



Livelihood and natural resources: A socio-cultural and economic case study of the Paraja Tribe in Laxmipur Block, Koraput District, Odisha

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Abstract

The connection between the Paraja tribe and their natural resources for livelihood is intricate, tracing from ancient times to the present and future. The Paraja are traditionally agriculturalists, particularly dependent on non-Timber Forest products (NTFPs) and minor forest products (MFPs) to supplement their livelihoods. Natural resources are crucial to the lives of the Parajas, particularly the land and forest. Over time, they have learned to coexist with nature, making their livelihoods primarily dependent on natural resources. However, as family sizes have increased while the availability of agricultural land remains unchanged, they have increasingly turned to daily wage labour to support their livelihoods. This paper explores the socio-cultural aspects of the paraja nature-based livelihood. The empirical study depends on primary data and was conducted through fieldwork in Jhalaguda village, located in the Laxmipur block of Koraput district of Odisha state. The research methods included observation, structured schedules, and interviews, with purposive sampling and snowball sampling employed to gather field data. The paper also examines agriculture as an integral part of paraja culture and the cyclical relationship among natural resources, knowledge, and culture. Findings: Many locals are migrating to towns and cities in search of employment, although opportunities are not always available due to a lack of skills and educational qualifications.

Keywords: Cultivation, subsistence, Natural resources, Paraja community

Introduction

Livelihoods refer to the various occupations and ways of life that people engage in to make a living. The tribal communities in scheduled areas partially depend on natural resources for their livelihood. As a result, they are primarily self-working and sustain themselves through the sale of minor forest products (MFPs) such as food, cropping, cutting, and grassland cutting, as well as of West-based handicrafts and cottage industries. (Khosla, 2024;)^[4] These activities include sericulture, resin production (lac cultivation), beekeeping, charcoal burning, leaf plate making, liquor production, rope making, basketry, traditional medicines, and the collection, processing, and marketing of Non-Timber Forest Products (NTFPs)(Bisoi *et al.*, n.d.).

Additionally, they cultivate crops through agrosilvicultural practices, animal husbandry, community and rural forestry, and exercise various entitlements and privileges. (Kundan Kumar Pranab Ranjan Choudhary *et al.*, 2005)^[5] Utilising homegrown skills and village-level technology in woodcraft and small-scale forest-based related industries provides alternative employment and income-generating opportunities for tribal communities (Sahoo *et al.*, 2024). Examples include making wooden containers, bamboo and rattan handicrafts, farming implements, wooden structures, traditional musical instruments (used in festivals and ceremonies), hand-rolled (bidi) making, learning aids, wood sculpture, and wooden cookware (Pal, n.d.; Mohanty). The integration of forest conservation with agricultural and industrialisation, 'Westernisation' and 'Sanskritization' over-exploitation of natural resources utilisation holds great promise for enhancing livelihood stability, poverty alleviation, and food security for marginalised groups, including the uneducated, untrained, economically

disadvantaged, unemployed, landless, and labourers among the paraja people(Naik, 2013)^[6].

The constraints on land availability have led to reduced agricultural and forest production, impacting the livelihoods of tribal communities. While these communities rely heavily on man-made resources for their day-to-day living, natural resources continue to play a crucial role in their socio-religious practices. Traditionally, most tribes have earned their income through agriculture or daily wage labour. However, as family sizes increase without a corresponding rise in available land, it has become increasingly difficult to support everyone through agriculture alone. As a result, many tribal people are migrating to urban areas for better livelihood opportunities. Due to affected industrialisation and westernisation, which are now seen in urban areas, leaving villages for better livelihood. Unfortunately, the lack of skills and educational qualifications often limits their options, forcing them into low-paying wage labour jobs. This migration contributes to what is known as the "tribal-urban continuum (Jena, 2022)^[3].

