



Food, Gender and Common Property Resources: An Understanding of Rural and Tribal Economy

Dr. Maneesha Pandey*

Professor of Political Science, Department of Political Science, Hindu College, University of Delhi.

ORCID ID: <https://orcid.org/0000-0003-1867-3978>

DOI: <https://doi.org/10.51244/IJRSI.2026.1308000257>

Received: 06 September 2026; Accepted: 11 September 2026; Published: 19 September 2026

ABSTRACT

Natural resources play a significant role in the life of rural Indians. Even in the tribal communities these resources are an essential need. All the natural resources, such as forests, rivers and ponds not only shape the cultural life of the rural and tribal people, but they are also important for their survival. Researchers have shown that in the coastal area the entire income of the fishermen community is based on rivers. There is a high demand for fish in the local, national, and international markets. Similarly, forest-based communities depend upon a range of minor forest products that include gum, herbs, nuts, and other items for subsistence as well as cultural needs. Not only men but also women of the local communities collect these products for domestic consumption as well as sell them in the local markets for income generation.

In this paper I analyse the relationship between natural resources and rural and tribal communities examined from a gendered lens. Further, this work brings into perspective the effects of involuntary displacement on the lives and natural resources of local communities impacted by mega development projects.

Keywords: Common property resources, gender, decision-making, food, NTFP

INTRODUCTION

Food, health, shelter, and livelihood of the rural and tribal population are integrated with the natural resources and their habitats. Their means of livelihood and economic activities predominantly center on agriculture, forestry, fisheries, and various natural resources, alongside tourism driven by picturesque landscapes and wildlife. This interplay not only creates income and business opportunities for local communities but also aids in attracting tourism, ultimately enhancing their access to food security and essential needs. Rural and tribal food systems are part of the socio-ecological context in which individuals and communities engage with and negotiate the layered dynamics which unfolds around natural resources for the procurement, production, and consumption of food. Depending on their geographical context, rural and tribal populations may engage with sea, wild, cultivated or constructed food environments, such as fields, markets etc. Natural ecosystems play a significant role in determining the nutritional and ecological characteristics of foods which in turn shape dietary choices and influence health outcomes of populations directly dependent on these.

Natural resources, especially land and water, play a vital role in the cultivation of crops and the rearing of livestock, thereby securing food supplies for rural communities. Water serves multiple critical functions, including drinking, sanitation, irrigation, and other domestic and agricultural needs. Additionally, forests and other natural materials offer essential resources for the construction of homes and various structures. These resources play a crucial role in supporting the livelihoods of rural populations and the tribal people by supplying food, traditional medicines, honey, gum karaya, condiments, and various other products that are either traded or utilised for further processing. These resources significantly enhance the subsistence

* Professor of Political Science. Department of Political Science, Hindu College, University of Delhi.

rural economies. Additionally, rural regions have the potential to serve as locations for the generation of renewable energy, including wind, solar, and bio-fuels.

METHODOLOGY

To establish a relationship between Common Property Resources (CPRs) and the rural population, this work seeks to examine the relationship analytically and through logical reasoning rather than through empirical research. It is hoped that the analysis presented here will provide a basis for future empirical research aimed at quantifying and establishing the extent of this relationship. Accordingly, the study relies on previously reported research and uses it as a source of secondary information. Since the objective of this work is to explore the connection between the degradation of Common Property Resources and - the gender inequality, migration, and food insecurity - a conceptual review is undertaken, drawing upon historical evidence and examining its continued relevance to the present situation. The work is intended to encourage further empirical research that may contribute to the conceptualization and formulation of appropriate policies in this regard.

Relation Between Common Property Resources and the Rural Population

The difference between natural resources and the Common Property Resources (CPRs) can be stated as overlapping to an extent. CPRs include an array of assets associated with tribal and rural areas such as village pastures, grazing areas, community forests owned by Panchayats, both protected and unclassified government forests and village forests, wastelands, watershed drainage, ponds, tanks, rivers, streams, water reservoirs, canals, and irrigation channels. Historically, prior to British rule, substantial natural resources of India were freely accessible to the rural population, with local communities managing these resources. Over time, however, the expansion of the State control over these resources led to the decline of community management systems, resulting in a significant reduction of CPRs available to villagers. In this respect, Shiva (2019) argues for biodiversity as a public good and critiques the enclosure of the commons through the restrictive regimes of globalization and state power. Biodiversity (including seeds, medicinal plants, and indigenous crops) she asserts, especially in agrarian and tribal society is part of traditional knowledge systems and community heritage¹.

In contemporary rural India, villagers have legal rights to access only certain specific categories of land, such as 'pasture and grazing lands' and 'village forests,' which are managed by the villagers or village Panchayat. All other types of land that are not privately owned, including barren and uncultivable land, land used for non-agricultural purposes, and forests, are under the control of the State. However, the rural population, especially the less fortunate, relies extensively on the goods and services that these land categories provide. Traditionally, various forms of community management systems for common property resources (CPRs) and forest land were prevalent in numerous regions of the country until the late 19th century. A significant portion of the country's natural resources were regarded as common property, allowing the rural populations to access a diverse array of essential resources without restriction. However, the onset of State control over these common resources, initiated by the establishment of "reserved" and "protected" forests in the late 19th century, primarily aimed at legally restricting villagers' access to these resources. Consequently, the community management systems began to deteriorate and are presently nearly nonexistent.²

The CPRs are integral to the rural economy, providing significant benefits to the local populace in various ways. The fuel woods derived from these resources are essential for cooking and heating needs. Furthermore, grass, leaves, and shrubs are utilised as fodder for animals, while bamboo, small timber, and palm leaves are used in construction. An assortment of fruits, vegetables, and fish is also available, particularly during lean periods. Additionally, CPRs contribute substantially to private-property farming and household enterprises by offering irrigation water, mulch, and manure for agricultural practices, as well as raw materials and community grazing pastures. Literature shows that these resources hold particular importance for the individuals and groups that rely on them for their livelihoods.



