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FROM FOREST TO MARKET: INDIGENOUS FOOD KNOWLEDGE, DIETARY TRANSITION AND CULTURAL RESILIENCE AMONG THE ORAON (KURUKH) OF CENTRAL-EASTERN INDIA

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ABSTRACT

Indigenous food systems are simultaneously nutritional resources, cultural archives and expressions of ecological knowledge. Among the Oraon (Kurukh) of central-eastern India, food practices have historically drawn upon cultivated crops, forest foods, wild fruits, leafy vegetables, roots and tubers, animal foods and fermented products. Yet the contemporary significance of this knowledge cannot be understood only by documenting what foods are known. A growing body of research indicates a widening distinction between awareness of Indigenous foods and their routine consumption, produced by changes in livelihood, market integration, mobility, environmental access and food preferences. This focused narrative review synthesises Oraon-specific and wider Indigenous food-systems scholarship to examine three questions: what characterises Oraon Indigenous food knowledge; what forces are reshaping everyday food practices; and how should continuity be understood when knowledge persists but practice declines or changes? The review argues that Oraon food systems are undergoing selective transition rather than uniform disappearance. Forest foods, traditional vegetables, fermented products and culturally significant dishes continue to carry nutritional and symbolic value, but their everyday use is increasingly mediated by availability, convenience, market access and changing aspirations. The paper proposes a knowledge-practice perspective in which cultural resilience depends not only on remembering Indigenous foods but on maintaining access, preparation skills, intergenerational transmission and socially valued

opportunities for consumption. It concludes that nutrition and tribal-development interventions should treat Indigenous food knowledge as a living biocultural resource rather than as a residual tradition.

Keywords: Oraon; Kurukh; Indigenous food systems; traditional food knowledge; dietary transition; wild foods; cultural resilience; tribal nutrition

1. INTRODUCTION

Food is one of the most ordinary ways in which Indigenous knowledge survives. It is gathered, cultivated, prepared, shared, offered in ritual, remembered through taste and taught through participation. For Indigenous communities, therefore, a food system is more than a list of edible resources. It connects biodiversity, livelihood, seasonal knowledge, social relationships, language, health practices and cultural identity. The Food and Agriculture Organization has consequently emphasised that Indigenous Peoples' food systems often embody distinctive relationships among natural-resource management, dietary diversity, governance, traditional knowledge and language, while also offering lessons for sustainability and resilience (FAO, Alliance of Bioversity International and CIAT, 2021). At the same time, these food systems are increasingly exposed to market integration, livelihood change, environmental pressure, urbanisation and changing consumption preferences, producing what global scholarship describes as food or nutrition transition (Kuhnlein, Erasmus, & Spigelski, 2009; da Rosa et al., 2026).