Nevertheless, industrialisation and globalisation have done havoc on their sustainable livelihood and rustic lifestyle (Rath Jyoti Prakash & Dibati Nibal, 2020)^[9]. In the local backdrop of these Paraja communities, industry like The National Aluminium Company Limited (NALCO) in Damanjodi has a significant impact on the livelihood and natural resources of the Paraja tribe in Jhalaguda village. (Pattanaik, n.d.) These mining activities have directly affected the traditional way of life of the tribal people due to deforestation, loss of fertile agricultural land, and loss of vital water resources. Paraja people, who have long depended on agriculture, forest products, and local water resources, face displacement and restricted access to their ancestral lands. This disruption only threatens their

economic stability and also undermines their cultural identity, as their connection with nature is deeply rooted in their traditions and beliefs. The large-scale extraction of natural resources has alienated communities, leading to increased poverty, reduced self-reliance, forced subsistence, and minimal benefits in terms of overall quality of life or day-wage labour generated by mining.

Jhalaguda Village Profile

The studied Jhalaguda village is located 45 kilometres from the Koraput district headquarters and is in the Laxmipur block, 15 kilometres from the nearby village. The village lies 5 kilometres away from the National Highway-26 (NH-26), which connects Koraput to Bhubaneswar, 485 kilometres away. Near

Jhalaguda village's biggest company is the National Aluminium Company Limited (NALCO), Damanjodi. The village is predominantly inhabited by the Paraja Tribe (ST) communities, with only a few residents from the general community.

The village features concrete roads and is divided by a canal into two areas: Upara Sahi and Tala Sahi. It is equipped with an Anganwadi centre and a primary school. Most children attend the local primary school, but after completing their primary education, they generally migrate to other schools for their higher secondary education.

Review of literature

1. (Bisoi *et al.*, n.d.) Life on Earth cannot be without natural resources. A survey of 300 tribal residents of five blocks showed that the communities preserve 66 plant species, which are considered to have medicinal value. There are also 54 species stored as food, which include trees, herbs, shrubs and climbers. The Paraja tribe is impressive in conservation activities that are directed by cultural and religious teachings. The communities practice several conservation techniques, such as stone bonding and terrace farming, which underscores their adherence to environmental sustainability.
2. (Forest Policy and Tribal Livelihood with Special Reference to Koraput District, n.d.). The situation of people who rely on forests in India, particularly tribals, is pathetic because more than 23 per cent of India is covered by forests. These are some of the poorest tribes whose historical marginalization and looting of their land and resources date back to the late colonial period, and this continued even after independence. Forests form a part of their culture and economy and shape their way of life, both at birth and death. They rely on forests to feed, provide livelihood, shelter and medical services and have a symbiotic relationship with nature and are often termed as forest dwellers.
3. (Jena, 2022)^[3] The Paraja, a primitive tribal community of southwestern Odisha, experienced significant interactions with British colonial power. Gopinath Mohanty's narrative of "Paraja" (1945) reflects the tragic consequences of colonialism on the Paraja community, illuminating the problems of customs, revenue and land control administrators and witnesses to the environmental relations affected by colonial rule, using his literary work to depict the displacement and degradation of Paraja culture. This study analyses Mohanty's depiction of colonialism in Odisha through comparative and historical perspectives, emphasizing

how his narrative represents a racialized knowledge shaped by colonial interests in modern Indian literature.

