



Nourishing the Roots

Nutritional Justice for Adivasi Communities

The nutritional crisis facing India's *Adivasi* children is rooted in interconnected issues: loss of traditional diets, insecure land rights, climate stress, weak health systems, high burdens of anaemia and genetic diseases, and conservation regimes that often overlook human welfare. This article examines the shifting diets of *Adivasis*, the impact of climate change, the burden of protein and anaemia, and the tensions between wildlife conservation priorities and human welfare. It argues that Early Childhood Development (ECD) interventions serve as a crucial entry point for addressing these inequities, emphasising the urgent need for action.

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India's tribal or Adivasi communities have long sustained themselves on diets rooted in forest biodiversity, traditional crops, and locally available wild foods. Their food systems were not merely about sustenance, but about culture, ecological balance, ancestral land rights, and intergenerational knowledge transfer. Yet, over the past few decades, structural economic changes, conservation policies, weak implementation of land rights, climate pressures, and health burdens have altered their diets and inflicted deep nutritional harm.

The most vulnerable among them are children in the first 1000 days of life, when deficits in nutrition are hardest to reverse..

Changing Diets: From Forests, Millets and Wild (animal) Foods to Rations and Mono-crops

Many different Adivasi diets historically comprised a complex mix of cultivated millets, foraged tubers, wild fruits, leaves, roots, mushrooms, seeds, and animals typically hunted for food in forests. See, for instance, the case of Odisha's Similipal Biosphere Reserve, as reported by Abhijit Mohanty in the India Water Portal,¹ where

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wild foods such as kendu (*Diospyros melanoxyla*), chara (*Buchanania lanzan*), jungle aloo (*Curcuma* species), wild tubers, and leafy greens continue to contribute “a major source of dietary diversity for tribal communities since millennia.” These wild, uncultivated foods are also seasonally abundant, helping buffer periods of scarcity. Traditional crops, such as ragi, kutki, kodo, mandia, and local varieties of finger millet, were central to both diets and agroecological resilience. The case of the Soliga Adivasi community in southern Karnataka, studied by Mundoli, Joseph & Setty (2016), highlights how climate pressures, restrictive conservation policies, shifting aspirations among younger farmers, and broader policy-market forces interact to reshape food systems.

However, the erosion of traditional diets in all communities is evident globally, and the drastic impact on Adivasi communities is particularly pronounced.

- **Conservation and Forest Governance Pressures:** Legal restrictions on forest access, whether through tiger reserve/wildlife protection laws, wildlife conservation policies, or regulation of forest produce, have diminished Adivasis’ ability to forage or hunt. There are widespread instances of forest laws restricting access to forests, which in turn have impacted the food habits of tribal communities.
- **Economic Commercialisation and Monocultures:** Hybrid seed programmes, cash crops, chemical inputs, and state-promoted commercial agriculture have replaced climate-resilient indigenous crops. Wild foods and varieties are diminishing. In Simlipal, as reported in the India Water Portal article referenced above, Adivasi farmers report that “Cash crops are replacing traditional crops which are climate-resilient, rich in nutrition, less



BUDGET ANNOUNCEMENT 2025-26

हितागरी का ना जयकिस
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काखा

उपमन्त्रीय कार्य संयोजक
Ministry of Tribal Affairs
Government of India

EMPOWERING TRIBAL COMMUNITIES

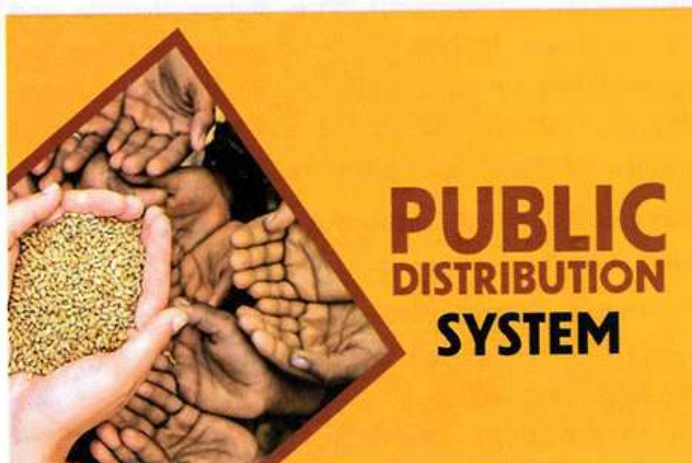
TWO MAJOR SCHEMES LAUNCHED:

- ✓ PM-JANMAN – ₹24,104 Cr. for PVTGs’ holistic development
- ✓ Dharti Aaba Janjatiya Gram Utkarsh Abhiyan – ₹79,156 Cr. for tribal villages

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labour intensive and need fewer agro-inputs. Loss of cereals like millets has led to poor nutrition outcomes among tribal communities.” This is a threat in multiple Adivasi areas currently.