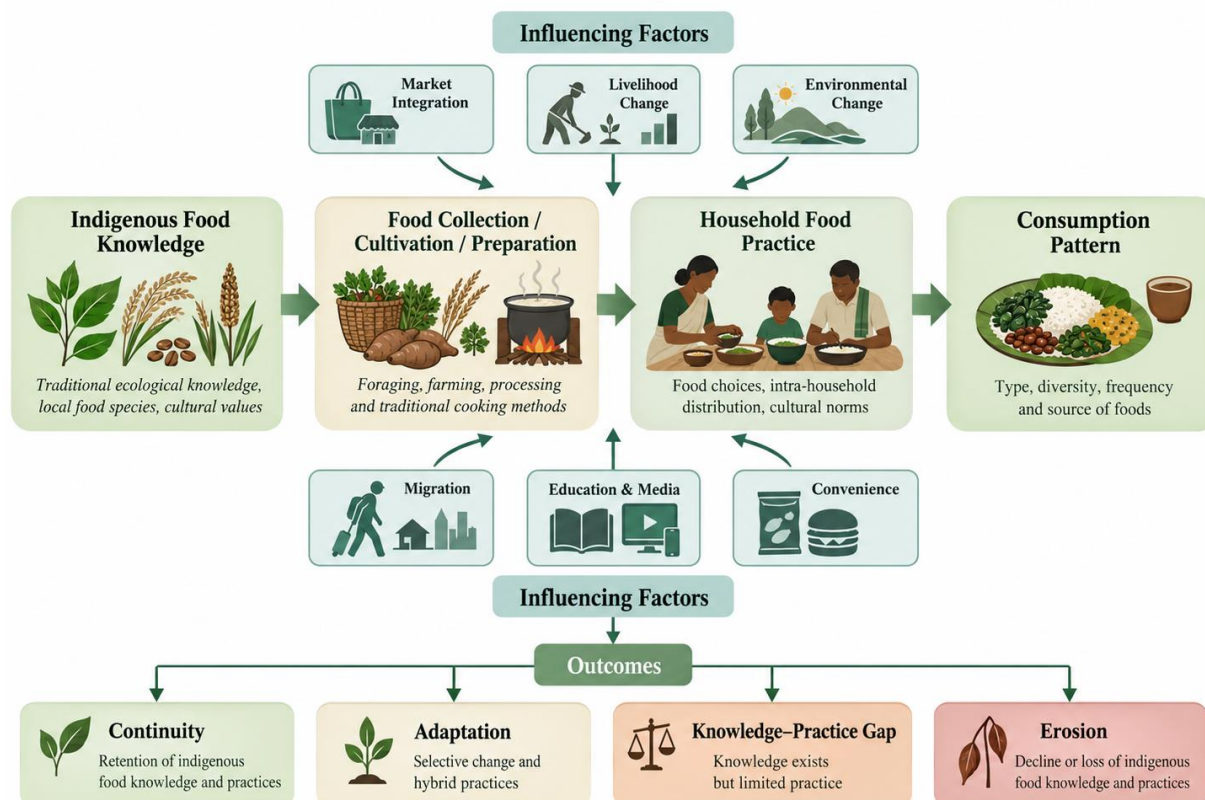
The Oraon, who identify themselves as Kurukh in many contexts, provide an important case for examining this tension. Oraon communities are distributed across Jharkhand, Chhattisgarh, West Bengal, Odisha and adjoining regions, and their traditional food environment has historically combined settled agriculture with access to forests, seasonal vegetation, small livestock, wild foods and locally developed processing practices. Research in Jharkhand has documented more than 130 Indigenous foods known within Oraon communities, including green leafy vegetables, roots and tubers, fruits, cereals, flesh foods and other locally available resources, many of which contain substantial amounts of micronutrients and are also attributed medicinal value (Ghosh-Jerath et al., 2015). Studies among Oraon women further show high awareness of Indigenous foods and demonstrate that consumption of such foods can contribute important nutrients, including calcium and iron (Ghosh-Jerath et al., 2018). In Chhattisgarh, research among Oraon communities in Surguja has documented the use of wild fruits not only as food but also within local therapeutic knowledge (Panda et al., 2022). A more recent study of Oraon food practices in West Bengal similarly records a diverse repertoire of traditional foods and fermented beverages while noting significant change under conditions of social and dietary admixture (Bisai, Dutta, & Das Mohapatra, 2023).

These findings create an important analytical puzzle. If knowledge of Indigenous foods remains extensive, why are many such foods underused in daily diets? Ghosh-Jerath et al. (2018) found precisely

this tension among Oraon women in Jharkhand: awareness of Indigenous food resources was high, yet household food security and actual consumption of these foods were comparatively limited. This suggests that knowledge persistence cannot be equated with practice continuity. A community may remember a food, recognise its nutritional or medicinal qualities and still consume it infrequently because the ecological, economic or social conditions that once supported routine use have changed.

The distinction is important because conventional accounts often frame dietary change as a simple movement from “traditional” to “modern” food. Such a binary obscures selective adaptation. Some foods disappear from routine diets, some become festival foods, some survive because they remain convenient or culturally valued, and others may be revived through nutrition programmes, local markets or renewed interest in biodiversity. Global evidence indicates that food transition among Indigenous Peoples and Local Communities is shaped by interacting economic, social and environmental drivers, including market integration, physical accessibility, government programmes, income change, land-use change, environmental seasonality and urbanisation (da Rosa et al., 2026). Thus, dietary transition is better understood as a reorganisation of food practices than as the automatic replacement of one complete food system by another.