As Agarwal (1994) observes, particularly for women - who are often primary users and stewards of CPRs - control over or free access to land and resources is fundamental to the food security and autonomy of these communities. In rural South Asian context her work is foundational for understanding the intersections of land, livelihood, gender, and ecological justice especially for women and tribal population.³

Since the commencement of economic planning in the 1950s, the Government has implemented various initiatives aimed at assisting those living in poverty. Public policies targeting the rural poor and common property can be classified into several main categories such as asset redistribution, productivity enhancement (including forest areas), formal management frameworks, and biomass production initiatives.

In the arid regions of India, CPRs encompass village pastures, community forests, wastelands, shared threshing grounds, refuse sites, watershed drainage systems, village baoris, ponds, tanks, rivers, rivulets, wetlands, riverbeds, community-conserved areas, protected zones, Dhaam or Dhooni, cultivable wastelands, and both barren and uncultivable lands.⁴ Table 1 shows the CPRs benefits to tribal and village economies in dry regions of India that range from food, income, employment, and ecological benefits.⁵

Table 1: Contribution of common property resources to village economies in dry regions of India

Contributions	Common property resources					
	community forest	pasture/wasteland	pond/tank	river/rivulet	Watershed drainage/river banks	river/tank beds
Physical products						
Food, fibre items	✓		✓	✓		
Fodder, fuel, timber, etc.	✓	✓	✓		✓	✓
Water				✓	✓	
Manure, silt, space	✓	✓	✓			✓
Income and employment benefits						
Off-season activities	✓				✓	✓
Drought period sustenance	✓	✓				✓
Additional crop activities			✓	✓		✓
Additional animals	✓	✓				
Petty trading and handicrafts	✓					✓
Broader social and ecological benefits						
Resource conservation	✓	✓				
Drainage and recharge of groundwater			✓	✓	✓	
Sustainability of farming systems	✓	✓	✓		✓	✓
Renewable resource supply	✓	✓	✓			
Better microclimate and environment	✓	✓		✓	✓	

Source: Jodha, N.S. (1994). Page 6.

Today, it is generally acknowledged that CPRs remain crucial to the economic and social fabric of rural life and the food security to the rural population largely depends on the CPRs.

Food security, gender and CPRs

Food security is defined as a condition where all individuals, at all times, have physical, social, and

economic access to adequate, safe, and nutritious food that meets their dietary needs and preferences for a healthy and active lifestyle.⁶ Over the past two decades, India has experienced remarkable growth and transformation but certain public health indicators have not advanced at the same rate. Food insecurity stands out as a critical issue, with India having the highest number of individuals affected by hunger and food scarcity. While substantial research has focused on the relationship between crop yields, policy initiatives, and food production in addressing food insecurity in India, there is a significant lack of investigation into the social and cultural factors influencing food insecurity, particularly regarding the role of women.

The understanding of food security has significantly changed over recent decades. The right to food is recognised in Article 25 of the Universal Declaration of Human Rights (UDHR), adopted by 58 Member States of the United Nations (UN) in 1948. This article emphasises the right to a sufficient standard of living, which includes food access, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.⁷ Additionally, Article 11(2) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) also encompasses the right to food and affirm that the State shall take steps to "improve measures of production, conservation and distribution of food by making full use of technical and scientific knowledge and by developing or reforming agrarian systems".⁸ Despite the importance of these documents in acknowledging the right to food, none provides a definitive explanation of what this right entails or the methods by which food security can be achieved, even though they have been ratified by nearly all UN Member States.

It is important to distinguish the Right to Food from the concepts of Food Security and Food Sovereignty, as they are not synonymous despite some commonalities. The Food and Agriculture Organization (FAO) describes food security as a situation where every person has consistent physical, social, and economic access to enough safe and nutritious food that fulfills their dietary needs and preferences for a healthy and active life. This state is a prerequisite for fully exercising the right to food. Nevertheless, Food Security is not a legal framework and does not impose responsibilities or grant rights to any parties involved. The concept of Food Sovereignty is a developing idea that allows communities to determine their own food systems and production models, such as those related to agriculture and fisheries. It empowers them to choose their level of self-sufficiency, protect local food production, and regulate trade to fulfill sustainable development aims. Food Sovereignty is proposed as a framework that supports alternative agricultural practices and trade policies that uphold people's rights to food and promote safe, healthy, and ecologically sound food production.

Although some countries like Nepal and Ecuador recognise the Right to Food sovereignty in their laws, an international consensus on this issue is yet to be established. The Right to Food is a human right enshrined in international law, which grants individuals the right to sufficient food and the resources required for the sustainable realization of food security. This right creates legal obligations for States to combat hunger and malnutrition, ensuring that food security is achieved for all. Moreover, it also addresses the responsibilities of States that extend beyond their borders, including trade-related obligations.⁹

The year 2013 marked a pivotal change for India, transitioning from the famine conditions of 1943 to a legal framework that guarantees access to essential calories at a very low cost for more than 75 percent of the population, utilizing locally sourced food. The pressing issue now is to maintain this commitment to the right to food in the face of climate change, which is characterised by detrimental shifts in temperature, precipitation, and sea levels. The Indian experience illustrates that this challenge can be effectively tackled through approaches like emphasis on improving soil health and preserving high-quality agricultural land is essential; implementing rainwater harvesting, aquifer replenishment, and the integrated use of groundwater, surface water, treated wastewater, and seawater is crucial; Given that seawater accounts for 97% of the world's water resources, it is now feasible to develop seawater farming systems that utilise halophytes and aquaculture. Additionally, the dissemination of suitable technologies and necessary resources is vital. Providing low-interest credit along with effective group and individual insurance options is important. Ensuring reliable and profitable marketing channels is also necessary. Furthermore, empowering smallholder farmers through cooperatives, self-help groups, producer companies, and contract farming can



enhance their economic strength and scale. By integrating nutrition science with agriculture, we can address nutritional deficiencies through agricultural solutions.¹⁰