4. (Khosla, 2024b)^[4]. Forest resources and minor forest products (MFPs) in particular are a crucial part of the Indian economy, which offers jobs and livelihood to the tribes. MFPs have a profound influence on the lives of people residing in the areas of forests, as they are one of the major sources of cash and fulfil non-subsistence requirements like education and healthcare. In Odisha, MFPs provide the tribal populations with a livelihood as they are part of their culture and economy. Even though they are crucial, MFPs are not given due attention, which does not help reduce poverty in rural communities. This paper will evaluate the importance of the existence of MFPs to the livelihoods of tribal people in Odisha.
5. (Pal, n.d.), With the rise in empowering women through education and the proliferation of Western thought, the issues of women have gained significant coverage in the literature, especially over the past twenty or so years. As much as there is gender inequality in India, the status of women in different parts of the country differs. Specifically, tribal women have a great role in the socio-economic life of their communities. They are unlike others as they are actively engaged in fulfilling their needs and have more freedom because of the traditional norms within their tribes. These women are also important in the national economy as they get involved in domestic work, agriculture, as well as other forms of labour and are central to society beyond subsistence.
6. (Pattanaik, n.d.-b) The association between the Paraja tribes and their natural resources is multidimensional and deep-rooted, both in ancient times and contemporary. The Paraja are traditionally farmers, and to supplement their income, they use non-timber forest products (NTFPs) and minor forest products (MFPs). They have become sustainable in their lives and depend more on the land and forest; their livelihoods depend on the land and forests. Nonetheless, as family sizes grow and farmlands become scarce, a large number of them have shifted to some extent towards daily wage labour. This adaptation is an expression of transformation in their socio-cultural fabric, but they are highly attached to agriculture, natural resources, and traditional knowledge. The dynamics can be illuminated by field research of Balda village in the Koraput district of Odisha, using interviews and observations that give an experience of their way of life.

Objectives

- To analyze the prevalence of activities related to various livelihood resources.
- To examine the socio-cultural significance of natural resources in livelihood.

Methods

The methods employed were both qualitative and quantitative. Primary data was gathered to ensure the accuracy of the information. During fieldwork, focus group discussions (FGDs) were conducted to gather insights into the village people's livelihood issues and the socio-cultural significance of natural resources in livelihood. A purposive sampling technique was used for selecting households, with a particular focus on women. Women were emphasized due

to their primary involvement in Non-Timber Forest Product (NTFP) collection and their strong connection to forestry (natural resources). The key tool utilized in the study was a structured questionnaire, which included both general and specific information. Additionally, techniques such as ethnography, interviews, and various forms of observation (direct, indirect, participant, and non-participant) were used to examine the livelihood resources of the local inhabitants. The collected data was organized and subsequently analyzed.

Results

The information was gathered, collected, analyzed, and

tabulated, and was organized, mixed qualitatively and quantitatively. For this study, 97 households were chosen using a purposive sampling method. These 97 households represent a total population of 276, with an average family size of 2.9. All the sampled households are from the Paraja tribe.

Table 1: Gender of the respondent

Particulars	Total population
Male	65
Female	50
Total	115
H.H	97

Table 2: Natural resources and different livelihood activities

	Resources	Activation
Livelihood Natural	Agricultural land	Cultivation, livestock farming, Slash-and-burn agriculture (Podu cultivation), Hilly terrain, forests
	Hills and Forest	Stone collection, wood, cultivation, Collection of NTFP and MFP, collection of healing plants for ethnomedicinal practice by disari, hunting, fruit collection
	Animal husbandry	Raising of cows and poultry, agriculture, mulching, dung manufacture for fertiliser, and consumption of poultry
	River	Water collection, Fishing, crabs, prawns, and sand collection
	Arrack	Construction, consumption, and circulation of salap, mahuli, fermented rice (chauli made), and Landa
	Market Bazaar (haat)	Trade system, shopping and marketing, Weekly markets (Haats)
Modern effect	Vehicle	Auto and bike cycle driving on their
	Politics	Sarpanch and ward member
	Anganwadi	Anganwadi worker
	Business	Shopkeeping, forest-based business, agriculture, Livestock rearing
	Artisans	Stitching and craftsmen, Traditional Artisans
	Pension	Old-age and Disability Pension
	school	Primary school, Jhamuguda, unskilled wage labouring
	Local towns	Unskilled wage labouring

