

# The Good Sight

## EMPOWERING 11 STATES:

**ADANI  
FOUNDATION'S  
SUPOSHAN  
INITIATIVE**

**-PG 32**

## FROM SURVIVING TO THRIVING:

**SMILE TRAIN'S EARLY  
NUTRITION IMPACT**

**-PG 28**





# The Good Sight

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# Together, we can create a healthier, stronger India for generations to come



Dear Reader,

Nutrition is the cornerstone of human development and an important predictor of nation's growth. India in its Amrit Kaal relies increasingly on a healthy, well-nourished 'Amrit Peedhi' to shoulder the weight of the unfolding development story.

The Rashtriya Poshan Maah marks an important milestone in India's journey towards achieving a "Suposhit Bharat." This month-long initiative stands as a testament to our collective commitment to combat malnutrition and

enhance holistic well-being across the nation. With an engaging blend of community involvement and government action, Poshan Maah is transforming into a powerful Jan Andolan, drawing participation from all corners of society.

Nutrition has increasingly become a priority on the national agenda, underscored by Prime Minister Mr. Narendra Modi's remarks during the 113th episode of 'Mann Ki Baat.' He emphasized, "Children's nutrition is of topmost priority," highlighting the critical need to address this issue. The observance of 'Poshan Maah' from September 1st to September 30th serves as a dedicated period for the nation to focus on the nutritional needs of its youngest citizens.

Throughout the month, various initiatives aim to raise awareness about nutrition. Activities such as nutrition fairs, anemia camps, home visits for newborns, seminars, and webinars engage communities in meaningful discussions about health are going on. Additionally, the establishment of mother and child committees under the Anganwadi system reflects a proactive approach to ensuring that families receive the support they need.

Let us remember that the journey toward a Suposhit Bharat is a shared responsibility to nurture present and the future generations. Each of us has a role to play, whether by spreading awareness, advocating for nutritious diets, or supporting local initiatives. By prioritizing nutrition, we are not just addressing immediate health needs but laying the foundation for a healthier, more educated society. Together, let's continue to champion these vital efforts throughout the year to build a future where every child, woman, and man has access to the nourishment they need to thrive. Together, we can create a healthier, stronger India for generations to come.

I am glad to know that The Good Sight is dedicating this issue on Nutrition and Food! This special edition provides a valuable platform for policy and program leaders to share inspiring stories and future plans. Highlighting successful programs and innovative strategies will not only raise awareness but also foster collaboration and inspire further action in the fight against malnutrition. It's an excellent opportunity to showcase the collective efforts being made to enhance nutrition and well-being across the country.

## Dr Sujeet Ranjan

CEO – United Way - Delhi

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# Editor's Note



# INSIDE



**08** Cooking Up Community Change



**14** Trickle Up India Foundation Adds Colours to Plates in Odisha's Ghatakudi



**18** Supporting Government Efforts: A Thoughtful Approach to Food Security



**22** Biofortification: Healthier Communities and Resilient Agriculture



**28** Accelerating Cleft Treatment through Early Nutrition Intervention and Care



**32** Growing Solutions: Poshan Vatikas and the Path to Zero Hunger



**38** Forging an Anemia-Free Future



**40** India's 'Millet Mothers'



**42** Guardians of Heritage: Tribal practices in Seed Conservation and Nutritional Sovereignty



**46** The Power of Food and Nutrition Literacy

**50** Millet – The Grain of Health and Prosperity

**54** Improving Nutritional Outcomes through Regenerative Landscapes

**60** The genetic revolution can support food security, tackle the climate crisis and protect biodiversity

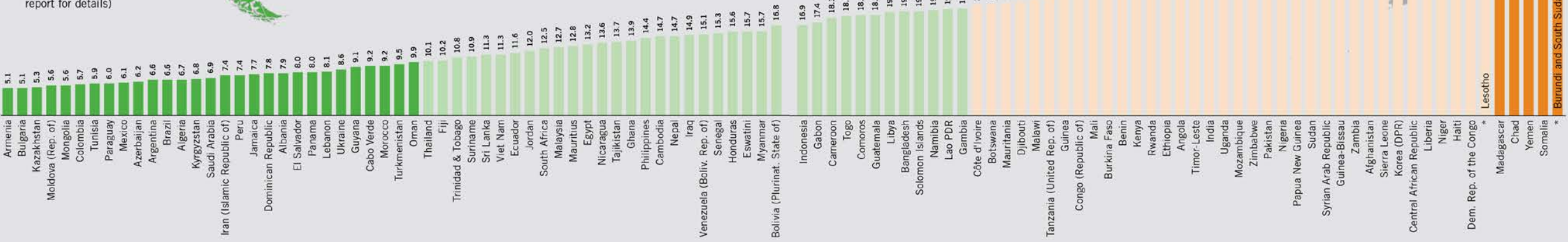
**62** Reshaping Foundational Learning for Better Knowledge Through ALfA