- **Food subsidies and Public Distribution System (PDS) dependence:** Staple rice or wheat rations from PDS, often cheaper and more easily processed, have displaced millets and more nutritious multi-diet food choices and other multi-source tribal foods. As reported by Shuchita Jha in an article about Madhya Pradesh’s tribal regions in *Scroll*², many Adivasi households, even when millets are available, prefer “rice accessible freely through the public distribution system.”
- **Migration and Remittances:** As forest degradation, land loss, and lack of employment push Adivasis into seasonal or longer-term migration, remittance incomes, market dependencies, and more





processed or convenience foods become part of diets. Field accounts from Thuamul Rampur, Odisha, as recounted by Amrutha Jose Pampackal³, based on her field interactions with members of tribal communities in Odisha, show that families increasingly buy market staples such as onions, potatoes, dried fish, or soya chunks, adding these to whatever limited produce they still cultivate or forage.

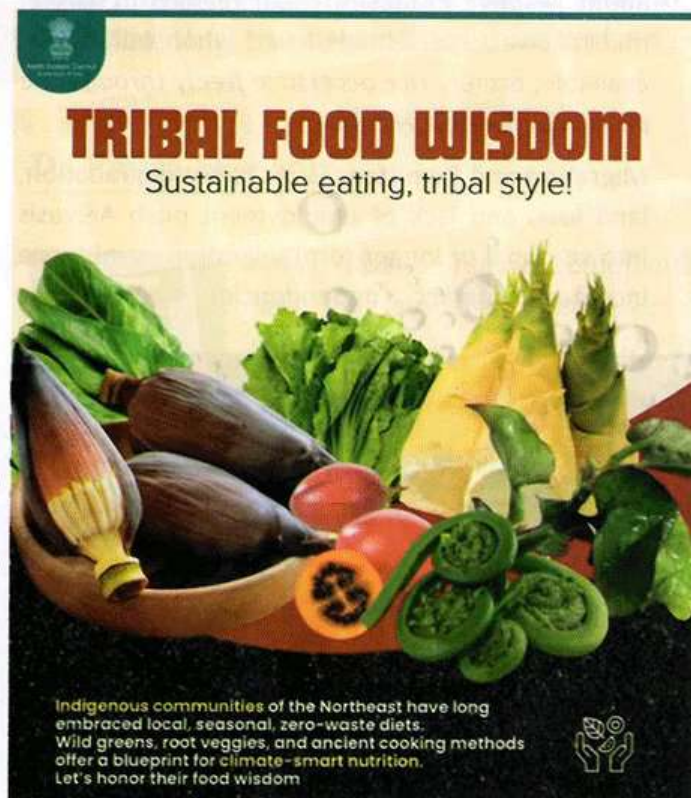
- **Cultural Change and Generational Loss:** Younger people often do not learn the traditional crop recipes or the foraging knowledge. Elders report declining appetite for wild plants among youth, loss of processing skills (for millets, etc.), and perception of millets as “*poor man’s grain*.”

- **Weak Implementation of Legal Rights to Land and Forests:** The Forest Rights Act (FRA) 2006 promises rights over minor forest produce and habitat, yet in many areas, Adivasis’ ownership over ancestral lands or access to forest resources remains contested or constrained. Without secure land, they cannot maintain the cultivation of traditional crops or foraging rights. Several recent reports highlight delays in claims, denial of rights, and forest department-led issues. These issues limit communities’ capacity to draw sustenance from forests or minor forest produce.

These issues limit communities’ capacity to draw sustenance from forests or minor forest produce. It is crucial to implement the FRA effectively, ensure the preservation of traditional knowledge, and promote sustainable agricultural practices to address these challenges. Additionally, empowering Adivasi women, who play a significant role in food production and preservation, can enhance the nutritional diversity of their communities. The shift away from diverse traditional diets toward cereals like rice or wheat, subsidised foods, fewer wild foods, and processed market offerings reduces not just caloric intake but also crucial micronutrients, fibre, dietary diversity, and protein quality. Millets, wild fruits and roots often had higher levels of iron, calcium, vitamin A precursors, complex carbohydrates, and essential amino acid profiles not matched by plain rice or wheat.