A significant number of studies examining food security have concentrated on the availability aspect, primarily through studies of crop yields, policy measures, and food production. The concept of food security is built upon four foundational pillars: availability, access, utilization, and sustainability. Availability pertains to the quantity of food accessible from personal production, market sources, or aid, and can be influenced by inadequate storage, adverse effects of climate change, and labor shortages during harvests. Barrett posits that while mere food availability does not guarantee access to or effective utilization of food for achieving food security, it remains a crucial prerequisite. The second pillar, access, encompasses a household's resources and purchasing power, along with the regulatory framework governing trade, subsidies, and conflict. Access represents the demand side of food security and highlights issues related to unforeseen shocks such as natural disasters, unemployment, health crises, or price increases. The third pillar, utilization, pertains to an individual's physiological capacity to effectively use the food consumed, taking into account factors such as the absence of parasites and diseases, the ability to absorb micronutrients, and the availability of suitable cooking facilities and skills. Lastly, sustainability relates to the stability of markets at both local and global levels. These pillars are structured hierarchically, where availability is essential but does not guarantee access; access is necessary but insufficient for utilization; and utilization is required but does not ensure sustainability.¹¹

The research into food insecurity at the household level in our country has largely been conducted using data from the National Sample Survey, consumer expenditure statistics, and national grain and rice production figures. This concentration on availability, especially in terms of purchasing power, is problematic as it prioritizes the distribution of government aid as a solution to food insecurity, while overlooking other essential components. This emphasis on redistribution diminishes the significance of local traditions, personal strategies, and social dynamics that contribute to food insecurity, such as poverty caused by unstable incomes, insufficient housing and infrastructure, overcrowding, and a lack of basic sanitation services that can lead to infectious diseases. It also disregards the unequal distribution of wealth and access to land and services. As a result, much of the formal response to hunger in India has been directed towards the availability dimension of food security, particularly through food supply initiatives such as the National Food Security Act (NFSA) of 2013 and the Public Distribution System (PDS). These measures represent significant progress in addressing the issue of food scarcity that affects millions of individuals. However, there is a possibility that these strategies have reached their limit in fostering positive change; therefore, new methods are necessary that extend beyond merely ensuring food availability. Women and children are particularly vulnerable to food insecurity. This vulnerability is linked to disparities in land ownership, persistent cultural obstacles to employment despite higher educational achievements, and the lack of recognition of women's economic roles in agriculture. Although research on food insecurity in India is on the rise, there are still gaps in our comprehension of how women react to and manage food insecurity and hunger.¹²

In India, the policies, plans, and reforms are designed for socio-economic development. The social development was focused to develop human resources and address the poverty issue prevalence majorly in tribal and rural areas by providing earning opportunities and access to the basic services of health and education. The food security programmes in India consist of a variety of initiatives aimed at alleviating hunger and malnutrition across different demographic groups. These programmes include both national strategies and local interventions that specifically address the needs of vulnerable populations, including low-income families, children, and the elderly. As of July 2024, the Central Pool has accumulated 608.75 lakh metric tonnes of foodgrains, which is well above the stocking requirement of 411.20 lakh metric tonnes. This surplus ensures that there are adequate resources available for the Targeted Public Distribution System (TPDS), various Welfare Schemes (CWS), and other government programmes throughout the nation.¹³

The redistribution of land to the landless and small landowners was a fundamental aspect of the land reforms implemented in India during the early 1950s. After struggling to effectively acquire surplus land from large-scale farmers and absentee landlords through land ceiling regulations, State governments opted to

Common Property Resources (CPRs)

The heightened pressure on CPRs has resulted in their over-exploitation and degradation, primarily due to the weakening of traditional management systems. While the physical degradation of CPRs is apparent, quantifying this degradation is complicated by the lack of benchmark data on the relevant variables. Nonetheless, case histories and thorough monitoring of CPR units can shed light on the physical degradation occurring. A notable decline in both the quantity and yield of available products serves as a critical indicator of the physical depletion of CPRs. Moreover, the reduction in the diversity of CPR products reflects a decrease in the biodiversity that these resources once supported, thereby limiting the range of production and consumption options for economically disadvantaged groups.¹⁷

States (and number of districts in parentheses)	No. of Study Villages	Area of CPRs in 1982-84 (ha)	CPRs as proportion of total village area		Decline in the area of CPRs since 1950-52 (%)	Persons per ha of CPR area	
			1950-52 (%)	1982-84 (%)		1951 (no.)	1982 (no.)



Andhra Pradesh (3)	10	827	18	11	42	48	134
Gujarat (3)	15	589	19	11	44	82	238
Karnataka (4)	12	1165	20	12	40	46	117
Madhya Pradesh (3)	14	1435	41	24	41	14	47
Maharashtra (3)	13	918	22	15	31	40	88
Rajasthan (3)	11	1849	36	16	55	13	50
Tamil Nadu (2)	7	412	21	10	50	101	286

Source: Jodha, N.S. (1994). Page 12.

Concerned about the deterioration and declining productivity of village forests and community pastures, the government implemented several measures aimed at enhancing their output. However, these community resources were regarded solely as physical assets situated within the villages, and public interventions did not engage local residents or seek their input. The initiatives prioritized technical solutions over the actual needs of the users. Many of these efforts were limited to a small number of species, occasionally including non-native varieties, which did not adequately address the diverse biomass requirements of the community.

Additionally, numerous programmes imposed limitations on local residents' access to their shared resources. For instance, pilot projects aimed at showcasing potential technologies were conducted under ideal conditions, devoid of user involvement. The lack of local engagement hindered the successful execution of these programmes. While they have been sustained by State funding in select pilot areas, most attempts to enhance the productivity of common property have proven to be irrelevant and ineffective.¹⁸

In the present era, "...Globally, extreme poverty in 2019 is estimated to increase from 8.5% to 9%, representing 41 million more people living in extreme poverty in that year. India accounts for almost 70% of this global change in extreme poverty. At the \$3.65 poverty line, India accounts for 40% of the slight upward revision of the global poverty rate from 23.6% to 24.1%. At the \$6.85 poverty line, virtually no change is observed in global poverty estimates."¹⁹ Poverty percentages are far higher for areas with tribal concentrations. Tribals, who constitutes 8.9% of the total population of India as per the Census 2011, get marginal returns for the large variety of minor and Non-Timber Forest Products (NTFP) that they collect primarily due to lack of knowledge regarding the uses and commercial value of these resources as well as lack of value addition.

