in this study. A GIS technique has been used for a spatial variation of under-nutrition level in India.

Malnutrition among young children is conventionally determined through measurement of height, weight, skin-fold thickness and age. The most used indices derived from these measurements are stunting (low height for age), wasting (low weight for height) and underweight (low weight for age). These groups are defined more fully in the following box, which is known as a composite index of anthropometric failure (CIAF), which enables the identification of groups of children that are missed by conventional indices.

Group Name	Description	Wasting	Stunting	Underweight
A	<b>No failure:</b> Children whose height and weight are above the age-specific norm and do not suffer from any anthropometric failure.	No	No	No
B	<b>Wasting only:</b> Children with acceptable weight and height for their age but who have a subnormal weight for height.	Yes	No	No
C	<b>Wasting and underweight:</b> Children with above-norm heights but whose weight for age and weight for height are too low.	Yes	No	Yes
D	<b>Wasting, stunting and underweight:</b> Children who suffer from anthropometric failure on all three measures.	Yes	Yes	Yes
E	<b>Stunting and underweight:</b> Children with low weight for age and low height for age but who have an acceptable weight for their height.	No	Yes	Yes
F	<b>Stunting only:</b> Children with low height for age but who have acceptable weight, both for their age and for their short height.	No	Yes	No
Y	<b>Underweight only:</b> Children who are only underweight.	No	No	Yes

Source: Adopted from Nandy et al. (2005)

Stunting is an indicator of chronic malnutrition, the result of prolonged food deprivation and/or disease or illness; wasting is an indicator of acute malnutrition, the result of more recent food deprivation or illness; underweight is used as a composite indicator to reflect both acute and chronic malnutrition.

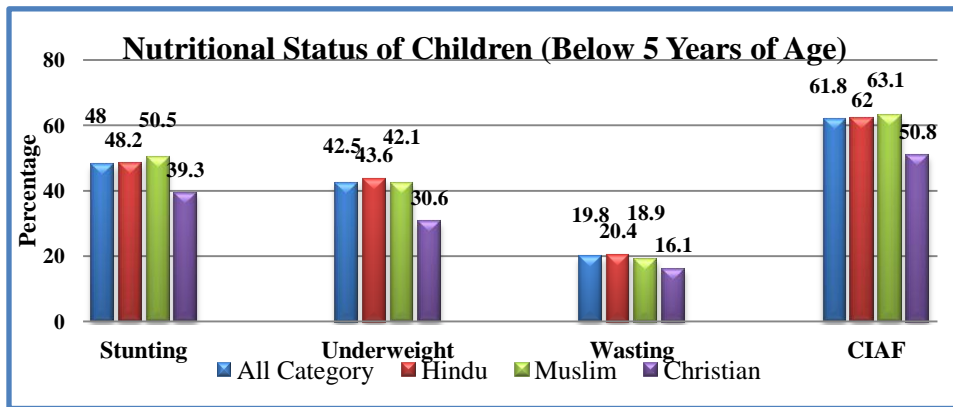
### Malnutrition Prevalence in India

Traditionally, stunting, underweight and wasting have been used as anthropometric indicators of malnutrition among children (Bhattacharya, 2000, Lee & Nieman, 2003; Bose et al. 2007). However, in studies evaluating childhood nutritional status, the CIAF has also been utilised and validated by investigations from India.

Figure 1 presents the religion wise percentage of children under age five who are undernourished according to height-for-age (Stunting), weight-for-age (Underweight), or weight-for-height (Wasting) and a Composite Index of Anthropometric Failure (CIAF) for India as a whole. Among all category forty-eight percent is stunted, 42.5



percent are underweight, and 19.8 percent are wasted. Muslim children are showing a lower percentage of wasted and underweight as compare to Hindu children in terms of nutritional status but Muslim children are stunted higher than Hindu children. Whereas the Christians children are altogether showing very low percentage of stunted, underweight, and wasted as compare to all other religious categories. The CIAF for all religious groups is showing very high undernourished children. The Muslim children are more undernourished than the Hindu, whereas the condition of Christian children is better than these two groups in terms of child nutrition. But Christian children are also above 50 percent undernourished.



**Figure 1: Nutritional Status of Children (below five years of age).**

At the national level, the state wise CIAF analysis for Hindu children shows that Madhya Pradesh and Bihar have a high risk of Malnutrition, followed by Jharkhand, Chhattisgarh, and Gujarat (Map1). Whereas only three states namely Punjab, Manipur, and Kerala are shown below 50 percent of Hindu children are undernourished and the rest of the Indian states are in moderate levels of malnutrition i.e. 50 to 60 percent.

Whereas the state wise CIAF analysis of Muslim shows that children of Madhya Pradesh, Bihar and Haryana have a high risk of Malnutrition, followed by Rajasthan, Uttar Pradesh, Uttrakhand, Jharkhand, West Bengal, and Assam (Map 2). The Muslim children are less undernourished in the southern states that are Kerala, Tamil Nadu, and Andhra Pradesh. From the northern states, Punjab and Jammu & Kashmir are showing low levels of undernourishment prevalence among Muslim children i.e., below 50 percent, whereas the other states are showing moderate malnutrition prevalence among the Muslim children, i.e., 50 to 60 percent.

### Background wise Malnutrition Differences among Hindu, Muslim, and Christian

Table 1 presents levels of malnutrition (CIAF) among place of residence of religion. The prevalence of malnutrition is considerably higher in rural areas than in urban areas, as expected for all religious groups. The malnutrition prevalence in an urban area is somewhat higher in Muslim than Hindu's. The female is slightly less undernourished in Muslim and Christian than male children of Hindu's.

**Table 1:** Nutritional status of children (percent CIAF) in different religion by place of residence, gender, and mother's educational level, of the child.

Background/ Religion	Hindu	Muslim	Christian
Rural	65.0	64.9	56.4
Urban	52.2	59.0	40.5
Male	61.4	63.5	51.5
Female	62.7	62.7	50.2
Illiterate	71.2	69.7	70.7
Primary	62.7	62.2	59.6
Secondary	52.9	50.8	44.9
Higher	31.7	32.9	30.5

Source: Computed from National Family Health Survey (III) 2005-06, Children data file.

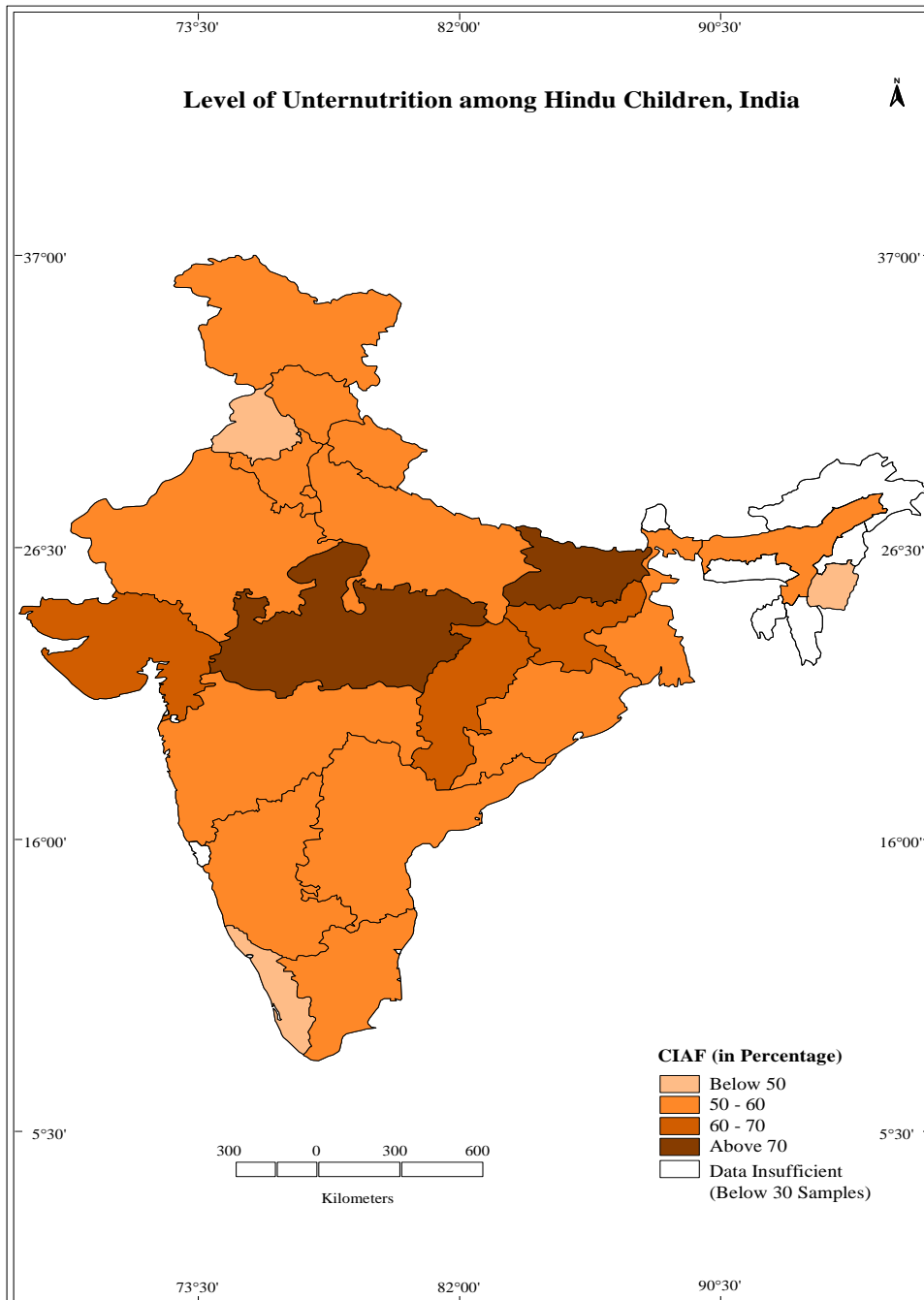
The nutritional levels of Muslim children are better than the Hindu and Christian children of illiterate women and poorest women from wealth quintile. But with an increase in mother education and wealth status, the situation of Hindus and Christian children are much better than the Muslim children. That is Muslim children are showing a lower level of nutrition than the Hindu and Christian at a similar level of a mother with higher education and richest wealth quintile.

**Table 2:** Nutritional status of children (percent CIAF) in different religion by wealth index.

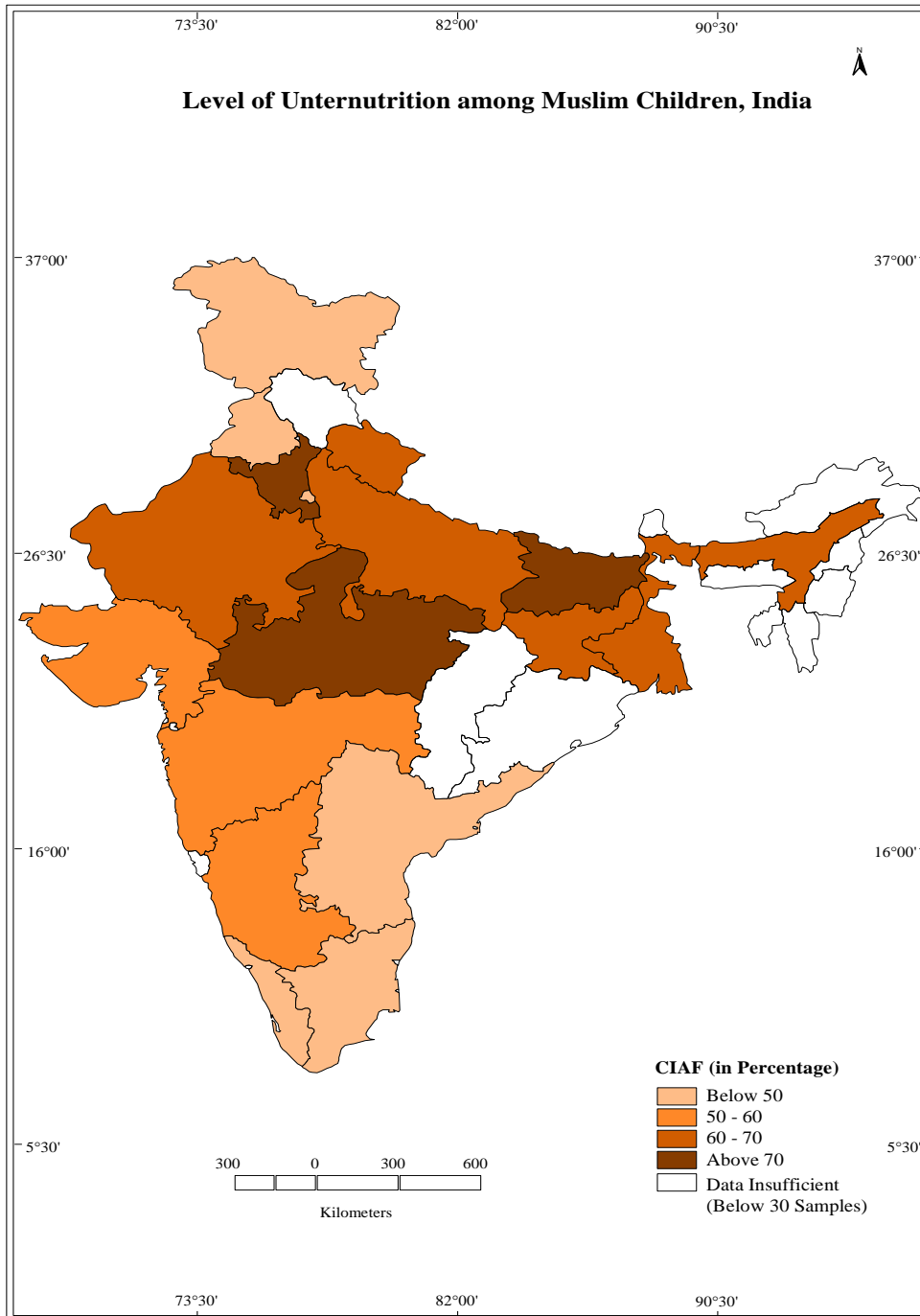
Wealth Index/Religion	Hindu	Muslim	Christian
Poorest	75.1	73.8	71.3
Poorer	68.1	69.2	63.5
Middle	62.2	63.1	56.0
Richer	53.9	56.9	48.6
Richest	38.2	39.1	27.9

*Nutritional Deprivation among Muslim Children in India: A Cause for Concern*

Source: Computed from National Family Health Survey (III) 2005-06, Children data file.



**Map 1**



Map 2

Similar differences are observed for social groups by their religious background (Table 3). Comparing child under-nutrition across religious groups, there are differences across religious as well as social-religious groups. Children from Christian have a relatively better nutritional status than those from Hindu and Muslim. From table 3 we can see, among socio-religious groups, SC Muslims (73.8%) has the highest proportion of undernourished children followed by ST Hindus (71.2%) and SC Hindu (67.9%). The Muslim general group (others) is showing very high undernourished children (62.3%) then the Hindu children (49.4%).

**Table 3:** Nutritional status of children (percent CIAF) in different religion by social group.

<b>Social Group/Religion</b>	<b>Hindu</b>	<b>Muslim</b>	<b>Christian</b>
Scheduled Caste (SCs)	67.9	73.8	46.4
Scheduled Tribe (STs)	71.2	61.7	64.3
Other Backward Caste (OBCs)	62.9	65.7	39.7
Others	49.4	62.3	42.0

*Source: Computed from National Family Health Survey (III) 2005-06, Children data file.*

### **The Role of Socio-Economic Conditions Determining Nutritional Status among Hindu, Muslim, and Christian Children**

Using multiple logistic regression models (see table 4), we attempt to examine the effect of various socioeconomic and demographic factors on child malnutrition in India. For example, children belonging to the richest wealth quintile of Muslim had 3 times significantly less likelihood of suffering from malnutrition relative to the children from poorest wealth quintile, whereas the Hindu children are 2.3 times significantly less likelihood of suffering from malnutrition relative to the children from poorest wealth quintile.

In the case of Christian children, the rural-urban difference is insignificant. But the Muslim rural children are 1.3 times less likely of being undernourished than their urban counterpart, whereas Hindu children are not showing any difference in malnutrition between rural and urban area. Mother education was also negatively associated with malnutrition as children belonging to highly educated mothers had 2 times less likelihood of being undernourished relative to children whose mothers were illiterates for all religious groups.

**Table 4: Logistic Regression Results of Factors Affecting Child Malnutrition among Hindu, Muslim, and Christian.**

Background Characteristics	Hindu (N=28106)	Muslim (N=5602)	Christian (N=3797)
<b>Place of Residence</b>			
Urban <sup>®</sup>	1	1	1
Rural	0.909 <sup>***</sup>	0.748 <sup>***</sup>	0.978
<b>Mother's Educational Level</b>			
Illiterate <sup>®</sup>	1	1	1
Primary	0.879 <sup>***</sup>	0.809 <sup>**</sup>	0.889
Secondary	0.721 <sup>***</sup>	0.691 <sup>***</sup>	0.718 <sup>***</sup>
Higher	0.450 <sup>***</sup>	0.497 <sup>***</sup>	0.500 <sup>***</sup>
<b>Work Status of Women</b>			
Not Working <sup>®</sup>	1	1	1
Agriculture	1.045	0.936	1.218 <sup>**</sup>
Unskilled Manual Worker	1.124 <sup>**</sup>	0.953	1.457 <sup>**</sup>
Service	1.025	1.088	1.056
<b>Wealth Index</b>			
Poorest <sup>®</sup>	1	1	1
Poorer	0.801 <sup>***</sup>	0.894	0.803
Middle	0.705 <sup>***</sup>	0.607 <sup>**</sup>	0.786 <sup>*</sup>
Richer	0.588 <sup>***</sup>	0.528 <sup>**</sup>	0.562 <sup>***</sup>
Richest	0.435 <sup>***</sup>	0.330 <sup>***</sup>	0.371 <sup>***</sup>
<b>Social Group</b>			
Scheduled Caste (SCs) <sup>®</sup>	1	1	1
Scheduled Tribe (STs)	0.911 <sup>*</sup>	0.556 <sup>**</sup>	1.254
Other Backward Caste (OBCs)	0.923 <sup>**</sup>	0.820	0.969
Other	0.758 <sup>***</sup>	0.703 <sup>**</sup>	1.015

*Nutritional Deprivation among Muslim Children in India: A Cause for Concern*

<b>Sex of Child</b>			
Male <sup>®</sup>	1	1	1
Female	1	0.871**	0.893*
<b>BMI of Mother</b>			
Under-Weight <sup>®</sup>	1	1	1
Normal	0.677***	0.776***	0.816**
Over-Weight	0.520***	0.569***	0.648**
<b>Mass Media Exposure</b>			
Not Exposed <sup>®</sup>	1	1	1
Exposed	0.868***	0.921	0.907
<b>Pseudo R<sup>2</sup></b>	<b>0.118</b>	<b>0.098</b>	<b>0.093</b>

Notes: \* $P < 0.1$ , \*\* $P < 0.05$ , \*\*\* $P < 0.01$ , ® = Reference category,

Source: Computed from National Family Health Survey (III) 2005-06 Children Data File.

For Muslim category, the work status of mother did not show any significance for child malnutrition. Whereas from Christian category the women who engaged in agriculture and unskilled manual worker are showing 1.2 and 1.5 times more likely to undernourished respectively. The role of caste was also found significant for Hindu and Muslim children, suggesting that children belonging to relatively poor social groups (SC/ST) had higher odds of being undernourished than their counterparts of other social group (general), whereas for Christian caste is insignificant for determining the nutritional level.

There is no difference is prevailing among Hindu male and female children in terms of malnutrition, but the female of Muslim and Christian are 1.2 and 1.1 times less likely to undernourished than their counterpart males respectively. If the mother of a child is normal (healthy) or overweight than the children are less likely to become undernourished than the underweight women's children. And the mass media exposure is significant only to the Hindu category whereas for other categories it is insignificant, i.e.; women who are exposed to mass media in Hindu category are 1.2 times less likely to have undernourished children than not exposed women.

After controlling for various confounding variables, it may be noted that wealth quintile, maternal education, caste, place of residence significantly affects the likelihood of suffering from malnutrition in India for various religious groups.

## Conclusion

In India, there is little difference in child malnutrition among male and female for Hindu but was not found significant which shows clearly that there is equality in childhood malnutrition among male and female for Hindu then the Muslim children. Mothers' education shows a negative relationship with the child's nutritional status for all religion, this is because better-educated mothers are more informed about the children required nutrient intake and more informed to take proper care of the child this relationship is found evident across all the religion.

Mothers' nutritional status also determines the child undernourishment. For instance, mother's BMI level which shows an inverse relationship with the children being underweight, stunted, and wasted. Wealth index also shows that poorer children suffer more of child malnourished as compared to richest children in all religion. Among the social group, SCs and STs children are more malnourished compared to other social groups, so social group also determines the child nutritional status as suggested by multivariate analysis.

Therefore, policy makers and public health worker are always on the chore to edify and stimulate people for abstaining from under-nutrition, which will be most effective and efficient intervention to cope with the burden of under-nutrition. Inclusive development, urgent proactive nutritional intervention, and supplementation programmes are also imperative to address this problem.

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## Corporate Social Responsibility – A Tool for Sustainable Development

Indra Pratap\*

### ABSTRACT

*This paper provides an outline of the current debate on the conceptualisation of Corporate Social Responsibility (CSR) and Sustainable Development. CSR is a form of corporate self-regulation integrated into a business model which can be understood as the responsibility of the corporation towards the society and the environment and sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Although both the concepts have evolved in different temporal settings but eventually came closed due to their similar goals and objectives. There is a theoretical interrelation between the 'triple-bottom line' approach of CSR and the 'three-pillar/dimension' approach of sustainable development. Later, both the concepts got merged into the idea of corporate sustainability.*

*This paper aims to highlight the conceptual relationship between corporate social responsibility activities and sustainable development by using a descriptive research methodology to analyse qualitative data obtained from relevant secondary sources.*

**Keywords:** *Corporate Social Responsibility, Triple-bottom Line, Sustainable Development, Three-pillar Approach, Corporate Sustainability etc.*

### Introduction

The Corporate Social Responsibility (CSR) and the Sustainable Development are buzzwords in modern times. The idea of sustainability is the gist of these two concepts. Their conceptual evolution can be sketched in different temporal dimensions, however, both concepts have gained prominence in recent times simultaneously because of their similar theoretical construct and goals. The concept of CSR has evolved from Bowen's idea of social responsibility of the businessman to Carroll's three-dimension conceptual model of corporate performance to Freeman's stakeholder approach and later reached its zenith with the notion of triple-bottom-line given by John Elkington. Similarly, the concept of sustainable development has gained prominence with the definition given by World Commission on Environment and Development (WCED) in 1982 which was later published in Brundtland report (1987). Both the concepts got overlapped when

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World Business Council for Sustainable Development (WBCSD) defined CSR as a tool for sustainable development in 2000. Later In 2002, Thomas Dyllick and Kai Hockerts introduced the concept of ‘corporate sustainability’ as an extension of the triple-bottom-line approach by diffusing both the ideas of CSR and sustainable development on basis of the similarities in their goals in his landmark paper ‘Beyond the Business Case for Corporate Sustainability.