# 2024 GLOBAL HUNGER INDEX BY SEVERITY

Extremely alarming ≥ 50.0  
Alarming 35.0–49.9  
Serious 20.0–34.9  
Moderate 10.0–19.9  
Low ≤ 9.9  
Not included or not designated (see Appendix A in the full GHI report for details)

\* Provisional severity designation (see Table A.3 in the full GHI report for details)



Source: Authors.

Note: For the 2024 GHI, data on the proportion of undernourished are for 2021–2023; data on child stunting and wasting are for the latest year in the period 2019–2023 for which data are available; and data on child mortality are for 2022. GHI scores were not calculated for countries for which data were not available and for countries that did not meet the GHI inclusion criteria; see Appendix A in the full report for details.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by Welthungerhilfe (WHH), Concern Worldwide, or the Institute for International Law of Peace and Armed Conflict (IFHV).

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# COOKING UP COMMUNITY CHANGE

Rise Against Hunger India's community kitchen initiative fosters grassroots leadership and engagement to combat hunger and malnutrition in vulnerable regions. By addressing immediate nutritional needs and empowering communities to take control of their health and well-being, it paves the way for lasting, sustainable change

In the heart of India's rural landscape, where the echoes of nutrition insecurity resonate, the need for improved maternal and child health is paramount. For many communities in remote pockets, malnutrition isn't merely a statistic; it's a lived reality that hampers and perpetuates the cycle of poverty. Recognizing this urgent challenge, Rise Against Hunger India embarked on an ambitious journey, targeting the critical first thousand days of life—a period that shapes the future of every child.

Building on insights from their baseline survey under the Hunger Free Village initiative, Rise Against Hunger India identified nutrition as a neglected yet essential intervention area. The baseline data showed that in terms of institutional delivery, places like Bastanar in Chhattisgarh showed only 39.39% institutional delivery, Katekalyan 29.07%, and Boarijor in Godda, Jharkhand, only 17.93%. Against the national



average of 58.71% institutional deliveries, our baseline survey in Bihar, Jharkhand, Odisha, and Chhattisgarh showed an abysmal 4%, much below the national average. Similarly, 0% of women completed their full ANC services in Bastanar, Godda, Khairput of Malkangiri, Odisha, and Chandahandi in Nabarangpur, Odisha. In the hard-to-reach regions, nutrition and health is often sidelined, with little demand from the communities and significant gaps in health service delivery. The organisation thought about creating a platform with a community-based approach, uniting three essential cohorts: pregnant women, lactating mothers, and young children – the demography that comes under the first 1000 days.

Experts warn that insufficient nutrition during the first 1000 days of life (conception till two years of age) can inflict irreversible damage on a child's developing brain and body. Therefore, prioritizing maternal nutrition during this pivotal period is not just important; it's vital for breaking the cycle of malnutrition across generations.

A platform was essential for organizing core interventions for the primary cohorts. The Community Kitchen was, therefore conceived, where participants could cook and share meals while accessing nutritional counseling and healthcare. Additionally, it served as a delivery

point for local frontline workers like Auxiliary Nurse Midwives (ANMs) and Accredited Social Health Activists (ASHA didis).

This initiative, a cornerstone of Rise Against Hunger India's flagship "1,000 Days Nutrition Program," embodies community engagement and grassroots leadership. It strives to combat hunger and malnutrition in some of India's most vulnerable regions. By creating a supportive environment, the Community Kitchen not only addresses immediate nutritional needs but also empowers communities to take charge of their health and well-being, paving the way for sustainable change.

Currently implemented in 52 locations across the remotest areas of Bihar, Jharkhand, Chhattisgarh, and Odisha, the program supports more than 1,200 pregnant, lactating women and children by providing hot, cooked meals (khichdi) enriched with essential micronutrients, minerals, and vitamins. These meals are prepared by the women participants, fostering a sense of ownership and collaboration. In every program location, especially in areas inhabited by Particularly Vulnerable Tribal Groups (PVTGs), women play a pivotal role in organizing spaces, coordinating cooking schedules, and tracking participation—all while cultivating a shared sense of purpose.



