

Accessibility and Uses of Common Property Resources: A Study of Environmental Linkages in Tribal Concentrated Areas in Lakhimpur Kheri of Uttar Pradesh

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ABSTRACT

CPRs are important not only in the lives of the rural poor but also in general rural development. The rural poor, especially women, rely on CPRs from the common forest to subsist. Rural households collect forest resources to augment agriculture. Rural communities collect CPRs from the forest to help balance their income and consumption, thereby reducing poverty. CPRs not only provide money and jobs to rural impoverished people, but also provide as a safety net during agricultural disasters. Conversely, indiscriminate CPR collection damages forests. For long-term development, rural poor are willing to participate in proper forest management. Thus, more environmentally sound and socially equitable production, consumption, and resource development systems are required. Against this backdrop, present paper examines the accessibility and utilization of Common Property Resources and their linkages with sustainable livelihood. The paper is based on primary data collected through field survey in tribal concentrated areas of Lakhimpur Kheri districts of Uttar Pradesh.

Keywords: Common property resources, Environment, Rural development, Rural poor.

Introduction

Common Property Resources (CPRs) are natural resources belonging to every community that each member can access purposefully with specified obligations since no one can have exclusive ownership rights over them (Jodha, 1986). Identifiable communities alone have the capacity to access and manage these jointly owned resources. For the rural common man in India, natural resources such as abundant lands, protected and non categorised forests, ponds, rivers, rivulets and waste lands used for agricultural techniques are his primary property. Common Property Resources are the sole source of human nourishment in rural India. CPRs are part of the social and institutional

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structures designed to help the rural poor. The rural poor, especially the landless, rely heavily on the CPRs. Earlier research indicates that both the poor and the not so poor rely on CPRs for their livelihood. CPRs operate as a buffer during economic crises caused by crop failures, but also as a source of revenue in regular times. The forests have given adequate non-timber forest products (NTFPs) for the rural poor's subsistence. The rural poor collect NTFPs such as wood, bushes, and dried leaves for cooking and heating. Bamboo and cane are used to build houses, while wild grasses and shrubs are used to feed animals. The forest is also a great source of medicinal plants. Rural poor collect fruits, vegetables, and roots for consumption and sale. Natural resources have long been recognised as vital to rural livelihoods. However, efficient resource usage and a key balance between stock and fl are required. Resource overexploitation leads to scarcity. Hardin (1968) introduced the concept of over-exploitation of shared natural resources in his paper 'The Tragedy of the Commons'. The story shows how unlimited access to a fi resource leads to over-exploitation and resource depletion. While acknowledging that depletion of shared natural resources is detrimental to the group's long term best interest, the author argues that people behaving autonomously and rationally leads to depletion of shared natural resources. Common property resources are those that are shared by a community and in which no single person has exclusive ownership rights. The community may have formal ownership rights or basic user rights. Watershed drainage, ponds and tanks, rivers, rivulets, water reservoirs, canals and irrigation channels are all part of CPRs in India (NSSO, 1999). A CPR is vital to rural areas and traditional human settlements. Aids in economic, cultural and social advancement. A resource is said to be common or collectively managed if its users establish a group and create rules and regulations excluding non-members from using it (Arnold, 1993). CPRs can be used in three property rights regimes: open access, communal, and state. Open access properties are non-exclusive and non-transferable. Because rights are shared, everyone has access to them. Communal property user rights belong to a group or community (Mitra, 2020). These are not privately owned or managed. The community owns, maintains, and oversees these resources, as well as their use. The State or nation owns or manages the resources in State property. These are public resources with no established access or usage permissions (Topal, 2015).

CPRs provide rural residents with food, fuel, small timber, mulch, manure, fruits, medicinal herbs, and other requirements. CPRs also help avoid soil erosion, deforestation, and siltation. In addition to cash and job opportunities, common property resource-based activities benefits rural communities (Beck 1994). Common property resources also provide vital biomass services like fuel and fodder, as well as supplementary occupations like animal husbandry, dairying, and modest forest product gathering. As a result, common property