The objective of this study is to assess a relevant review of the literature and to explore the correlation between the theoretical framework of CSR and sustainable development. This study is based on a hypothesis that sustainable development is corollary to the impact of CSR activities. A qualitative and descriptive research methodology has been employed to critically analyse secondary data available at various research papers, books, articles and other relevant web sources.

### **Origin OF CSR**

In modern times, Howard R. Bowen has advocated his concept of CSR as a social responsibility in his landmark book ‘Social Responsibilities of the Businessman’ in 1953. Later, Keith Davis (1960), J. McGuire (1963), S. Network (1975) and Carroll (1979) magnified the concept and content of social responsibility as an extension of the theory of CSR stakeholders. Following the publication of a study by R. Freeman in 1984, this theory of CSR stakeholders began used widely to analyse and explain the relationship between the company and society.

However, the early roots of CSR can be found in the actual business practices of the Cadbury chocolate makers in the UK that prospered in the 1870s. In 1878, they established a ‘Bournville’ town to promote housing reform, green environment and the advancement in conditions and social benefits for their workforce and demonstrated today's CSR message of “successful business lies in successful communities”.

### **Meaning of CSR**

CSR is a form of corporate self-regulation integrated into a business model. It can be understood as the responsibility of the corporate toward the society. With the advent of organic theory, a company or an enterprise is considered a living organism and law confer personality to it. This organic theory has improvised the concept of CSR from merely an act of charity or philanthropy by corporations to the direct participation of corporations in achieving social responsibility.

CSR can be defined as a concept whereby companies voluntarily decide to respect and

protect the interest of a broad range of stakeholders and to contribute to a cleaner environment and a better society through active interaction. Corporations have a degree of responsibility not only for the economic consequences of their activities but also for the social and environmental implications. This is sometimes known as the 'triple-bottom line' (based on 3Ps: people, planet and profit) that considers corporate activity's economic, social and environmental aspects. It is also known as corporate conscience, corporate citizenship and the responsive business. It is an extension of corporate governance.

### **Scope of CSR**

The phrase 'triple-bottom line' aptly defines the scope of CSR. The triple-bottom-line is an accounting practice that incorporates the company's performance practice beyond measuring profits. It was first coined in 1994 by John Elkington, the founder of the UK consultancy called *SustainAbility*. Later in 1998, it was conceptualised as the 'triple-bottom-line' approach of CSR. His argument was that companies should prepare three different bottom lines, namely, profit, people and planet.

**Profit** – The bottom line of the 'profit' and 'loss' accounts of corporate businesses is one of the traditional measures. It focuses on economical and efficient use of natural resources along with cost-cutting in production to achieve an ultimate goal of sustainable profit.

**People** – The second bottom line of any company should be 'people' account. It measures the effectiveness of business operations and the end product of an organisation. It includes the responsibility not only towards their employees and consumers but also towards the society as a whole as well to establish a responsible business.

**Planet** – The third bottom line of the company is the 'planet' account which is corollary to the first two bottom lines. It measures how impactful business has been towards a sustainable ecology and the environment to construct a prosper planet.

The triple bottom line, thus, aims to achieve sustainability by putting the holistic effort of all three Ps – 'profit, people and planet' or 'economic prosperity, social equity and environmental impact'. It is based on the assumption that companies should not measure mere profit numbers but also take account of their social and environmental impacts. This approach also evaluates the company's fairer business practices and greener and sustainable production methods are at critical interactions among these three-bottom lines or the three Ps.

## **Sustainable Development**

The term development is generally used to denote growth or progress. Nowadays, it has become synonymous to economic growth in terms of gross domestic product or the per capita income of the nation. But the term sustainable development is a normative outlook which has much wider implications than development. It is both a way of understanding the world and a method for solving global problems.

The term ‘Sustainable Development’ was first coined in 1972 at the United Nations Conference on Human Environment at Stockholm. The WCED was initiated by the General Assembly of the United Nations in 1982, and its report, *Our Common Future*, was published in 1987. It was chaired by the then Prime Minister of Norway, Gro Harlem Brundtland, thus earned the name the ‘Brundtland Commission’.

The most frequently used definition of sustainable development is from the Brundtland Report, that is, “sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. In other words, it is improving the quality of life of the present generation without excessive use or abuse of natural resources so that they can be preserved for the next generation.

## **Meaning and Nature of Sustainable Development**

Sustainable Development has two root words- “sustainable” and “development” with positive connotations. The Board on Sustainable Development of the U.S. National Academy of Sciences, in its report *Our Common Journey: A Transition toward Sustainability* focused on the distinction between these two ideas in which first advocates what sought to sustain and later advocates what sought to develop in relation with time horizon.

The nature of the idea of sustainable development is highly dynamic. Priorities of action for sustainable development definitely get changed with respect to time. In early times, we only sought to sustain earth, biodiversity and the environment and sought to develop people and the quality of life. But today, we focus on sustaining life support ecosystems and resources with community and cultures as well while developing the economy and society simultaneously. It is quite easy to get answers for these two crude ideas which further extend the scope of sustainable development with the increase of the list in modern times.

## **Scope of Sustainable Development**

The World Summit on Sustainable Development (2002) marked a further expansion of the standard definition with the widely used three pillars of sustainable development: economic, social, and environmental. Thus, sustainable development can be understood of the interactions of three complex systems namely, the world economy, the global society, and the Earth's physical environment.

### **Economic Dimension**

The economic dimension of sustainable development delivers the idea of economic welfare to people at present and in the future while paying more attention to the natural resources of economic value. It includes the creation of new markets and opportunities for sale growth and cost reduction through efficiency and improvements in usage of raw material inputs through technological interventions which ensure the availability of goods and services to all at affordable prices.

### **Social Dimension**

The social dimension of sustainable development comprises the idea of developing of indigenous communities through improvement in quality of life. It focuses on improvement in health, sanitation and availability of potable water facilities; workers' health and safety measures; and literacy and awareness-level at a community level.

### **Ecological Dimension**

The ecological dimension is the first and foremost idea of sustainable development. Its emphasis on the holistic development of all species of flora and fauna including human beings. To achieve this objective, it aims to reduce waste, carbon emissions and toxic substances in the environment and promotes the use of renewable energy sources.

## **Relevance of CSR in Sustainable Development**

The WBCSD (2000) defines Corporate Social Responsibility as “the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.” Similarly, Commission of European Communities (2002) defined CSR as “companies having responsibilities and, taking actions beyond their legal obligations and economic/business aims. These wider responsibilities cover a range of areas but are frequently summed up as social and environmental – where social means society broadly defined, rather than simply social

policy issues. This can be summed up as the triple-bottom-line approach: i.e. economic, social and environmental.”

These definitions of CSR are very near to the concept of sustainable development as it also based on three pillars – ‘economic, environmental and, social’ based on three Es – ‘economy, ecological and, equity’. The concept of sustainable development can also be understood in terms of the ‘triple-bottom-line’ (three Ps – ‘profit, people and planet’) approach of CSR. Both CSR and sustainable development can be interpreted in many different ways due to their dynamic nature, but at its core, their approach towards development looks to balance different and often competing needs against in pursuit of the environmental, social and economic limitations we face as a society.

Later, Thomas Dyllick and Kai Hockerts (2002) extended the concept of the tripe-bottom-line by introducing a new concept of ‘corporate sustainability’ in his landmark paper ‘Beyond the Business Case for Corporate Sustainability’. Corporate sustainability has a much wider connotation in the form of three dimensions of sustainability and its three associated capitals, namely, economic, social and environmental which made the distinction between CSR and sustainable development more porous and even more immaterial than ever.

### **Prospects of CSR Activities in Sustainable Development**

As in a modern society, no government can act alone in pursuance of the objectives of the sustainability. And hence it is recognised the need for involvement of and support from corporate sector in development activities. Recent developments in the CSR approach led the business corporations towards active participation in the achievement of Millennium Development Goals (MDGs) and Sustainable Development Goals (MDGs) established by United Nations. In pursuance of these MDGs and SDGs, India has made CSR mandatory and has also mentioned CSR activities aligned with spectrum of MDGs and SDGs under Schedule VII of the Companies Act, 2013.

### **Conclusion**

The goal of this study is to explain the correlation between CSR and sustainable development which evolved in due course of time. This paper emphasised that business corporations’ approach of direct participation in the achievement of social responsibility led to the concurrence in the ‘triple-bottom line’ approach of CSR and the ‘three-pillar/dimension’ approach of sustainable development. The idea of ‘corporate sustainability’ has further enhanced the spectrum of overlapping. But the quest for the distinction of concepts and definitions of CSR and sustainable development still

remains relevant due to their dynamic nature and applicability. Further studies can be conducted to explore the newer scope and boundaries of these concepts.

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## Perceiving Happiness as a Pre-condition for Productive and Fruitful Human Living

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### ABSTRACT

*Happiness is the state closely connected with one's positive emotions. It involves numerous feelings and leads to a satisfied and serene life. Its manifestations vary from person to person. It influences a spectrum of factors. The interest of the mankind lies in happiness so it is must to increase in its frequency, and this can be done by following several customary practices.*

**Key words:** *Happiness, feeling, satisfaction, purpose of life, jubilant, self-fulfillment, well-being.*

### Introduction

Human beings or Homo sapiens, the biological beings, are primates belonging to the genus Homo. Among the primates the human beings are the most ample and diffused species on the planet Earth. Apart from being biological the human beings are social and cultural beings who live in social groups in the society in accordance with their cultural beliefs and follow their mores, traditions and cultural practices. The life of each and every individual is so closely intertwined with her or his social and cultural milieu that no one can even think of remaining aloof from it. Throughout their life span most of the individuals try to lead a meaningful life where they attempt to remain joyous, jubilant, contented, cheerful and mirthful. It is in this context the role of happiness in human living comes into picture.

### Meaning of Happiness

Happiness is the state of mind associated with one's positive emotions. It involves various types of feelings such as delight, liveliness and merriment. It suggests the state of predominant complacency and peace of mind. In the *Dictionary of Psychology of American Psychological Association (APA)*, happiness has been explained as 'an emotion of joy, gladness, satisfaction and well-being.'

Happiness brings about and leads to a satisfied and serene life. It is often referred to as subjective well-being for the reason that its exact manifestations vary from person to

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person. *Aristippus* (435–356 BCE), a Greek philosopher and disciple of Socrates, held the view that among various human values the highest value is pleasure and the lowest one is pain. He was of the opinion that life should be devoted by the persons to the seeking and indulgence of pleasure. However, at the same time he also considered that righteous judgment and self-control should be made use of by them to restrain compelling human desires.

The famous Greek philosopher *Aristotle* (384 -322 BCE) regarded ‘happiness is the meaning and purpose of life, the whole aim and end of human existence.’ He in his famous work ‘*The Nicomachean Ethics*’ has stated ‘...the function of man is to live a certain kind of life, and this activity implies a rational principle, and the function of a good man is the good and noble performance of these, and if any action is well performed it is performed in accord with the appropriate excellence: if this is the case, then happiness turns out to be an activity of the soul in accordance with virtue....he is happy who lives in accordance with complete virtue and is sufficiently equipped with external goods, not for some chance period but throughout a complete life.’

*Daniel Gilbert*, an American social psychologist, has described happiness as ‘anything we pleased’. The famous American researcher in the field of positive psychology *Sonja Lyubomirsky* in her book ‘*The How of Happiness*’ has defined happiness as ‘the experience of joy, contentment or positive well-being, combined with a sense that one’s life is good, meaningful and worthwhile.’

Happiness may take the form of hedonism and / or life satisfaction (eudemonism). Hedonism is referred to in the sense of gratification of one’s cravings and thereby increasing enchanting experiences of life. Life satisfaction takes the form of well-disposed and amicable mental attitude regarding seeking satisfaction in terms of purposeful, worthwhile and useful life.

### **Happiness for Feasible Human Living**

The topic of happiness as a major source of viable human living and as a means for healthy survival has over the years emerged as a key area of interest and research in the physical and social sciences. It is assumed that greater the proportion of happy population of any country, the greater that country takes care of its citizens. It is often said that happiness is one such factor which unravels the accomplishments of any country in comprehensive terms covering intensively non-economic measures.

Promotion of happiness has become one of the main agendas of development of the modern states especially in the democratic ones. Recognizing the importance of

happiness, *the Declaration of Independence of the United States of America* (July 4, 1776) states ‘.....that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.’

The famous German psychologist *Karl Ludwig Buhler* gave the term *funktionslust* in the year 1924 which implies pleasure in function, that is, the pleasure being derived by the human being by getting involved in any function and its related activities. The researches reveal that happiness surfaces as an outcome of following long-term progressive goals and this journey towards sustainable happiness is iterant with both positive and negative emotions. Happiness is much beyond materialistic wealth and pleasure.

The emphasis on happiness in the present day societies has another aspect and it is that there is a flourishing business for promoting pleasure and happiness. The science and scientific developments are actively contributing in this business. The result is that market is replete with numerous material and non-material means for advancing pleasure and happiness.

There are innumerable factors which contribute in advancing happiness. These factors may be associated with incidents, acts, circumstances, thoughts etc. The famous psychologist *Ed Diener* (who is popularly known as *Dr. Happiness*), a well-known researcher of the United States of America in the area of positive psychology who has given the term ‘subjective well-being’, has described five factors which aid in fostering happiness. These factors are social relationships, temperament / adaptation, money, society and culture, and positive thinking styles.

Professor *Paul Dolan*, a British specialist in the areas of human behaviour and happiness who was termed as *Professor Happiness* by the famous newspaper, *The Telegraph*, in the year 2018 and the author of two noted books ‘*Happiness by Design*’ and ‘*Happy Ever After*’, in his works has attempted to develop the measures of happiness and subjective well-being as well as to make use of advancements in the behavioural science to gain insights into human behavior and to bring changes in it. *Martin Elias Peter Seligman*, a leading American psychologist in the area of positive psychology and well-being, has developed *PERMA model* in which each letter denotes a factor which promotes well-being. Thus, according to Seligman there are five such factors which are positive emotions, engagement, relationships, meaning and accomplishments. All these factors are inherently motivating ones. In the coming years *PERMA model* was evolved into *PERMA+ model* which includes *PERMA* factors

along with optimism, physical activity, nutrition and sleep.

*Abraham Harold Maslow*, a renowned American psychologist, in his *theory of need hierarchy* has presented promising ideas related to human nature and possibilities in terms of psychological health. Maslow in his book '*Motivation and Personality*' has observed 'the more we learn about man's natural tendencies, the easier it will be to tell him how to be good, how to be happy, how to be fruitful, how to respect himself, how to love, how to fulfill his highest potentialities ... The thing to do seems to be to find out what one is really like inside; deep down, as a member of the human species and as a particular individual.' The highest level in his theory is the need for self-actualization which he has described in the following words: 'what a man can be, he must be. This need we may call self-actualization...It refers to the desire for self-fulfillment, namely, to the tendency for him to become actualized in what he is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming.' In the same vein Frederick Herzberg in his motivation-hygiene theory or two factor theory which appeared in his book '*One More Time: How Do You Motivate Employees*' (1968) he explained two factors namely motivation (intrinsic) and hygiene (extrinsic) factors to explain job satisfaction and job dissatisfaction. The former factors increase job satisfaction and hence, wellbeing of the employees. Motivation factors according to Herzberg include achievement, recognition, responsibility, work itself, advancement and personal growth. Clayton Paul Alderfer, a renowned American psychologist, in his ERG theory has classified main human needs into three categories namely existence, relatedness and growth. Of these the first one is concerned with fundamental palpable prerequisites for living, second one with sustaining inter-personal relationships and last one with inherent inclination for personal development. It is the last set of human needs that bring about a happy and satisfied life. The American psychologists Edward Deci and Richard Ryan in their book '*Self-Determination and Intrinsic Motivation in Human Behaviour*' (1985) put forward self-determination theory which stressed that the need to grow and attain fulfillment propel human behavior. According to this theory, persons have to feel autonomy, competence and connection or relatedness to bring about their psychological growth.

### ***Practices for Augmenting Happiness***

As subjective aspect is associated with happiness so measures and practices for increasing it vary from individual to individual. However, there are various customary practices which when followed solemnly may increase the frequency and degree of happiness. These include pursuing internal goals; wholesome efforts to lead a meaningful life; cherishing even small moments of life; keeping alive spirited

relationships; exhibiting sense of responsibility and commitment; acclimatizing in thankfulness; developing optimistic state of mind; regularly doing physical and mental exercises; developing trustworthy and reliable support groups; making sincere efforts to be natural in the conduct of behaviour; focusing on mental peace; developing proximity with the natural world; avoiding negative ideas; remaining aloof from destructive and disparaging acts etc.

## Conclusion

Happiness having association with positive emotions is among those basic aspects that are essential for the calm and composed life especially in the turbulent and frenetic conditions of modern living. Considering its relevance for amicable living happiness has emerged as a significant area of research and too much importance is being given to it. However, at the same time the fact remains that mostly long-lasting happiness remains a fantasy so variety of practices are being advocated to realize and sustain it.

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*Perceiving Happiness as a Pre-condition for Productive and Fruitful Human Living*

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## ICT and Curriculum

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### ABSTRACT

*In the age of digital pedagogy, ICT i.e. Information and Communication Technology plays a pivotal role in the development of curriculum. According to the curriculum development experts, the inclusion of ICT into the curriculum should be given priority in order to develop a basic computer awareness among the students. The introduction of ICT into the various levels of curriculum construction will enhance the computer literacy level of the students, by which the attainment of digital literacy can be easily realized. The ICT curriculum broadly attempts to equip students with an ability to negotiate a range of devices, tools, applications, information and resources. The ICT based curriculum makes the students able to be digitally educated. The students become able to connect with the world, connecting with each other. They become able to develop ICT based creativity and intelligence. The interaction becomes ICT based. The ICT curriculum will lead the students to an immensely popular field. They become motivated in exploring and participating in something innovative. The development of ICT in Education in India has been provided an important go by introducing SWAYAM, EDFLY LEARN etc. These are the digital ICT based educational initiatives with the help of what educational curriculum is developing every now and then. ICT based curriculum makes learning interactive on the part of both the students and the teachers. It ensures better teaching and learning methods. In an ICT based educational set up, the process of students' management is very easy. It eliminates the usage of paper and ensures environmental protection.*

**Keywords:** *Better teaching, innovative, curriculum, creativity, student management.*

### Introduction

Information and Communication Technology is the most important component of modern digital education that use information and communication technology to support, enhance and optimize the delivery of information. The world wide researches have shown that ICT can lead to an improved student learning and better teaching method with the help of an integrated curriculum. It is very important to note that ICT has an important role in the development of the curriculum. Since curriculum is an important aspect of the education process so the curriculum construction needs a special

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attention. The curriculum based on the ICT is aimed at the development of technology orientation of education.

The national policy on ICT in education organizes the competencies for ICT literacy into three levels, basic, intermediate and advanced. The curriculum as the total unit subsumes them.

The competencies to be acquired as a result of studying the ICT based curriculum help the learners in meeting the basic aspect of life and as a result of expertise with the basic aspects, he or she becomes expert in intermediate skills and finally he or she become a master of advance studies. It is a shifting trend that significantly denotes the trend of “easy to complex” and “Concrete to abstract”.

Curriculum as the go of life, reveals this very aspect. The ICT based curriculum is an important aspect that reveals the digitilisation of education, which basically aims at the development of digital literacy among the students, both formally and non-formally. The “Rajiv Gandhi Computer Literacy Programme” aims at the development of computer literacy among the students. This very programme is an important step to the formation of “Digital India” where each and every citizen gets digitally acquainted. The curriculum development with the help of ICT has contributed to the learners ability to develop ICT based creative intelligence or artificial intelligence.

The important aspect related to the development of the ICT based curriculum is related to the concept of e-learning which is aimed at making the students and the learners able to perceive education on line, principally all over the country.

The teaching-learning situation related to ICT based curriculum is generated with the help of webinars, audio and video conferences, web precautions, live streaming, learning management system like Edfly learn, which has become one of the most important aspects.

It is very important to note that MOOCs or Massive Open Online Courses have become very popular through SWAYAM, an initiative by the MHRD, India. The Indraprastha University is all set to introduce an online course named “society and media” under which the learners will be able to have a deep rooted knowledge regarding the roles exercised by the media in the process of social mobility and transformation. Any curriculum is basically aimed at the positive social transformation, by the way of generating technology based productive knowledge among the learners. It is also aimed at the development of education and productivity.

**Objectives of the Study:** The present study entitled, “ICT and Curriculum” has been undertaken with the following objectives:

- To know about the various aspects of the ICT based curriculum.
- To know about the utilities of ICT Curriculum in the present day content.
- To find out the importance of ICT based curriculum in the present context of knowledge explosion.
- To know about the importance of ICT education in the present pandemic situation.
- To have an idea regarding the implication of ICT based curriculum in classroom technology learning situation.

**Methodology of the Study:** The present study has been undertaken with the help of descriptive research method. All the aspects of ICT based curriculum have been discussed in between the lines.

**Types of Data Used:** The present study in “ICT and Curriculum has been undertaken with the help of secondary data of the following type:

- Books
- Journals
- Periodicals
- Magazines
- Newspapers etc.

**Discussion on the Topic: “ICT and Curriculum”**

Information and Communication technology has developed a significant revolution in the world today, with the help of a strong curriculum that makes an attempt to equip teachers with ICT competencies to strengthen their own professional competencies. It should also develop teacher’s effectiveness in handling the ICT tools. It is worth mentioning in this context that the AICTE is organizing a good number of MOOCs both for the teachers and the students with the SWAYAM as the platform.

It is also aimed at the development of the capacity of the teachers as that they can work as the local coordinators for organizing the capacity development programmes. For example EANDICT Academy organizes faculty development programmes for the development of the competence level of the university and the college faculties.

The ICT based curriculum is based on the learning strands which seek to build capacities to handle the technological approaches for use in education, capitalizing on technology, to master technology, measuring the ICT infrastructure, using technology to cross the barriers and to acquire the desired insight, which can be termed as the insightful learning. The important strands are as follows:

- Setting up connection with the world.
- Connecting with others.
- Creation on the basis of ICT.
- Interaction with the ICT.
- Looking into educational possibilities.
- Reaching out and bridging out the divides.

It is to be mentioned with due importance that the National ICT Curriculum is based on the points of focus set in the National ICT Policy. These are related to the skills of computing, creating and collaborating through safe, ethical, legal means of using the ICT, ability to handle the ICT environment, creating the contents based on originality.