## Empowering Mothers: The Key to Success

At the core of nutrition security lies the empowerment of mothers. In rural settings, mothers often serve as the primary custodians of family health, making informed nutritional choices that impact their families' well-being.

The 1000 Days Nutrition Program is meticulously designed to educate and empower pregnant and lactating women. By equipping them with essential knowledge about nutrition, the program aims to transform maternal roles from mere caregivers to informed decision-makers.

Healthcare workers, such as ANMs, ASHA didis, and local community health centers, are integral to this initiative. They provide essential counseling and support on a timely basis in the community kitchens, ensuring that mothers receive accurate information and access to healthcare services.

Through counseling sessions and community gatherings, mothers learn about the importance of balanced diets, micronutrients and timely health checkups. This synergy between community and healthcare, fosters an environment where mothers can thrive, share experiences, and support one another in making healthy choices.



## Creating Sustainable Change

Nutrition security transcends the mere availability of food; it encapsulates a holistic approach that includes knowledge, resources, and sustainable practices for balanced nutrition. The 1000-Day Nutrition Program aligns seamlessly with this broader vision. By addressing food diversity, micronutrient supplementation, and sustainable agricultural practices, the program paves the way for long-lasting change.

One of the most transformative aspects of the initiative is the introduction of household nutri-gardens. These gardens empower mothers to cultivate a variety of vegetables, enriching their diets and ensuring access to fresh organic produce. The vibrant colors of homegrown vegetables now grace the community kitchen's khichdi, reflecting

a monumental shift in dietary habits. Once reliant on external sources for nutrition, mothers are now self-sufficient, contributing to the community's collective health. This hands-on experience fosters a deeper understanding of nutrition, encouraging mothers to explore new recipes and diversify the family meals.

In addition, these kitchens also serve as educational hubs. Women gather to prepare meals and share vital information on hygiene, pregnancy care, and nutrition awareness. The collaborative efforts of the government and local communities ensure comprehensive support for families, promoting holistic health and nutrition in ways that resonate deeply within the fabric of these communities.



**The Way Forward: Scaling and Sustainability**

The primary goal of uniting women under one roof was to reduce the critical cases of pregnancy and malnutrition among mothers and children, as well as close monitoring and monthly recording of vital health metrics to facilitate safe deliveries, timely vaccinations, and overall well-being. Additionally, the aim was also to create a community vigilance system, empowering mothers to nurture camaraderie, stay informed about each other’s health, and alert community animators in emergencies.

After a year of operations, many mothers have become healthcare advocates, taking charge of their well-being and families. This empowerment has enhanced individual health outcomes and strengthened community bonding, creating a supportive network that prioritises nutrition and health for all.

Long-term sustainability hinges on effective monitoring and data collection, adapting strategies based on evidence and community feedback. By engaging with local stakeholders and continuously evolving the program, Rise Against Hunger India aims to embed nutrition security within the very fabric of these communities, transforming them into hunger-free communities..





Empowering mothers is the cornerstone of nutrition security. By bringing women together in community kitchens, we not only nourish bodies but also cultivate strength, resilience, and a shared commitment to health in rural areas. When mothers are equipped with knowledge and resources, they become advocates for their families and communities, breaking the cycle of malnutrition and building a brighter future for the next generation.

**- Dola Mohapatra**  
Executive Director  
Rise Against Hunger India



# TRICKLE UP INDIA FOUNDATION ADDS COLOURS TO PLATES IN ODISHA'S GHATAKUDI

- Contributed by Laressa A. Gomez (Communication Manager, Trickle Up) and Rasmi Ranjan Behera (Program Officer - Digital Inclusion, Trickle Up India Foundation)

The celebration was an important step in fostering health and well-being at the village level, contributing to the broader goals of the Poshan Maah initiative



In the heart of Odisha's Ghatakudi village, a one-day celebration of Poshan Diwas brought together 32 eager folks,

including mothers, children, and community leaders, to emphasize the importance of nutrition in everyday life. This celebration, organized by the

Srijan Foundation and supported by the Trickle Up Indian Foundation (TUIF) as part of the ongoing MPowered Project, marked a significant step towards

promoting health and well-being at the village level as part of the larger Poshan Maah initiative.

Poshan Maah, celebrated each September, is a cornerstone of India's Poshan Abhiyaan, a national nutrition mission aimed at improving nutrition for children, pregnant women, and lactating mothers. It highlights the need for better dietary practices and the role of locally sourced, nutrient-rich foods in combating malnutrition, especially in rural areas.