resources can improve rural poor livelihoods. CPRs (common property resources) are common in rural India. Forests and water resources have always been important CPRs in rural India. The landless, who are usually the poorest and most vulnerable, rely heavily on common property resources. The CPRs are often the poorest only source of food and income. During periods of low agricultural output or periodic food shortages, CPRs help to ensure rural household food security by providing an alternative source of income. Village institutions set standards and constraints for obtaining CPRs, ensuring that the resources are fully utilised. Common property resources are slowly disappearing as natural resources are used and rural institutional processes erode, endangering the rural economy and household food security (Mitra, 2020). Rural populations rely on CPR goods for work and income, especially when other opportunities are limited (Jodha, 1990). Well-managed CPRs benefit local people's long-term livelihoods. It allows people to diversify their income and hence improve their living situations. CPRs support communities in three ways: by providing fuel and feed, by providing income, and by providing capital goods or savings that may be cut and cashed to cover unexpected expenses. Inaccessible or damaged forests, CPRs, and loss of forest cover would negatively affect the poor's life (Chambers, Saxena and Shah, 1991). Woody plants and animals provide a variety of food for rural communities. They can eat these goods all year round and meet their nutritional demands. It also serves as a food safety net in case of seasonal food shortages, low agricultural output, crop loss, or natural calamities. CPRs are vital in providing the villagers' wood needs. Many village houses still use biomass for cooking. Livestock is prized in rural homes. Landless people, often the lowest of the poor, keep cattle and rely entirely on it for their livelihood. It is a secondary source of income for many households. Having access to pasture or community grazing area ensures grass for the livestock. Without CPR fodder and feed supplies, users would have to convert large areas of agricultural land from food and cash crops to cow fodder/feed production, or reduce their cattle herd size (Jodha, 1990). The CPRs are decreasing due to resource deterioration and misuse, and they currently do not deliver significant returns to communities. Globalization has opened the market, putting pressure on the country's natural resources (forest, water, minerals, and land). Land is purchased for industrial reasons, displacing local and indigenous communities. This affects rural communities' individual and common property rights. During industrialization, communities lose ownership of these resources to the state. Privatization has harmed tribal people in India. They've always been close to nature, and natural resources are significantly more valuable to tribal people than anything else. These materials shape their lives and civilizations. Alienation and exclusion from CPRs impact food and livelihood security, as well as socio-cultural sustainability (Behera & Basar, 2014). Displacement causes loss of social capital, including social integration,

culture, community life, and involvement. Certainly, industrialization is required for the country's economic growth, but not at the expense of the country's tremendous natural resources.

Review of Literature:

The topic of Common Property Resources (CPRs) has received a lot of attention in both theoretical and empirical studies. Several studies by eminent academics have contributed to a better knowledge of the subject. Gordon (1954) was one of the first economists to address the economic theory of optimum natural resource utilisation. Berkes (1989), dispelling the idea of the "Tragedy of the Commons," describes Common Property Resources as a "class of resources for which exclusion is impossible and collaborative usage requires subtractability." Chopra's (2001) attempt to calculate CPRs in terms of land area, which covered 16 states across the country, was impressive. She used land-use statistics, which she complemented with data from agricultural censuses and satellite photography. CPRs contributed greatly to employment and income production for the rural poor, i.e. labour and small farms, according to Jodha's (1986) study in dry tropical regions spanning seven states and eighty villages in India. Arnold and Stewart's (1991) research covered dry and semi-arid regions, hills and forests in high-rainfall areas, and the central Indian forest belt. The data for Menon and Vadivelu's (2006) study on CPRs came mostly from the 54th wave of the National Sample Survey (1999). *Common property resources (CPRs), according to Mitra (2020), are an integral part of India's rural life. Dasgupta (2005) believes that the subject of common property resources has spawned a plethora of literature over the last two decades (CPRs).* Rural residents derive most of their income from private and public property. Rural residents' earnings decline when common property resources dwindle, compelling them to seek jobs in adjacent cities. As a result, degradation of common property resources, poverty, and migration are linked (Mahanta and Das, 2012; Suresh et al., 2010). The Central Plateau and Hills, Eastern Plateau and Hills, Southern Plateau and Hills, and Middle Gangetic Plains have all seen the greatest loss of forest and grazing land in India (Menon and Vadivelu, 2006). As a result, the research area (Gondia) is shrinking. These include common pastures, forests, wastelands, dumping and threshing sites, watershed drainage, village ponds, rivers and their banks and beds (Gowda and Savadatti, 2004). Unlike open access resources, which are utilised by anybody without regard for property rights, CPRs are exclusive to the local community. The resources have two broad characteristics. For starters, preventing potential beneficiaries from using them would be prohibitively costly. In addition, the use of one user influences the availability of resources for others. These two characteristics necessitate collaboration among the resource's beneficiaries. Despite the fact that over 75 billion Indians survive off CPRs (Pradhan and Patra, 2011), land use planning