This paper examines that reorganisation among the Oraon (Kurukh) through a focused narrative review of Oraon-specific and wider Indigenous food-systems literature. It asks three questions: (1) what characterises Oraon Indigenous food knowledge; (2) what factors are contributing to dietary transition; and (3) how can cultural resilience be understood when food knowledge remains but everyday use changes? The paper argues that Oraon food systems currently occupy a space between persistence and transition. Indigenous food knowledge remains substantial, but its future depends on whether knowledge can continue to be converted into access, preparation, consumption and intergenerational practice. The central issue, therefore, is not simply whether younger generations know traditional foods, but whether they retain practical opportunities and social reasons to use them. Figure 1 summarises the paper's analytical pathway: Indigenous food knowledge is translated into collection, cultivation and preparation, then into household food practice and consumption, while market integration, livelihood change, environmental change, migration, education, media and convenience shape whether the outcome is continuity, adaptation, a knowledge-practice gap or erosion.

Figure 1. Conceptual Pathway of Indigenous Food Knowledge and Dietary Transition among the Oraon (Kurukh)**Figure 1. Conceptual pathway linking Indigenous food knowledge, dietary transition and cultural resilience among the Oraon (Kurukh).**

Source: Author's conceptual synthesis based on Ghosh-Jerath et al. (2015, 2018), FAO et al. (2021), Bisai et al. (2023) and da Rosa et al. (2026).

2. REVIEW METHOD

This paper uses a focused narrative-review approach. The purpose is interpretive rather than bibliometric: to bring together the most relevant evidence on Oraon food knowledge and situate it within the broader literature on Indigenous food systems and dietary transition. Sources were identified through combinations of terms including “Oraon indigenous foods,” “Oraon traditional food,” “Kurukh food,” “Oraon nutrition,” “wild foods Oraon,” “tribal indigenous foods India,” and “Indigenous food transition.” Priority was given to peer-reviewed studies that directly examined Oraon communities, followed by Indian studies and authoritative international literature useful for conceptualising Indigenous food systems, nutrition transition and resilience.

The core Oraon evidence comprises studies from Jharkhand, Chhattisgarh and West Bengal examining Indigenous food knowledge, nutrient contribution, wild edible resources and traditional food-

consumption patterns (Ghosh-Jerath et al., 2015, 2018; Panda et al., 2022; Bisai et al., 2023). These were interpreted alongside wider syntheses of Indigenous foods in India (Kapoor, Sabharwal, & Ghosh-Jerath, 2022), international work on Indigenous Peoples' food systems (Kuhnlein et al., 2009; FAO et al., 2021), and recent scholarship on the drivers of food transition among Indigenous Peoples and Local Communities (da Rosa et al., 2026). The review focuses on recurring themes rather than attempting an exhaustive inventory of every Oraon food item. Four analytical themes were used: food knowledge as biocultural knowledge; nutritional and livelihood significance; the knowledge-practice gap; and selective transition and cultural resilience.

3. INDIGENOUS FOOD KNOWLEDGE, DIETARY TRANSITION AND CULTURAL RESILIENCE

3.1 Food Knowledge as Biocultural Knowledge

Oraon food knowledge is best understood as biocultural knowledge because it links edible species to places, seasons, preparation techniques, health beliefs and social occasions. The 2015 study by Ghosh-Jerath et al. identified 136 Indigenous foods through focus-group discussions in Oraon communities of Jharkhand. The repertoire included cultivated and wild green leafy vegetables, roots and tubers, fruits, cereals, flesh foods and other locally available resources. Importantly, participants differentiated foods according to where they were obtained, such as vegetables cultivated around the household and foods foraged from forests. Knowledge therefore included not only food identification but also an understanding of habitat, seasonality, access and use (Ghosh-Jerath et al., 2015).