Climate Change: Disproportionate Impact on Adivasi Food Security

Though Adivasi lifestyles often have low carbon footprints, they are among the first to suffer climate impacts, because their livelihoods depend heavily on local ecology, rainfed agriculture, forests, and



seasonal cycles. Changing rainfall patterns, drought, and unpredictability disrupt millet cultivation and the availability of wild food. Traditional crops require less water and are more resilient, but even they suffer when dry spells lengthen or rains shift. Similipal's millet areas show that millets like finger millet/local ragi are climate resilient, yet their decline reduces resilience.

Forest Degradation: Mining, plantations of non-native trees (e.g. eucalyptus), dams, unsustainable agricultural expansion, all reduce biodiversity, forest cover, and hence wild food options. In Thuamul Rampur, Odisha, forests once rich in tubers, berries, and leaves are being degraded by dam projects, eucalyptus plantations, and monocultures.⁴ These climate pressures amplify the damage from the loss of traditional food systems, lifting stress on already vulnerable populations, the Adivasi children, pregnant/lactating women in particular.

Protein, Anaemia, Sickle Cell Disease, and Malnutrition: the Health Burden

Traditionally, many Adivasi economies have included hunting, small livestock, poultry, fishing, and gathering insects, among other activities. These provided good-quality protein, essential amino acids, and micronutrients, such as vitamin B12 and haeme-iron. As access to forests or wild fauna is reduced, and as diets shift to plant staples (millets, pulses, rice), the quality of protein often drops. Pulses are helpful but usually consumed in limited quantities, and complementary feeding (mixing pulses, millets, wild foods) declines. Millets, though more nutritious, are sometimes processed or de-husked in ways that reduce nutrient content. Additionally, market pulses may be expensive and therefore inaccessible, despite their nutritional quality, to many Adivasi communities.



India continues to struggle with addressing Severe Acute Malnutrition (SAM) even as economic growth continues. In a recent study from IPH Bengaluru published in *BMJ Global Health*, the NFHS-5 data show alarming rises in many districts (despite improvements in several others). Their analysis shows a significant overlap of SAM clusters with tribal-dominated areas. Strengthening Anganwadi services and community management of acute malnutrition are urgent in these districts. Anaemia among Adivasi women and children is markedly higher. According to UNICEF-India, about 40% of under-five tribal children are stunted, and 16% severely stunted. Severe stunting is more common among tribal than non-tribal populations, and micronutrient deficiency (iron, folic acid, etc.) is pervasive. Sickle Cell Disease (SCD) contributes an additional, under-recognised burden. SCD disproportionately impacts Adivasi (tribal) communities in India. Gene prevalence is high in certain central/western tribal regions; yet many gaps remain in health-system readiness, early diagnosis, and community-based care. Thus, anaemia in Adivasi areas is multi-factorial: iron deficiency, infectious disease (malaria, worm loads), dietary protein scarcity, and haemoglobinopathies like SCD. Weak health infrastructure means that diagnosis, treatment, and screening are patchy.

Malnutrition both predisposes to and worsens infectious diseases. Undernutrition raises the risk of tuberculosis (TB), slows recovery, and increases mortality. A 2023 study in the journal *The Lancet* by Dr. Anurag Bhargava and team⁴ has emphasised the significant contribution of undernutrition to TB burden. Though tribal-specific data is limited, the overlap of high undernutrition, poverty, and TB risk in tribal regions suggests that Adivasi communities likely suffer more.

Conservation, Protected Areas, and Conflicts with People's Welfare

While conservation is crucial, many interventions and laws have focused narrowly on the protection of wildlife and forests, sometimes at the expense of Adivasi access to traditional lands and livelihoods. Protected area laws, wildlife sanctuary regulations, and afforestation projects sometimes restrict access to forests for minor forest produce, foraging, and hunting. This undermines both food and nutrition security. Conservationists' efforts often fail to incorporate human welfare, particularly in terms of nutrition, livelihoods, and cultural practices. Schemes such as relocation, bans on grazing or collecting minor forest produce, or exclusion under "fortress conservation" models have caused food and income hardship. Occasionally, compensation or alternative livelihood programs are inadequate or poorly implemented. When traditional knowledge is dismissed or criminalised, younger generations lose both skills and a sense of agency.