in CPRs has been largely overlooked due to the protected nature of these resources, which forbids any change in land use (forests) or features (as in case of village ponds, common grazing land). In practice, each society has its own local resource management system based on users' expertise and experience (Adhikari, 2004). However, greater CPR use for livelihood security requires better land use planning. In actuality, many of these CPRs have a big impact on land use decisions. Systematic CPR research and use can significantly enhance people's lives, especially in developing nations.

Bina Agarwal (1997) studied gender, poverty, and the environment in rural India from 1971 to 1991, focusing on regional disparities and temporal shifts. After briefly defining the primary elements behind environmental degradation, the study explores why and how environmental deterioration affects female members of poor rural households. Most research on rural energy has focused on drier locations where fuel wood supply issues have been discovered and linked to desertification (Digernes 1977 and 1978). The high rate of population growth, growing prices of other fuels and challenges in supplying, along with severe problems developing and using new energy technologies predict that wood use will rise. There is a complex and difficult interplay between poverty, the environment, and development. Poverty is often believed to be the primary driver of environmental degradation, as the impoverished are unable to fully exploit natural resources (Duraippah 1996, Prakash 1997). The decline is expected to worsen poverty. In this view, the impoverished have a short time horizon, discounting future conservation advantages to survive and avoid starvation. With this time frame, natural resources are not used sustainably (Nadkarni, 2000). It takes a lot of planning and effort from poor farmers to build and maintain terraced fields to control soil erosion, grow trees for feed, and soil mending, and manage irrigation water (Prakash, 1997).

Objectives and Methods

The paper aims at examining the accessibility and uses of common prosperity resources, and their linkages with sustainable livelihood. It also focuses on degradation of common property resources and need for their conservation and effective management. Present paper is based on a major research study conducted during the course of doctoral research. The study was conducted in selected villages from Bankati, Dudhawa and North Sonaripur forest ranges of Palia Tehsil of Lakhimpur Kheri in Uttar Pradesh. The sample of the study comprises of 351 households. The survey was conducted with the help of structured interview schedule. The inferences, results and conclusions were drawn out from the analysis and interpretation of data with use of SPSS and relevant statistical tools.

Discussion of Results

Most of respondents had no access to NTFP, tendu leaves, seeds, plants, manure, and water from river for irrigation, washing of clothes, herbs and medicinal plants and mahua flowers/seeds. However, accessibility of common property resources to some extent reported mainly for forest produce, fuel woods, timber, fishing and aquatic resources, fire wood and raw materials for cottage industries as well as water for irrigation from pond/lake. Majority of respondents reported that they collect common property resources occasionally and sometimes mainly for forest produce, fuel wood, wire wood, timber, bamboo, fishing and aquatic resources, water for irrigation and grazing of livestock. However, NTFP, herbs and medicinal plants, raw materials for cottage industries, manure, seeds, and water from river for irrigation of crop land and mahua flowers/seeds are never collected by the local people.

Collection of common resources for agriculture is shown in Table 1. Most of respondents reported that they never collect plants and seeds for agriculture purposes. However, majority of respondents reported that they occasionally and sometime collect wood for agriculture implements, water for irrigation and manure for agriculture. More than half of the respondents reported that they collect fodder for draught animals occasionally and sometimes.

Table1: Collection of Common Resources For Agriculture

Particulars	Always	Sometimes	Occasionally	Never	Total
Wood For Agricultural Implements	67	65	193	26	351
	19.1%	18.5%	55.0%	7.4%	100.0%
Water For Irrigation	20	124	143	64	351
	5.7%	35.3%	40.7%	18.2%	100.0%
Fodder For Draught Animals	29	53	134	135	351
	8.3%	15.1%	38.2%	38.5%	100.0%
Manure For Agriculture	35	91	95	130	351
	10.0%	25.9%	27.1%	37.0%	100.0%
Plants And Seeds	0	5	26	320	351
	0.0%	1.4%	7.4%	91.2%	100.0%
Other	0	6	22	323	351
	0.0%	1.7%	6.3%	92.0%	100.0%

Source: Field Survey.