The integration of tribal groups into the broader society is both a Constitutional requirement and a key priority for the government but the tribal communities often find it difficult to satisfy their economic needs due to minimal income levels. This predicament is largely attributed to a significant portion of the tribal population being isolated from the mainstream, which hinders their ability to adapt to new developments. The economic structures within these tribes are deficient in organised markets and financial institutions that could support the marketing of their products. Despite a high demand for tribal crafts, textiles, paintings, pottery, cane and bamboo items, and organic food products, the supply is markedly inadequate, resulting in the community's inability to benefit from their creations. Consequently, it is essential to improve production methods and promote these products effectively to foster economic growth within the community. The promotion of NTFP has the potential and can considerably elevate the income levels of the economically disadvantaged and hardworking tribal groups on a sustainable basis.

There are numerous challenges hindering the relationship and equilibrium between rural populations and the CPRs. For instance, unequal access to these resources can intensify poverty and inequality within rural and tribal regions. Additionally, the overexploitation of natural resources may result in environmental degradation, leading to enduring economic and social repercussions. Furthermore, the effects of climate change, including droughts, floods, and extreme weather phenomena, can significantly impact rural communities that rely greatly on natural resources and the CPRs.

The Gender Issues

The burden of poverty, discrimination, and exploitation falls disproportionately on women. Gender discrimination often relegates women to insecure, low-paying jobs, with only a few achieving decent jobs. This occupational gap limits their access to financial resources. Additionally, various social barriers prevent women from engaging in activities that impact economic and social policy. Furthermore, since women primarily manage household responsibilities, they often lack the time needed to explore economic opportunities. Gender stereotypes and discriminatory social norms significantly restrict women's professional opportunities. Women frequently bear the burden of unpaid care and domestic responsibilities, which reduces the time they can dedicate to education, training, or paid work.

Discriminatory social institutions encompass a complex network of both formal and informal laws, social norms, and practices that hinder the access of women and girls to rights, justice, empowerment, and resources, thereby diminishing their independence and authority. In 2019, the OECD projected that the worldwide financial impact of gender-based discrimination within social institutions reached USD 6 trillion, representing 7.5% of the global GDP. When focusing specifically on Southeast Asia, the financial burden of discriminatory social institutions is estimated to be approximately USD 200 billion, which also constitutes 7.5% of the region's Gross Domestic Product (GDP).²⁰

It is well known that women work longer hours than men. The contribution of rural women in access to and economic activities related to natural resources are underestimated. In India, despite certain advancements, the data obtained from the Census and the National Sample Survey (NSS) indicate a significantly low level of workforce participation among women. According to the Census of 2011, the female workforce participation rate stands at 25.52% nationally, with 30.3% in rural regions and only 15.44% in urban areas.

In contrast, the male participation rates are considerably higher, at 53.26%, 53.03%, and 53.76% respectively. The NSS data for the years 2011-12 reveals that the percentage of female workers in rural areas is 24.8%, while for males it is 53.5%. In urban settings, these figures are 14.7% for females and 54.6% for males. Such estimates fail to accurately reflect the true proportion of women in the workforce, thereby underestimating their contribution to the national economy.²¹

Although, the role of women in different tiers of Government at decision-making has increased over the decades but the indices for the rural women's involvement in income generation activities at rural level is not brightening in comparison to men. The Worker Population Ratio (WPR) serves as a crucial indicator for evaluating a country's employment scenario, offering insights into the proportion of the population actively engaged in the production of goods and services.

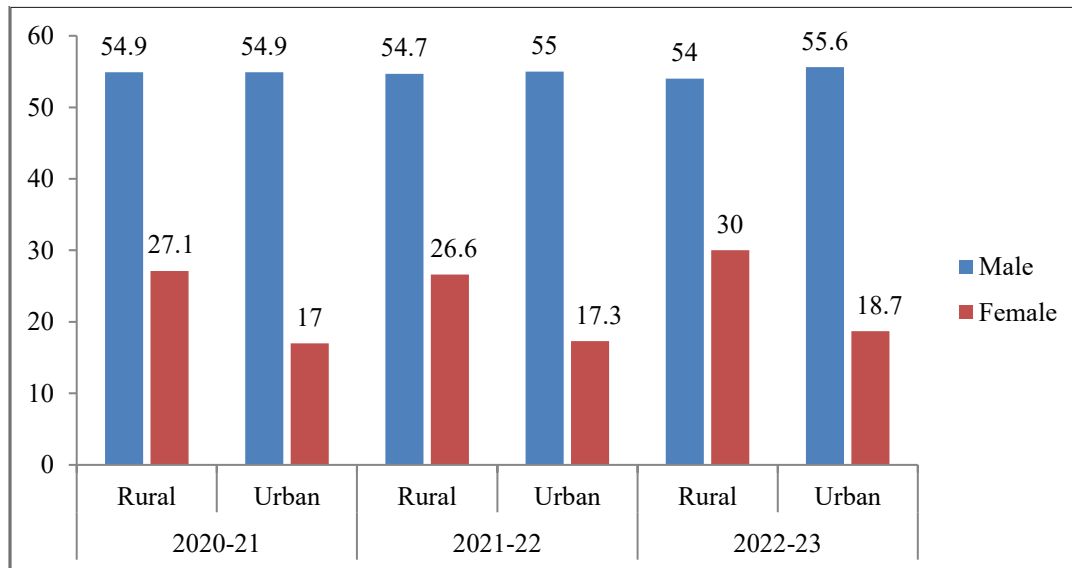
In the fiscal year 2022-23, Figure 1 shows that the WPR for the male population was 54 in rural areas and 55.6 in urban areas, while for the female population, it was significantly lower at 30 in rural areas and 18.7 in urban areas. The disparity between men and women remains pronounced, as indicated by the notable differences in the WPRs.