The curriculum has been designed keeping in mind the various possibilities of creative expression possible through ICT applications and platforms available today and also seems to build a mindset that explore and such applications on an ongoing basis. This type of learning comes under the category of teacher's training pedagogy.

The national ICT Curriculum aims at bridging development realities and technological possibilities. It is the implication of virtual reality and transforming it into an important possibility.

The task of transforming into strong possibility is mainly due to the important strands of ICT based curriculum, which can be analysed as follows:

- ICT based curriculum aims at the explosion of the educational possibilities and the practitioners of these innovative educational practices for the development of students and teaching learning situation. For example “edfly learn” is an ICT based learning management system that provides its users with optimum management tools to enhance overall virtual classroom learning. It fosters creative learning, where the learners are to do some virtual tasks as homeworks. Learners are provided extra guidance, so that they can explore educational possibilities.

- ICT based curriculum is an important tool with the help of what the interactions become ICT based. This type of interaction makes the learners well equipped with the different prospective of knowledge since interaction fosters connectivity which in term develops knowledge.
- ICT based curriculum provides an important platform for the persons who are beyond the reach and hence it is meant for bridging the educational gaps. Virtual classroom is the platform that serves the purpose of ICT based curriculum.
- The term “Internet Connectivity” stands for a connectivity at the global level, ICT based curriculum aims at setting up of the connectivity with the world. This typical connectivity is an important aspect of the ICT based curriculum, which fosters the following aspects among the learners:
  - Enquiry based learning
  - Development of inquisitive approach
  - Improvement of creativity
  - Improvement of technology based knowledge and understanding
  - Improvement of productive capabilities.

ICT based curriculum approaches its users to make fruit yielding connection with the ICT, for getting proper acquaintance with the ICT tools and techniques of the virtual character.

The emergence of the ICT based curriculum is a burning necessity on the part of the students, teachers and the administrators. The important factors that lead to the popularity and the emergence of the ICT based curriculum, are as follows:

- ICT based curriculum is an important aid in the hands of a teacher, with the help of what the teacher can ensure better teaching and learning situation. The learners get easily motivated as a result of what the learning environment becomes a reality. The learning becomes conducive.
- One of the most important aspects of ICT based curriculum is that this type of curriculum eliminates the usages of paper. It is paperless for what it can easily contribute to the development of the eco-friendly initiatives for the purpose of environmental protection.
- The ICT based curriculum is cost-effective, for what the intending practitioners can easily avail it. In this crucial moment of economic crisis, during lockdown, the

online classes organized by the institutions, are found to be very economically convenient. The teachers have the opportunity to participate in the online webinar free of cost. It reveals the traits of cost-effectiveness of the ICT based approaches to education.

It is very important to note that there has been a considerable increase in the IT education and ICT based educational instruction in the recent period of lockdown. According to BARC India and Nielsen, Online education and e-learning platforms have seen astonishing adoption and exponential growth. It has also been found out that there has been a thirty percent increase in the time spent on education apps on smart phones since the lockdown, among which, some important apps are as follows:

- DIKSHA
- SWAYAM PRABHA
- BYJU'S which has the recorded user of 7.5 million in the recent time.
- VEDANTU is another interactive online learning platform that is offering free learning materials to the learners during this period of lockdown.
- GREAT LEARNING, an important Edtech startup, is also aimed at equipping the learners with professionally oriented new skills.

Some important massive open online courses in education deserve special mention. It is to be noted that MOOCs are the recent and widely researched development in distance education, first introduced in 2008 and emerged as a popular mode of learning in 2012. EDYSYS is a globally recognized institute that provides training in the field of ICT. It is an ecosystem of authorized training partners to offer multi-model training through mobile, online, virtual and classroom.

ICT based curriculum is an important aspect which is best reflected through the Open University networks in India.

The Indira Gandhi National Open University, the world's largest Open University is completely a technology driven university. IGNOU student App, mobile App, is an official Mobile app of Indira Gandhi National Open University. It has already been accorded the recognition of the peoples' university. Other important facilities that an IGNOU learner can derive are – IGNOU e-content, IGNOU Mate. The learners are technologically empowered through the large scale usage of ICTs.

Regarding KKHOU, the ICT enabled courses are – MCA, MSC (IT) and PGDCA etc. The Krishna Kanta Handiqui State Open University is aimed at “Education beyond

barriers” with the help of ICT enabled teaching learning system.

e-Pragya is an online learning platform that stands for the learning management system of KKHSOU and its collaborative partner CEMCA (Commonwealth Educational Media Centre for Asia). This programme is meant for developing the ICT environment at the school level. The university also organizes the programme entitled, “Certificate in Application of ICT in school education”. This is a certificate course of three months duration in order to train the in-service teachers at the upper primary and the secondary level.

It is important to note that the development of self-materials by IGNOU has been accorded an extra impetus by moving it ICT enabled. It is titled “e-gyankosh” – a national digital repository to store, index, pressure, destitute and share the digital learning resources developed by the institutions of open and distance learning. The leading communities under e-Gyankosh are as follows:

- IGNOU FB live recorded videos
- IGNOU self learning materials
- IGNOU SWAYAM course content.
- INGOU YouTube videos
- Indian Journal of Open learning.

There is an emerging upsurge of ICT based education all over the world, which is an ever continuing phenomenon with a learner’s friendly approach, specially, in a democratic country like India, the trend is very significant, because it stands for the development of the education among the mass people, which in term strengthens the democratic set up of the country. The most important aspect in the regard is that the ICT enabled curriculum and the learning opportunities have created a particular situation under which education has become the issue of everybody’s door step. It made “Education for all” reality.

Education is not a particular issue which is not suffering from any type of containment. It is not limited by the institutional boundaries. Education in ICT enabled world, can take place at any time, and at any place. It has no limitations. Learners are entitled to go for any educational endeavour with the help of mobile apps. This type of popular learning is called mobile learning, which engages the learners in the following ways:

- It enhances exploration activities.

- Organizing the self-activated lessons.
- Answering the e-quizes.
- Preparing the assignments.

It is to be noted that the Pilot Project entitled “SAKSHAT” is a one stop Education portal launched in the year 2006, on 20<sup>th</sup> October, by the then president of India. It aims at facilitating life long learning for students, teachers and those in employment or in a pursuit of knowledge free of cost to them.

Another important aspect of the ICT enabled learning is that it ensures integrative learning. The integration takes place between the learner’s ability and technological possession of knowledge obtained by the learners.

Enabling the learners through ICT enabled curriculum is an important aspect of ICT learning which stands for “recognition of knowledge structure in human mind”. Learning is a collaborative endeavour here.

ICT enabled learning is typically run by the following important tools like

- e-Notepad
- Chat
- Document sharing
- Whiteboard
- Video-sharing etc.

One of the important bodies that work for the development of ICT enabled curriculum and learning is NMEICT (National Mission on Education through Information and Communication Technology). This body works for learning the potential of ICT in teaching and learning process for the benefit of all the learners in Higher Education Institutions in anytime and at any place.

The emerging concept of ICT enabled curriculum is based on the following pillars:

- Open Educational Resources
- Small Private Open Learning Courses
- Technology Enabled Learning Materials
- e-Learning Materials

- e-Contents
- e-Tutorial Teaching and Learning Situations

It is to be noted that the ICT based curriculum is within the reach of the every learner because it makes learning productive in the following ways:

- Learning becomes largely interactive
- Learning is flexible
- Learners are engaged in learning
- Learning is facilitated by stimulus and human response.
- Learning occurs as a result of practice plus reinforcement

ICT enabled curriculum makes teaching-learning based on the deep-rooted approaches of:

- Thinking capabilities
- Capabilities of analyzing
- Capabilities of organizing

ICT based curriculum has developed a new vista for the students suffering from the following disorders:

- Hearing disorder
- Blindness
- Low vision
- Speech disability
- Motor disability etc.

It is based on the existence of virtual character, which aims at:

- Designing the curriculum
- Developing the curriculum
- Delivering the curriculum

**Conclusion:** While concluding the discussion on “ICT and Curriculum” we can easily quote Dr. Samuel Johuem, who said, ‘knowledge is of two kinds, we know a subject



ourselves or we know where we can find information in it'. This worth quoting remark regarding the existence of knowledge clearly acquaints us with the fact that the development of future is going to be enhanced by the ICT enabled educational structure.

The term "Curriculum" is originated from the Latin word 'Currere' which in English means a 'race course' of a runaway on which one runs to reach a goal. Accordingly, a curriculum is the instructional and the educative programme by following which the pupil achieve their goals, ideals and aspirations of life. So, curriculum is referred to the particular discussion with the help of what the learners become able to achieve their learning objectives in the usual direction. So, curriculum is the vehicle through which the teaching learning programme progresses. Curriculum is the mirror that reflects the various aspects of teaching learning programme.

In the modern time, there is an upsurge of information and communication technology, which has developed a new horizon in the domain of curriculum development, an important aspect of teaching learning situation.

The ICT based curriculum can be broadly classified as a media which has caused the shifting of teacher-centered/lecture-based approach to the learners-centered/Interactive approach.

The induction of ICT into the curriculum has made teaching learning process a complete revolutionized process, where the learners play a vital role. This type of leaning is called Learners Directed Learning. It follows the following aspects of ICT in learning:-

- Open Educational Resources.
- Video and Interactive Video.
- Tutorials.
- Virtual Laboratories.
- MOOCs / SPOCs
- Mobile Learning /Indivisualized Learning / Blended Learning.

There are the certain aspects which have made ICT based learning a unique one.

The emergence of ICT based curriculum is due to the development of Information and Communication Technology at the different levels of curriculum construction, which is based on the planning of the lesson in an interactive manner. The learner should follow the development of knowledge and skills related to higher thinking order. It should

reflect the sound pedagogy considering the socio-economic and cultural aspects of knowledge as well as indigenous knowledge.

According to Reeves (1998), computer based cognitive tools such as databases, spreadsheets, communication software etc. have been intellectually developed to function as intellectual partners to enable and facilitate critical thinking and higher order learning.

The ICT based curriculum is found to be more productive and useful in the domain of Professional Educational Curriculum belonging to legal education, Medical and Health Education, Engineering Education respectively approved of by the MHRD and Bar Council of India, ICMR, IMA and AICTE etc.

The Medical and Health Education in India is approved of and managed by the ICMR and IMA, which follows the integration of ICT into the Health Education. The aspects of Health Education, which have been integrated with the ICT are as follows:

- ICT has influenced not only the curriculum, but also the health diagnosis system. The medical practitioners use ICT in order to have a clear insight into the clinical problems of the patients.
- Experts in heart surgery, urological surgery, brain surgery etc. train their students through YOUTUBE, ZOOM MEETING in aspect of clinical diagnostics and surgical cases.
- ICT helps a doctor in finding out the case history of a patient with the help of registration no. for example, the laboratory cum hospital “AYURSUNDRA” of “APPOLO HOSPITALS” are very rich in ICT, network where the case history of a patient can be easily found out with the help of ICT.
- ICT is a blessing to have an insight into the trends of viral infection. The electronic journals are very rich in latest findings and the researches into the disease and the medicines. They also publish the thoughts provided by the experts.

When we talk about legal education, there is a large scale integration of ICT into the curriculum of legal education. ICT has influenced the legal education in the following ways:

- Technology has enabled the law profession to automate the process and operate more like the business sector.

- The term ‘Internet Law’ is referred to how legal principles and legislation govern the use of the internet in all its forms.
- Cyber law is an important term related to the cyber activities like the creation of websites.
- The important software makes the legal provisions that include clio, abacus law, Bill 4 time, legal files, and PC law.
- Technology has made the lawyer’s job easier. It also improves the accessibility and quality of legal services while reducing costs.
- Sophisticated litigation platforms make the litigation process more accurate.

Engineering education is also influenced by ICT in many directions:

- ICT is itself the Engineering branch that recently came into existence with a mission to provide a wider perspective on the nature of technology, its use and application to the living world.
- The course B.Tech in ICT is a four year UG Engineering Programme, while M.Tech in ICT is PG degree for the development of preparing skilled Engineering Professionals.
- ICT in Engineering education is a skill oriented way to ensure the participation of the skilled Engineers in the work force.

So, Education is eventually a process of growth and development, which continues throughout the life of the individual. Technology can offer a personalized environment that is tailored to learn as per their individual differences, interests, backgrounds etc. where ICT has an emerging role to play.

The ICT enabled curriculum has developed a series of revolutionary throughout the world based on the development of artificial intelligence and computing abilities. It is a new dimension in the field of learning.

This very system of learning enriches the learners through inclusiveness of learning experiences through blended learning and flipped learning. It is the direction with the help of what “Learning for all” is highly ensured.

The Ministry of Human Resources Development of the Government of India has opened up a large of number of virtual labs in the various Engineering Colleges, Technological Institutes and the Science Colleges. This is a particular step to make education productive in the real sense of the term.

The upsurge of ICT Pedagogy in education is due to the following important reasons:

- It provides learning empowerment
- It allows effective collaboration
- This type of learning allows effective networking.
- It stands for the easy sharing of the resources

For example EDUSAT in India is providing a great network for the expansions of education throughout the country.

In the Covid 19 distorted world order, the development of ICT has caused the following important changes:

- The teachers have gained a lot by attending the webinars, faculty development programmes, workshops etc. It is the particular outcome that is going to create a universe of knowledge. The students are expected to be the beneficiaries of the acquired knowledge.
- It has caused a well-organized social and scientific development, throughout the world which owes its origin from Open Educational Resources.

The ICT enabled learning opportunities have created a new dimension under the title, “Searching for people”, anyone can go in detail with the help of [www.anywhere.com](http://www.anywhere.com) an official website.

The various agencies that serve the purpose of an ICT learner are as follows:

- Open Access library
- Elsevier
- Open knowledge repository
- World e-book library
- NPTEL online courses

The leading bodies in this field are:

- N-LIST – An MHRD initiative
- e-Shodhganga
- e-Shodhgangotri

- e-Shodhsindhu
- INDEST AICTE Consortium

These bodies provide the researchers a new light to the development of their research programmes.

The project INFLIBNET, was launched in the year 1991. It is a particular UGC Centre for the purpose of developing virtual learning and resources.

Dr. A.P.J. Abdul Kalam was strongly of the opinion to adopt the ICT education for the overall competent growth of the Indian education system.

Former Prime Minister Rajiv Gandhi said, “As science without technology is useless, so education without ICT is blind and deaf”.

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## **Selected Attribute of Households and Socio-Economic Pattern: A Case study of Bhangar and Moarcch Villages (Boh Valley), Tehsil Shahpur, District Kangra, Himachal Pradesh, India**

**Sanjay Singh Pathania**\*

**Reena Bala**\*\*

### **ABSTRACT**

*This paper is an attempt to analyze the household attributes and socio-economic pattern of two villages namely, Bhangar and Moarcch located in Boh valley of Shahpur Tehsil, district Kangra. These rural settlements depend particularly on primary activities and the natural environment for their basic needs and income regeneration. The people of the present research area reside in the laps of nature. This study investigates the nature and design of dwellings and the socio-economic condition of these villages. This paper explores how people survive in this Himalayan mountainous narrow valley and limited landholding area and how they generate their livelihood? Are geographical factors affect their household pattern? Where climatic conditions are very harsh, mostly mountainous temperate climatic regions. A visit to the same area has been conducted to answer the above questions field.*

*This research paper is descriptive. Data were collected from the entire households through interviews, informal discussions, and field observation. There was a total of 20 and 42 households in Bhangar and Moarcch villages, respectively. Both of the villages were investigated, and it was found that subsistence agriculture activities and livestock rearing were the main occupations. Some other interesting facts noticed in these study areas such as shifting trends towards horticultural activities i.e. (planting apple orchards, plums, apricot) and some households were taking interest in the field of fish farming due to suitable climatic conditions (especially trout fish). In the context of households, there was a higher composition of joint families rather than nuclear families. There is a lack of adequate social infrastructures such as education and health institutions.*

*The paper will help carry out further analysis and show a way to improve existing socioeconomic conditions and household pattern rural settlement in the high Himalayan mountainous region in Himachal Pradesh.*

**Keywords:** *Dwelling, livelihood, social infrastructure, occupation, age-sex composition*

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## **Introduction of Study Area**

At the time of formation of Himachal Pradesh in 1971, it was an economically backward rural area with poorly developed rural infrastructure such as rural roads, electricity, housing, transport, banking, and market network due to its hilly and rugged mountainous terrain. Socio-economic conditions in the hilly rural area differ from the plain area. These areas are still using traditional methods of agriculture due to the small size of landholding and terrain not allowed to use machinery over there. Socio-economic characteristics also differed from rural to urban areas as the former engaged in subsistence agriculture activities and the latter one involved in non-agriculture activities, respectively. Agriculture plays an essential role in the process of economic development. Besides providing food it provides employment and savings to households. It reveals that subsistence agriculture is the main source of income and economic development in rural areas. In Himachal Pradesh, most people are residing in rural areas. They are depending upon their natural surroundings environment for day-to-day survival. In the present study area, agricultural activities are the main source of their survival and occupation. Agricultural activities in this mountainous valley are controlled by the topographic features, soil, and climatic conditions. Most people engaged in agriculture activities in both the villages. Various social aspects influenced the location of the houses such as the influence of casteism that the intermingling of residential houses of upper and lower castes was never allowed. The houses in many parts of this rural settlement never face west direction. The slanting of the roofs with traditional slate shingles expressed the climate condition of that rural settlements. The material used in house construction depends on the climate, soil of a particular region, and source of income of the family in these rural settlements. Therefore, rural settlements of areas of the mountainous area bounded by the physical nature.

## **Review of Literature**

The review of the present study is divided under different sub-heads of the socio-economic and households pattern.

## **Socio-Economic Development**

**Kapur (2011)** observed that the socio-economic development of hills and mountainous areas includes eco-preservation and eco-restoration. Community participation is an important aspect in mountainous areas as these individuals are secluded from the societies and reside in remote areas. He further suggested that proper techniques are required in the implementation of agriculture activities and the development of

infrastructural facilities i.e., roads and transportation should be considered.

**Roy, M.L. et al. (2013)** explained that the socio-economic status (SES) is a combined measurement of the economic and social position of an individual or a group. It has a profound role in determining one's accessibility to the common resources, livelihood pattern, household food & nutritional security, etc. **Jaswal (2015)** remarked that rural health has been one of the neglected sectors in the Indian economy. She further pointed out that there has been a shortfall in terms of physical infrastructure and human resources in rural health care. **Kwatiah (2011)** examined economic development creating various types of occupation and these can be broadly classified into three categories: primary, secondary, tertiary. The primary occupations include animal husbandry, fishery, poultry farming, etc. Secondary activities include manufacturing industries composed of both large and small scale and mining. Tertiary activities include all other activities like transport, communication, banking, insurance, trade, etc.

In another study, **Cham (2019)** found socio-economic inequities and the educational efforts to reduce gaps in socio-economic status. He observed the association between socio-economic status (SES) and educational achievement, and differences among educational systems, together with changes over time.

### **Demographic and Occupational Pattern**

*A report of the Government of Himachal Pradesh 2001* reported that agriculture is one of the main pillars of the people of Himachal Pradesh on which 66.71 percent of the population depends for their livelihood. This report further demarcated that due to hilly terrain terraced cultivation being adopted in the same area, close to four-fifth of holdings fall in the category of small and marginal farmers. Due to the ideal climate for fruit cultivation, horticultural and vegetable growing, seasonal as well as off-season a well-diversified farm economy has developed rapidly during the past three decades.

**Kumar (2012)** evaluated notable variation under permanent pastures and net sown area. On the other side, other land categories had not shown significant change, the study on cropping patterns in Solan district over the period identifies that among food crops area under wheat and paddy has increased whereas, in case of barley and maize, it had declined considerably. The area under non-food crops has shown an increasing trend for cash crops. He also disclosed the fact that shifting of the area from food grains towards vegetables, fruits, spices are considerably high. Overall, it pointed out that the farmers of the area are shifting towards commercial cropping. **Sharma (2011)** assessed agricultural diversification in the parts of Himachal Pradesh and concluded that it is changing towards fruit and vegetable crops, especially in Shimla, Kullu, Solan, and



Lahul-Spiti districts. It started in the late sixties and continued in the seventies and eighties. The process of crop diversification gained momentum in the nineties and has now encompassed many new areas in the low and mid-hill districts.

**Rahut and Scarf (2012)** emphasized the importance of rural livelihood diversification in the Himalayas. They found that rural households in the region derive a significant share of income from non-farm sources. On average, non-farm income accounts for about 58 percent of total household income. Further, the analysis has produced mixed evidence on the importance of gender. On the one hand, households with more women are more likely to diversify in high return non-farm activities. On the other hand, male-headed households seem to have better access to the non-farm sector in general. They suggested that raising the capacity of the poor to participate in better-paid non-farm activities through investment in education will be effective only if the overall business environment is favorable and if job creation is on the rise.

Another study by **Gautam and Anderson (2016)** assessed the role of livelihood diversification in household well-being in Humla, a remote mountain district in west Nepal. They collected household data and prepared a composite household well-being index incorporating four components and 15 indicators and measured the effect of diversification on it. They found a uniform pattern of diversification and analysis showed that well-being was not associated with diversification per se but rather on a households' involvement in 'high return sectors' such as trade or salaried jobs. Therefore, livelihood diversification was found to have a highly skewed effect leading to inequality of income and well-being. **Aghaghia (2016)** examined the implications of rapid transformation in the Kinnaur district of Himachal Pradesh. He observed that the subsistence-based livelihood strategies such as pastoralism and cultivation of traditional crops have been replaced with a cash economy dominated by commercial monoculture apple production. The landscape of opportunity and prosperity will be temporary if Kinnaur continues with its extreme dependence on monoculture apple production. He suggested that livelihood diversification may provide important protection for Kinnauri prosperity. **Subedi (2017)** conducted a study on two settlements namely Phalyak and Dhakarjong of Kagbeni VDC of Mustang district of Nepal. Data were collected from 50 households of the settlements as well as information has been collected through interviews, informal discussions, and field observation between 2013 and 2015. The findings suggest that households in these settlements amidst shocks and stresses have diversified their livelihood options from being primarily dominated by agriculture and livestock raising in the past to apple farming (cash income), vegetable farming, external migration, and tourism-based activities.

## **Nature of Dwelling**

A report of Himachal Pradesh (2002) concluded the housing infrastructure in terms of the condition of houses, ownership status, type of structure, use of structure and material used for construction, household size, and dwelling rooms. The report concluded because of the primary survey that more than four-fifths of houses were built more than ten years ago. Only nine percent of houses were built between two to five years and only eight percent of the houses were built in two years.