The Paraja tribe of Laxmipur block in Koraput district has its livelihood directly associated with natural resources and traditional practices surrounding them. Farming continues to be a major source of livelihood. Other related practices include farming, animal husbandry and traditional forest, hill-cutting (locally referred to as Podu Chash), particularly in forested and hilly regions where the community partakes in activities such as stone and wood collection, seasonal farming and harvesting of non-timber and minor forest products (NTFP and MFP). Also, the community members gather medicinal plants to use in tribal medicines in their communities, which is usually headed by the traditional healers referred to as Disaris. Gathering of wild fruits and hunting are also prevalent. They also earn a living through animal farming, raising goats and chickens, making organic fertilizer out of mulch and cow dung, etc. The rivers within the area supply water to be used on a daily basis and are a source of fish, crabs, shrimp and sand. The production and trade of traditional alcoholic drinks, including salp, mauoli, kinme chaul (rice) and landa, is also part of the culture and trade in alcoholic drinks, particularly at the cultural and social parties. Haats is a significant node in the local trade structure, with week-to-week markets that enable the exchange of goods and help to support the buying and selling demands of the local population. Modernization has been providing new livelihood avenues in recent years. Local transport services have been made possible by the introduction of vehicles like auto-rickshaws and motorcycles. There is also a rise in political participation where the tribal members have been involved in activities like sarpanchs and ward members. Government schemes

have opened job prospects in the form of Anganwadi workers, and most people are currently involved in small businesses, including shopkeeping, trading in forest produce, and agro-related trading. Sedimentary skills have not yet been forgotten, and the artisans are busy at sewing, handicrafts and other local craftsmanship. These tribal communities are further supported by the government in terms of social security, such as old-age and disability pensions. In the villages, education is slowly taking root through the introduction of primary schools. Nevertheless, most of the individuals are forced to find shelter in the neighbouring towns to perform unskilled labour due to a lack of education. In sum, this discussion brings to the fore the dynamic relationship between knowledge of the Paraja tribes in terms of traditional knowledge, natural resource utilization and developed livelihood strategies.

Socio-Cultural Aspects of Natural Resources and Livelihood

The Paraja strongly relate with nature, and their cultural knowledge helps them earn their livelihoods using the natural resources. In this regard, they have to support their livelihoods. Basically, the resources, knowledge and income are in a cyclical relationship. The Paraja cultural interpretation of how to use resources forms the basis of intergenerational knowledge. Knowledge assists in resource conservation, whereas livelihood practices assist in the conservation of knowledge and resources. Therefore, these three components are seen to evolve over time, and this leads to their development and sustainability. The Paraja have been taught to live in harmony with the surroundings

over an extended period of time, and the collective ownership of land portrays a village council, which oversees the management of the natural resources. Today, the Paraja are observed to change their livelihoods to daily labour and other practices rather than traditional agriculture. Nonetheless, they rely mainly on agriculture as a means of earning.

Natural resources are crucial to the livelihood of the Paraja. The two primary natural resources for the studied Paraja are forests and farming land. Their main income sources are largely dependent on these natural resources, highlighting their coexistence with nature. The Parajas have a traditionally and occupationally intertwined relationship through the forest, resulting in a “symbiotic relationship” with it. The periodic collection of non-timber forest products (NTFPs) and minor forest products (MFPs) partially supports their livelihood. Paraja females are predominantly involved in forestry resources, while the male Parajas practice hunting during the Chaita Parab festival in the forest.

Alcohol plays a central part in the socio-cultural natural life of these communities. These people drink beverages such as mahuli, which is a cultural concept (mahua liquor), Landa (Mandia, Dhana liquor), and salap, which is made from natural salap trees (palm liquor). Traditionally, alcohol was considered a staple in their daily diet and routine. However, the native Parajas have become more aware and have limited their daily alcohol consumption. Despite this, alcohol remains significant during lifecycle rituals and local cultural festivals (paraja). It is spiritually offered to the goddess, and a small amount is given to a newborn baby on their 21st day (eksia). Similarly, during wedding ceremonies, alcoholic drinks are viewed as a prestigious donation. The Paraja celebrate a series of festivals through which altogether members, regardless of role, drink alcohol and perform the paraja dance or Desia dance (dhemsā) at night.