For the population aged 15 years and above, the WPR for males was 78.0 in rural areas and 71.0 in urban areas. In stark contrast, the corresponding figures for females were 40.7 in rural areas and 23.5 in urban areas. The data vividly illustrate that women's employment situation is markedly inferior to that of men, with the WPR for females being less than half of that for males in rural areas and less than one-third in urban areas.

This disparity suggests a significantly lower presence of working women, possibly influenced by various socio-economic factors like educational achievements, fertility rates, age at marriage, economic growth, cyclical effects, and urbanization. Beyond these factors, outcomes are also significantly influenced by social norms, often shaped by male-dominated communities, which dictate the roles women play in the public domain. These social norms continue to impact the results of women's participation in the workforce. Figure 1 shows that there is a substantial gap between male and female Worker Population Ratio (WPR) during

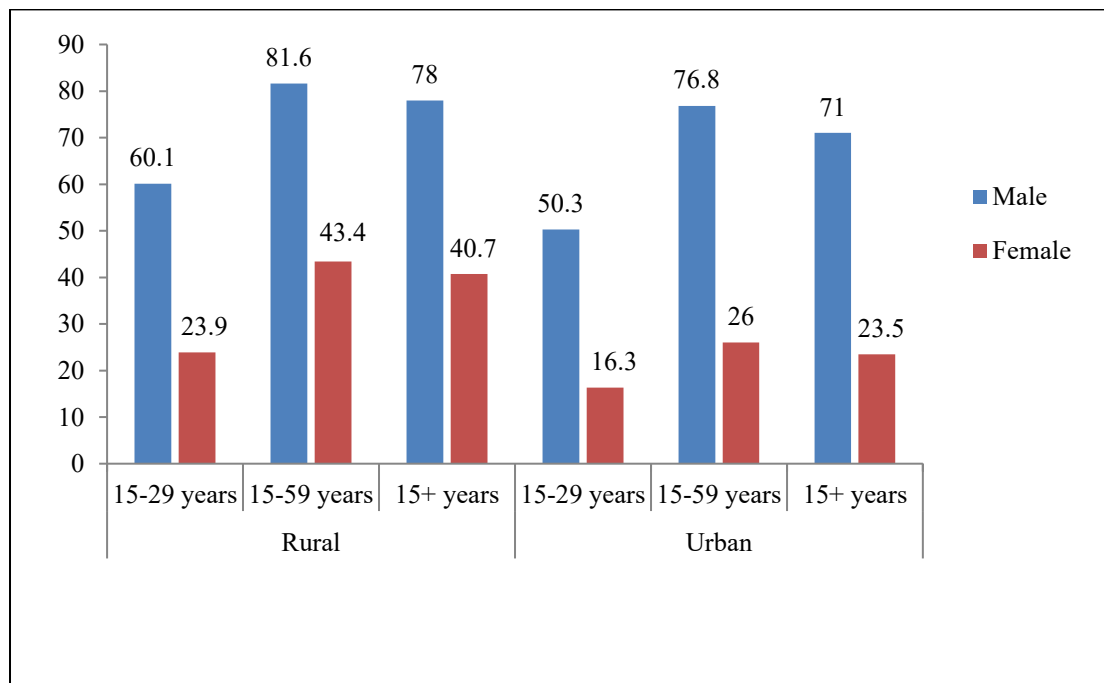
the three year period of 2020-21, 2021-22, and 2022-23. Similarly, the WPR for different age groups of male and female for the period 2022-23 as shown in Figure 2 was not favourable for women.

Figure 1: Worker Population Ratio



Source: Government of India. Ministry of Statistics and Programme Implementation (MOSPI). Women and Men in India 2023. Page 74.

Figure 2: Age Group wise Worker Population Ratio in 2022-23



Source: Women and Men in India 2023. Page 74.

Similarly, the average wage per hour earned by rural male and rural female for (2021-22) shows that rural women are paid less for skilled agricultural and fishery works, craft and related trade works, plant and machine operators and engaged in elementary occupations (Table 3). Table 4 also shows that there is a great disparity in average wage earnings received per day by male and female casual labourers in works other than public works in rural and urban areas during January-March, 2023.

Table 3: Average Wage (in ₹) Per Hour Earned by Occupation Divisions as per National Classification of Occupations (NCO) 2004 - Rural Male and Female (2021-22)

Clerks	Service Workers and Shop & Market Sales Workers	Skilled Agricultural and Fishery Workers	Craft and related Trades Workers	Plant and Machine Operators and Assemblers	Elementary Occupations	All
Rural Male						
77	52	53	56	52	46	57
Rural Female						
58	33	41	36	41	35	41

Source: Women and Men in India 2023. Pages 91-92.

Table 4: Average Wage Earnings received per day by Casual Labourers in works other than Public Works

(January- March, 2023)

Works other than Public Works(Amount in ₹)			
Rural		Urban	
Male	Female	Male	Female
413	280	507	343

Source: Women and Men in India 2023. Pages 89.

Likewise, the established roles of men and women in society have led to the belief that women play a limited role in all sectors. In a similar vein, in the fisheries sector, traditionally, men are viewed as fishers, while women are relegated to domestic duties, caring for the home and family. This rigid division of labour is becoming obsolete, as women are now actively participating in the workforce across various sectors, serving as both providers and caregivers. However, despite the progress in fisheries technology, many entrenched gender role ideologies continue to exist, and governance has not sufficiently acknowledged the unequal labour distribution. Although men frequently work on industrial fishing vessels, this type of employment constitutes merely a small segment of the overall job market in the industry. Women dominate land-based roles in fisheries. Their responsibilities include managing local fish farms, working in seafood processing plants, marketing products, and collecting snails or crabs, which serve as vital food sources for communities while fishers are out at sea.²²

In other words, rural women's works are generally presented statistically invisible or undervalued whether they work at home or outside the home. Like, the economic value of rural women engaged in activities in agriculture, animal husbandry, fishery, casual labour, gum karaya collection, fire-wood collection are generally underpaid, undervalued and underestimated even though they work equal time with their men counterparts.