**Sood, A. et. al (2013)** observed that the people of Himachal Pradesh have been forced to leave their traditional construction practices due to scarcity of the wood. This construction style is nothing but the traditional housing of Thathara style of Chamba district, Kath-Sunnistyle of Kullu, Shimla, and Kinnaur districts. Due to the region's heavy precipitation both in terms of rainfall as well as snowfall, rubble stones are preferred over the alternative locally available construction material. However, these buildings possess high seismic vulnerability due to the low in-plane and out-of-plane strength of their dry stone walls. **Bansal & Tiwari (2011)** concluded that the roofs are a major part of the buildings. For heavy rain and snowfall, the slates are projected little out, their function is to resist the direct sunlight inside the rooms. The construction of houses in the state are according to its climate and topography and generally different construction techniques are used in different states.

**Chatterjee (2017)** examined the different types of architectural built forms on the laps of the Himalayas in Shimla, started from the Scottish Baronial style in the time of British rule when Shimla was chosen as the summer capital of India followed by the traditional vernacular style, coming up with the new Tudor style and in recent times with the modern architectural style. However, the raw materials used for all these styles are stones, timber, batten boats, and glass. **Panwar & Sharma (2020)** observed traditional construction techniques and materials were evolved as a response to local climate and materials availability. Market forces require faster construction with state-of-the-art facilities, and indigenous techniques are unable to cope with the situation. The choice of material used in different areas is dependent on its availability and structural properties.

## **Objectives of Study**

The objectives of the present study are to: -

1. Examine the nature of households
2. Investigate the availability of selected basic amenities among the households

3. Analyze the demographic and occupational pattern
4. Study the availability of social infrastructure.

### **Research Questions**

In the light of the above-stated objectives, the following questions were framed and answered with the help of data analysis: -

1. How do households differ on the patterns of type and size?
2. Which type of material is used for construction purposes and why?
3. How do geographical factors play an important role in the designs and roof types of the households?
4. What is the demographic and occupational pattern of these mountainous rural villages?
5. How does social infrastructure affect their way of life?

### **Data Sources and Methodology**

The present study area is based on a primary survey. Data has been collected from a door-to-door survey at the household level in October 2019. The required information was collected on the demographic and occupational patterns, health services, education availability and household size, type, dwelling pattern, etc. The Base map was collected from the respective Patwari of the village. ArcGis 10.6.1 was used for mapping and a base map was prepared from Latha (i.e., Cloth map). Based on research questions, this study was guided by the following methodological steps. For compilation tabulation, mapping, and analysis of data for cartographic techniques were pressed into service. These two rural villages selected from Boh valley come under Shahpur tehsil of district Kangra, Himachal Pradesh. The relevant information was gathered through personal investigation, informal interviews of old age people, and field observation.

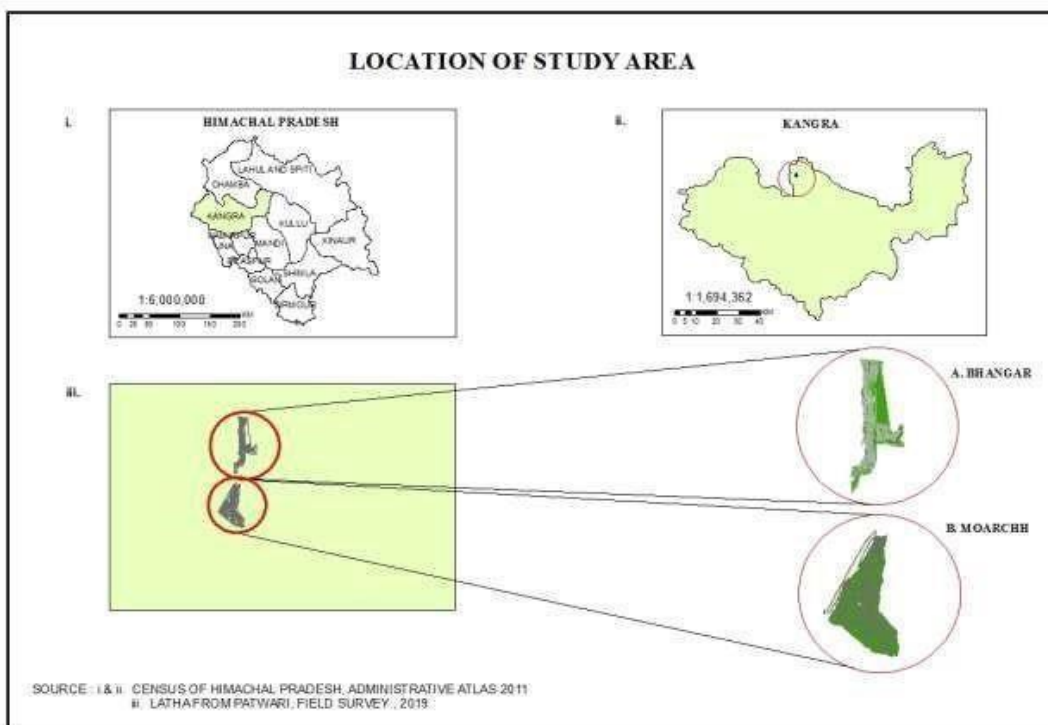
A questionnaire was framed to collect the required information for this research paper and the investigation stayed in a rural area for three days and filled the questionnaire which was framed. Separately, the interview was also taken from the village Pradhan, old-aged persons, assistant of Patwari, and shopkeepers of the same area to gather the historical information as well as throw light upon the changing scenario throughout the time.

### **Study Area**

The present study area village in Moarcch & Bhangar in Boh valley Shahpur Tehsil,

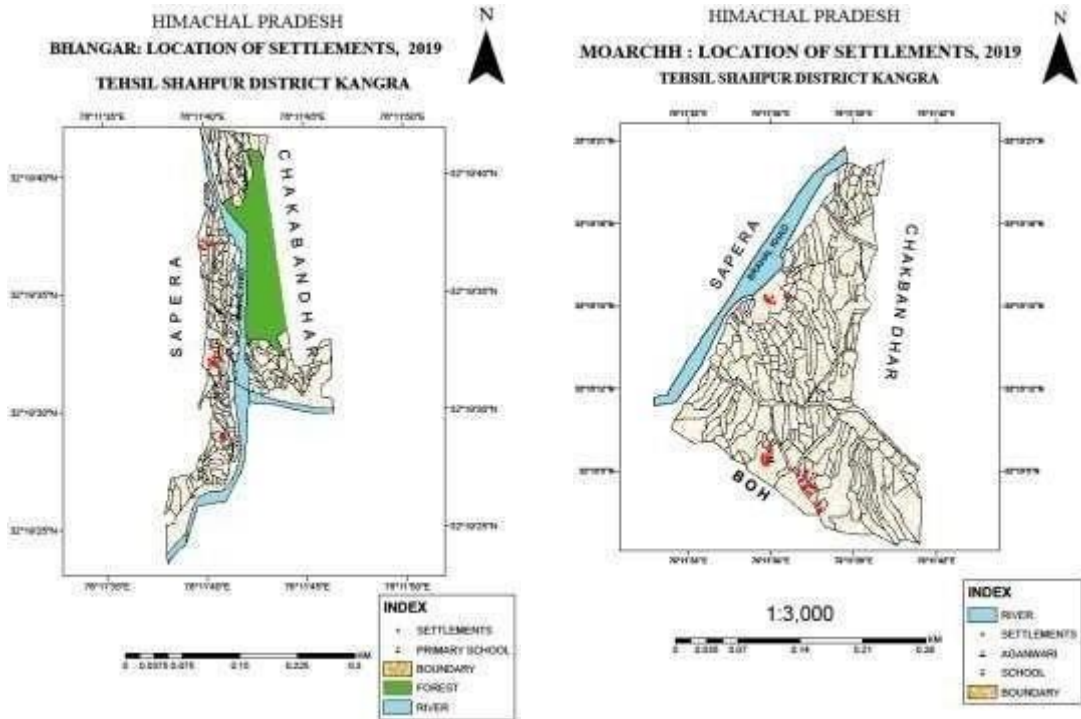
district Kangra is situated adjacent to Dauladhar range in Himachal Himalayas during October 2019 (Map 1). It is 676 meters above sea level and 26 km far from the tehsil headquarter i.e., Shahpur, 48 km from district headquarters. There are 20 and 42 households respectively.

**Map 1: Location of Study Area**



The adjoining villages namely Garghun, Rulehar, Sapera, Chakban Dhar Boh, Dadru, Gharoli, Lam, and Haar villages in the study area. The study area was selected based on their location one from the right side of the Brahal (drainage) Khad and another from the left side. As per the historical versions of the village people about 120 years ago, five brothers came from village upper Kugti from Dharamshala area migrated to Moarcch

**Map 1 : Bhangar and Moarcch**



Source: Trace from Latha from the office of Patwari and digitized in GIS software

village by crossing Rakh pass with their sheep, goats, and cattle for green pastures for their livestock and found congenial mountain environment for their survival and settled down in the study area. The extension of families took place from the families of five brothers. A marital relationship was established with the surrounding villages led to the formation of these villages.

Climate means the usual condition of the temperature, humidity, atmospheric pressure, wind, rainfall, and other meteorological elements in an area of the Earth's surface for a long time. In simple terms, the climate is the average condition for about thirty-five years. The climate of the Himachal Pradesh villages of Bhangar & Moarcch is classified as cold and dry. The summers are much rainier than the winters in Kangra (Boh valley). The average winter temperature is 7°C and the average temperature of summer is 28°C, whereas the annual average temperature is 21.8°C. The average precipitation of Moarcch and Bhangar is 1469 mm. In Bhangar & Moarcch villages there is snowfall in winters. The elevation of Boh valley is 2500 meters above mean sea level.

The vegetation of the villages is dictated by altitude and precipitation. The main vegetation of these villages is Alpine scrub, Betula/Rhododendron, Chilgoza, Chir pine, mixed conifer, oak. The Dhauladhar range has an immense wealth of medicinal plants and traditional medicinal knowledge

### **Drainage Pattern**

Drainage pattern formed by the streams, rivers, and lakes in a particular drainage basin. They are governed by the topography of the land, whether a particular region is dominated by hard or soft rocks and the gradient of the land. The unique feature of these two villages is their water system. A river named ***Barahal Khad*** flows through the villages. It is considered as the lifeline of these two villages because it provides water to produce electricity. The water of this river is utilized by the local inhabitants on regular basis. It provides the 24hours water facility to the villagers of both villages as well as to the livestock

### **Interpretation and Analysis**

Dwellings are the representation of the human imprint upon the physical landscape, showing the traditional as well as modern attainments. Surroundings have an impact on the nature of the dwelling and can be seen in variations in dwelling patterns. The same pattern applied in both the villages in the Boh valley of Kangra district. The ongoing discussion is based on the household attributes followed by the socio-economic condition of the same area.

### **Site and Situation of the Study Area**

The site is the land or place on which the settlement is built, it can be sited on a hill, by a riverside, or a plain area. A site of a settlement described its physical and cultural aspects. Settlement location influences the availability of water supply, building material, quality of soil, climate, shelter, and safety. The Bhangar village is located three kilometers from Boh along the right-side stream Barahal. Whereas Moarcch village is located one kilometer from Boh along the left side of Barahal khad.

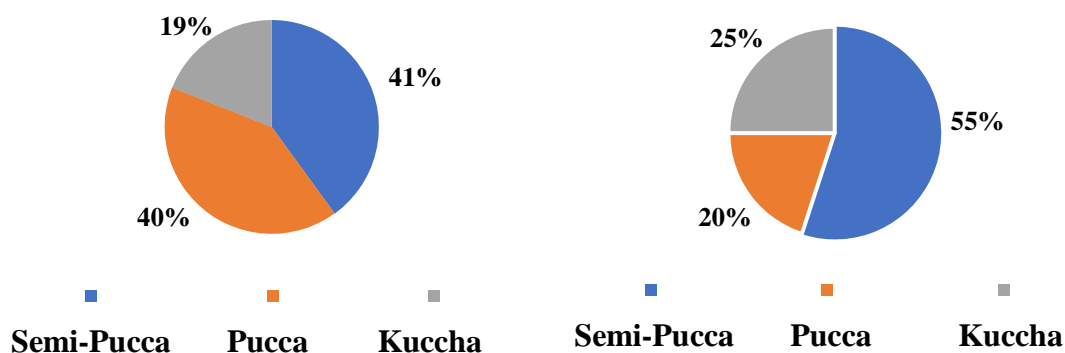
Bhangar village is situated on a terraced formation and Moarcch is in the valley side. The settlement pattern in Bhangar was dispersed. Most of the houses were dispersed in nature but few houses were clustered too. On the other side, the settlement pattern in Moarcch was clustered. The clustered settlement was a compact or closely built-up area of houses.

### Nature of Dwelling

Both villages have three types of dwelling in the form of Kuccha, Pucca, and SemiPucca houses (Plate 1). From the data analysis, it was found that more than a fourth-fifth of the houses are semi-pucca and pucca houses, remaining one-fifth Kuccha houses in Moarcch (Figure 1). Trends towards the pucca houses in the village were found due to the increase in their earning and availability of material through road connectivity from the last ten years and that changed the scenario of this village.

**Moarcch: Nature of Dwellings    Bhangar: Nature of Dwellings**

**Figure 1**



Source: Field Survey, 2019

On the other side of the scale, in Bhangar nearly three-fourths of houses consisted of semi-pucca and pucca houses and very less or one-third of kuccha houses. However, this village is far from the main road but the availability of stone, crusher, and sand available from the nearby stream and the remaining material carried by the horses.

**Plate 1: Pucca, Semi Pucca, and Kuccha Houses**



Pucca house

Semi-Pucca house



Traditional Kuccha House (mud and wooden) in the village

The age of the dwelling in these villages observed that mostly pucca houses were constructed since 2004. Kuccha houses in these villages were constructed about sixty years to hundred years ago. **Latha** map also gave the details of its **Awadi** area, 1961-62. Earlier all the houses were kuccha, houses particularly pucca houses or semi-pucca houses constructed due to the construction of roads through the Government scheme namely, Pradhan Mantri Sadak Yojna in 2000.

Construction material such as wood, stone, cement, metallic sheets, sand, bricks, clay, slate, shingles, concrete were the most common type of materials used for settlements (Plate2).

### Plate 2: Construction Material

STONE



BRICKS







Traditional and modern house construction materials have to lay in the village

The choice of the households to construct the house was based on their economic condition. Most of the pucca houses have their walls made from stones/bricks duly coated with cement. Walls were made up of locally available stones of varying sizes. The material used for the floors such as stones, cement, mud, and timber. On the other side, kuccha houses walls were plastered with mud and clay on both sides and finished with mud and cow-dung. Semi-pucca houses bricks were made up from the mud and the walls were plastered with cement.

Overall, it can be said that the kuccha houses are made up of clay, mud-made bricks, timber, etc.

A wooden beam was placed horizontally to give support to the roofs of semi-pucca and kuccha houses. The floor of the kuccha houses is made up of a mixture of mud and cow dung. The final touch-up to the floors was done by mixing a green colour pigment mix with the cowdung. The main source of water for the construction purpose was Bharhal Khad flowing along with these villages. It is a perennial stream. It can be said the lifeline of the study area. One small 5-megawatt micro hydel power project on this khad is also generating electricity and supplying the power to the main grid.

A roof type is a top covering of a building and its construction is necessary to support it on the walls of the building. It protects against rain, snow, sunlight, extremes of temperature, and wind. In simple words, it defines as a building envelope. Bhangar and Moarccch villages, the roof type was maximum slanting in nature. The roof mainly consisted of slates which are easily available in this Dualadhar range Whereas few houses observed roof type was in the form of the linter (Plate 3). The linter is used for various purposes such as drying agricultural production and is used for many other household activities. Roof type of pucca houses having linter found among both

villages. It was made up of concrete materials like stones, cement, ironrods, etc.

**Plate 3 Slanting Roof with Slate Shingles and Lanterned Concrete in the Village**



A dwelling is a unit of residential accommodation occupied by a single person or by people living together as a family. Three-fourths of houses in Bhangar have a veranda, whereas in Moarchh village all houses have a veranda in their houses (Plate 4). The design of houses shows that now people adopted the modern style and traditional style of houses slowly vanishing from these villages. Some of the dwellings have the traditional style three storey set up houses build-up. People also constructed animal shelters or locally it is called Gharal/cowshed separately for cow, goat, sheep, etc. Most of the Gharal were made of mud, stone, and clay material with a roof made up of slate shingles. In some dwellings, the animal shelter was attached within their houses on the ground floor. The size of the dwelling comprises a maximum of double storey. Some of the households are three-storeys where the ground floor is mostly used for animal shelter and middle for residential area and top for storing dry grass in the winter season. The design of the dwelling of both the villages includes veranda in their houses (Plate 4).

**Plate 4: Design of Houses**



Aagan used for various activities

Lanter with a slanting roof

Aangan (open space in front of house) can be seen in each household of these villages. Aangan is the place attached in the front of the houses, many rituals are performed in this place, most of the household activities are done in this place, it is made up of mud, cow-dung slurry, and kuccha in nature.

### **Livelihood in the Study Area**

Livelihood means how the people of these area earns for their daily needs. These rural settlements have the main economic strength is how many numbers of livestock they have in terms of goat and sheep, cow, buffaloes, as they produce dairy product milk, paneer, khoya (drymilk product which is used to prepare sweets) meat and wool which are in great demand in the local market. The demand for goat's milk is also in demand.

Secondly, many medicinal herbs they collected from the high-altitude areas also have demand and people earn from these products. It was observed that household patterns changed from traditional to modern infrastructure reflects their economic condition far better than the earlier.

**PLATE 5: Livelihood**



Unprocessed wool (black and white) are drying in the (Aagan) open spaces in the village



Making woolen shawl, of pattu and mattresses through local khaddi



Sheep and goat rearing in the surrounding slope of the village bhangar

Further, it was also observed that this fact did not apply to all the households of these villages, some were poor due to fewer numbers of livestock and they fulfil their basic needs only. The traditional occupation of these villages was agriculture and the rearing of livestock. However, in the contemporary scenario, considerable occupational diversification has taken place but only in the case of a small number of *Gaddis*. Sheep rearing and woolen mattress, clothes made by wool of sheep provide a great economic value by selling these items in the nearby market (Plate 5).

The productions of dairy products (milk, ghee, paneer) also provide a great economic benefit to the people of these villages. Even donkeys and horses are used for carrying the material to the doorsteps of the houses. Very interesting facts were observed during the field visit, although few numbers of households shifting from traditional occupation activities to modern ones such as planting apple orchards, walnut, apricot, plums in their land as the climate of these areas suited for their cultivation and people can earn much more from these products. Secondly, some households taking interest in trout fish farming also.

In simple words, it was observed that sheep and goat rearing, domestication of cows provide a good earning to the people to fulfill the necessity of life. Trout fish farming also has a great economic significance to the people of the villages.

### **Family Types**

Households consist of two types of families joint and nuclear. A joint family is an extended family and is consist of all the members of the family there is an emotional

bond between more than one generations that helps to keep the family united in all the situations. It is a large undivided family that lives together in a common house, including grandparents, father, mother, and children under one roof. On the other side of the scale, the nuclear family is a family structure that consists of two parents living with their children, also known as an immediate family. This system is different from an extended family system.

In Moarcch village, nearly two-third (64.28 percent) were joint families, and the remaining more than one-third (35.71 percent) consists of nuclear families. On the other side, Bhangar village comprised more than half (55 percent) of joint families found and the remaining (45 percent) nuclear families. This reflects the changing trends towards nuclear families.

### **Size and Ownership**

Family size is an indicator of societal structure that may vary over time. The term family size is sometimes used to represent the total number of individuals comprising a family unit. The family size in Moarcch and Bhangar village was categorized into three categories namely, small (up to 6), medium (6-10), large (above 10). Nearly three-fourths (25 percent) families were found under the small families, nearly two-fourth (45 percent) comprised medium size and remaining more than one-fourth (30 percent) under the category of large family size in both villages. During an interaction in the villages, it was found that both villages were male dominated societies. The land and other property (livestock, agricultural land) were in the control of males. All decisions related to family, livestock, land were taken by the males only.

### **Basic Amenities**

Basic amenities consist of making life easier and more pleasant. The government intends to provide basic amenities such as roads, water, and electricity. It includes safe drinking water, sanitation, housing, road connectivity, electrification, fuel, social services such as educational institutions and recreational facilities.

Both villages have the availability of water for twenty-four hours. It is a most essential need of life as used for washing clothes, bathing, feeding animals and cooking purposes. The main source of water is a perennial river (*Barhalkhad*), and their source is the snow-fed ranges of Dhauladhar. The supply of water was provided through taps outside the houses in both the villages. The villagers were also depending upon the *khuls* (small water channels) for agriculture activities. It is noticed that Bharal khad is providing adequate water supply for domestic and agricultural activities to these villages in the

summer season too. People also used natural sources of water for drinking purposes such as Baudi (Plate 6).

### Plate 6: Source of Water



Natural water source (Baudi) for drinking purpose and government scheme tap water also available

In the context of sanitation, Bhangar village has proper toilet facilities. Toilets constructed outside the main house. Not even a single household has an attached toilet within the main house. It was further noticed that the outlet of water from the kitchens was not managed properly. On the other side, Moarcch village sanitation was not good due to the non availability of proper facilities of toilets in some houses. The streets of the village were in shabby condition. The water from kitchens and toilets was drained directly into the *khuls and towards khad*. It affects the nearby area as well as Brahal Khad (Plate 7).

### Plate7: Sanitation



Toilet facility available outside the house

Open Drainage in the village street

The study area is surrounded by dense forests and the villagers gather fodder and wood for their daily use from these forests by walking distance of about four to five kilometers (Plate8). They are usually dependable for the energy on the wood collected from these forest areas. The use of L.P.G (Liquefied Petroleum Gas) was not that much in trend because of improper road facilities and the abundance of natural wood that was available free of cost, didn't allow the people to use gas (LPG). Although L.P.G connections distributed there most of the households used LPG since 2016 under the scheme namely, *Pradhan Mantri Ujjwala Yojana, 2016*. People were usually using the traditional methods for the energy resources due to the easy accessibility of fuelwood.

**Plate 8: Storage of Fuelwood for Domestic Purposes**

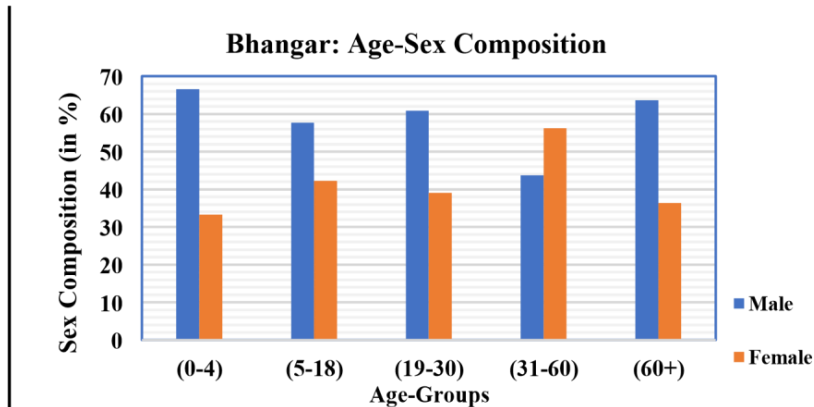


The distance between the main road to the household also affects the use of LPG due to the carriage of the cylinder to doorsteps. The use of kerosene in these two villages is quite less as compared to wood fuel and L.P.G. The lack of road facilities in both the villages doesn't allow people to adopt traditional to the modern method of energy resources for daily uses i.e., fuelwood to L.P.G gas in the both the villages

**Age-Sex Composition**

The total population is 104 in Bhangar and 238 in Moracch rural settlement, comprised 55.7 percent of male and 44.3 percent female. On the other side in Bhangar village 54.2 percent were males and 45.60 percent were females. Age groups 0-4 also recorded a higher percentage of males than females. (Figure 2) clearly shown only age-group (31-60) has a larger share of persons and in this group female population was higher than the male. Age groups (0-4), (518), and (60-above) are dependent populations upon the (19-60) age group population.