Collection of common resources for cottage industry is shown in Table 2. A significant proportion of respondents reported that they collect wood and

wooden materials, fodder and cattle feed for livestock, raw materials for rope making, fish and aquatic resources, lotus flowers/singara and leave for plat making occasionally and sometimes for cottage industries.

Table 2: Collection of Common Resources For Cottage Industry

Particulars	Always	Sometimes	Occasionally	Never	Total
Raw Materials For Cottage Industry	0	2	6	141	149
	0.0%	1.3%	4.0%	94.6%	100.0%
Wood And Wooden Materials	0	6	32	111	149
	0.0%	4.0%	21.5%	74.5%	100.0%
Soil For Earthen Wares	1	13	8	127	149
	0.7%	8.7%	5.4%	85.2%	100.0%
Fuel For Baking Of Earthen Wares	0	9	14	126	149
	0.0%	6.0%	9.4%	84.6%	100.0%
Fodder And Cattle Feed For Livestock	0	11	19	119	149
	0.0%	7.4%	12.8%	79.9%	100.0%
Bamboo For Craft Work	2	3	6	138	149
	1.3%	2.0%	4.0%	92.6%	100.0%
Raw Materials For Rope Making	0	7	31	111	149
	0.0%	4.7%	20.8%	74.5%	100.0%
Pond/ Lake For Fishing And Aquatic Resources	1	12	20	116	149
	0.7%	8.1%	13.4%	77.9%	100.0%
Pond /Lake For Singhara / Lotus Flowers/ Makhana	0	6	15	128	149
	0.0%	4.0%	10.1%	85.9%	100.0%
Leaves For Plate Making	0	7	13	129	149
	0.0%	4.7%	8.7%	86.6%	100.0%
Others	0	7	13	129	149
	0.0%	4.7%	8.7%	86.6%	100.0%

Source: Field Survey.

Collection of common resources from forest is shown in Table 3 . Timber, wood, fuel wood, fi wood, thatched /house repair materials, fi and bamboo

resources are being collected occasionally, sometimes and even always from forest in the surveyed villages. However, collection of seeds, tendu leave, mahua flowers, NTFP, herbs, plants and hunting of wild animals are never reported in the surveyed areas.

Table 3: Collection of Common Resources From Forest

Particulars	Always	Sometimes	Occasionally	Never	Total
Timber	94	114	142	0	350
	26.9%	32.6%	40.6%	0.0%	100.0%
Wood	33	174	143	0	350
	9.4%	49.7%	40.9%	0.0%	100.0%
Bamboo	58	59	155	78	350
	16.6%	16.9%	44.3%	22.3%	100.0%
NTFP	0	16	15	319	350
	0.0%	4.6%	4.3%	91.1%	100.0%
Fuel Wood	114	163	73	0	350
	32.6%	46.6%	20.9%	0.0%	100.0%
Fire Wood	40	240	70	0	350
	11.4%	68.6%	20.0%	0.0%	100.0%
Tendu Leaves	0	0	0	351	351
	0.0%	0.0%	0.0%	100.0%	100.0%
Mahuwa Flowers	0	2	32	317	351
	0.0%	0.6%	9.1%	90.3%	100.0%
Mahuwa Seeds	0	2	4	345	351
	0.0%	0.6%	1.1%	98.3%	100.0%
Plants	0	1	1	349	351
	0.0%	0.3%	0.3%	99.4%	100.0%
Seeds	0	0	0	351	351
	0.0%	0.0%	0.0%	100.0%	100.0%
Medicinal Plants	0	0	0	351	351
	0.0%	0.0%	0.0%	100.0%	100.0%
Herbs	0	0	0	351	351
	0.0%	0.0%	0.0%	100.0%	100.0%
Aonwla	0	0	0	351	351
	0.0%	0.0%	0.0%	100.0%	100.0%
Thatched/ House Repair Materials	38	200	84	29	351
	10.8%	57.0%	23.9%	8.3%	100.0%

Fishing	66	62	178	44	350
	18.9%	17.7%	50.9%	12.6%	100.0%
Hunting	0	1	3	346	350
	0.0%	0.3%	0.9%	98.9%	100.0%
Others	0	1	3	346	350
	0.0%	0.3%	0.9%	98.9%	100.0%

Source: Field Survey.