This relationship between biodiversity and food culture is equally visible in Chhattisgarh. Panda et al. (2022) documented 26 wild fruit species used by Oraon communities in Surguja and recorded medicinal uses associated with several of them. Such findings demonstrate that categories of “food” and “medicine” are not always sharply separated in Indigenous knowledge systems. A fruit can simultaneously be consumed for taste, seasonal availability, nutrition and perceived therapeutic value. This overlap also appears in wider Indian evidence. Kapoor et al. (2022), reviewing 508 Indigenous foods from communities across 15 states and one Union Territory, found that many documented foods had high levels of iron, calcium, protein, vitamin C, vitamin A, zinc or folate. The review therefore challenges the assumption that locally available wild or semi-wild foods are nutritionally marginal.

Food knowledge also contains technical knowledge. Preparation determines whether an available resource becomes culturally acceptable and nutritionally usable. Oraon food practices described in the literature include boiling, roasting, drying, fermentation and other forms of processing adapted to locally available ingredients (Ghosh-Jerath et al., 2015; Bisai et al., 2023). Fermented rice beverages, especially handia/haria, are particularly significant because they occupy several domains at once: subsistence,

hospitality, social gathering, ritual and cultural identity. Bisai et al. (2023) emphasise the importance of handia within Oraon food culture and show that fermentation remains part of the community's broader food knowledge.

The significance of this knowledge is therefore not reducible to nutritional composition. Indigenous food systems are also systems of memory and belonging. FAO et al. (2021) emphasise that Indigenous food systems are interwoven with language, governance, ecological management and social organisation. This broader perspective is useful for Oraon studies because a decline in the use of particular foods may simultaneously represent loss of plant knowledge, collection practices, preparation skills and culturally specific occasions of sharing.

3.2 Nutritional and Livelihood Significance of Oraon Indigenous Foods

The nutritional relevance of Oraon Indigenous foods is well supported. Ghosh-Jerath et al. (2015) reported that several of the documented foods were rich in micronutrients such as calcium, iron, vitamin A and folate. In their later study of 143 reproductive-age Oraon women in Jharkhand, Ghosh-Jerath et al. (2018) found that women consuming Indigenous foods had higher intakes of key micronutrients, particularly calcium and iron. These findings are important because they show that locally embedded dietary diversity can make a measurable contribution to nutrient intake even when overall nutritional vulnerability remains high.

The same study also illuminates the food-system foundation of household diets. Most participating households possessed agricultural land, many maintained backyard gardens, and livestock ownership was common; respondents also reported substantial dependence on home-grown foods and nearby forests for daily food requirements (Ghosh-Jerath et al., 2018). Oraon food security has therefore historically rested on a mixed provisioning system rather than on market purchase alone. Cultivation, gathering, livestock and local exchange together produced a diversified food environment.

Such diversity has implications beyond nutrition. Wild and semi-wild foods can function as seasonal buffers, low-cash food sources and culturally familiar resources. Panda et al. (2022) show that wild fruits in Surguja remain linked to both dietary and ethnomedicinal use. At the wider Indian level, Kapoor et al. (2022) argue that Indigenous foods can strengthen food and nutrition security while supporting biodiversity, provided that scientific documentation does not detach these foods from the communities and ecological systems that sustain them. Evidence from other Indigenous communities in India similarly suggests that local food species can contribute simultaneously to nutritional security, livelihood opportunities and biocultural conservation (Singh et al., 2021).

This point is especially important for policy. Promoting Indigenous foods should not mean extracting a few “nutrient-rich” species from their cultural context and turning them into external commodities. Their value depends partly on continued community access to land, forests, seed systems, knowledge and

preparation practices. Indigenous food security is therefore both nutritional and institutional.

3.3 The Knowledge-Practice Gap

One of the strongest findings in the Oraon literature is that knowing Indigenous foods does not guarantee consuming them. Ghosh-Jerath et al. (2018) found comprehensive awareness of Indigenous food resources among participating Oraon women, but actual intake remained low and household food insecurity persisted. This produces what may be called a knowledge-practice gap: culturally retained knowledge survives at the level of recognition and memory but is only partially converted into routine dietary behaviour.