The net consequence of underpaid economic activities also push rural women to migrate to urban areas or toward large development projects where they suffer due to low wages, unfavourable and hazardous living, working environment, poor access to health care, non-nutrition food and other related problems.

The other major reason for migration of rural population to urban areas is the impact of large development projects on the CPRs as depicted in Table 5.

However, in the recent past to enhance the capacity of women farmers and enhance their adaptation capacities certain policy initiatives have been taken in different countries. Like, the integration of an "Engaging Men and Boys" framework in climate justice programmes has yielded positive impacts. A case in point is the 'Where the Rain Falls' initiative in India and the 'Samarthya' project in Nepal, which utilised awareness-raising efforts and gender dialogues with men, local households, and community influencers to challenge the entrenched social norm that "women are not farmers." As a result, there has been a growing recognition among local governments of the needs and priorities of women. Also, the Consultative Group on International Agricultural Research launched a programme in India aimed at collaborating with women-led organizations to enhance their ability to adopt climate-smart agricultural technologies and innovations, as well as to access climate information services. The programme also prioritized the engagement of women's self-help groups, fostering greater agency and voice among women.²³

Impact of Development Projects on CPRS

The large development projects bring about advantageous changes with economic development that create wealth, enhance well-being, and deliver important benefits across regions. However, on a rural and tribal scale, these projects gradually disrupt natural processes, modify landscape structures, and influence environmental interactions. In rural contexts, the growth of infrastructure and economic development undermines the capacity of agricultural practices to provide essential services, such as crop supply and soil preservation, while also leading to changes in social behaviour and consumption patterns. In scenarios of rapid development near key urban areas, these initiatives can initiate a rural-urban transition that may result in serious environmental impacts and the degradation of ecosystem services, affecting local, regional, and global environments.

The detrimental consequences of these projects can reach rural populations and tribal communities, leading to diminished livelihoods or heightened exposure to natural threats like flooding and erosion. A prominent criticism of extensive development projects is that they predominantly advantage the wealthy, failing to provide support to impoverished communities. This can lead to an increase in socioeconomic disparities and also one of the reasons for migration as presented in Table 5.

Table 5: Percentage distribution of migrants by reason for migration (all-India)

Reason for migration	Rural			Urban		
	Male	Female	Person	Male	Female	Person
In search of employment/better employment	11.8	0.2	1.5	29.9	1.5	10.8
For employment/ work (to take up employment/ to take up better employment/ business/ proximity to place of work/ transfer)	14.6	0.3	1.9	23.6	1.7	8.9
Loss of job/closure of unit/lack of employment opportunities	12.5	0.3	1.7	3.0	0.4	1.3
Migration of parent/earning member of the family	12.2	2.4	3.5	20.8	19.4	19.9
To pursue studies	4.9	0.4	0.9	4.5	1.3	2.4
Marriage	11.8	93.8	84.4	2.7	69.5	47.5
Natural disaster (drought, flood, tsunami, etc)	1.0	0.1	0.2	0.4	0.2	0.2
Social/political problems (riots, terrorism, political refugees, bad law and order, etc.)	1.0	0.1	0.2	0.3	0.2	0.2
Displacement by development project	0.6	0.1	0.2	0.2	0.1	0.2



Health related reasons	4.7	0.3	0.8	1.2	0.4	0.6
Acquisition of own house/ flat	3.2	0.3	0.6	3.2	0.9	1.7
Housing problems	5.5	0.4	1.0	4.3	1.8	2.6
Post retirement	2.3	0.0	0.3	1.2	0.1	0.5
Others	14.1	1.4	2.9	4.7	2.5	3.2
All	100.0	100.0	100.0	100.0	100.0	100.0

Source: Government of India. MOSPI. 'Migration in India 2020-2021.' Periodic Labour Force Survey (PLFS).

It is essential to harmonize the interests of various stakeholders, including the government, rural populations, tribal communities, and the private sector. The diverse priorities and interests necessitate coordination, which can often complicate collaborative efforts. Additionally, existing suspicion and distrust among these groups may hinder effective collaboration, ultimately resulting in significant delays and inefficiencies in large development projects. A lack of transparent communication regarding project plans and their impacts fosters skepticism within communities and obstructs both project acceptance and community engagement. The participation of local communities in project development faces numerous challenges. The absence of necessary skills within these communities restricts meaningful involvement, as rural and tribal residents frequently lack the technical knowledge required for the projects. Furthermore, limited access to equipment, technology, and financial resources exacerbates the situation, leading to minimal participation in project implementation. Additionally, insufficient opportunities for community involvement in project planning and decision-making can foster feelings of exclusion.²⁴

The Way Forward

Ensuring the long-term availability and benefits of natural resources for rural communities necessitates a strong emphasis on sustainable management practices. A multitude of factors, including an adaptive and considerate administration, an openness to employing scientific and technical expertise for the identification of export market demands, comprehensive analysis and experimentation on the product to foster understanding, and the development of handling techniques to ensure the preservation of the product's qualities, together with the broad transfer of scientific knowledge through extensive training that utilises local dialects and culturally pertinent examples, can contribute to enhanced benefits for the tribal population. However, these outcomes would not have been feasible if traditional bureaucratic practices had been utilised. The fundamental driving force behind this reform is the administration's responsiveness, its commitment to the constitutional principles of equality, social justice, and the needs of vulnerable populations, and the ongoing necessity to operate as an enabler and facilitator for the public good.