The studied area is nestled among hills, providing an ideal environment for the Paraja to live. Their village's memorial, situated deep within the forested mountains or hills of their villages, is the site where sacrifices of livestock, goats, sheep, buffalo, and pigs are accomplished during festivals, reflecting their socio-sacred values.

Fishing has become a new source of income for them, but the Badanadhi River's expansion over their arable lands has completely consumed their croplands and eliminated their traditional main source of income.

Apart from farming, these communities enhance their sustenance through animal rearing. They keep fowl and cows, which partially assist in supporting their subsistence through hardships. Animals, such as oxen, water buffalo, and cattle, are employed for agriculture and milk production. Sheep and goats are bred for commercial purposes. During celebrations, they offer chickens, goats, pigs, and buffalo as sacrifices at the village altar located deep in the forested hills.

Socio-Economic Aspects of Natural Resources and Livelihood

The Parja tribe of Laxmipur block shows that there is a profound interconnection between the people, the environment and culture. Their livelihood systems are based on natural resources like land, forests and wetlands, which are very important in determining their economic activities,

social organization and cultural practices. The traditional community of Parja has traditionally been dependent on agriculture and forest-based resources. Farmlands are not merely used to produce food but also serve as a symbol of identity and livelihood. The majority of the families earn their livelihood through such traditional means as shifting cultivation (Podu cultivation). Millet, paddy, pulses and vegetables are some of the crops grown. These rituals are directly interconnected to the menstrual cycles and ecological state of affairs, indicating their aboriginal knowledge and a long-term experience of intercourse with nature.

Another significant part of their livelihood system is the forests. Timber, fruits, medicinal plants, leaves and resins are classified as non-timber forest products (NTFPs) and minor forest products (MFPs) that are important in terms of household income and food security. These are not just economically significant, but also socially; they are integrated into their lives. Indicatively, the gendered division of labour in the Parja community can be underscored by the fact that women are very much involved in forest-based activities. The use of medicine and traditional medicine, especially by local healers (Disari), indicates how important natural resources are socio-culturally. Moreover, they are more dependent on the environment since they use forest resources to make traditional foods, beverages, shelter and tools.

Rivers and streams are also sources of their livelihoods as they offer a source of fishing activities, harvesting of aquatic organisms like crabs and shrimps, and support the day-to-day activities of the household. Nevertheless, farming land has been adversely impacted due to environmental alterations like river expansion and soil erosion, which have led to low productivity and unreliable livelihoods. Socio-economic changes have been experienced in recent years as a result of population growth, land fragmentation, industrialization and modernization. Due to the introduction of industries like mining in the surrounding areas, deforestation, displacement and agricultural land loss have been caused. This has compelled a large number of the Parja people to leave their traditional jobs in pursuit of wage labour and move to towns in pursuit of improved livelihoods. The community is still poor economically, regardless of its riches. Their access to education is limited, they do not have the technical skills, and they cannot connect to the market sufficiently to make full use of the available resources. Their local economies heavily rely on weekly markets (Haats) that allow people to exchange goods and services, but are prone to exploitation by middlemen since they are not aware and do not have bargaining power. Pensions, rural employment schemes and Anganwadi services are some of the government schemes that have been used to offer a certain degree of support, but their implementation is still not evenly spread. The small businesses, transport services and artisans are signs of the gradual diversification of livelihood sources, though they are not yet extensive.

Naturally, the natural resources affect the social interaction, cultural activity and traditional establishments. The Parja tribes have a strong community ownership and collective responsibility towards the land and forests. Their rituals and festivals, as well as their cultural beliefs, have a tight connection with nature. As an illustration, there are agricultural festivals, hunting activities and ritual sacrifices

in order to receive blessings to have good crops and ecological harmony. Social and ritual aspects are associated with traditional beverages prepared using natural resources like mahuli and salpa. The practices enhance social cohesion and maintain cultural identity in the community. Moreover, with the growing influence of modernization have come opportunities and challenges. Although this has resulted in new opportunities due to better connectivity, education and connections to external markets, it has also contributed to the slow disappearance of traditional knowledge and practices. The young generation is abandoning agriculture and livelihoods based on forests, and this is altering the socio-economic environment. This is a necessary change in favour of economic development, but this change poses questions of sustainability and cultural continuity.