## A Day of Learning and Engagement

The Poshan Diwas celebration in Ghatakudi kicked off with a

speech by local leader Sitaram Oraon, who shed light on the critical role of nutrition during pregnancy and early childhood. He emphasized the importance of the 'first 1000 days' of life — from conception to the child's second birthday — as a window of opportunity for ensuring healthy growth and development.

## Key takeaways included:

**Nutritional Recommendations for Babies:** The focus was on exclusive breastfeeding for the first six months, followed by the introduction of iron and protein-rich complementary foods like mashed vegetables and lentils. Practical examples were shared,

such as meals of mashed sweet potatoes and lentils.

**Diet for Pregnant Women:** Participants were encouraged to include iron-rich leafy greens, folic acid from citrus fruits and legumes, and calcium from dairy products in their diets to support their health and that of their unborn babies.

**Nutrition for Lactating Mothers:** The event stressed the need for higher caloric intake during breastfeeding, with emphasis on nutrient-dense foods like eggs, fish, and leafy greens, along with adequate hydration.



## The 'Colour Foods' Concept: A Rainbow on Your Plate

One of the highlights of the day's celebration was the introduction of the 'colour foods' concept to the community — a simple method for ensuring a balanced diet by incorporating a variety of fruits and vegetables in different colours. This approach helps ensure the inclusion of a wide range of nutrients in diets, which is critical for pregnant women, mothers, and children.



- Green Foods:** Spinach, broccoli, and peas for strong bones and improved immunity.
- Red Foods:** Tomatoes and strawberries for heart health and cell protection.
- Orange & Yellow Foods:** Carrots and mangoes to boost eye health and the immune system.
- Purple & Blue Foods:** Blueberries and eggplant to enhance memory and heart health.
- White & Brown Foods:** Potatoes and garlic to support digestion and heart health.

A sample balanced meal might include green leafy vegetables, orange sweet potatoes, and a serving of protein like lentils, creating a colourful, vibrant and (most importantly) nutrient-packed plate.



### A Showcase of Local Foods

In a nod to Ghatakudi village’s rich agricultural traditions, an exhibition of 41 locally sourced raw food items was arranged by women’s self-help groups (SHGs) and Trickle Up’s Project Participants. The showcase included:

- Rice:** Gora and Usna varieties.
- Lentils:** Six types, including Masur and Arhar.
- Spinach:** Nine varieties, from muli to sajina.
- Vegetables:** Eighteen types, from pumpkin to bitter gourd.
- Non-Vegetarian Items:** Small fish, dried fish, poultry eggs and ant eggs.

The exhibition aimed to encourage participants to rediscover traditional, nutritious food options that are both affordable and locally available.

### Interactive Sessions and Community Engagement

The day-long celebrations also featured interactive sessions wherein community members asked questions about dietary practices, debunked myths surrounding nutrition, and learned practical tips for improving their families’ diets. Discussions on how to incorporate local ingredients into everyday meals, facilitated by a field coordinator, further conveyed the importance of balanced nutrition during pregnancy and lactation.



### Enjoying the Celebrations and Embracing New Learnings

Nitima Chorova, who travelled to Ghatakudi from nearby Timra village, “Partaking in today’s Poshan Diwas celebrations was a wonderful experience for all of us. From now on I will make sure to prepare meals that include a variety of vegetables, pulses and grains for my family.”

Belmoti Champiya, a resident of Ghatakudi village, could not contain her excitement as she shared, “This was an enjoyable celebration as well as a valuable learning experience for our entire Ghatakudi community. This will help us improve our food habits and plan nutritious meals for our children. We must send our children to the Anganwadi. Expectant mothers must get regular checkups and maintain a nutritious diet as this will also ensure a healthy baby.”



### A Step Forward for Nutrition and a Giant Leap for Community Health

The Poshan Diwas celebrations proved to be a resounding success in that it raised awareness about the importance of good nutrition. The introduction of the ‘colour foods’ concept and the exhibition of local produce were clear favourites and runaway hits with participants, who left with practical knowledge to improve their families’ diets.

Follow-up workshops and monthly meetings have been planned to ensure that the lessons imparted through Poshan Diwas continue to be reinforced, contributing to long-term health improvements in the Ghatakudi community.