The underreporting of women's work can be attributed to a wide array of factors, including methodological difficulties in research, biases that stem from the definitions applied, measurement inaccuracies, the unique characteristics of women's work, and the diverse range of activities in which women engage, which complicates classification efforts. The dominance of domestic labour often leads to the underreporting of other forms of work. Moreover, societal conventions, the unpaid nature of many roles, misconceptions about women's economic contributions held by respondents, biases from interviewers or enumerators, the intermingling of production for self-consumption with production for sale, cultural and ideological systems, anomalies created by applying advanced economy concepts to agrarian economies, a lack of recognition of women's multifaceted roles, and the merging of their contributions with family economic activities all contribute to the invisibility of their individual efforts.²⁵

Along with the administrative reforms, the Indian context presents a notable challenge, as a considerable share of women's contributions to the production of goods and services, whether supplied to the market or retained for household use, is often overlooked. As a result, a more accurate estimation of women's role in the national Gross Domestic Product (GDP) is required, which involves refining the assessment of their



participation in the workforce and their production contributions within the established production boundary.

CONCLUSION

CPRs are an essential lifeline for the poorest rural and tribal populations during their most critical periods, which usually fall between the harvest and the arrival of new rains. Those living in poverty rely heavily on CPRs, as they often do not have the means to develop privatised common land and gain significant advantages from the job opportunities generated through CPR management activities. The absence of additional resources needed for land development and the urgent need for money for various expenses force many poor individuals to sell, mortgage, or lease the land assigned to them through privatization initiatives. Consequently, they find themselves without access to CPRs and lacking control over alternative private resources.²⁶ Many activities related to CPRs yield limited financial returns, and their impact on income generation may be minimal. Nevertheless, CPRs serve a vital role as a safety net during crises, non-crop seasons, or periods of drought, particularly for rural poor households that lack alternative coping strategies. Furthermore, it is essential to recognise at the planning stage that most CPR-related activities, with the exception of gathering seasonal fruits and spices, are not constrained by time and do not require full-time commitment, allowing individuals to participate without forgoing other employment opportunities. Generally, specialised skills are not necessary for harvesting CPRs, except in specific cases such as collecting honey, fishing in ponds, and gathering gum from forests. Consequently, CPRs not only provide essential resources for rural communities but also significantly enhance employment and income for these populations. Depending on the worker's profile, the nature of the CPR activity, and the season, engagement in CPR-related work can be either consistent or sporadic. In view of the fact that CPRs contribute more than a fifth of the incomes from other sources for the poor, they should be recognised as an integral part of programmes directed towards reduction in rural poverty and inequality.²⁷

At the State level, substantial amounts of financial resources have been allocated and spent in the name of addressing rural poverty, but little of this has trickled down to the poor. In the context of demands for redefining the role of government, serving the rural population effectively and ensuring efficient and cost-effective administration, it can be stated that participation of rural individuals, tribal and village communities can make a difference and markets can be made to work to the advantage of the rural and tribal poor. The scientific and technical knowledge-based interventions in agriculture, fisheries and in NTFPs, creates value addition. The increased competitiveness of such products, empowerment of the tribal and sustainable use of forest resources could possibly provide one route-a significant one at that-to alleviating poverty among the rural and tribal poor and lower rural to urban migration and gender empowerment. It is also crucial to involve tribal and rural communities in the planning, decision-making, and execution phases of the development projects. This involvement not only addresses social concerns but also promotes sustainability and secures essential support from the community. Such a collaborative approach brings forth the unique insights and perspectives of local communities, ensuring that the project is in harmony with the needs and aspirations of the individuals it directly affects.

Lastly, to address the relationship between food, gender, and CPRs it is essential to promote and replicate best practices in capacity building programmes for empowering tribal and rural women. As some research findings indicate that women farmers with increased decision-making power in agricultural practices are more likely to embrace Climate Smart Agriculture (CSA) than those with low authority. For instance, in Bangladesh, evidence suggests that women who engage equally in household decision-making are more likely to cultivate a wider variety of crops, which helps to lessen the threats that climate change poses to food security and nutrition.²⁸ This achievement will also support the realization of the Sustainable Development Goals focused on gender equality (SDG5) and climate action (SDG13).²⁹

ACKNOWLEDGEMENTS

The author acknowledges the support extended by the Hindu College and the ICSSR for providing the infrastructure and the encouragement to carry out this work.



Ethical Considerations

The work did not require any ethical approval number because it uses only secondary data which are duly acknowledged through the references. This is a non-invasive social science study meant to fulfil the requirement for a project titled “Community-Based Food Security Models in India: An Intersectional, Decentralized Approach Towards Vision Viksit Bharat” funded by the Indian Council of Social Science Research (ICSSR), Government of India, India.

The author also thanks all the co-project directors - Dr. Avantika Singh, Dr. Pankaj Kumar Jha, Dr. Anju Rana, Dr. Priti Upadhyay, Dr. Mohd Shahid Ali - associated with this project. All procedural modalities and research compliance were duly followed and the author claims no conflict of interest involved in this work. The work has used secondary data for analysis and the references are duly mentioned at appropriate places in the paper.

The author has used AI assisted tools for language refinement, proofreading and editorial; polishing.

There was no requirement of consents since the work does not use any primary data procured from surveys.