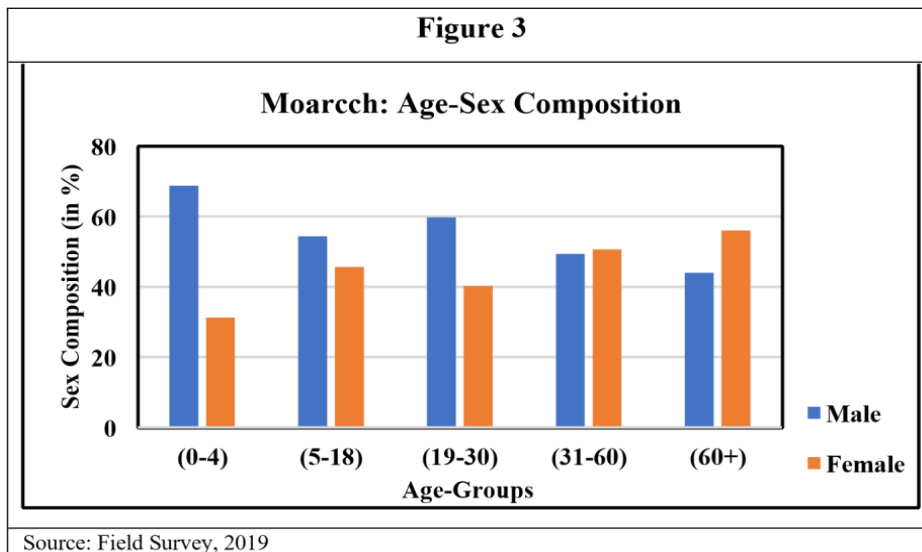
**Figure 2**



Source: Field Survey, 2019

Through the figure, it can be noticed 0-4 age group shows the higher percentage of males than the females and there was a wide gap between them. More than three-fourth were males and less than one-third were females (Figure 3).

**Figure 3**



Source: Field Survey, 2019

## Literacy

Literacy rate was low in Bhangar, the gender gap also exists as the enrolment of females were very less than the males. There was not even a single female enrolled or completed Graduation in Bhangar. On the other side of the scale, only two males completed their graduate degrees. The total number of male students of Bhangar village was 17 of which 8 enrolled at primary school and 7 in secondary and 2 were graduates. The total



numbers of female students in Bhangar village were 10, comprising 6 in primary school and 4 enrolled in secondary and not even a single at Graduate and above. In Moarcch village male students were 49, comprised 17 in primary education and 23 in secondary level and 9 were graduates.

**Plate 9: Government Primary School: Moarcch & Bhangar**



On the other side, a female student was 26, consisted 12 in primary education and 13 in secondary education, and only one female was graduate. Therefore, it was noticed that the male literacy rate is higher than females in both villages as both the areas have male-dominated societies. On contrary, students of Bhangar and Moarcch village have to go to Shahpur or Dharmshala for higher education due to the unavailability of higher education. The only source of education in the villages was Aanganbadi and primary school and it was also lacking in teaching staff as well as infrastructure (Plate 9). The students from these villages cover 3-4 km distance daily for attaining secondary education in Boh valley. It was observed that parents are not allowing their girls to travel far distant located institutes and it creates an obstacle for the girls' higher education.

Another interesting fact observed during the field visit in both villages, there was no dropout between the (5-18) age group due to the availability of primary and secondary schools within the Boh panchayat. It reflects the awareness about education among them. The study area has one dispensary in Boh valley which caters to a large number of people of the valley and is 34 km away from villages and hospital facilities are available at Shahpur tehsil to headquarters. In the study area, villagers have still believed in black magic or Flick (Jhaadhfook).

### **Occupational Pattern: Moarcch and Bhangar**

Agriculture and livestock rearing is the prime occupation for their livelihood. Very few people have been involved in the service sector. To meet their day-to-day expenses, villagers have taken many occupational activities such as spinning wheel and weaving wool. In the account of other activities only males indulged in their own business. The crops have limited production or are under subsistence farming is going on the villages. The farmer has involved their traditional methods for agriculture activities (Plate 10). The contribution of people in the agricultural sector is high as compared to another sector (business and services).

#### **Plate 10: Traditional Methods of Agriculture**



Ploughing by Ox



Leveller (Mai)



Cowdung

Simultaneously, villagers have been involved in daily wages and the MANREGA project under Panchayat. Traditional methods have been used i.e., ploughing leveling manuring(cow dung) for agricultural purposes.

Both males and females are involved in agriculture equally (Plate 11). The agriculture

production of these two villages is only for self-consumption. It is also observed that the income of service sector is more than the agricultural sector as they still use old and traditional methods of farming and secondly due to lack of scientific and new techniques of agriculture this sector is contributing less to income of the local inhabitant's but it is very essential for their livelihood in the study area.

**Plate 11: Agriculture Production**



Drying their Kharif and Rabi crops in their Verandahs in the house



Pulses (Kidney beans, soybeans, and mustard) has cultivated in the village for domestic purposes

Different crops grown at different points in time such as wheat, rice, maize, fodder crops, mustard, and pulses are major crops people produce these crops for self consumption in Bhangar and Moarcch village. Rice, maize, and fodder are Kharif crops. The duration month of these crops is June-September. Wheat, mustard, and pulses are Ravi crops. The duration month of these crops is November-April. Cucumber, tomato, potato, and beans are Zaid crops. Vegetables and fruits are Potato, Tomato, Chilly, Walnut, and

Rhododendron for their personal use. Both villages adopted traditional methods of agriculture. Cow dung is used as a fertilizer. They used khapral for throwing the animal dung near to their cropping fields for use as fertilizers. They obtain wool from sheep in raw form, and it has to go through several processes to bring it to the right stage of use.

It is interesting to notice the shifting trends towards planting apple orchards, plums, apricot, and some households taking interest in the field of fish farming (especially trout fish) (Plate 12).

### **Plate 12: Agriculture Diversification**



Local people dry walnut for their domestic use

Trout fish farming due to availability of perennial stream of village Bhangar



Plantation of apple and Plums in the Moarcch village

Chilies, Tomatoes, Spinach has grown in their field for domestic purpose

## **Conclusion:**

Ever since the dawn of human civilization, especially in rural settlements man has been thriving for more development in their rural setup. This thrust of continuous development has many times covered several hurdles in such rural environments. The present study area showed the changes that occurred in the rural settlement in a mountainous environment that has poorly developed infrastructure, meager resources, harsh climatic conditions, and rugged terrain for proper rural development. The study area highlighted changes that occurred in the rural nature of dwelling, demographic aspects, basic amenities, livelihood, and social setup despite tough life in a rural settlement in a mountainous environment.

The village Bhangar and Moarcch are situated adjacent to (Pir Panjal) called the Dhauladhar range in Himachal Himalayas. The villages are located on right and left banks of stream Bharal, which is the tributary of river Beas. It is a perennial stream, which is the main lifeline for the livelihood of rural settlements. It is 676 meters above sea level and two-three kilometers away from the central part of Boh valley. These rural settlements are 28 km away from tehsil headquarter Shahpur and 50 km from District headquarter.

From the data analysis, it was found that more than a fourth-fifth of the houses are semi-pucca and pucca houses, remaining one-fifth kuccha houses. On the other side of the scale, in Bhangar nearly three-fourths of houses consisted of semi-pucca and pucca houses and very less or one-third of kuccha houses. In Moarcch village, nearly two-third (64.28 percent) were joint families, and the remaining more than one-third (35.71 percent) consists of nuclear families. On the other side, Bhangar village comprised more than half (55 percent) of joint families found and the remaining forty-five percent nuclear families. Nearly three-fourths (twenty-five percent) of families were found under the small families, nearly twofourths (forty-five percent) comprised medium size and remaining more than one-fourth (thirty percent) under the category of large family size in both villages. Ownership is the state of exclusive rights and control over the property. During the field visit, it was found that both villages were male-dominated societies. Life is hard in the hilly rural areas but the people of these areas are very hard working reflects the positive picture. Every household was involved in agriculture although it was limited to self-consumption due to small-size holdings and traditional methods of farming. It is vital to implement appropriate programmes, schemes, and projects for the development of these areas as there was a lack of infrastructural facilities. There should be the introduction of new methods of agriculture, animal husbandry, provide seeds for horticulture purposes and financial support should be given for fish

farming as it can enhance the earning of the people. There is a lack of proper transportation and roads in Bhangra and Moarcch although the link road connects to Boh panchayat during the rainy season villagers face the problem of the overflow of rain water that damaged and destroys the kuccha roads. This is a need of the hour, government should introduce projects to improve the living condition of the inhabitants. Physical infrastructure and human resources should be provided therefore betterment of social infrastructure.

Government should introduce awareness programmes at the village level of self-employment and give incentives and awareness to start fish farming and horticulture and taking care of them.

Training should be given to the people of the villages so that they are taking interest in agriculture diversification.

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## **Income Tax Deductions for Salaried Individuals / HUFs / Companies**

### **Section 80 Deductions for F.Y. 2020-21, A.Y. 2021-22**

#### **(Including Budget 2021 amendments)**

**Shashi Yadav\***

#### **ABSTRACT**

*Tax planning means the assessment of one's financial affairs without violating the legal provisions of Income Tax Act. It reduces the burden of taxation of an assessee by taking the full advantage of exemptions, deductions, rebates and relief permitted under the act. This paper aims to know the most suitable and popular tax saving instrument used to save tax and to know the amount saved by using that instruments by the assesseees. Overall findings of the paper reveals that 80C deduction is the most adopted tax saving instrument and 80EE is the second most adopted tax saving instrument.*

**Key words:** Deductions, Income Tax, Taxpayers, Tax Planning, Tax Saving Instrument

Income tax department with a view to encourage savings and investments amongst the taxpayers have provided various deductions from the taxable income under chapter VI-A deductions. 80C being the most famous, there are other deductions which are beneficial for the taxpayers to reduce their tax liability. Let us understand these deductions in detail:

#### **Section 80C – Deductions on Investments**

Section 80C is one of the most popular and a favourite section amongst the taxpayers as it allows reducing taxable income by making tax saving investments or incurring eligible expenses. It allows a maximum deduction of Rs 1.5 lakh every year from the taxpayer's total income.

The benefit of this deduction can be availed by Individuals and HUFs. Companies, partnership firms, LLPs cannot avail the benefit of this deduction.

Section 80C includes subsections, 80CCC, 80CCD (1), 80CCD (1b) and 80CCD (2).

It is important to note that overall limit including the subsections for claiming deduction is Rs 1.5 lakh except an additional deduction of Rs 50,000 allowed u/s 80CCD(1b)

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**Section 80CCC – Insurance Premium /Section 80CCD – Pension Contribution**

<b>Income Tax Act Section</b>	<b>Eligible investments for tax deductions</b>
80 C	80C allows deduction for investment made in PPF , EPF, LIC premium, Equity linked saving scheme, principal amount payment towards home loan, stamp duty and registration charges for purchase of property, Sukanya smridhi yojana (SSY) , National saving certificate (NSC) , Senior citizen savings scheme (SCSS), ULIP, tax saving FD for 5 years, Infrastructure bonds etc
80CCC Deduction for life insurance annuity plan.	80CCC allows deduction for payment towards annuity pension plans Pension received from the annuity or amount received upon surrender of the annuity, including interest or bonus accrued on the annuity, is taxable in the year of receipt.
80CCD (1) Deduction for NPS	Employee’s contribution under section 80CCD (1) Maximum deduction allowed is least of the following:- <ul style="list-style-type: none"> <li>• 10% of salary (in case taxpayer is employee)</li> <li>• 20% of gross total income (in case of self employed)</li> <li>• Rs 1.5 Lakh ( limit allowed u/s 80C)</li> </ul>
80CCD (1b) Deduction for NPS	<ul style="list-style-type: none"> <li>• Additional deduction of Rs 50,000 is allowed for amount deposited to NPS account.</li> <li>• Contributions to Atal Pension Yojana are also eligible for deduction.</li> </ul>
80CCD (2) Deduction for NPS	Employer’s contribution is allowed for deduction up to 10% (additional will be taxable) of basic salary plus dearness allowance under this section. Benefit in this section is allowed only to salaried individuals and not self employed.

Here are some investment options that are allowed as deduction u/s 80C. They not only help taxpayers with saving taxes but also help taxpayers grow their money. A quick comparison for the options is tabulated below:

<b>Investment options</b>	<b>Average Interest</b>	<b>Lock in period for</b>	<b>Risk factor</b>
ELSS funds	12% – 15%	3 years	High
NPS Scheme	8% – 10%	Till 60 years of age	High
ULIP	8% – 10%	5 years	Medium
Tax saving FD	7% – 8%	5 years	Low
PPF	7.10%	5 years	Low
Senior citizen savings scheme	7.4%	5years (can be extended for other 3 years)	Low
National savings scheme	6.8%	5 years	Low
Sukanya Samridhhi Yojana	8.4%	Till girl child reaches 21 years of age (partial withdrawal allowed when she reached 18 years)	Low

### **Section 80 TTA – Interest on Savings Account**

#### **(Deduction from Gross Total Income for Interest on Savings Bank Account)**

If taxpayer is an individual or an HUF, taxpayer may claim a deduction of maximum Rs 10,000 against interest income from your savings account with a bank, co-operative society, or post office. Do include the interest from savings bank account in other income.

Section 80TTA deduction is not available on interest income from fixed deposits, recurring deposits, or interest income from corporate bonds.

### **Section 80GG – House Rent Paid**

#### **(Deduction for House Rent Paid Where HRA is not received)**

- a. Section 80GG deduction is available for rent paid when HRA is not received. The taxpayer, spouse or minor child should not own residential accommodation at the

place of employment

- b. The taxpayer should not have self-occupied residential property in any other place
- c. The taxpayer must be living on rent and paying rent
- d. The deduction is available to all individuals

**Deduction available is the least of the following:**

- a. Rent paid minus 10% of adjusted total income
- b. Rs 5,000/- per month
- c. 25% of adjusted total income\*

*\*Adjusted Gross Total Income is arrived at after adjusting the Gross Total Income for certain deductions, exempt income, long-term capital gains and income related to non-residents and foreign companies.*

From FY 2016-17 available deductions have been raised to Rs 5,000 a month from Rs 2,000 per month.

**Section 80E – Interest on Education Loan**

**(Deduction for Interest on Education Loan for Higher Studies)**

A deduction is allowed to an individual for interest on loans taken for pursuing higher education. This loan may have been taken for the taxpayer, spouse or children or for a student for whom the taxpayer is a legal guardian.

80E deduction is available for a maximum of 8 years (beginning the year in which the interest starts getting repaid) or till the entire interest is repaid, whichever is earlier. There is no restriction on the amount that can be claimed.

**Section 80EE – Interest on Home Loan**

**(Deductions on Home Loan Interest for First Time Home Owners)**

**FY 2017-18 and FY 2016-17:** This deduction is available in FY 2017-18 if the loan has been taken in FY 2016-17. The deduction under section 80EE is available only to home-owners (individuals) having only one house property on the date of sanction of the loan. The value of the property must be less than Rs 50 lakh and the home loan must be less than Rs 35 lakh. The loan taken from a financial institution must have been sanctioned between 1 April 2016 and 31 March 2017. There is an additional deduction of Rs 50,000 available on taxpayer's home loan interest on top of deduction of Rs 2 lakh (on interest component of home loan EMI) allowed under section 24.

**FY 2013-14 and FY 2014-15:** During these financial years, the deduction available under this section was first-time house worth Rs 40 lakh or less. Taxpayer can avail this only when taxpayer's loan amount during this period is Rs 25 lakh or less. The loan must be sanctioned between 1 April 2013 and 31 March 2014. The aggregate deduction allowed under this section cannot exceed Rs 1 lakh and is allowed for FY 2013-14 and FY 2014-15.

## **Section 80D – Medical Insurance**

### **(Deduction for the Premium Paid for Medical Insurance)**

Taxpayers (as an individual or HUF) can claim a deduction of Rs.25,000 under section 80D on insurance for self, spouse and dependent children. An additional deduction for insurance of parents is available up to Rs 25,000, if they are less than 60 years of age. If the parents are aged above 60, the deduction amount is Rs 50,000, which has been increased in Budget 2018 from Rs 30,000.

In case, both taxpayer and parent(s) are 60 years or above, the maximum deduction available under this section is up to Rs.1 lakh.

**Example:** Rohan's age is 65 and his father's age is 90. In this case, the maximum deduction Rohan can claim under section 80D is Rs. 100,000.

From FY 2015-16 a cumulative additional deduction of Rs. 5,000 is allowed for preventive health check.

## **Section 80DD – Disabled Dependent**

### **(Deduction for Rehabilitation of Handicapped Dependent Relative)**

Section 80DD deduction is available to a resident individual or a HUF and is available on:

- a. Expenditure incurred on medical treatment (including nursing), training and rehabilitation of handicapped dependent relative
- b. Payment or deposit to specified scheme for maintenance of handicapped dependent relative.
  - i. Where disability is 40% or more but less than 80% – fixed deduction of Rs 75,000.
  - ii. Where there is severe disability (disability is 80% or more) – fixed deduction of Rs 1,25,000.

To claim this deduction a certificate of disability is required from prescribed medical

authority. From FY 2015-16 – The deduction limit of Rs 50,000 has been raised to Rs 75,000 and Rs 1,00,000 has been raised to Rs 1,25,000.

## **Section 80DDB – Medical Expenditure**

### **(Deduction for Medical Expenditure on Self or Dependent Relative)**

#### **a. For Individuals and HUFs Below Age 60**

A deduction up to Rs.40,000 is available to a resident individual or a HUF. It is available with respect to any expense incurred towards treatment of specified medical diseases or ailments for himself or any of his dependents. For an HUF, such a deduction is available with respect to medical expenses incurred towards these prescribed ailments for any of the HUF members.

#### **b. For Senior Citizens and Super Senior Citizens**

In case the individual on behalf of whom such expenses are incurred is a senior citizen, the individual or HUF taxpayer can claim a deduction up to Rs 1 lakh. Until FY 2017-18, the deduction that could be claimed for a senior citizen and a super senior citizen was Rs 60,000 and Rs 80,000 respectively. This has now become a common deduction available upto Rs 1 lakh for all senior citizens (including super senior citizens) unlike earlier.

#### **c. For Reimbursement Claims**

Any reimbursement of medical expenses by an insurer or employer shall be reduced from the quantum of deduction the taxpayer can claim under this section.

Also remember that taxpayer need to get a prescription for such medical treatment from the concerned specialist in order to claim such deduction.

## **Section 80U – Physical Disability**

### **(Deduction for Person Suffering from Physical Disability)**

A deduction of Rs.75,000 is available to a resident individual who suffers from a physical disability (including blindness) or mental retardation. In case of severe disability, one can claim a deduction of Rs 1,25,000.

From FY 2015-16 – Section 80U deduction limit of Rs 50,000 has been raised to Rs 75,000 and Rs 1,00,000 has been raised to Rs 1,25,000.

## **Section 80G – Donations**

### **(Deduction for Donations towards Social Causes)**

The various donations specified in u/s 80G are eligible for deduction up to either 100% or 50% with or without restriction. From FY 2017-18 any donations made in cash exceeding Rs 2,000 will not be allowed as deduction. The donations above Rs 2000 should be made in any mode other than cash to qualify for 80G deduction.

#### **a. Donations with 100% Deduction without any Qualifying Limit**

- National Defence Fund set up by the Central Government
- Prime Minister's National Relief Fund
- National Foundation for Communal Harmony
- An approved university/educational institution of National eminence
- Zila Saksharta Samiti constituted in any district under the chairmanship of the Collector of that district
- Fund set up by a State Government for the medical relief to the poor
- National Illness Assistance Fund
- National Blood Transfusion Council or to any State Blood Transfusion Council
- National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities
- National Sports Fund
- National Cultural Fund
- Fund for Technology Development and Application
- National Children's Fund
- Chief Minister's Relief Fund or Lieutenant Governor's Relief Fund with respect to any State or Union Territory
- The Army Central Welfare Fund or the Indian Naval Benevolent Fund or the Air Force Central Welfare Fund, Andhra Pradesh Chief Minister's Cyclone Relief Fund, 1996
- The Maharashtra Chief Minister's Relief Fund during October 1, 1993 and October 6, 1993
- Chief Minister's Earthquake Relief Fund, Maharashtra

- Any fund set up by the State Government of Gujarat exclusively for providing relief to the victims of earthquake in Gujarat
- Any trust, institution or fund to which Section 80G(5C) applies for providing relief to the victims of earthquake in Gujarat (contribution made during January 26, 2001 and September 30, 2001) or
- Prime Minister's Armenia Earthquake Relief Fund
- Africa (Public Contributions - India) Fund
- Swachh Bharat Kosh (applicable from financial year 2014-15)
- Clean Ganga Fund (applicable from financial year 2014-15)
- National Fund for Control of Drug Abuse (applicable from financial year 2015-16)

**b. Donations with 50% Deduction without any Qualifying Limit**

- Jawaharlal Nehru Memorial Fund
- Prime Minister's Drought Relief Fund
- Indira Gandhi Memorial Trust
- The Rajiv Gandhi Foundation

**c. Donations to the Following are Eligible for 100% Deduction Subject to 10% of Adjusted Gross Total Income**

- Government or any approved local authority, institution or association to be utilized for the purpose of promoting family planning
- Donation by a Company to the Indian Olympic Association or to any other notified association or institution established in India for the development of infrastructure for sports and games in India or the sponsorship of sports and games in India

**d. Donations to the Following are Eligible for 50% Deduction Subject to 10% of Adjusted Gross Total Income**

- Any other fund or any institution which satisfies conditions mentioned in Section 80G(5)
- Government or any local authority to be utilized for any charitable purpose other than the purpose of promoting family planning

- Any authority constituted in India for the purpose of dealing with and satisfying the need for housing accommodation or for the purpose of planning, development or improvement of cities, towns, villages or both
- Any corporation referred in Section 10(26BB) for promoting the interest of minority community
- For repairs or renovation of any notified temple, mosque, gurudwara, church or other places.