Collection of common resources for livestock is shown in Table 4. A significant proportion of respondents reported that they always collect fodder for draught animals, materials for housing shading of animals and fodder for mulching animals. A large proportion of respondents further reported that they occasionally and sometimes collect fodder /feed for hatcheries, materials for housing and shading of animals and fodder for mulching animals.

Table 4: Collection of Common Resources for Livestock

Particulars	Always	Sometimes	Occasionally	Never	Total
Fodder For Draught Animals	71	34	59	179	343
	20.7%	9.9%	17.2%	52.2%	100.0%
Fodder For Mulching Animals	24	70	69	181	344
	7.0%	20.3%	20.1%	52.6%	100.0%
Fodder For Goats / Sheep	11	39	59	235	344
	3.2%	11.3%	17.2%	68.3%	100.0%
Fodder/ Feed For Hatcheries	9	91	42	202	344
	2.6%	26.5%	12.2%	58.7%	100.0%
Grazing Of Animals On Fallow/ Barren Land	0	12	58	274	344
	0.0%	3.5%	16.9%	79.7%	100.0%
Materials For Housing And Shading Of Animals	27	94	76	147	344
	7.8%	27.3%	22.1%	42.7%	100.0%
Other	24	85	74	161	344
	7.0%	24.7%	21.5%	46.8%	100.0%

Source: Field Survey.

The respondents were asked that whether extraction of common property resources has affected environmental degradation. Most of the respondents were of the view that extraction of common property resources has affected environmental degradation mainly in terms of shrinking of water bodies,

shrinking of grazing land, commercialization of water bodies, decreasing in traditional water structure, decrease in livestock resources and deforestation (Table 5)

Table 5: Whether Extraction of Common Property Resources Has Affected Environmental Degradation

Particulars	Strongly Agree	Agree	Do Not Agree	Strongly Disagree	Total
Shrinking Of Water Bodies	125	199	24	3	351
	35.6%	56.7%	6.8%	0.9%	100.0%
Shrinking Of Grazing Land	140	194	17	0	351
	39.9%	55.3%	4.8%	0.0%	100.0%
Commercialization Of Water Bodies	141	187	21	2	351
	40.2%	53.3%	6.0%	0.6%	100.0%
Decrease In Livestock Resources	156	172	21	2	351
	44.4%	49.0%	6.0%	0.6%	100.0%
Decreasing In Traditional Water Structures (Well , Pond / Lake)	171	150	28	2	351
	48.7%	42.7%	8.0%	0.6%	100.0%
Shrinking Of Common Land	130	206	15	0	351
	37.0%	58.7%	4.3%	0.0%	100.0%
Deforestation	118	185	43	5	351
	33.6%	52.7%	12.3%	1.4%	100.0%
Other	83	220	43	5	351
	23.6%	62.7%	12.3%	1.4%	100.0%

Source: Field Survey.

The respondents were asked that whether agricultural risks have affected common property resources. The overwhelming majority of respondents were found agreed and strongly agreed on the view point that agriculture risk have affected common property resources mainly in terms of reclamation of sodic land, fragmentation of land, distribution of surplus land, climate change, increase pollution, development of barren / fallow land, distribution of gram samaj land, change of land use, reduction in agricultural productivity, soil erosion, change in water logging/flood affected area and decrease in rainfed agriculture (Table 6).