Several mechanisms can produce this gap. Availability is one. Wild foods depend upon ecological access, seasonality and the continued presence of particular species. Forest degradation, land-use change and reduced access to customary landscapes can therefore restrict consumption even where knowledge remains. The wider literature on Indigenous food transition identifies environmental seasonality and land-use change among significant drivers of changing diets (da Rosa et al., 2026). Kapoor et al. (2022) similarly connect urbanisation, changing natural-resource management and nutrition transition with the declining use of Indigenous foods in India.

Time and livelihood are another mechanism. Employment patterns that reduce time for collection, processing or slow cooking can favour purchased foods that are easier to obtain and prepare. The global review by da Rosa et al. (2026) identifies market integration, increased household income, new employment patterns, improved physical access and urbanisation as recurrent triggers of food transition. These processes alter not only what people can afford but also the organisation of household labour and the perceived convenience of particular foods.

Aspirations and status can also matter. Food choices carry meanings of modernity, poverty, prestige and identity. Market foods may be attractive not only because they are accessible but because they are associated with changing lifestyles, schooling or urban consumption. Conversely, some traditional foods may become socially devalued as “poor people’s food” even when their nutritional qualities are substantial. Global Indigenous food-systems scholarship has repeatedly shown that the influx of industrial and purchased foods can change preferences and reshape the cultural status of traditional foods (Kuhnlein et al., 2009; FAO et al., 2021).

The implication is that dietary transition cannot be reversed simply by informing communities that traditional foods are nutritious. Oraon communities may already possess that knowledge. The policy problem may instead lie in ecological access, convenience, social valuation, livelihood change and intergenerational practice. Nutrition communication that ignores these conditions risks treating a structural transition as an information deficit.

3.4 Selective Transition and Cultural Resilience

The available evidence does not support a narrative of complete dietary replacement. Oraon food systems show selective persistence. Rice remains central; traditional vegetables, roots, tubers, animal foods and fermented preparations continue to be recorded; and culturally significant foods remain connected with festivals, hospitality and community identity (Ghosh-Jerath et al., 2015; Bisai et al., 2023). At the same time, Bisai et al. (2023) report that traditional food practices have undergone substantial change through interaction with other communities and changing food environments. Continuity and transition therefore occur together. Figure 2 provides a concrete example of this persistence through culturally significant festive foods documented among Oraon communities in West Bengal; such foods illustrate how culinary continuity can survive even while everyday diets undergo wider transition.



Figure 2. Traditional festive foods documented among Oraon communities of West Bengal: (A) different types of pitha, (B) gur-pitha, (C) bhog prepared for ritual offering, and (D) aske-pitha.

Source: Reproduced from Bisai, Dutta, and Das Mohapatra (2023), Figure 1, *Frontiers in Sustainable Food Systems*, 7, 969264, under the Creative Commons Attribution (CC BY) License. Full bibliographic details are provided in the References.

This can be conceptualised through four possible trajectories. First, some foods display continuity: they remain known, available, prepared and regularly consumed. Second, some undergo adaptation: ingredients, utensils, processing methods or consumption contexts change while the food remains recognisably part of Oraon culture. Third, some experience ceremonial retention: they decline in everyday diets but survive in festivals, rituals or special social occasions. Fourth, some move toward erosion: ecological access, practical skill and intergenerational familiarity all decline.

Cultural resilience lies in the capacity of the food system to retain meaningful functions while adapting to new circumstances. It should not require freezing Oraon cuisine in an imagined historical form. Indigenous food systems have always responded to ecological variation, exchange and innovation. The important question is whether communities retain agency over the terms of change. FAO et al. (2021) argue that the sustainability of Indigenous food systems is inseparable from rights, governance, traditional knowledge and access to natural resources. Similarly, recent global review evidence shows that food transition is driven by interacting forces operating from household to regional scales, meaning that community preferences alone cannot explain or control all dietary change (da Rosa et al., 2026).

For the Oraon context, cultural resilience would therefore involve at least four capacities: knowledge of foods and their uses; practical ability to collect, cultivate and prepare them; ecological and economic access to the resources on which they depend; and continued social value attached to their consumption. If any one of these capacities disappears, knowledge may survive symbolically while the food system weakens materially.