As the curtain falls on Poshan Maah for this year across the country, events like this one remind us that small, village-level initiatives can create a meaningful impact on public health, ensuring a brighter, healthier future for India’s next generation.■

#### About Trickle Up India Foundation:

Trickle Up India Foundation (TUIF) is a nationally registered non-profit organization that partners with women living in ultra-poverty in India to create a sustainable livelihood and break the cycle of extreme poverty. Together with governments and local non-governmental organizations, Trickle Up India Foundation reaches underserved women in remote, rural areas as well as in urban slums enabling them to forge their own resilient pathways out of poverty.

Since 2013, Trickle Up India Foundation has been empowering women in ultra-poverty who have faced discrimination, and social and economic isolation all their lives. Leveraging a robust program framework and the much-acclaimed Graduation approach, Trickle Up India Foundation helps women develop sustainable livelihoods and strong savings habits, strengthening their capacity, self-reliance, and stability. They begin building their self-esteem and resilience. This profound individual transformation has positive ripple effects on their families, throughout their communities, and across generations.

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# SUPPORTING GOVERNMENT EFFORTS: A THOUGHTFUL APPROACH TO FOOD SECURITY

IHAT has collaborated with the Government of Uttar Pradesh to enhance community platforms, healthcare facilities, and systems, driving improvements in maternal and child health and nutrition outcomes across the state

**S**ustainable Development Goal 2: Zero Hunger aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture by 2030. This goal goes beyond providing enough food; it focuses on ensuring that everyone has consistent access to safe, nutritious, and sufficient food throughout the year. Food security is a cornerstone of SDG 2, addressing the critical need

for access to adequate food, which is vital for ending hunger, improving nutrition, and fostering sustainable agricultural practices. Nutrition plays a critical role in achieving Zero Hunger. Optimal nutrition is crucial for the growth, development, and overall health of individuals. Undernutrition—whether due to lack of food, poor-quality food, sub-optimal nutritional behaviours or recurrent infections—can result in stunted growth, weakened immune systems, and various

other health challenges. Thus, tackling undernutrition is essential to breaking the cycle of poverty and hunger.

In Uttar Pradesh (UP), health and development outcomes have improved significantly over the past decade. For instance, from NFHS 4 to 5 (i.e. from 2015-16 to 2019-21), stunting has decreased in children under five years from 46.4% to 39.7% and the percentage of underweight children under five years decreased from 39.5% to 32.1%. However, there remains substantial scope for strengthening maternal and child nutrition in the state. Since 2013, the India Health Action Trust (IHAT)-Uttar Pradesh Technical Support Unit (UP TSU) has been supporting the Government of Uttar Pradesh (GoUP) to enhance community-based platforms, healthcare facilities and health systems to improve maternal and child health and nutrition



outcomes. The focus has been on increasing the availability, and quality of health and nutrition services in UP.

In 2016, IHAT-UP TSU further deepened its engagement with the GoUP by providing support to the Integrated Child Development Services (ICDS) Department. This collaboration aims to strengthen nutrition systems, programs and services, with the ultimate goal of improving the health and nutrition indicators in the state.

## ICDS Supplementary Nutrition Programme

The Ministry of Women and Child Development, through the ICDS department, implements one of the world's largest programs for supplementary nutrition. Targeting vulnerable age groups and life stages, this initiative plays a critical role in

ensuring food security. Under the Supplementary Nutrition Programme (SNP), nutritional support is provided to pregnant and lactating women, children aged six months to three years, and adolescent girls through take-home ration (THR), while children aged 3–6 years receive a morning snack and a hot cooked meal. In order to strengthen the THR supply and uptake, the ICDS department has undertaken several initiatives, outlined below.

## Strengthening the Supply of Supplementary Nutrition

The THR supply chain is crucial to delivering supplementary nutrition in Uttar Pradesh. In compliance with Hon. Supreme Court order (2020), the GoUP restructured the supply chain by empowering women's Self-Help





Groups (SHGs) under the Uttar Pradesh State Rural Livelihood Mission (UPSRLM). These SHGs manage decentralised nutri-enterprises and MSME grade food processing factories, producing fortified, ready-to-cook THR for the ICDS target populations. This community-driven model enhances sustainability and empowers local communities.

As an interim measure until the SHG enterprises achieve full coverage, dry rations are provided to the target populations. To ensure quality, the ICDS department has established stringent quality testing protocols, utilising NABL-accredited labs. Additionally, the department has launched the hot cooked meal programmes for children aged 3-6 years enrolled in Anganwadi Centres.