Table 6: Whether Agricultural Risks Have Affected Common Property Resources

Particulars	Strongly Agree	Agree	Do Not Agree	Strongly Disagree	Total
Reclamation Of Sodic Land	117	196	38	0	351
	33.3%	55.8%	10.8%	0.0%	100.0%
Development Of Barren / Fallow Land	102	205	44	0	351
	29.1%	58.4%	12.5%	0.0%	100.0%
Distribution Of Surplus Land	153	173	20	5	351
	43.6%	49.3%	5.7%	1.4%	100.0%
Redistribution Of Gram Samaj Land	130	179	39	3	351
	37.0%	51.0%	11.1%	0.9%	100.0%
Change Of Land Use	126	168	52	5	351
	35.9%	47.9%	14.8%	1.4%	100.0%
Fragmentation Of Land	140	173	34	4	351
	39.9%	49.3%	9.7%	1.1%	100.0%
Reduction In Agricultural Productivity	120	187	41	3	351
	34.2%	53.3%	11.7%	0.9%	100.0%
Soil Erosion	100	185	62	4	351
	28.5%	52.7%	17.7%	1.1%	100.0%
Change In Water Logging / Flood Affected Area	119	191	35	6	351
	33.9%	54.4%	10.0%	1.7%	100.0%
Decrease In Rainfed Agriculture	120	178	45	8	351
	34.2%	50.7%	12.8%	2.3%	100.0%
Climate Change	127	193	29	2	351
	36.2%	55.0%	8.3%	0.6%	100.0%
Increased Pollution	110	208	29	4	351
	31.3%	59.3%	8.3%	1.1%	100.0%
Other	93	224	31	3	351
	26.5%	63.8%	8.8%	0.9%	100.0%

Source: Field Survey.

The perception of environmental degradation and CPR perception has been computed for fi out the variation among them. The variation among perceptions of environmental degradation was tested by ANOVA. The F value is showing significance at the 1% level of significance. The value of correlation is showing positive and significant at the 1% level of significance between the perception of environmental degradation and perception about CPR of the respondent. It can be concluded based on both tests the null hypothesis is rejected (Table 7.).

Table 7: Perception Levels of Respondents Towards Environmental Degradation

Perception level of CPR	Mean
Low	25.64
Medium	25.87
High	26.75
Total	26.30
F test	6.065**
Correlation	0.202**

** . Correlation is significant at the 0.01 level

The perception of forest management and CPR perception has been computed for finding out the variation among them. The variation among perceptions of forest management was tested by ANOVA. The F value is showing significance at the 1% level of significance. The value of correlation is showing negative and significant at the 5% level of significance between the perception of forest management and perception about CPR of the respondent. It can be concluded based on both tests the null hypothesis is rejected (Table 8).

Table 8: Perception Levels towards Forest Conservation, Biodiversity and Sustainable Development

Perception level of CPR	Mean	Std. Deviation
Low	1.27	.814
Medium	1.47	.692
High	1.15	.534
Total	1.26	.652
F test	7.386**	
Correlation	-0.136*	

*. Correlation is significant at the 0.05 level

Source: Field Survey

The occupation of respondents wise distribution by the perception level of the respondent about agricultural risks affected the CPR is given in the table. The chi-square test has been applied to test the relation between the Occupation of Respondent and the perception level of the respondent about agricultural risks affected the CPR. The value of chi-square has been found significant at 5% level of significance. It can be concluded that there is a significant relationship between the Occupation of Respondent and the perception level of the respondent about agricultural risks affected the CPR (Table 9).

Table 9 : Occupation Of Respondents Wise Agricultural Risks Affected CPR Level

Occupation of Respondent	Level Of Perception About Agricultural Risks Affected CPR			Total
	Low	Medium	High	
Agriculture	32	133	41	206
	15.5%	64.6%	19.9%	100.0%
Non- Farm sector	5	22	12	39
	12.8%	56.4%	30.8%	100.0%
Business	1	0	0	1
	100.0%	0.0%	0.0%	100.0%
Self Employment	0	2	0	2
	0.0%	100.0%	0.0%	100.0%
Service	0	23	6	29
	0.0%	79.3%	20.7%	100.0%
Skilled Labour	0	4	0	4
	0.0%	100.0%	0.0%	100.0%
Agriculture Labour	9	31	5	45
	20.0%	68.9%	11.1%	100.0%
Other	4	20	1	25
	16.0%	80.0%	4.0%	100.0%
Total	51	235	65	351
	14.5%	67.0%	18.5%	100.0%
Chi-Square Tests	24.015*			

* indicates the value is significant at the 5% level of significance.

Source: Field Survey

The size of agriculture land wise distribution by the perception level of the respondent about environmental degradation is given in the table. The chi-square test has been applied to test the relation between the Size of agricultural land and the perception level of the respondent about environmental degradation. The value of chi-square has been found significant at 5% level of significance. It can be concluded that there is a significant relationship between the Size of agriculture land and the perception level of the respondent about environmental degradation level (Table 10).