### **Section 80GGB – Company Contribution**

#### **(Deduction on Contributions given by Companies to Political Parties)**

Section 80GGB deduction is allowed to an Indian company for the amount contributed by it to any political party or an electoral trust. Deduction is allowed for contribution done by any way other than cash.

### **Section 80GGC – Contribution to Political Parties**

#### **(Deduction on Contributions given by Any Person to Political Parties)**

Deduction under section 80GGC is allowed to an individual taxpayer for any amount contributed to a political party or an electoral trust. It is not available for companies, local authorities and an artificial juridical person wholly or partly funded by the government. Taxpayer can avail this deduction only if you pay by any way other than cash.

### **Section 80RRB – Royalty of a Patent**

#### **(Deduction with Respect to Any Income by Way of Royalty of a Patent)**

80RRB Deduction for any income by way of royalty for a patent, registered on or after 1 April 2003 under the Patents Act 1970, shall be available for up to Rs.3 lakh or the income received, whichever is less. The taxpayer must be an individual patentee and an Indian resident. The taxpayer must furnish a certificate in the prescribed form duly signed by the prescribed authority.

### **Section 80 TTB – Interest Income**

#### **(Deduction of Interest on Deposits for Senior Citizens)**

A new section 80TTB has been inserted vide Budget 2018 in which deductions with respect to interest income from deposits held by senior citizens will be allowed. The limit for this deduction is Rs.50,000.



No further deduction under section 80TTA shall be allowed. In addition to section 80TTB, section 194A of the Act will also be amended so as to increase the threshold limit for TDS on interest income payable to senior citizens. The earlier limit was Rs 10,000, which was increased to Rs 50,000 as per the latest Budget.

### **Conclusion**

Any individuals who want to assess income tax and want to do tax planning and savings first calculate total income then compute the income tax by deduction and adjustment in total income as per taxable structure.

Tax planning is not just a strategy to reduce tax burden. It helps to save tax by encouraging investments in Government Securities. Tax planning not only reduces the tax burden of an individual but also gives mental satisfaction to them. This paper creates awareness about tax planning in the minds of assesses.

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## ब्रह्मपुर प्रखण्ड (जिला—बक्सर, बिहार) के नव—अन्वेषित पुरास्थलों का महत्त्व

चन्द्र भूषण गुप्त\*

### सारांशिका

बिहार प्रान्त के पश्चिम में अवस्थित बक्सर जनपद ऐतिहासिक रूप से प्राचीन मगध में स्थित था। बक्सर जनपद में गंगा, कर्मनाशा धर्मावती, छेर ठोरा एवं काँव इत्यादि छोटी बड़ी नदियाँ प्रवाहित होती हैं, जो पुरातात्विक दृष्टि से अतिमहत्त्वपूर्ण हैं। ब्रह्मपुर प्रखण्ड (जिला—बक्सर, बिहार) से लगभग 10 नवीन पुरास्थल खोजे गए हैं, जैसे छोटकापुरवा, भदवर, पकरही, बराढी, बगेन, ब्रह्मपुर, रहथुहा, राजपुर, सपही एवं कैथीडीह। यहाँ से उत्तरी कृष्ण मार्जित मृद्भाण्ड परम्परा से लेकर मध्यकाल तक के संस्कृति के अवशेष प्राप्त हुए हैं। जिनका विस्तारपूर्वक इस शोध पत्र में वर्णन किया गया है।

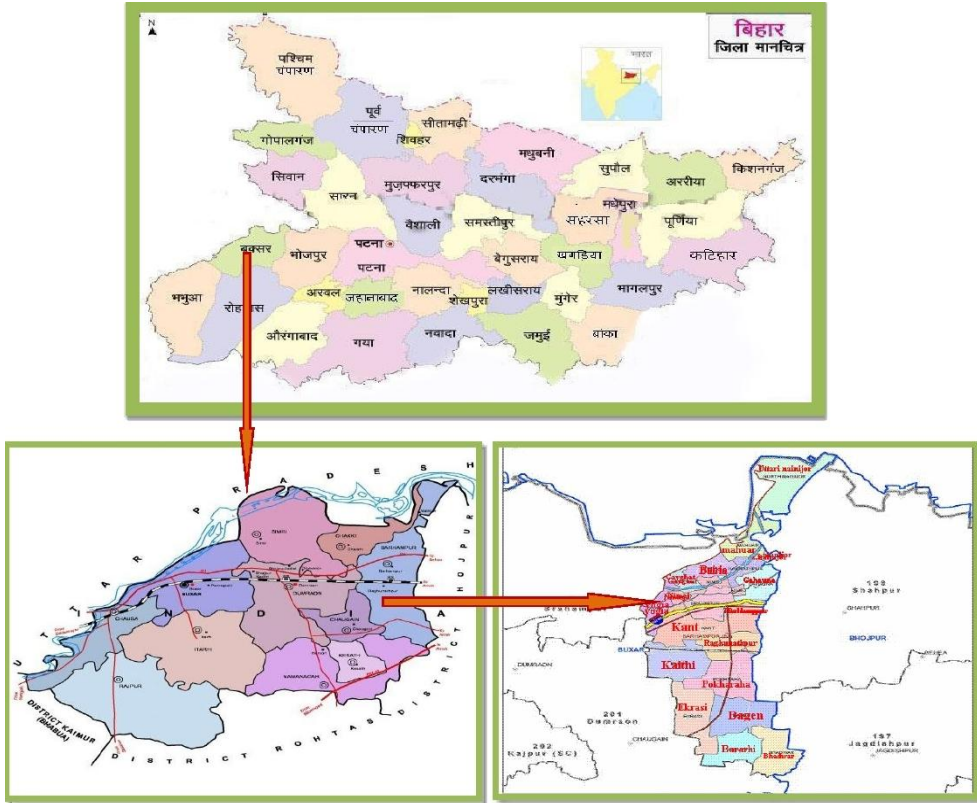
**कुञ्जीशब्द :** ब्रह्मपुर, बक्सर, धर्मावती, छेर, लाल मृद्भाण्ड, कुषाण काल, गुप्त काल।

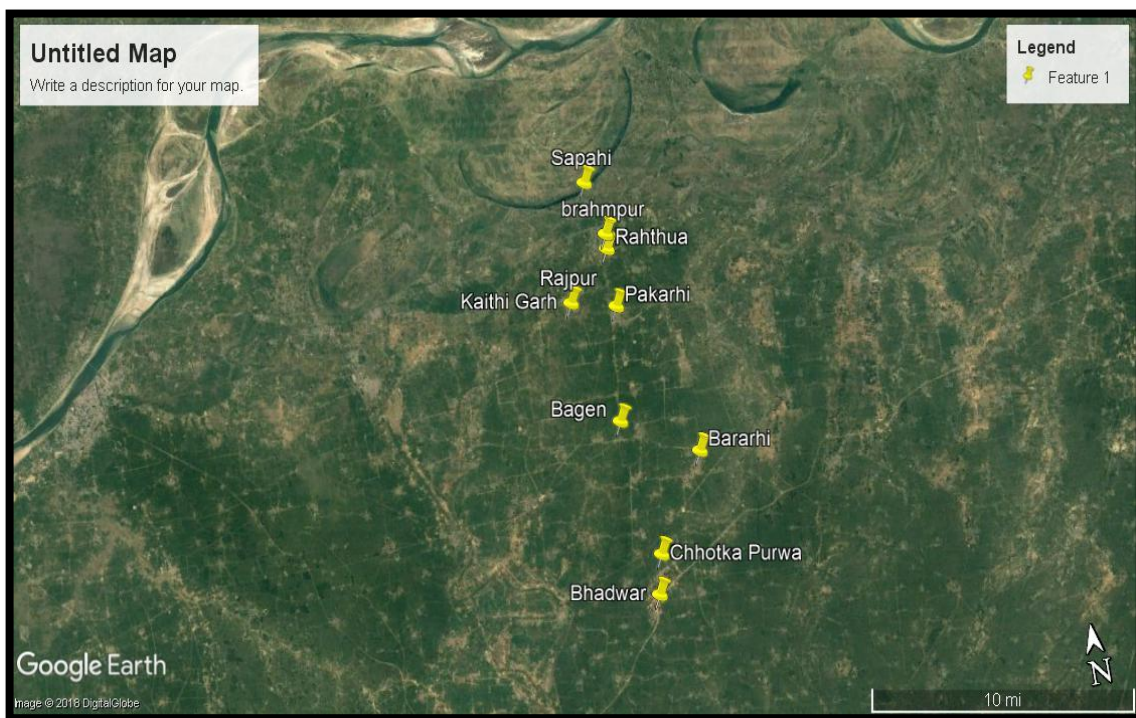
बिहार के पश्चिमी भू-भाग में स्थित बक्सर जनपद प्राचीन काल से ही अनेक संस्कृतियों को अपने आँचल में समेटे हुए है, जिन्हे अनेक पुराविदों व इतिहासकारों ने उद्घाटित करने का प्रयास किया है। बक्सर जनपद (25°36' उत्तरी अक्षांश एवं 83°59' पूर्वी देशांतर) का क्षेत्रफल लगभग 1703 वर्ग कि० मी० है।<sup>1</sup> इस परिक्षेत्र में सर्वप्रथम 1812 ई० में भूगोलवेत्ता फ्रांसिस बुकानन द्वारा सर्वेक्षण किया गया था।<sup>2</sup> गंगा नदी के तट पर स्थित इस नगरी को विश्वामित्र की नगरी के नाम से जाना जाता है। यह क्षेत्र प्राचीन काल में मगध साम्राज्य का एक महत्त्वपूर्ण भाग था। बक्सर जनपद स्वतंत्र रूप से 17 मार्च 1991 को अस्तित्व में आया, जिसको 11 प्रखण्ड में विभक्त किया गया है। इसके उत्तर में बलिया, दक्षिण में रोहतास, पश्चिम में गाजीपुर एवं पूरब में भोजपुर जिले स्थित हैं।<sup>3</sup> (चित्र संख्या 1) बक्सर जिले में गंगा, कर्मनाशा धर्मावती, ठोरा, काँव, एवं छेर इत्यादि प्रमुख नदियाँ प्रवाहित होती हैं। इस जनपद का ब्रह्मपुर प्रखण्ड पौराणिक एवं पुरातात्विक दृष्टिकोण से अत्यन्त महत्त्वपूर्ण है। ब्रह्मपुर में प्रसिद्ध बाबा ब्रह्मेश्वरनाथ का प्राचीनतम मंदिर है। एसा मान्यता है कि इस मंदिर का निर्माण स्वयं भगवान ब्रह्मा जी ने किया था, जैसा नाम से प्रतीत होता है कि ब्रह्मपुर का अर्थ ब्रह्मा की नगरी। अन्य अनुश्रुतियों के अनुसार भगवान शंकर, शिवलिंग के रूप में स्वयं धरती पर प्रकट हुए उनका नाम ब्रह्मेश्वरनाथ है। यहीं कारण है कि गाव का नाम ब्रह्मपुर पड़ा। इस मंदिर की सबसे बड़ी खासियत है कि मंदिर का मुख्य द्वार पश्चिममुखी है जबकि देश के अन्य शिव मंदिरों की द्वार पूरब दिशा में होती है। किंवदन्तियों के अनुसार एक बार मुस्लिम शासक महमूद गज़नवी ने इस मंदिर को तोड़ने के लिए आया, तब यहाँ क लोगों ने गज़नवी से अनुरोध किया कि इस शिव मंदिर को नहीं तोड़े, नहीं तो बाबा उसका

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विनाश कर

देंगे। इस पर गज्जनवी ने कहा ऐसा कोई देवता नहीं है, अगर है तो मंदिर का प्रवेश द्वार पूरब दिशा से रातभर में पश्चिम दिशा की ओर हो जाएगा तो वह मंदिर छोड़ देगा और कभी मंदिर के पास नहीं आएगा। अगले दिन गज्जनवी जब मंदिर का विनाश करने आया तो दंग रह गया उसने देखा कि मंदिर का प्रवेश द्वार पश्चिम की तरफ हो गया है। इसके बाद गज्जनवी वहाँ से हमेशा के लिए चला गया। ब्रह्मपुर प्रखण्ड में सर्वेक्षण से प्राप्त पुरातात्विक स्थलों एवं उनसे प्राप्त भौतिक अवशेषों के अध्ययन के आधार पर इस क्षेत्र की प्राचीनता एवं अधिवास के प्रतिरूप पर प्रकाश डालने का प्रयास किया गया है। उपरोक्त नदियों ने बक्सर जनपद के प्राचीन अधिवासों के आबाद होने में महत्त्वपूर्ण भूमिका का निर्वहन किया है। ये नदियाँ प्राचीन काल में इस क्षेत्र में निवास करने वाले मानव के लिए वरदान स्वरूप थीं, क्योंकि इनके द्वारा ही मानव व अनेकान्य जीव-जन्तुओं को जल की आवश्यकता की पूर्ति होती थी। इसी क्रम में मेरे द्वारा पुरातात्विक सर्वेक्षण के फलस्वरूप ब्रह्मपुर प्रखण्ड से नवीन पुरास्थल (चित्र संख्या 2) प्रकाश में आये हैं, जिनका पुरातात्विक विवरण एवं महत्त्व इस प्रकार है—





चित्र संख्या 2: ब्रह्मपुर प्रखण्ड का दूरसंवेदी मानचित्र पर नव-अन्वेषित पुरास्थलों की स्थिति

### 1. छोटकापुरवा (25°26' 01" उत्तरी अक्षांश व 84°18'10" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से उत्तर-पूर्व लगभग 2 किमी०, बक्सर-आरा राष्ट्रीय राजमार्ग 84 मुख्य सड़क से दक्षिण सटा हुआ, रघुनाथपुर रेलवे स्टेशन से लगभग 5 किमी० उत्तर-पूर्व एवं धर्मावती नदी के दक्षिण लगभग 1.5 किमी० पर स्थित है। यह पुरास्थल लगभग 300x200x1 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 3) वर्तमान में पुरास्थल पर कृषि कार्य एवं आवासित है। सर्वेक्षण से कुषाण कालीन परई, घड़ा, तथा गुप्त कालीन परई, हॉडी, घड़ा, कोखदार हॉडी (कैरिनेटेड पात्र) इत्यादि मिले हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 4) अतः प्राप्त पुरावशेषों के आधार पर इस पुरास्थल की प्राचीनता कुषाण काल से लेकर गुप्तकाल तक मानी जा सकती है।



चित्र संख्या 3: छोटकापुरवा पुरास्थल का दृश्य

चित्र संख्या 4: छोटकापुरवा पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार

## 2. भदवर (25°24'50" उत्तरी अक्षांश व 84°17'51" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पूरब लगभग 12 किमी०, बगेनगोला-वीर कुँवर सिंह पथ से दक्षिण सटा हुआ व ब्रह्मपुर-कोरानसराय मुख्य सड़क से पूरब लगभग 6 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 9 किमी० दक्षिण-पूरब एवं छेर नदी से पश्चिम लगभग 3 किमी० पर स्थित है। यह पुरास्थल लगभग 500x400x5 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 5) वर्तमान में पुरास्थल पर हनुमान मंदिर स्थित है तथा पुरास्थल को काटकर कृषि कार्य एवं आवासित है। इस पुरास्थल से उत्तरी कृष्ण मार्जित मृद्भाण्ड परम्परा के खण्डित ठीकरों के साथ धूसर मृद्भाण्ड परम्परा के कटोरे, खण्डित टुकड़े भी प्राप्त हुये हैं। इसके अतिरिक्त यहाँ से कुषाण कालीन घड़ा, परई (चित्र संख्या 6) एवं खण्डित मृण खिलौना (झुनझुना) (चित्र संख्या 7) गुप्त कालीन चमकीली लाल मृद्भाण्ड परम्परा के घड़ा, नाद, तसला आदि का साक्ष्य मिलते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। सर्वेक्षित पुरावशेषों के आधार पर इस पुरास्थल को उत्तरी कृष्ण मार्जित मृद्भाण्ड संस्कृति से लेकर गुप्तकाल तक सम्बद्ध किया जा सकता है।



चित्र संख्या 5: भदवर पुरास्थल दृश्य

चित्र संख्या 6: भदवर पुरास्थल से प्राप्त मृद्भाण्ड पात्र प्रकार

चित्र संख्या 7: भदवर पुरास्थल से प्राप्त खण्डित मृण खिलौना

### 3. पकरही (25°33'36" उत्तरी अक्षांश व 84°18'05" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पूर्व लगभग 7 किमी०, ब्रह्मपुर-कोरानसराय मुख्य सड़क से पूरब लगभग 3 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 4 किमी० दक्षिण एवं छेर नदी से पश्चिम लगभग 1 किमी० पर स्थित है। यह पुरास्थल लगभग 100x100x1 मी० के विस्तृत भू-भाग पर फैला हुआ है। वर्तमान में पुरास्थल पर कृषि कार्य हो रहा है। (चित्र संख्या 8) सर्वेक्षण के क्रम में कुषाण कालीन परई, घड़ा, गुप्त कालीन लाल मृद्भाण्ड के तसला, परई, नाद, कोखदार हॉडी (कैरिनेटेड पात्र) एवं पूर्वमध्यकालीन तसला, घड़ा, मिलते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 9) अतः प्राप्त पुरावशेषों के आधार पर इस पुरास्थल की प्राचीनता कुषाण काल से लेकर पूर्वमध्यकालीन तक माना जा सकता है।



चित्र संख्या: 8 पकरही पुरास्थल का दृश्य

चित्र संख्या: 9 पकरही पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार

### . बराढ़ी (25°28'50" उत्तरी अक्षांश व 84°20'11" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण लगभग 14 किमी०, बगेनगोला-वीर कुँवर सिंह पथ से दक्षिण व ब्रह्मपुर-कोरानसराय मुख्य सड़क से पूरब लगभग 5 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 10 किमी० दक्षिण एवं छेर नदी से पश्चिम लगभग 4 किमी० पर स्थित है। यह पुरास्थल लगभग 400X300X3 मी० के विस्तृत भू-भाग पर फैला हुआ है। वर्तमान में पुरास्थल को काटकर कृषि कार्य एवं आवासित है। (चित्र संख्या 10) सर्वेक्षण के क्रम में गुप्तकालीन घड़ा, परई और पूर्वमध्यकालीन मृद्भाण्ड परम्परा के कोखदार हॉडी, घड़ा, परई पात्र मिलते हैं। (चित्र संख्या 11) इसके अलावा हस्तनिर्मित लाल मृण चक्राभ की प्राप्ति हुई है। (चित्र संख्या 12) अतः पुरावशेषों के आधार पर इस स्थल की प्राचीनता गुप्तकाल से लेकर पूर्वमध्यकाल तक निर्धारित की जा सकती है।



चित्र संख्या 10: बराढ़ी पुरास्थल का दृश्य

चित्र संख्या 11: बराढ़ी पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार

चित्र संख्या 12: बराढ़ी पुरास्थल से प्राप्त हस्तनिर्मित मृण चक्राभ

### 5. बगेन (25°30'11" उत्तरी अक्षांश व 84°17'31" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पूरब लगभग 10 किमी०, बगेनगोला-जगदीशपुर सड़क से उत्तर व ब्रह्मपुर-कोरानसराय मुख्य सड़क से पूरब लगभग 2 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 6 किमी० दक्षिण एवं बगेन नहर से उत्तर लगभग 1 किमी० पर स्थित है। यह पुरास्थल लगभग 200X150X2 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 13) सर्वेक्षण के क्रम में गुप्तकालीन घड़ा, द्रोणी और पूर्वमध्यकालीन मृद्भाण्ड परम्परा के घड़ा, परई पात्र मिलते हैं। (चित्र संख्या 14) इसके अलावा खण्डित ईंटों की प्राप्ति हुई है। (चित्र संख्या 15) अतः पुरावशेषों के आधार पर इस स्थल की प्राचीनता गुप्तकाल से लेकर पूर्वमध्यकाल तक निर्धारित किया गया है।



चित्र संख्या 13: बगेन पुरास्थल का विहंगम दृश्य

चित्र संख्या 14: बगेन पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार



चित्र संख्या 15: बगेन पुरास्थल से प्राप्त खण्डित ईंटे

## 6. ब्रह्मपुर (25°35'47.32" उत्तरी अक्षांश व 84°18'8.29" पूर्वी देशांतर)

यह पुरास्थल बक्सर मुख्यालय से दक्षिण लगभग 33 किमी०, बक्सर-आरा मुख्य सड़क से दक्षिण लगभग 1 किमी० व ब्रह्मपुर-कोरानसराय सड़क से पूरब सटा हुआ है। रधुनाथपुर रेलवे स्टेशन से लगभग 3 किमी० उत्तर एवं धर्मावती नदी के उत्तरी तट पर स्थित है। ब्रह्मपुर में प्रसिद्ध बाबा ब्रह्मेश्वरनाथ का प्राचीनतम मंदिर है। (चित्र संख्या 16) मंदिर के पास बहुत बड़ा एक प्राचीन कुण्ड भी है। यह कुण्ड कब बना ज्ञात नहीं है तथा इस कुण्ड की खास बात यह है कि इसमें साल भर जल रहता है। (चित्र संख्या 17) मंदिर क गर्भगृह में शिवलिंग स्थापित हैं। इसके अलावा नन्दी, भैरव एवं स्थानक विष्णु प्रतिमाओं की प्राप्ति हुई है।



चित्र संख्या 16: ब्रह्मपुर में प्रसिद्ध बाबा ब्रह्मेश्वरनाथ का प्राचीनतम मंदिर

चित्र संख्या 17: प्राचीन कुण्ड



**शिवलिंग:** बलुआ प्रस्तर निर्मित शिवलिंग मंदिर के गर्भगृह में योनिपीठाधिष्ठित शिवलिंग के रूप में स्थापित है। इस शिवलिंग पर सर्प लिपटा हुआ प्रदर्शित है, जिसका फण रुद्रभाग पर है। यह शिवलिंग अपेक्षाकृत सौन्दर्य से परिपूर्ण है। इस मंदिर के सभामण्डप में नन्दी की आकृति बनी हुई है। इसके अतिरिक्त शिवलिंग का आकार भी बड़ा है। (चित्र संख्या 18)

**नन्दी:** बलुआ पत्थर से बनी नन्दी की मूर्ति शिव मन्दिर के मध्य में स्थापित है, इसकी संरचना स्थूल है परन्तु अग्रभाग की संरचना सुगठित है एवं नासाग्र अन्य भाग की संरचना सुन्दर है। प्रस्तुत बैठी हुयी नन्दी उत्तर मध्यकालीन प्रतिमा है। (चित्र संख्या 19)