REFERENCES

1. Shiva, V. (2019). *Earth Democracy: Sustainability, Justice and Peace*. Buffalo Environmental Law Journal. Vol 26. No. 1. Available at: <https://digitalcommons.law.buffalo.edu/belj/vol26/iss1/1> accessed on 24.03.2025
2. Government of India. National Sample Survey Organisation. (1999). *Common Property Resources in India. NSS 54th Round. Report No. 452. January - June 1998*.
3. In Agarwal, Bina. (1994). *A field of one's own: Gender and land rights in South Asia (Chapter 2: Land Rights and Women's Autonomy)*. Cambridge University Press.
4. Gaur, M. K., Goyal, R. K., Kalappurakkal, S., & Pandey, C. B. (2018). *Common Property Resources in Dryland of India*. *International Journal of Sustainable Development and World Ecology*. Vol. 25. Issue 6. Pages 491-499.
5. Jodha, N.S. (1994). *Common Property Resources and Dynamics of Rural Poverty (Field Evidence from Dry Regions of India)*. Available at: <https://dlc.dlib.indiana.edu/dlcrest/api/core/bitstreams/8db6f872-f7f9-4ea3-a73d-eab1582fedf5/content> accessed on 28.03.2025.
6. <https://www.worldbank.org/en/brief/2023/06/11/what-is-food-security> accessed on 24.03.2025
7. <https://www.un.org/en/about-us/universal-declaration-of-human-rights> accessed on 24.03.2025.
8. Eide, A. (1998). *The Human Right to Adequate Food and Freedom from Hunger*. In 'The Right to Food in Theory and Practice.' Available at: <https://www.fao.org/4/w9990e/w9990e03.htm> accessed on 29.03.2025.
9. United Nations Human Rights. (2010). *The Right to Adequate Food*. Fact Sheet No. 34. Pages 4-5. Available at: <https://www.ohchr.org/sites/default/files/Documents/Publications/FactSheet34en.pdf> accessed on 25.03.2025.
10. UNDP. (2014). *Human Development Report- Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*. Available at: <https://hdr.undp.org/system/files/documents/human-development-report-2014.human-development-report-2014> accessed on 27.03.2025. Page 49.
11. Barrett, C.B. (2010). *Measuring Food Insecurity*. *Science*. Vol. 327. No. 5967. Pages 825–828. And Webb, P., Coates, J., Frongillo, E.A., Rogers, B.L., Swindale, A., and Bilinsky P. (2006). P. *Measuring household food insecurity: Why it's so important and yet so difficult to do*. *The Journal of Nutrition*. Vol. 136. Issue 5. Pages 1404S–1408S. (cited in McKay FH et. al. 2020).
12. McKay FH, John P, Sims A, Kaur G, Kaushal J. (2020). *Documenting the Food Insecurity Experiences and Nutritional Status of Women in India: Study Protocol*. *International Journal of Environmental Research and Public Health*. May 26;17(11):3769. doi: 10.3390/ijerph17113769. PMID: 32466486; PMCID: PMC7312776.
13. <https://pib.gov.in/PressNoteDetails.aspx?NoteId=151969&ModuleId=3®=3&lang=1> accessed on 29.03.2025.

14. Jodha, N.S. (1992). Rural Common Property Resources: the missing dimension of development strategies. Washington D.C., World Bank.
15. Jodha, N.S. (1986). Common Property Resources and Rural Poor in Dry Regions Of India. *Economic and Political Weekly*, 21(27). pp 1169-1181.
16. Jodha, N.S. (1994).
17. Ibid.
18. Gupta, A.K. (1987). Why Poor People do not Cooperate. A Study of Traditional Forms of Cooperation with Implications for Modern Organization. In G.C. Wanger, (ed.) *Politics and practices of social research*. London, Allen and Unwin. And Shankarnaryan, K.A. & Kalla, J.C. (1985). *Management systems for natural vegetation*. Jodhpur, Rajasthan, Central Arid Zone Research Institute.
19. Aron, D.V. et. al. (2023). Global Poverty Monitoring Technical Note: September 2023 Update to the Poverty and Inequality Platform (PIP) What's New. The World Bank. Page 2.
20. <https://www.oecd.org/en/topics/sub-issues/gender-discrimination-in-social-norms.html> accessed on 30.03.2025
21. Mehta, A. K and Pratap, S. (2017). Exploring the Possibility of Estimating the Monetary Value of Women's Contribution to GDP. National Commission for Women (NCW).
22. Harper, Sarah. et. al. (2013). Women and Fisheries: Contribution to Food Security and Local Economies. *Marine Policy*, Elsevier. . Vol. 39 (C). Pages 56-63.
23. OECD. (2023). SIGI 2023 Global Report: Gender Equality in Times of Crisis, Social Institutions and Gender Index, OECD Publishing. Paris. <https://doi.org/10.1787/4607b7c7-en>. Pages 133 and 148. Accessed on 30.03.2025; (2) Huyer, S. (2021). Building Farmers' Resilience to Climate Change Means Addressing Gender Inequalities. Available at: <https://gender.cgiar.org/news/building-farmers-resilience-climate-change-means-addressing-gender-inequalities> accessed on 30.03.2025; and (3) CARE International. (2022). "Men and women are two hands": CARE's experience of engaging men and boys in programming for climate justice, CARE Climate Change and Resilience Platform (CCRP), The Hague, <https://reliefweb.int/report/world/cares-experience-engagingmen-and-boys-programming-climate-justice-learning-review>. Accessed on 30.03.2025.
24. Parihar, T. and Chowdhury, D. (2023). Environmental and Social Impact Assessments (ESIAs) in India for Energy and Infrastructure Projects. *The Indian Journal of Projects, Infrastructure and Energy Laws (IJPIEL)*. December. Available at: <https://ijpiel.com/index.php/2023/12/22/environmental-and-social-impact-assessments-esias-in-india-for-energy-and-infrastructure-projects/> accessed on 31.03.2025.
25. Mehta, A. K. and Pratap, S. (2017).
26. Arnold, J.E.M. (1990). Common Property Management and Sustainable Development in India. Available at <https://conservancy.umn.edu/server/api/core/bitstreams/ea838914-d12d-46a2-b14b-ad34de298784/content> access on 29.03.2025
27. Jodha, N.S. (1986). Page 1177.
28. SIGI 2023 Global Report. Page 131.
29. 29. Shahbaz, P., Ul Haq, S., Abbas, A., Batool, Z., Alotaibi, B. A., & Nayak, R. K. (2022). Adoption of Climate Smart Agricultural Practices through Women Involvement in Decision Making Process: Exploring the Role of Empowerment and Innovativeness. *Agriculture*, 12(8), 1161. <https://doi.org/10.3390/agriculture12081161>