Table 10: Size of Agriculture Land Wise Environmental Degradation Level

Size Of Agriculture Land	Perception Level Of Environmental Degradation			Total
	Low	Medium	High	
Landless	13	22	5	40
	32.5%	55.0%	12.5%	100.0%
Less than 5 Acres	41	171	65	277
	14.8%	61.7%	23.5%	100.0%
5-8 Acres	1	19	3	23
	4.3%	82.6%	13.0%	100.0%
8-10 Acres	0	7	4	11
	0.0%	63.6%	36.4%	100.0%
Total	55	219	77	351
	15.7%	62.4%	21.9%	100.0%
Chi-Square Tests	16.640*			

* indicates the value is significant at the 5% level of significance. Source: Field Survey

The size of agriculture land wise distribution by the perception level of the respondent about agricultural risks affected the CPR is given in the table. The chi-square test has been applied to test the relation between the Size of agricultural land of the Respondent and the perception level of the respondent about agricultural risks affected the CPR. The value of chi-square has been found not significant at the desired level of significance. It can be concluded that there is no significant relationship between the Size of agriculture land of the Respondent and the perception level of the respondent about agricultural risks affected the CPR (Table 7.13).

Table 11: Size of Agriculture Land -Wise Agricultural Risks Affected CPR Level

Size of agriculture land	Perception Level About Agricultural Risks Affected The CPR			Total
	Low	Medium	High	
Landless	9	26	5	40
	22.5%	65.0%	12.5%	100.0%
Less than 5 Acres	37	189	51	277
	13.4%	68.2%	18.4%	100.0%
5-8 Acres	3	12	8	23
	13.0%	52.2%	34.8%	100.0%
8-10 Acres	2	8	1	11
	18.2%	72.7%	9.1%	100.0%

Total	51	235	65	351
	14.5%	67.0%	18.5%	100.0%
Chi-Square Tests	7.640 ^{NS}			

NS indicates the value is not significant at the desired level of significance. Source: Field Survey

The variation among mean scores of perception about CPRs, environmental degradation and forest conservation, biodiversity and sustainable development by educational level of the respondents have been computed by ANOVA and testing of significance tested by F test. The values of the F test were found non-significant for the perception of CPRs, and forest conservation, and biodiversity and sustainable development, however, found significant at 5% level of significance for environmental degradation. It can be concluded that there are significant differences between education-wise classification in perception about CPRs and forest conservation, biodiversity and sustainable development. However, the non-significant difference, in environmental degradation (Table 12).

Table 12: Educational Level of Respondents Wise Perception Levels of CPRs, Environmental Degradation and Forest Conservation

Educational Level	Perception About CPR	Environmental Degradation	Forest Conservation , Biodiversity And Sustainable Development
Illiterate	126.54	26.15	1.18
High School	127.38	27.86	1.28
Middle School	125.05	26.57	1.44
Intermediate	124.88	26.00	1.04
Graduate	128.50	25.93	1.20
Postgraduate	131.25	27.00	1.00
Literate	126.45	25.87	1.36
Total	126.43	26.30	1.26
F test	0.608NS	2.421*	2.012 NS

Source: Field Survey

The variation among mean scores of perception about CPRs, environmental degradation and forest conservation, biodiversity and sustainable development by occupation of respondent has been computed by ANOVA and testing of significance tested by F test. The values of the F test were found significant at 5% level of significance for the perception of CPRs, and a 1% level of significance for environmental degradation, forest conservation, and biodiversity and sustainable development. It can be concluded that there are significant differences between occupation wise classification in perception about

CPRs, environmental degradation, and forest conservation, biodiversity and sustainable development (Table 13).

Table 13: Occupation of Respondents Wise Perception Levels of CPRs ,Environmental Degradation and Forest Conservation

Occupation Of Respondent	Perception About CPR	Environmental Degradation	Forest Conservation, Biodiversity And Sustainable Development
Agriculture	125.47	25.96	1.37
Non- Farm sector	127.25	27.19	1.09
Business	136.67	21.00	1.00
Self Employment	127.50	23.00	3.00
Service	128.69	27.69	1.00
Skilled Labour	131.25	29.00	1.00
Agriculture Labour	129.69	26.90	1.07
Other	122.48	25.48	1.24
Total	126.43	26.30	1.26
F test	2.024*	6.286**	4.807**

Source: Field Survey

The overall analysis shows that finger villages in forest areas are depend on common property resources from forests , common land and water resources for agriculture, livestock resources, cottage industry , and livelihoods

However, agricultural risks, degradation of natural resources, restriction in accessibility and collection of forestry resources/ produce from forests, shrinking of common property resources and commercialization of common resources has affected the livelihoods of tribal people as well as other villagers

The dependency of villagers on fuel wood, fire wood, timber, bamboo, grass land, water bodies etc. has been cause of concern. Hence, effective management of common property resources, ensuring equity in accessibility and utilization of common resources as well as sustainability of common resources is imperative.