**भैरव:** प्रस्तुत भैरव की प्रतिमा ताखें में स्थापित की गई है। जिसमें वह अपने वाहन कुत्ते (स्वान) पर विराजमान है। उनकी संरचना भयावह प्रतीत होती है। इनकी दो भुजाएँ हैं, दाये हाथ में डमरू एवं बायें हाथ में त्रिशूल धारण किए हुए हैं। शरीर का ऊपरी भाग नग्न है परन्तु नीचले भाग में धोती धारण किए हुए हैं जिनमें सिलवटें बनी हुई हैं। बाँया पैर नीचे एवं दाहिना पैर बाँए पैर के ऊपर है। गले में रुद्राक्ष की माला एवं हाथों में रुद्राक्ष के बाजूबन्द धारण किए हुए है। (चित्र संख्या 20)

**स्थानक विष्णु:** विष्णु की प्रतिमा काले प्रस्तर से बनी है जो जीर्णावस्था म है। इनमें विष्णु खड़ी (स्थानक) मुद्रा में चार भुजाओं से युक्त है। जिसमें कमल, शंख इत्यादि धारण किए हुए है। इसके अतिरिक्त गले में आभूषण, किरिट मुकुट के साथ शरीर के निचले भाग में धोती धारण किये हुए हैं, जिसकी सिलवटे स्पष्टतः दिखाई देती है। (चित्र संख्या 21)



चित्र संख्या 18: ब्रह्मपुर से प्राप्त शिवलिंग चित्र संख्या 19: ब्रह्मपुर से प्राप्त नन्दी चित्र संख्या 20: ब्रह्मपुर से प्राप्त भैरव चित्र संख्या 21: ब्रह्मपुर से प्राप्त स्थानक विष्णु

## 7. राजपुर (25°33'58" उत्तरी अक्षांश व 84°16'29" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पूर्व लगभग 9 किमी०, ब्रह्मपुर-कोरानसराय मुख्य सड़क से पूरब लगभग 1 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 6 किमी० दक्षिण एवं छेर नदी से पश्चिम लगभग 3 किमी० पर स्थित है। यह पुरास्थल लगभग 400X300X4 मी० के विस्तृत भू-भाग पर फैला हुआ है। वर्तमान में पुरास्थल पर कृषि कार्य हो रहा है। (चित्र संख्या 22) इस

पुरास्थल के सर्वेक्षणोपरांत गुप्तकाल के पात्र प्रकारों में संग्रह पात्र, परई, तसला, टोंटीदार पात्र, द्रोणी एवं पूर्वमध्यकाल के परई, घड़ा आदि मिलते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 23) इसके अलावा मृण पात्र चक्राभ (चित्र संख्या 24) एवं प्रस्तर सिल/लोढ़ा (चित्र संख्या 25) की प्राप्ति हुई है। सर्वेक्षित पुरावशेषों के आधार पर इस पुरास्थल को गुप्तकाल से लेकर पूर्वमध्यकाल तक सम्बद्ध किया गया है।



चित्र संख्या 22: राजपुर पुरास्थल का विहंगम दृश्य

चित्र संख्या 23: राजपुर पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार



चित्र संख्या 24: राजपुर पुरास्थल से प्राप्त मृण पात्र चक्राभ

चित्र संख्या 25: राजपुर पुरास्थल से प्राप्त प्रस्तर सिल/लोढ़ा

### 8. रहथुहा (25°35'02" उत्तरी अक्षांश व 84°18'06" पूर्वी देशांतर)

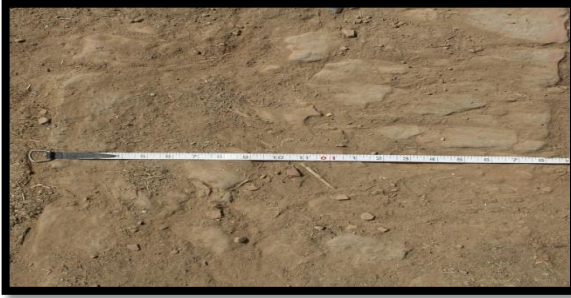
यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पश्चिम लगभग 4 किमी०, ब्रह्मपुर-कोरानसराय मुख्य सड़क से उत्तर-पश्चिम, रधुनाथपुर रेलवे स्टेशन से लगभग 3 किमी० उत्तर-पश्चिम एवं धर्मावती नदी से दक्षिण लगभग 8 किमी० पर स्थित है। यह पुरास्थल लगभग 300X200X3 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 26) वर्तमान में पुरास्थल पर कृषि कार्य एवं आवासित है। यहाँ सर्वेक्षण में गुप्तकाल तथा पूर्वमध्यकालीन लाल मृद्भाण्ड के परई, घड़ा आदि मिलते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 27) इसके अतिरिक्त गुप्तकालीन खण्डित ईंट निर्मित भवन की नींव (चित्र संख्या 28) और पूर्वमध्यकाल के भवन भग्नावशेष मिलते (चित्र संख्या 29) हैं। अतः इस पुरास्थल से प्राप्त पुरावशेषों के आधार पर गुप्तकाल से लेकर पूर्वमध्यकाल का माना जा सकता है।



चित्र संख्या 26: रहथुहा पुरास्थल का दृश्य



चित्र संख्या 27: रहथुहा पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार



चित्र संख्या 28: रहथुहा पुरास्थल से प्राप्त गुप्त कालीन खण्डित ईट निर्मित भवन की नींव



चित्र संख्या 29: रहथुहा पुरास्थल से प्राप्त पूर्वमध्यकाल के भवन भग्नावशेष

### 9. सपही (25°37'26" उत्तरी अक्षांश व 84°17'42" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से उत्तर लगभग 5 किमी० ब्रह्मपुर-नैनीजोर मुख्य सड़क से पश्चिम लगभग 2 किमी० रधुनाथपुर रेलवे स्टेशन से लगभग 9 किमी० उत्तर एवं धर्मावती नदी के दक्षिण में स्थित है। यह पुरास्थल लगभग 200x200 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 30) इस पुरास्थल से सर्वेक्षण के क्रम में घड़ा, तसला, और द्रोणी के टुकड़ों के साक्ष्य मिले हैं, जो पूर्वमध्यकाल के प्रतीत होते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 31)



चित्र संख्या 30: सपही पुरास्थल का दृश्य



चित्र संख्या 31: सपही पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार

### 10. कैथीडीह (25°33'58" उत्तरी अक्षांश व 84°16'29" पूर्वी देशांतर)

यह पुरास्थल ब्रह्मपुर प्रखण्ड से दक्षिण-पश्चिम लगभग 7 किमी०, ब्रह्मपुर-कोरानसराय मुख्य सड़क से पश्चिम लगभग 2 किमी०, रधुनाथपुर रेलवे स्टेशन से लगभग 2.5 किमी० दक्षिण-पश्चिम एवं छेर नदी से पश्चिम लगभग 4 किमी० पर स्थित है। यह पुरास्थल लगभग 100x100x5 मी० के विस्तृत भू-भाग पर फैला हुआ है। (चित्र संख्या 32) सर्वेक्षण के फलस्वरूप गुप्त कालीन लाल मृद्भाण्ड के तसला, घड़ा तथा पूर्वमध्यकाल के घड़ा, परई मिलते हैं तथा यहाँ के मृद्भाण्डों पर अलंकरण भी मिलता है। (चित्र संख्या 33) इसके अलावा खण्डित मृण पशु पैर का भी साक्ष्य मिला है। (चित्र संख्या 34) अतः प्राप्त पुरावशेषों के आधार पर इस पुरास्थल की प्राचीनता गुप्तकाल से लेकर पूर्वमध्यकाल तक माना गया है।



चित्र संख्या 32: कैथीडीह पुरास्थल का दृश्य



चित्र संख्या 33: कैथीडीह पुरास्थल से प्राप्त लाल मृद्भाण्ड पात्र प्रकार



चित्र संख्या 34: कैथीडीह पुरास्थल से प्राप्त खण्डित मृण पशु पैर

**ब्रह्मपुर पखण्ड (जिला-बक्सर) के नव-अन्वेषित पुरास्थलों की सूची**

क्र. सं.	पुरास्थल एवं अक्षांश/देशान्तर	विस्तार एवं नदी	पात्र प्रकार	अन्य भौतिक पुरावशेष	उत्तरी कृष्ण मार्जित मृद्भाण्ड	कुषाण काल	गुप्त काल	पूर्वमध्य काल	मध्य काल
1.	छोटकापुरवा (25°26'01" उत्तरी अक्षांश व 84°18'10" पूर्वी देशांतर)	300x200x1 मी० धर्मावती नदी	परई, हॉडी, घड़ा, कोखदार हॉडी (कैरिनेटेड पात्र)			✓	✓		
2.	भदवर (25°24'50" उत्तरी अक्षांश व 84°17'51" पूर्वी देशांतर)	500x400x5 मी० छेर नदी	उत्तरी कृष्ण मार्जित मृद्भाण्ड परम्परा के खण्डित टीकरों के साथ धूसर मृद्भाण्ड परम्परा के कटोरे, खण्डित टुकड़े, घड़ा, परई चमकीली लाल मृद्भाण्ड परम्परा के घड़ा, नाद, तसला	खण्डित मृग खिलौना (झनझुना)	✓	✓	✓		
3.	पकरही (25°33'36" उत्तरी अक्षांश व 84°18'05" पूर्वी देशांतर)	100x100x1 मी० छेर नदी	लाल मृद्भाण्ड के तसला, परई, घड़ा, परई, नाद, कोखदार हॉडी (कैरिनेटेड पात्र)			✓	✓	✓	
4.	बराढ़ी (25°28'50" उत्तरी अक्षांश व 84°20'11" पूर्वी देशांतर)	400x300x3 मी० छेर नदी	मृद्भाण्ड परम्परा के कोखदार हॉडी, घड़ा, परई पात्र	हस्तनिर्मित लाल मृग चक्राभ			✓	✓	
5.	बगेन (25°30'11" उत्तरी अक्षांश व 84°17'31" पूर्वी देशांतर)	200x150x2 मी० बगेन नहर	मृद्भाण्ड परम्परा के द्रोणी, घड़ा, परई पात्र				✓	✓	
6.	ब्रह्मपुर (25°35'47.32" उत्तरी अक्षांश व 84°18'8.29" पूर्वी देशांतर)	धर्मावती नदी		शिवलिंग, नन्दी, भैरव एवं स्थानक विश्णु की प्रतिमाओं					✓
7.	राजपुर (25°33'58" उत्तरी अक्षांश व 84°16'29" पूर्वी देशांतर)	400x300x4 मी० छेर नदी	पात्र प्रकारों में संग्रह पात्र, परई, तसला, टोंटीदार पात्र, द्रोणी, घड़ा,				✓	✓	
8.	रहथुहा (25°35'02" उत्तरी अक्षांश व 84°18'06" पूर्वी देशांतर)	300x200x3 मी० धर्मावती नदी	लाल मृद्भाण्ड के परई, घड़ा				✓	✓	

9.	सपही (25°37'26" उत्तरी अक्षांश व 84°17'42" पूर्वी देशांतर)	200x200 मी० धर्मावती नदी	घड़ा, तसला, और द्रोणी के टुकड़े					✓	
10.	कैथीडीह (25°33'58" उत्तरी अक्षांश व 84°16'29" पूर्वी देशांतर)	100x100x5 मी० छेर नदी	लाल मृद्भाण्ड के तसला, घड़ा, परई	खण्डित पशु मृण्मूर्ति				✓	✓

- बक्सर परिक्षेत्र में स्थित प्राचीन टीलों को स्थानीय ग्रामीणों द्वारा सामान्यतया डीह और गढ़ कहा जाता है। अतः उपरोक्त आधारों पर प्राचीन स्थलों की पहचान आसानी से की जा सकती है।
- इस जिले में ब्रह्मपुर प्रखण्ड के सर्वेक्षण से फलस्वरूप 10 नये पुरास्थल प्रकाश में आए हैं। उपरोक्त पुरास्थलों में अधिकांशतः बहुसंस्कृति से सम्बद्ध है एवं पुरास्थल धर्मावती, छेर, एवं नहरों के किनारे अवस्थित है। सर्वेक्षण से यह तथ्य उद्घाटित हुआ है कि अधिक संख्या में गुप्त कालीन एवं पूर्व मध्यकालीन पुरास्थल प्रकाश में आए हैं।
- भू-आकृति विज्ञान के अध्ययन से यह भी ज्ञात हुआ है कि इस क्षेत्र के अधिकांश गाँव प्राचीन अधिवास स्थलों की भाँति नदी, तालाब एवं नहरों के किनारे स्थित है। सर्वेक्षण से पुरास्थलों से प्राप्त भौतिक अवशेषों के आधार पर इसकी प्राचीनता उत्तरी कृष्ण मार्जित मृद्भाण्ड संस्कृति तक स्थापित की जा सकती है। महत्त्वपूर्ण तथ्य यह है कि उत्तरी कृष्ण मार्जित मृद्भाण्ड सांस्कृतिक चरण से पूर्वमध्यकाल तक उत्तरोत्तर पुरास्थलों की संख्या में अभिवृद्धि दिखाई पड़ती है, जो इस क्षेत्र में उत्तरी कृष्ण मार्जित मृद्भाण्ड सांस्कृतिक काल से निरन्तर जनसंख्या में बढ़ोत्तरी का परिचायक है। यह जनसंख्या वृद्धि या तो पर्यावरण अनुकूल के कारण अथवा विभिन्न तकनीकों के विकास के कारण हुई होगी।
- इस क्षेत्र के अधिकांश पुरास्थलों को ग्रामीणों द्वारा कृषि योग्य भूमि में परिवर्तित कर दिया गया है एवं किया भी जा रहा है, जिससे ये महत्त्वपूर्ण पुरास्थल नष्ट होने के कगार पर है। अतः शीघ्र ही शीघ्र इन पुरास्थलों के प्रलेखन की आवश्यकता है नहीं तो भविष्य में यह पहचान कर पाना कठिन होगा कि यहाँ कभी अतिमहत्त्वपूर्ण पुरास्थल स्थित थे।

उपरोक्त पुरावशेषों के आधार पर ब्रह्मपुर प्रखण्ड की प्राचीनता उत्तरी कृष्ण मार्जित मृद्भाण्ड परम्परा से लेकर मध्यकाल तक स्थापित की जा सकती है। उल्लेखनीय तथ्य यह है कि इस परिक्षेत्र में प्राचीन सांस्कृतियों की निरन्तरता भी दृष्टिगत् होती है। ब्रह्मपुर प्रखण्ड के पुरातात्विक सर्वेक्षण से यह तथ्य भी उद्घाटित होता है कि इस परिक्षेत्र में कुषाण काल से लेकर पूर्वमध्यकाल तक के अधिवासों की संख्या में वृद्धि दिखायी पड़ती है, जो गुप्त काल में इस क्षेत्र में जनसंख्या

वृद्धि के सूचक हैं। इसके अतिरिक्त सर्वेक्षण के फलस्वरूप पूर्वमध्यकाल और मध्यकाल की प्रस्तर प्रतिमाएँ प्राप्त हुयी हैं। ये सभी प्रतिमाएँ बलुए प्रस्तर, एवं काले प्रस्तर द्वारा निर्मित है। चूँकि यह क्षेत्र प्राचीन काशी-मगध के व्यापारिक मार्ग पर स्थित था। अतः यह क्षेत्र प्राचीन काल में सम्पन्न रहा होगा। यह क्षेत्र वैष्णव, भागवत व शाक्त सम्प्रदाय से सम्बद्ध था, जिसकी पुष्टि पूर्वमध्यकाल और मध्यकाल में इन क्षेत्रों से प्राप्त धार्मिक प्रतिमाओं से होती हैं।

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## स्थानीय सिक्कों के आधार पर धार्मिक इतिहास

डॉ० दुष्यंत कुमार शाह\*  
कीर्ति गौड़\*\*

### सारांशिका

स्थानीय मुद्राओं से तात्पर्य उन सिक्कों से है जो एक क्षेत्र विशेष तक ही सीमित रहे कालांतर में उस निश्चित भूभाग से विशिष्ट लगाव के साथ इनकी गतिशीलता समाप्त हुई तथा ये उस भौगोलिक क्षेत्र को अपना स्थायी निवास बनाने में सफल हुये। ये प्रवृत्ति एक विशेष कालखंड मौर्योत्तर काल (200 ई०पू०-400 ई०) में प्रबल होते हुए दिखलाई पड़ती है।

धार्मिक इतिहास पर मुद्राओं के आधार पर यद्यपि प्रत्यक्षत प्रकाश पड़ने की सम्भावना कम ही रहती है परन्तु भारतीय जनजीवन में धर्म की विशेष महत्ता ले रही है अतः इस आधार पर ऐसा अनुमान किया जा सकता है कि स्वयं के हित कामना के लिये व अपने सिक्कों पर ईष्ट देवी-देवता के प्रति श्रद्धा प्रकट करने हेतु इनका अंकन सिक्कों पर प्रारम्भ हुआ व कालांतर में वह उस जनपद के राजकीय चिन्ह रूप में अंगीकृत किया जाने लगा।

स्थानीय सिक्कों पर अंकित विभिन्न देवी-देवताओं के अंकन व विविध प्रकार के धार्मिक अभिप्रायों के आधार पर इन राज्यों द्वारा अनुपालित धर्म की जानकारी प्राप्त की जा सकती है।

**कुंजी शब्द:** आहतमुद्रा, पांचाल, कौशांबी, देवालय, धार्मिक प्रतीक ।

मौर्यों व शुंगों के पतन के बाद अयोध्या, कौशांबी, मथुरा और बरेली जिले के अहिच्छत्र में स्वतंत्र जागीरें चमक उठीं। मौर्य साम्राज्य ने जिस कबीलाई राज्यों को हड़प लिया था वे पुनः अपने अस्तित्व की खोज में जुटे। मथुरा केद-पूर्व अर्जुनायनों ने लगभग शुंगकाल के पतन के समय अपनी स्वतंत्र सत्ता स्थापित कर ली। मुद्रा विषयक पमाणों से भी ज्ञात होता है कि पंजाब, उत्तराखण्ड, हरियाणा में कई स्थानीय व कबीलाई जनपद खड़े हो गये। जहाँ औदुम्बरों ने रावी और व्यास की द्रोणियों पर अधिकार जमा लिया। वहीं शिवालिक पहाड़ियों की तलहटी में कुण्ड

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\*\* शोध छात्रा, प्रा०भा०इ० संस्कृति एवं पुरातत्त्व विभाग, काशी हिन्दू विश्वविद्यालय, वाराणसी



राज्य व्यास व यमुना की उपत्यकाओं में निवास कर रहा था। रावी और सतलज का क्षेत्र जहाँ पंजाब का वर्तमान जालंधर क्षेत्र है, यही त्रिगेर्त ने स्वयं को स्थापित किया। वहीं दूसरी ओर रोहतक, हिसार, करनाल, अंबाला, लुधियाना के क्षेत्र में पेशेवर योद्धा के रूप में यौधेय थे। यौधेयों के पश्चिम दिशा में अगस्त्यों अथवा अग्र कबीलाई जनपद का निवास था।

स्थानीय मुद्राओं से ज्ञात होता है कि कुछ जनपद जो अपने भौगोलिक क्षेत्र तक ही सीमित रहे तथा भारतीय इतिहास के पृष्ठों में अपने स्थान को वृहद् बना सकने में असक्षम थे परंतु छोटे-स्तर पर ही सही अपने अस्तित्व को किसी भी प्रकार से बनाये हुये थे। जनपदीय सिक्के के नामकरण के सन्दर्भ में बहुत से पक्ष विपक्ष देखने को मिलते हैं। जिनमें 'एलन महोदय' ने मौयौत्तर काल (200 ई.पू. से 400 ई.) के सभी सिक्कों को जनजातीय सिक्कों के अन्तर्गत व्याख्यायित किया है। किन्तु के.डी. वाजपेयी ने इन्हें स्थानीय सिक्के कहते हुये इनके लिये जनपद शब्द का प्रयोग किया। जयप्रकाश सिंह ने भी इन्हें स्थानीय सिक्के माना और इस वर्ग के सिक्के प्रायः तक्षशिला एरण, उज्जैन मथुरा, कन्नौज, कौशाम्बी, पांचाल तथा आयोध्या स प्राप्त हुये हैं इस वर्ग को बनाने के पीछे इन्होंने यह तर्क दिया कि इसमें प्रथम वर्ग में राजतन्त्रीय और अराजतन्त्रीय दो प्रकार के जनपद सम्मिलित है वही दूसरे वर्ग में यौधेय औदुम्बर, अर्जुनायन, मालव एवं अन्य जनजाति ये मुद्राओं को रखा साथ ही प्राचीन भारतीय मुद्रा पणाली को अलग स्वतन्त्र समूह या वर्ग में रखा है अतः इस पूरे समूह की मुद्राओं के लिये क्षेत्रीय या स्थानीय सिक्को की शब्दावली का प्रयोग किया गया।

इस वर्गीकरण के सन्दर्भ में ही कुछ विद्वान 'जनजातीय' व स्थानीय सिक्कों के प्रयोग को समानार्थी ना मानते हुये इन दोनों शब्दों को अलग-अलग मानते हैं विसेन्ट स्मिथ, बेला लाहिडी, निसार अहमद सरीखे विद्वान इनका वर्गीकरण इस प्रकार करते हैं स्थानीय सिक्कों के अन्तर्गत अयोध्या, अवन्ति, कोसल और तक्षशिला है जबकि जनजातीय सिक्कों में अर्जुनायन, औदुम्बर, कुण्डि, मालव, नाग, राजन्य एवं यौधेय को रखा है।

जनजातीय सिक्कों के अन्तर्गत मुख्यतः बारह जनजातियों के सिक्के ज्ञात हुये हैं इनमें आग्नेय, अर्जुनायन, औदुम्बर, कुलुत, कुण्डि, मालव, राजन्य, शिवि त्रिर्गत, वृष्णि, वेमक तथा यौधेय मुख्य हैं। जनपद शब्द दो शब्दों 'जन' तथा 'पद' के संयोग से बना ह। जिसका शाब्दिक अर्थ