Lastly, socio-economic factors of natural resources and livelihood within the Parja tribes indicate a complicated and dynamic connection between conventional practices and contemporary influences. Their livelihoods have mainly been supported by natural resources.

Farming: A way of life for the Paraja

The cultivation of produce is not merely a means of sustenance for these indigenous Paraja. It embodies several important traditional beliefs for people. The land-living is their primary resource, from which they spring their existence. They grow finger millets (ragi), rice, flax, several vegetables in their pantry gardens, and tomatoes on their plots, along with peanuts and mustard, using very basic farming tools. As cultivation is both their traditional and main way of life, and it carries cultural taboos, farming can be seen as a "way of life" for them.

During the Bandapana festival (August - September), they honour the farming fields and offer chickens and pigs as sacrifices on the land, sprinkling the blood to enhance the soil's fertility. On this day, the Paraja farmers prepare and consume their meals right on the same land. Another socio-traditional belief is that, subsequently, while carrying the harvest's backbone home, all the windows and access points of the household are kept exposed, and a lamp is kept lit until the harvests arrive. The person bringing the produce is forbidden from speaking to anyone until the crops are spread in the house.

Case Study

To understand the reasons behind the changing patterns of their livelihood, the investigator conducted a case study. The investigator interviewed an elderly man named Dambu Disari (pseudonym), who was 76 years old (pseudonymous age). The interviewee explained that all the locals had agricultural land, but it was taken away due to the establishment of the NALCO (National Aluminium Company), a company that was established to harness the bauxite-rich deposits of the Panchpatmali range in Damanjodi. He disclosed that the NALCO Company took over most of their farming land, and the river's expansion swallowed their fields as well. The locals were also displaced from their original settlement due to the company's growth, and they named their first residence the overflow area (Budhi Anchala / Badhi Anchala). The locals were neither resettled nor provided with any compensation.

Discussion

Natural resources, both land and jungle, perform an essential role in the lives of these communities. The

examined Paraja possess the familiarity to harmoniously interact with nature, and their agricultural practice serves as a means of livelihood, supplemented by a seasonal collection of NTFPs (Non-Timber Forest Products) and MFPs (Minor Forest Products). The inverse relationship between cropland resources and household establishment has led to a shift in their livelihood, and daily wage labour has become a major employment practice; this shift has been facilitated by increased job opportunities in local areas. Land and forest are the two main natural resources for the studied Parajas, embodying distinct socio-cultural aspects of livelihood and natural resources. This emphasizes agriculture as a cultural practice and illustrates the Parajas' symbiotic relationship with the forest, where both the Parajas and the forest rely on each other for survival.

Conclusion

The examined Parajas are found to be resource-rich yet impoverished, despite having access to both terrestrial and aquatic natural resources. Additionally, the growth of local cities and government initiatives to establish various factories have provided some daily wage labour opportunities. Natural resources such as forests are both socio-culturally and socio-economically intertwined with the Paraja community, fostering a mutually beneficial connection over time. Culture and understanding of ecology play a crucial role in the protection and utilization of natural resources, creating a cyclic connection within the community. Much of their living relies on natural resources. Agriculture, which is considered the core livelihood for this paraja community, has developed into a distinctive cultural practice of the Parajas.

In response to these challenges, the government is taking steps to improve agricultural productivity by introducing improved farming practices, enabling higher crop yields from the same amount of land. Additionally, efforts are being made to create alternative employment opportunities within or near villages, promoting sustainable livelihood development and reducing the need for migration.

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