Conclusion

Rising incomes, globalization, and the digital revolution have created new opportunities for those who can seize them. This increased the wealth gap and hampered progress. This has enhanced the poor's vulnerability and marginalization, endangering their lives and livelihoods. Human security thus defends people from threats to their lives, livelihoods, and way of life.

The sustainable livelihoods method is well-known as a strategy for reducing poverty and managing natural resources. Increased collaboration between government agencies, non-government organizations, the community, and the private sector to identify means to create sustainable livelihoods for local economic development India's environmental problems are severe. The biosphere, which aided in the progressive growth of human life on Earth, began to lose its revitalizing power due to human insolence. The resulting situation provided a middle problem. The human exploitation of natural resources is at the root of this dilemma. Moreover, woods are crucial to the state's economy. Indians rely on forestry for energy, housing, fodder and tiny timber. As the country's population and economy develop, so does the need for forest goods and services. Economic growth, globalization, and the information revolution have generated new opportunities for those with knowledge, capital, and the capacity to capitalize on them. This has widened the wealth disparity. In this setting, the sustainable livelihoods strategy is widely regarded as a crisis-sensitive and asset-inclusive mechanism for reducing poverty and managing natural resources. Greening India must work hard to address food security and environmental issues. Deforestation has harmed the ecology, the economy, and the country's progress. The program's success will assist the country achieve ecological security, environmental and economic balance, and place it among the world's developed nations. It will ensure sustainable land, water, and biodiversity management. Integrated resource management will offer peace, prosperity, happiness, livelihood security, and sustainable development.

Environmental degradation endangers economic progress, and sustainable development takes time. Inadequate environmental regulation and enforcement contribute to resource degradation. Land deterioration is caused by natural and man-made processes such as wind erosion and water logging. Many plant and animal species are threatened by habitat degradation and overexploitation of forestry resources in India. Industrialization, energy production, urbanization, commercialization, and car proliferation all contribute to air pollution. City traffic pollution is a major issue. A major challenge in India in the coming decades will be clean water access. Overuse of fertilizers and other chemicals in agricultural production puts pressure on water resources. Aside from surface water pollution, untreated sewage dumped into lakes, rivers, and oceans pollutes ground water. Waste generation in India has expanded considerably in recent decades. The industries that produce hazardous waste include petrochemicals and pharmaceuticals.

Livelihood strategies and outcomes are modified by the environment of structures and processes. Construction is a term used to describe the process of constructing a building. Construction is the process of constructing a building. It is processes that determine how buildings work. In the lack of proper

institutions and processes for policy implementation, policy-determining structures are ineffective. Processes are vital to all aspects of life. They encourage people to make better choices. They control asset access. They allow people to trade one asset for another. They have a big impact on relationships. Unless the government adopts pro-poor policies that filter down to legislation and even less formal processes, the poor and vulnerable confront one of the main issues. Livelihood strategies seek outcomes. Choosing between intensification and diversification and short-term versus long-term consequences can be difficult. (Projects and programmes that benefit some may disadvantage others.) Enhanced income, increased well-being, reduced vulnerability, improved food security, more sustainable use of natural resources, and restored human dignity are all possible benefits of improved livelihood. Food, livelihood, and environmental security depend on natural resources. Their protection and sustainable usage remain huge issues. Circumstances warrant combining environmental and poverty-reduction initiatives. Land, water, forest, and biodiversity management are now universally regarded as critical to food, livelihood, and environmental security. Natural resources require simultaneous conservation, sustainable usage, and equitable benefit sharing. Indeed, development efforts must not lead to severe loss of natural resources and environmental deterioration. Creating large-scale sustainable livelihoods is one of the main priorities of emerging countries.

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