### Building Capacities

UP TSU and other development partners support the ICDS department in building the capacities of the field staff. The

Incremental Learning Approach (ILA) trainings were rolled out state-wide in collaboration with development partners. Additionally, trainings were organized for the supervisory cadre to improve supportive supervision of the Anganwadi Workers (AWWs). Through this approach, supervisors mentor frontline workers (FLWs) in conducting home visits, educating pregnant, lactating mothers and their families on the significance of appropriate nutrition and promoting the uptake of THR. AWWs are also trained to organise community based events and encourage optimal nutrition behaviours within their communities, playing a key role in ensuring the nutritional well-being of children and women.

### Strengthening Review

To improve accountability for supplementary nutrition services, the ICDS department, with support from IHAT-UP TSU and UNICEF, has reinforced its review mechanisms. The District

Nutrition Committee, chaired by the District Magistrate/Chief Development Officer, holds monthly meetings where supplementary nutrition programs are reviewed alongside other initiatives and programs of the ICDS department. With the participation of the DPO and CDPOs, these meetings serve as a review platform at the district level. The AWWs provide program updates to the sector Supervisors during monthly sector meetings, ensuring the continuous monitoring and review of service delivery with the THR supply-chain being a key focus area of review and discussion.

### Creating Awareness

Raising community awareness is vital for achieving food security. The ICDS department leverages multiple platforms to promote optimal nutrition behaviours, locally available foods and the benefits of THR. FLWs provide family counselling during home visits, while interactive sessions during Village Health Sanitation



In Uttar Pradesh, health and development outcomes have improved significantly over the past decade. For instance, from NFHS 4 to 5 (i.e. from 2015-16 to 2019-21), stunting has decreased in children under five years from 46.4% to 39.7% and the percentage of underweight children under five years decreased from 39.5% to 32.1%.

Nutrition Days (VHSNDs) emphasise the importance of maternal and child nutrition through “Poshan Corners”. Additionally, wall paintings for THR entitlement at Anganwadi Centres serve as visual reminders, creating broader community awareness of THR.

### Conclusion

The Government of Uttar Pradesh’s efforts to combat hunger and malnutrition are commendable. By strengthening its nutrition systems, improving services, and raising awareness, the state is making significant strides towards food security. A continued focus on these areas is crucial to ensure that all citizens have access to safe, nutritious, and sufficient food. The recently concluded month of September, celebrated as National Nutrition Month, has served as a powerful reminder of the critical role nutrition plays in achieving food security and eradicating hunger. Through collaborative efforts, governments, international organisations, and communities can contribute to creating a world where everyone has access to nutritious and sufficient food.





# BIOFORTIFICATION: HEALTHIER COMMUNITIES AND RESILIENT AGRICULTURE

HarvestPlus improves nutrition and public health by developing and promoting biofortified food crops that are rich in vitamins and minerals and providing global leadership on biofortification evidence and technology. HarvestPlus works across CGIAR as part of the International Food Policy Research Institute (IFPRI)

**M**icronutrient deficiencies affect more than two billion people worldwide causing health issues, including stunting, blindness, brain development, immunity, and even death. According to the United Nations' State of Food Security and Nutrition in the World (SOFI) report published on July 24, 2024, more than half of India's total population (55.6 percent) is unable to afford a healthy diet. The National Family Health Survey (NFHS-5) further highlights the issue of prevalence

of anaemia prevalence at around 53% among women aged 15-49 and approximately 57% among children aged 6-59 months. Climate change, with rising CO<sub>2</sub> levels and increased temperatures, is significantly reducing the nutritional quality of staple food crops, further exacerbating micronutrient deficiencies.

Biofortification is a revolutionary approach that enhances the nutritional value of staple crops by increasing their content of essential vitamins and minerals. Unlike conventional fortification, which adds nutrients to food

during processing, biofortification boosts the nutritional quality of crops as they grow, ensuring that these nutrients are embedded directly into the food that communities consume daily. This strategy holds immense promise, particularly in developing countries like India, where micronutrient deficiencies are widespread and traditional dietary interventions often fall short. Studies have established that regularly eating biofortified crops can have a measurable impact, with more than 150 nutrition papers published on the topic.





## Why Biofortification Matters

### 1. Addressing micronutrient deficiencies cost effectively

Biofortified crops, such as iron-rich pearl millet and zinc-enriched wheat and rice, iron and zinc lentils and vita A sweet potatoes can address these deficiencies by providing essential nutrients naturally through daily diets.

### 2. A sustainable solution for long-term impact

Unlike supplementation and food fortification programs that require continuous external inputs, biofortification offers a sustainable, long-term solution by embedding nutrients directly into the crops. Once developed and adopted, biofortified crops require no additional changes in farming practices, making them a cost-effective intervention that reaches even the most remote and economically disadvantaged communities.