Early Childhood Development: A Human-Centred, Intersectional Entry Point

Given the wide range of challenges—economic, ecological, legal, health system, and cultural—where should policies and programmes intervene for the most significant impact? Focusing on early childhood, especially the first 1000 days from conception to two years of age, provides an entry point for multiple benefits: nutritional, cognitive, social justice, and intergenerational equity. According to UNICEF, the first 1000 days are when "most of the cognitive and nutritional development happens." Early deficits in energy, protein, and micronutrients during this period can lead to stunting, impaired brain development,

poorer school performance, and reduced adult capacity and health. Tribal children face greater risks of these deficits due to historical disadvantage, poverty, and limited access to health and nutrition services.

Some inspiring efforts demonstrate how combining early childhood care, creches, nutritional supplementation, and local food inclusion can make a significant difference. Several models of creches run in Adivasi and remote rural areas by the Public Health Resource Network (PHRN) and Ekjut have demonstrated the remarkable improvement that can be achieved through early nutrition interventions, early childhood care, and stimulation using locally available foods. Evidence shows that these crèches have improved child growth and reduced malnutrition, while also supporting mothers in the critical first 1000 days. In addition to creches, Ekjut has pioneered the use of Participatory Learning & Action (PLA) models⁵ (involving mothers, ASHAs, and local women) in tribal areas. Rigorous research has shown that PLA improves child health, nutritional behaviours, and early childhood growth with a focus on locally available foods, mother support, and community engagement. In fact, the health ministry's National Health Systems Resource Centre recommends PLA in many Indian states. It has created an entire training module for delivering PLA in different states through ASHAs. The module emphasises inclusion of local food knowledge and culturally appropriate feeding practices.

These interventions demonstrate that, beyond supplementation or rationing, engaging communities, reviving local foodways, ensuring caregivers understand protein quality, dietary diversity, and providing them with control over land and forest resources can produce sustained change.

Building on the above, recommendations for policies, programmes, and practical actions to restore nutritional justice for Adivasi communities through ECD and broader systemic supports are outlined below.

- **Strengthen Implementation of FRA:** Ensure that Adivasi claims over forests and lands are recognised in timely and non-adversarial ways; protect minor forest produce and customary rights to hunting/foraging. Without land and forest, traditional diets cannot be restored.
- **Promote Millets, Wild Foods and local Varieties of Crops:** Several states have announced millet missions and such campaigns, which can be used





for this purpose. Seed banks, community seed centres, and long-term programmatic support for agroecological farming practices, as well as the integration of local foods into Anganwadi, PDS, and maternity & child health programmes, will facilitate better acceptance by communities and improve nutritional outcomes.

- **Intersectoral Approaches:** Nutrition is not only about health. Agriculture, forestry, land rights, conservation, education, and women's empowerment all matter. Policies, and more importantly, the implementation of these policies at the district and panchayat levels, must be coordinated across various departments, including Tribal Affairs, Health & Family Welfare, Agriculture, Environment & Forests, Rural Development & Panchayati Raj, etc.
- **Invest in ECD Services** tailored to tribal settings, including creches that utilise culturally relevant feeding practices and incorporate local foods. Support parents, particularly mothers, in active community participation, and provide flexible service delivery to address remoteness. Additionally, integrate ECD into Anganwadi, maternal health, and child growth monitoring.
- **Conservation with Justice:** Tiger reserve, wildlife sanctuary and reserve forests policies need to balance ecological protection with human nutritional needs. They need to ensure participatory conservation, include benefit sharing of such conservation with local communities and must prioritise the rootedness of communities within their own areas.
- **Monitoring, Data & Research to Fill Gaps** – More context-specific data in tribal areas (especially

in southern India, Northeast), evaluation of interventions, tracking of nutritional outcomes, malnutrition, anaemia, and SCD outcomes.

The nutritional crisis facing India's Adivasi children is rooted in interconnected issues: loss of traditional diets, insecure land rights, climate stress, weak health systems, high burdens of anaemia and genetic diseases, and conservation regimes that often overlook human welfare. However, this crisis is not unavoidable. Early childhood development, focusing on the first 1000 days, provides a strong entry point to address not just the symptoms but the root causes of nutritional injustice. Restoring traditional food systems, securing forest and land rights, reviving millets and wild foods, strengthening screening and health services, aligning conservation efforts with local priorities, and prioritizing caregiving, mothers, and communities—all form a pathway to ensure that Adivasi children not only survive but thrive. The nutrition and tribal life, sustainable and nutritious food systems must be rooted in justice, equity, and participation. Government policies, civil society efforts, and researchers must treat early childhood nutrition among Adivasis not merely as public health issues, but as matters of social justice and nation-building. □

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