‘जन का आश्रय स्थान’ वैदिक काल मानव विकास के उस चरण का द्योतक है जब मानव समूह किसी निश्चित भूभाग के प्रति विशिष्ट लगाव के बिना चल समुदायों में विचरण करते थे कालान्तर में यह जन कई परिवारों में विभक्त हो गये उनकी गतिशीलता समाप्त हो गई, उनमें सम्बन्धित भू-भाग के प्रति मातृवत प्रेम हो गया और अन्ततः यह निश्चित भूभाग को उन्होंने अपना स्थायी निवास स्थान बना लिया। इस प्रकार जनपद किसी जन द्वारा वह निर्धारित भूभाग जो वेदकालीन भारतीयों के विकास की उस अवस्था का परिचायक है जब वे क्षेत्रीय दृष्टि से प्रबुद्ध हुये और उन्होंने प्राथमिक स्तर पर छोटे-छोटे क्षेत्रीय राज्यों की स्थापना की जिन्हें जनपद राज्य कहा जाने लगा। स्थानीय इकाइयों का विभाजन दो वर्ग में हुआ। नगर राज्य और जनपद पुनः प्रशासनिक व्यवस्था के आधार पर जनपदों को दो वर्गों में रखा गया जिसमें प्रथम वर्ग के अंतर्गत गणतंत्रीय और राजतंत्रीय जिसमें प्रायः राजतंत्रीय जनपदों की संख्या अधिक होने से इन्हें ही जनपद कहा गया जनपदों में प्रमुख थे पांचाल मथुरा कौशाम्बी तथा अयोध्या और गणराज्यों में प्रमुख थे औदुम्बर, यौधेय, कृष्णिन्द, मालव, आजनायन आदि। इनके विशेष प्रकार के सिक्के प्राप्त हुये हैं। इनमें प्रथम शताब्दी ई०पू० में औदुम्बर कृष्णिन्द, मालव और कुलूत का नाम ज्ञात होता है। द्वितीय शती ई०पू० में आर्जुनायन का ज्ञान होता है। चौथी शताब्दी के कालखंड में रखी गयी। समुद्रगुप्त की प्रयाग प्रशस्ति से यौधेय अर्जुनायन और मालव का नाम विदित होता है। जिनमें अधिकांश का निवास स्थान पंजाब था जहाँ विदेशी आक्रमणकारियों के प्रभाव के कारण ये राजस्थान की ओर चले आये नगर राज्यों में वाराणसी, उज्जैनी, महिष्मती, त्रिपुरी का नाम लिया जा सकता है। पर ये शीघ्र ही साम्राज्यवादी हिंसा के शिकार होकर अपना अस्तित्व खोकर साम्राज्यों में मिला लिये गये।

इस सुदीर्घ शासन परम्परा में विभिन्न जनपदों के विभिन्न शासकों ने अपनी-अपनी मुद्रायें भी प्रचलित की। इन जनपदों में मुख्यतया कौशाम्बी, तक्षशिला, मथुरा, कोशल, पांचाल, एरण उज्जैन, विदिशा तथा महिष्मती इत्यादि का नाम उल्लेखनीय है। उत्तर प्रदेश, पंजाब, राजस्थान, मध्य प्रदेश आदि से जनपदीय मुद्रायें प्राप्त हुई हैं जो मुख्यतया ताम्र निर्मित हैं रजत मुद्रायें बहुत कम संख्या में उपलब्ध हैं। इस संदर्भ में उल्लेखनीय है कि इन भारतीय सिक्कों पर लेख भी मिलने लगे यद्यपि लेखरहित मुद्रायें भी प्राप्त हुई हैं जिन पर अंकित प्रतीक चिन्ह आहत मुद्राओं

के प्रतीक चिन्ह से समानता रखते हैं ऐसी मुद्रायें वर्गाकार एवं आयताकार स्वरूपों में मिली हैं। कुछ सिक्कों पर पाँच तो कुछ पर चार प्रतीक चिन्ह का अंकन प्राप्त होता है। पी०एल० गुप्ता महोदय मानते हैं कि ऐसी मुद्राओं का प्रचलन पुष्यमित्र शुंग ने किया होगा। विदिशा से भी इस प्रकार की मुद्रायें प्राप्त हुई हैं। आहत मुद्राओं के अनुकरण पर बनायी गयी कुछ ताम्र मुद्रायें मथुरा के सोंख तथा मौर्यकालीन रजत आहत मुद्राओं के प्रतीक चिन्हों की पुनरावृत्ति करने वाली कतिपय ताम्र मुद्राएँ राजस्थान के 'नागरी' नामक स्थान से प्राप्त हुई हैं। गांधार से प्राप्त कुछ पूर्ववर्ती सिक्कों पर आहत मुद्राओं के सामान चिन्ह मिलते हैं परन्तु उत्तरवर्ती सिक्कों पर पशु-आकृतियों के अंकन की अधिकता देखने को मिलती है। कौशाम्बी से मिले सिक्कों के अग्रभाग पर सुमेरु पर्वत, वृक्ष आदि चिन्ह प्राप्त होते हैं। परमेश्वरी लाल गुप्त महोदय ने लेखों के आधार पर लेखयुक्त मुद्राओं का वर्गीकरण करते हुये नागर सिक्के, जनपदीय सिक्के, वैयक्तिक सिक्कों के रूप में विभक्त किया है। नागर-नामांकित यह नागर सिक्के गांधार, वाराणसी, कौशाम्बी, श्रावस्ती, राजस्थान, त्रिपुरी, विदिशा, महिष्मती से मिले हैं।

कालांतर में सिक्कों की निर्माण विधि में भी अंतर आया। अब ठप्पे के साथ-साथ साँचे में ढाल कर सिक्के तैयार किये जाने लगे। साँचे का प्रयोग मौर्यकालीन था परन्तु ठप्पे का प्रयोग करके कुछ नये रीति से पशुओं का प्रदर्शन प्रारम्भ हुआ जैसे कूबड़दार बैल, दो हाथियों द्वारा अभिषिक्त लक्ष्मी आदि। विभिन्न मानव आकृतियाँ जैसे तीन सिर का मानव सम्भवतः शिव तथा स्त्री आकृतियाँ भी बनने लगी थी। यहाँ यह बात विशेष उल्लेखनीय है कुछ लेखयुक्त सिक्कों पर जिस भू-भाग पर खरोष्ठी प्रचलित थी वहाँ खरोष्ठी लिपि में लेख भी उत्कीर्ण है। कुछ लेखयुक्त सिक्कों के पुरोभाग पर पहले देवता का नाम फिर राजा का नाम राजा तथा महाराजा उपाधि सहित अंकित है और पृष्ठभाग पर उस नगर राज्य का नाम अंकित है जहाँ से ये निर्गत किये गए थे। देवता के नाम से अंकित सिक्कों के कारण सम्भवतः वहाँ देवता के नाम पर शासक शासन करते थे। तभी औदुम्बर, कुण्ड यौधेय के सिक्कों पर महादेव छमेश्वर (शिव), ब्राह्मणदेव (कार्तिकेय) का उल्लेख है। प्रत्येक जनपद के सिक्कों का अपना अलग तौल होता था कुछ जनपद एक से अधिक तौल के सिक्के बनाते थे क्योंकि उन्होंने सिक्कों के छोटे भागों को बनाने में उसी अनुपात में कम भार का प्रयोग किया था।

यहाँ एक बात विशेष रूप से ध्यान देने योग्य है कि आयोध्या के सिक्कों पर दो विशिष्ट चिन्ह जिन्हें अयोध्य हुक कहा जाता था का प्रयोग किया गया था जो यौधेय सिक्कों पर भी मिलता है कहीं-कहीं अयोध्या चिन्ह अलग रूप से भी प्राप्त होता है। कुलुत के सिक्कों पर भी इस प्रकार का अंकन प्राप्त हुआ है कुछ चिन्ह विचित्र आकार के बनने लगे जिनका अभिप्राय भलीभाँति ज्ञात ना होने की वजह से इन्हें अस्पष्ट कहना उचित होगा। यौधेय सिक्कों पर स्वस्तिक चिन्ह बनाये जाते थे कालांतर में कई प्रकार के चिन्हों को मिलाकर आकृतियाँ बनाई जाने लगी उदाहरणार्थ— मेरु, ध्वज, गोला और नन्दिपद को एक साथ जोड़ दिया गया।

इनमें अधिकांशतः चिन्हों को देखने से ज्ञात होता है कि यह तत्कालीन जनसामान्य की आस्था के रूप में भी उत्कीर्ण करवाये गये थे इनमें प्रमुख रूप से त्रिशूल, डमरु, स्वस्तिक, ध्वज लगा पर्वत, नन्दिपद, वृषभ, मत्स्य, वेदिका में वृक्ष आदि ये चिन्ह हिन्दू धर्म में भी उतने ही पूजनीय व प्रार्थनीय है जितने बौद्ध धर्म में उदाहरणस्वरूप— त्रिरत्न, प्राकार में या पर्वत पर बना वृक्ष (बोधिवृक्ष) का बोधक है जैसा बौद्धकला में दृष्टिगोचर होता है। इन्द्रधनुष युक्त मन्दिर बौद्ध स्तूप का स्मरण करवाता है साथ ही साथ कुछ चिन्ह सामाजिक जीवन की भी झांकी प्रस्तुत करते हैं जैसे— तीर—धनुष से शिकार, घर की बनावट आदि। स्थानीय सिक्कों से व्यापारिक केन्द्रों तथा उस समय के महत्वपूर्ण स्थानों का भी ज्ञान होता है कुछ सिक्कों पर 'नेगम' तथा 'गाधिकानम्' लिखा प्राप्त होता है यहाँ पर एक महत्वपूर्ण बिन्दु यह भी है धातु के अतिरिक्त मिट्टी के भी सिक्के मिलते थे जो वाराणसी के राजघाट के उत्खनन से प्राप्त हुये हैं साथ ही अयोध्या के राजाओं के मिट्टी से निर्मित सिक्के भी प्राप्त हुये हैं साथ ही साथ काँसे का प्रयोग कौशाम्बी में निर्मित सिक्कों के लिये किया गया था।

इसके साथ ही इन सिक्कों की निर्माण, विधि, चित्रांकन, में विदेशियों के कुछ तत्व दिखलाई देने लगे थे यथा—विदेशी भारतीय बख्त्री शासकों के सिक्कों पर देवांकन, उनका भार और उनके साँचे का प्रयोग अब यहाँ के सिक्कों के निर्माण में भी अपनाया जाने लगा तथा दूसरे वर्ग में कुषाण सिक्कों का प्रभाव यौधेय जनपद के सिक्कों प्रकारों उपप्रकारों कौशल में भी दृष्टिगोचर होता है इनके राजाओं के नामांकन की शैली कुषाणों के अनुरूप प्रयोग की गई। औदुम्बर शासक घरघोष के सिक्कों पर विश्वामित्र की प्रतिमा हेलेनेस्टिक शैली में अंकित है।

पुष्कलावती (पेशावर) से प्राप्त एक स्वर्ण सिक्के के पृष्ठभाग पर यूनानी लिपि में 'तौरोस' तथा खरोष्ठी में 'वृषभ' लिखा है जो भारत में वैदेशीक भाषी सिक्कों के निर्माण की ओर ध्यान आकृषित करता है। साथ इसकी बनावट कौशल के आधार पर यह हेलेनेस्टिक प्रभाव के अनुसार तैयार किये हुए प्रतीत होते हैं।

उपरोक्त तथ्यों को आधार बनाकर यदि हम प्रत्येक स्थानीय मुद्राओं का वर्णन करे तो निम्नलिखित तथ्य दृष्टिगोचर होते हैं जो इस प्रकार हैं—

### कौशाम्बी के सिक्के :-

कौशाम्बी प्राचीन 'वत्स' जनपद की राजधानी थी। उत्तर प्रदेश के इलाहाबाद जिले में यमुना नदी के किनारे स्थित आधुनिक कोसम ही प्राचीन काल में कौशाम्बी के नाम से विख्यात थी। यह एक सामरिक, केन्द्र होने के साथ ही एक प्रमुख व्यापारिक केन्द्र भी था जिसकी पुष्टि यहाँ से प्राप्त मुद्राओं से होती है इस जनपद से प्राप्त सिक्कों को चार प्रकारों में विभाजित किया गया है—

1. लेखरहित व लेखयुक्त ढलुआँ सिक्के
2. ठप्पा निर्मित प्रारम्भिक सिक्के
3. धनदेव के सिक्के
4. मद्य नामधारी शासकों के सिक्के

प्रथम वर्ग के सिक्के गोलाकार हैं और ढालकर बनाये गये ताम्रनिर्मित हैं। इसके अग्रभाग पर हस्ति और पृष्ठभाग में वेदिका में वृक्ष का अंकन है। साथ ही कौशाम्बी का विभिन्न रूपों यथा 'कसविम' अथवा 'कोसविय' शब्द भी अंकित है। सुदेव वृहस्पतिमित्र जैसे नाम भी परिलक्षित होते हैं।

**ठप्पा निर्मित प्रारम्भिक सिक्के:-** इस प्रकार के सिक्को में 'मित्र' नामांत शासकों के सिक्कों की संख्या अधिक है जिसमें अश्वघोष, सूर्यमित्र, ज्येष्ठमित्र, ईश्वरमित्र, प्रजापतिमित्र, राजमित्र, देवमित्र, सुरमित्र, शतमित्र, अग्निमित्र, शिवघोष आदि हैं जो सिक्के के अग्रभाग पर अंकित हैं। ईश्वरमित्र ने 'राजन' उपाधि धारण की वृहस्पतिमित्र के सिक्कों पर छोटी आकृति है और 'वहसतिमित' लेख प्राप्त होता है। अश्वघोष के सिक्कों पर सिंह, ज्येष्ठमित्र और ज्येष्ठभूति के सिक्कों पर पुरुष का

अंकन दिखायी देता है इसके साथ अन्य अंकनों में उज्जैन चिन्ह, नन्दिपद, जयध्वज की विभिन्न रेखायें उल्लेखनीय है।

धनदेव के सिक्कों पर प्रमुख रूप से वृषभ और वेदिका में वृक्ष का अंकन दृष्टि गोचर होता है। यह चिन्ह अन्य चिन्हित मुद्राओं की संख्या में तुलनात्मक रूप से अंकित है इससे विद्वान यह अनुमान लगाते हैं कि यह दीर्घ कालिक शासक की ओर संकेत करती है। महानाम धारी शासको के सिक्के, मुहरें, अभिलेखों से प्राप्त साक्ष्यों के आधार पर इन मघनामधारी शासकों की तिथि 217 ई० निर्धारित की जा सकती है। जिन्हें पुराणों में कोसल प्रान्त के शासक मेघ के रूप में उल्लिखित किया गया है इन सिक्कों पर प्रमुख रूप से वृक्ष का अंकन दिखाई देता है इनमें शिवमघ, भद्रमघ, भीमवर्मा, सतमघ, विजयमघ, पोथसिरि आदि नाम स्पष्ट रूप से पढ़े जा सकते हैं जबकि पुरमघ यममघ, शंकुमघ, जयमघ आदि नामांकन अस्पष्ट व अपठनीय है। इतिहासकारों का विचार है कि इस वंश का प्रथम शासक वंगघोष था जिसके सिक्कों पर वृषभ या वत्स की आकृति अंकित है इसी आधार पर इस वंश का नाम वत्स पड़ा अनेक विचारक पुष्यमित्र शुंग के मित्र नामधारी शासकों को इसी वंश का मानते हैं जिन्होंने प्रथम शताब्दी ई० में शासन तथा मित्रवंशियों के पश्चात् लगभग पंचास वर्षों तक कुषाण शासकों ने इस क्षेत्र में शासक किया और तब मघ नामधारी शासक सता में आये समुद्रगुप्त ने मघों के परास्त कर कौशाम्बी पर अपना अधिकार कर दिया।

**अयोध्या के सिक्के** :- अयोध्या उत्तर प्रदेश के फैजाबाद जिले में स्थित है। यहाँ से प्राप्त मुद्राओं को तीन वर्गों में विभाजित किया गया है :-

**प्रथम वर्ग** :- प्रथम वर्ग की मुद्राओं को ढाल कर बनाया गया था इसको तीन उप प्रकारों में भी विभाजित किया गया है।

जिसमें प्रथम उप प्रकार के अग्रभाग पर पुरुष की आकृति है और पृष्ठभाग चित्र रहित है। दूसरे उपकार में अग्रभाग पर स्वस्तिक और पृष्ठभाग में अस्पष्ट चिन्ह अंकित है। तीसरे उपप्रकार के अग्रभाग पर मत्स्य के ऊपर स्वस्तिक का अंकन है जबकि पृष्ठभाग अस्पष्ट है।

द्वितीय वर्ग की मुद्राएँ ढलुवाँ और वर्गाकार है इन सिक्कों के अग्रभाग पर अधिकांशतया

वृषभ की आकृति अंकित रहती है, पृष्ठभाग पर सूर्य, वेदिका में वृक्ष, त्रिशूल, स्वस्तिक, उज्जैन चिन्हों का समूह अंकित है। लक्ष्मी खड़ी मुद्रा में और शिवदत्त के सिक्कों पर बैठी मुद्रा में प्रदर्शित है। (धनदेव, वायुदेव और विशाखदेव की मुद्रा में) धनदेव नामंत की तुलना अयोध्या अभिलेख में उल्लिखित पुण्यमित्र के छठे वंशज से की जाती है।

तृतीय वर्ग के सिक्के वृत्ताकार हैं और ठप्पे द्वारा बनाये गये हैं। इन सिक्कों के अग्रभाग पर वृषभ और पृष्ठभाग पर हंस, मुर्गा, मयूर, त्रिशूल नन्दी अथवा नन्दिपद का अंकन है। इन सिक्कों से प्राप्त राजाओं के नाम कुमुदसेन, संघमित्र, विजयमित्र, देवमित्र, सत्यमित्र, आयुमित्र हैं। जिसमें केवल कुमुदसेन ने 'रांजन' की उपाधि धारण की थी ऐसा मुद्राओं से ज्ञात हो पाया है। नरदत्त और शिवदत्त के सिक्कों की मथुरा से प्राप्ति इन दोनों जनपदों के मध्य व्यापारिक सम्बन्धों को प्रकट करती है ऐसा अनमान लगाया जाता है। अयोध्या के अधिसंख्य सिक्कों पर वृषभ की आकृति उत्कीर्ण है इसको आधार मानकर अधिकांश विद्वान मौर्यों के मयूर के समान अयोध्या के शासकों का राजचिन्ह बताते हैं।

**मथुरा के सिक्के** :- यमुना के उत्तरी तट पर स्थित मथुरा शूरसेन की राजधानी थी यहाँ से प्राप्त सिक्कों को दो वर्गों में रखा जा सकता है। प्रथम वर्ग में 'स्वदेशी' शासकों के सिक्के, दूसरे वर्ग में 'शक-क्षत्रपों के सिक्के'।

प्रथम वर्ग के सिक्कों में दत्त और मित्र नामांत वाले 'तेरह शासकों' के नाम ज्ञात हुये जिनमें प्रमुख रूप से ब्रह्ममित्र, दृढमित्र, गोमित, सतमित, सूर्यमित्र विष्णुमित्र आदि इन शासकों के सिक्कों के अग्रभाग पर दाहिने हाथ में कमलपुष्प लिये लक्ष्मी और कुछ अन्य चिन्ह का अंकन तथा पृष्ठभाग पर सवार सहित तीन हाथी हैं यह आकार में गोल और चौकोर है मित्र नामांत वाले शासकों के सिक्कों पर उज्जैन चिन्ह की अधिकांशतः होने के कारण मथुरा का राजचिन्ह माना है। दत्त नामांत वाले शासकों में पुरुषदत्त, भवदत्त, कामदत्त, रामदत्त, उतमदत्त आदि। इसमें पुरुषदत्त के सिक्के 'रांजन' उपाधि के साथ प्राप्त होते हैं।

श्रीराम गोयल महोदय के अनुसार मित्र नामांत वाले सिक्कों की विशेषता उज्जैन चिन्ह का अंकन था और दत्त नामांत वाले सिक्कों की ब्राह्मी अक्षर 'श' का अंकन/हगान, हगामश, शिवदत्त और शिवशेष के सिक्कों पर भी दिया गया था जिन्होंने मथुरा में शासन किया था। मथुरा के

सिक्कों पर 'वृक्ष' के समान अंकन है जो स्थानीय शासकों के साथ एक अन्य सिक्के पर भी प्राप्त हुआ है।

**पांचाल के सिक्के** :- जैसा की ज्ञातव्य है पांचाल छठी शताब्दी ई.पू. के षोडश महाजनपदों में से एक था। इसका क्षेत्र आधुनिक बरेली, बदायूँ, फर्रुखाबाद और समीपवर्ती प्रदेशों में फैला हुआ था। इसके अन्तर्गत गोरखपुर, बस्ती आदि जनपदों को सम्मिलित किया गया था इस पूरे क्षेत्र को गंगा नदी उत्तरी व दक्षिणी प्रदेशों में विभाजित करती थी जिसकी राजधानी क्रमशः अहिच्छत्र और काम्पिल्य थी। यहाँ से प्राप्त अधिकांश सिक्के वृत्ताकार हैं और ताम्रनिर्मित हैं कुछ मुद्रायें रजत लेपित अथवा मिश्रित धातु की हैं इसके अग्रभाग पर वर्ग के अन्दर तीन चिह्नों के साथ नीचे राजा का नाम अंकित है। पृष्ठभाग पर कोई देव या उस देवता के सम्बन्धित प्रतीकांकन है। पांचाल सिक्कों पर अधिकांशतः 'मित्र' नामांत वाले शासक हैं। शेष राजाओं के सिक्कों पर घोष, गुप्त, नन्दी, पाल और सेन नामांत हैं दोनों नामांत वाले शासकों के सिक्कों की विशेषताएँ समान ही हैं परन्तु यहाँ उल्लेखनीय है कि अग्निमित्र के सिक्कों पर दो स्तम्भों के बीच खड़े देवता का अंकन है। जिसके बाल अग्नि की पाँच ज्वालाओं के समान दिखायी दे रहे हैं। यहाँ से प्राप्त 'अच्यु' और नन्दी नामक सिक्कों की तुलना समुद्रगुप्त की प्रयाग प्रशस्ति में अंकित 'अच्युत' से कुछ विद्वानों को साम्यता बैठाने का प्रयास करते हुये देखा जा सकता है। पांचाल सिक्कों पर अंकित देवताओं के आधार पर इस क्षेत्र में शैव, वैष्णव सौर और मातृदेवी की उपासना का प्रभाव दिखलाई पड़ता है।

**राजस्थान के सिक्के** :- राजस्थान के रैड़ से प्राप्त सिक्कों के आकार में आयाताकार, वर्गाकार, गोल आकृति है जिस पर उज्जैन चिन्ह और सेनापति। वच्छघोष अंकित है इस स्थल के उत्खननकर्ता के.एन.0. पुरी ने 'सेनापति' शब्द को पुष्यमित्र शुंग से जोड़ने का प्रयास किया है। अन्य विद्वानों यथा— अग्रवाल महोदय ने इसे मालवो से और अल्तेकर महोदय ने यौधेयो और आर्जुनायनो से इस शब्द को जोड़ने का प्रयास किया है। रैड़ से चौदह मित्र नामांत वाले सिक्के प्राप्त हुये हैं। इनके अग्रभाग पर उज्जैन चिन्ह के साथ उदेहकी और सूर्यमितस लेख की प्राप्ति होती है। वही पृष्ठभाग पर हस्ति और वृषभ का अंकन प्राप्त होता है। अन्य सिक्कों पर उदेहकी के स्थान पर 'सुदवप' और ध्रुवमित्र नाम की प्राप्ति होती है।



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