### 3. Enhanced crop resilience and climate adaptation

Biofortified crops are often bred not only for their nutritional content but also for traits like drought tolerance, pest resistance, and improved yield. This dual benefit makes them particularly valuable in the context of climate change, where resilient crops can help ensure food security and stabilize farmers' livelihoods in the face of increasingly erratic weather patterns.

### 4. Empowering communities and boosting local economies

By improving the health of communities, biofortification can have a cascading effect on productivity and economic development. Healthier children are more likely to perform better in school, and healthier adults can work more effectively, contributing to overall economic growth. Furthermore, cultivating biofortified crops can open new market opportunities for farmers, as consumer awareness of the nutritional benefits of these foods grows.

### 5. Cultural acceptance and integration into traditional diets

One of the key strengths of biofortification is its ability to integrate into existing food cultures. Biofortified versions of familiar staple foods, such as rice, wheat, millets, and maize, do not require communities to alter their diets significantly. This ease of adoption facilitates widespread acceptance and ensures that the nutritional benefits are realized without major lifestyle changes.

## Expanding ecosystems for scaling

HarvestPlus is at the forefront of promoting and disseminating biofortified crops globally, spanning Asia, Africa, and Latin America. Dr. Howarth Bouis, the Founder and Director of HarvestPlus, received the prestigious World Food Prize in 2016 for his pioneering work. In India, HarvestPlus collaborates with over 135 partners from various sectors, including public and private organizations, farmer-producer organizations (FPOs), JEEViKA, National Rural Livelihood Programs, and community organizations. HarvestPlus works to scale biofortified crops in Bihar, Uttar Pradesh, Odisha, Karnataka, Punjab, and Jharkhand, focusing on seed availability, demand creation, value chain development, and policy advocacy.





Policy support for biofortification

The scaling further biofortification hinges on robust policy support and strategic government interventions. India has already recognized the importance of this approach.

1. Incorporation in national nutrition policies

Biofortification is gaining traction as a key component of India’s efforts to combat malnutrition, as seen in initiatives like the Poshan Abhiyaan (National Nutrition Mission). Including biofortified crops in national food and nutrition programs can amplify their impact on public health.

2. Support and investment for agricultural research and development

Continued investment and international collational in agricultural research through institutions like National Agriculture Research Education System (NARES)- ICAR and SAU is critical to advancing biofortification efforts. Policies that prioritize funding for the development of biofortified varieties and ensure their availability to farmers can significantly boost adoption rates.

3. Subsidies and incentives for farmers

Providing subsidies for biofortified seeds and offering financial incentives to farmers who grow these nutrient-rich varieties can accelerate the shift toward biofortification. Training and extension services that educate farmers about the benefits of biofortified

crops are also essential for widespread adoption.

4. Public awareness campaigns

Raising awareness among consumers about the health benefits of biofortified foods can drive demand and encourage broader acceptance. Government-led campaigns, in collaboration with private and civil society organizations, can play a pivotal role in educating the public.

5. Food processing industry

The food processing industry can incorporate biofortified ingredients into products such as fortified flours, snacks, and other packaged foods, making nutrient-rich options more accessible to a broader consumer base. Collaborations between food companies and biofortification programs can create new market opportunities.

6. Supply Chain Infrastructure

Building efficient supply chains and last mile infrastructure to reduce the gaps to market biofortified crops is critical. The private sector can invest in infrastructure development, and robust traceability protocols to ensure that identity preserved biofortified produce reaches consumers.

Major Accomplishments

- 1. Establishment of strong partnerships between ICAR, SAUs, livelihood programs, private and public sectors, and community organizations.
- 2. The Prime Minister’s endorsement of biofortified crops marks a transformative moment.
- 3. Globally, more than 300 million people benefit from biofortified crops
- 4. More than 8 million people benefitting from biofortified crops.
- 5. The Indian Council of Agricultural Research (ICAR) policy to include 10 percent of its Frontline Demonstrations (FLDs) would include zinc-biofortified wheat and rice varieties.
- 6. Micronutrient standards developed for iron and zinc in pearl millet
- 7. Over 136 biofortified varieties have been released for cultivation by ICAR and SAUs in India and globally more than 420 biofortified varieties developed in Asia, Africa and Latin America.