4. DISCUSSION AND IMPLICATIONS

The reviewed literature produces three important insights. First, Oraon Indigenous food knowledge remains substantial. Studies across Jharkhand, Chhattisgarh and West Bengal consistently document diverse knowledge of leafy vegetables, wild fruits, tubers, locally available animal foods, medicinally valued food resources and fermented preparations (Ghosh-Jerath et al., 2015; Panda et al., 2022; Bisai et al., 2023). The evidence does not support portraying the community as detached from traditional food knowledge.

Second, however, knowledge and practice must be analytically separated. The Jharkhand evidence is particularly important because it demonstrates high awareness alongside underutilisation (Ghosh-Jerath et al., 2018). This distinction changes the research question. Rather than asking only whether traditional food knowledge is disappearing, future studies should measure at least four separate dimensions: recognition, access, preparation and consumption. A respondent may know a wild vegetable but no longer have access to it; another may have access but lack time to collect it; another may know its preparation but prefer market alternatives; and a younger person may recognise its name without possessing practical preparation skills. Each condition implies a different form of continuity or erosion.

Third, the drivers of transition are multidimensional. Global evidence indicates that market integration, government programmes, infrastructure, income changes, employment, land-use change, environmental seasonality and urbanisation interact rather than act independently (da Rosa et al., 2026). For Oraon communities, these forces are likely to intersect with local conditions such as forest access, agricultural change, migration, education, household labour and the cultural status attached to particular foods. This means that “revival” cannot be reduced to recipe documentation.

A more useful policy direction would be community-centred food-system strengthening. School and community nutrition initiatives could include locally available foods where appropriate; kitchen gardens and local seed conservation could support seasonal availability; community-led documentation could record names, habitats and preparation methods; and local markets could create value for selected foods without transferring control away from knowledge holders. The cultivation or domestication of suitable wild food species has already been suggested in Oraon-focused research as a means of sustaining traditional food practices (Bisai et al., 2023). Wider Indian evidence likewise supports the careful mainstreaming of local food species for nutritional and livelihood security (Singh et al., 2021).

Such interventions nevertheless require caution. Not every Indigenous food should be commercialised, and not every culturally embedded practice should be converted into a nutrition product. Commercialisation can alter ownership, access and meaning. A culturally respectful approach should therefore prioritise community participation and control, especially when knowledge has medicinal, ritual or identity significance.

For research, the most promising next step is empirical study of the knowledge-practice gap across generations. A short household survey combined with interviews could compare older, middle and younger Oraon participants on knowledge, frequency of consumption, food-source access, preparation ability and perceived reasons for change. Such work would extend existing nutritional documentation into a more explicitly social-science analysis of dietary transition.

5. CONCLUSION

Oraon Indigenous food systems should not be understood as relics of an earlier subsistence order. They remain repositories of ecological knowledge, nutritional diversity, food-processing skill and cultural meaning. Existing studies demonstrate extensive awareness of Indigenous foods and significant nutritional potential, yet they also reveal a critical tension: knowledge can remain culturally present while everyday consumption declines.

The movement “from forest to market” is therefore not a simple story of replacement. Oraon dietary transition is selective. Some foods remain routine, some adapt, some become concentrated in ceremonial settings, and some weaken as ecological access, preparation practices and social preferences change. The most important analytical distinction is between knowing a food and sustaining the conditions that allow it to be eaten.

For tribal-studies scholarship, this distinction shifts attention from documentation alone toward the social reproduction of food systems. For policy, it suggests that Indigenous food promotion must move beyond awareness campaigns. Cultural and nutritional resilience requires community access to food environments, continued practical knowledge, opportunities for intergenerational learning and respect for community control over knowledge and resources. Protecting Indigenous food systems ultimately means

protecting the relationships through which food remains part of lived culture.

Figure Sources and Reuse Notes

Figure 1 is an author-created conceptual synthesis prepared for this paper.

Figure 2 is reproduced from Bisai et al. (2023). The article is distributed under the Creative Commons Attribution License (CC BY), permitting reuse with attribution.

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