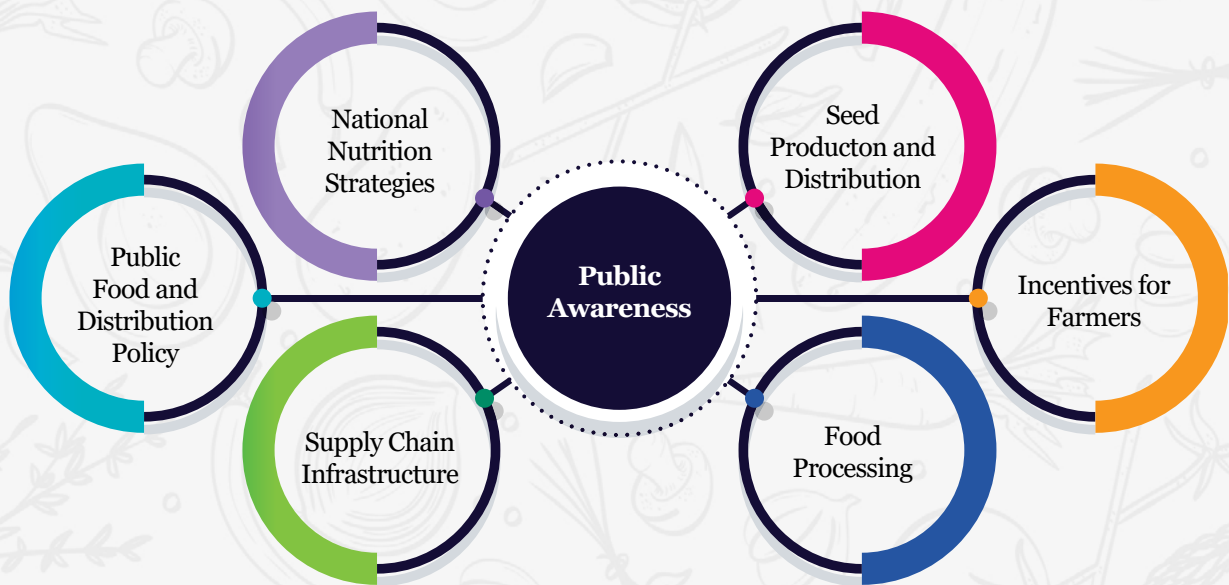
Conclusion

Biofortification presents a powerful, sustainable strategy for improving the nutrition of millions of people while simultaneously enhancing agricultural resilience. As India continues to face challenges related to malnutrition and climate change, biofortification stands out as a critical tool for empowering communities, safeguarding health, and building a resilient future. By embracing this innovative approach, we can ensure that the benefits of better nutrition and more resilient agriculture reach all corners of society, creating healthier, stronger communities for generations to come.



Biofortified crops offer a cost-effective solution to micronutrient deficiencies, empowering vulnerable communities to grow locally and consume these nutrient-dense foods. Supportive policies can enhance their integration into large food and nutrition programs.

- Binu Cherian  
Country Manager  
HarvestPlus







# ACCELERATING CLEFT TREATMENT THROUGH EARLY NUTRITION INTERVENTION AND CARE

Smile Train's early nutrition intervention ensures cleft-affected children survive and thrive, laying the groundwork for optimal long-term health and well-being

**C**left lip and palate are congenital conditions that affect millions of children worldwide. According to estimates by the World Health Organization (WHO), more than 35,000 babies are born with clefts in India each year. These conditions not only affect a child's physical appearance but also pose serious health challenges, including difficulties in eating, breathing, hearing, and speaking. Many of these children face bullying and social exclusion, struggle to continue their education, and later find it challenging to secure employment or lead a healthy, fulfilling life. Delaying surgical intervention may also result in a compromised

quality of life, speech impairments, and hearing loss.

## National Nutrition Month Focus: Supporting the Nutritional Needs of Children with Clefts

While National Nutrition Month provides Smile Train an opportunity to talk about maternal and child nutrition, it is critical to have a dialogue around the specific nutritional challenges faced by children with cleft lip and palate. Early diagnosis and specialized nutritional care can help ensure these children are prepared for timely surgery, improving their overall health and chances for a full and healthy life.



### Common Feeding Challenges for Children with Clefts

- **Poor Suction:** Difficulty in creating a proper seal due to the gap in the lip and/or palate, affects breastfeeding.
- **Swallowing Difficulties:** Food or liquid may enter the nasal passage or run out through the nose, leading to risks of choking.
- **Slow Feeding:** Children with clefts may find it difficult to drink milk or swallow food at a stretch. Frequent pauses are required to help the child reach the breath or adjust.
- **Frustration and Fatigue:** Feeding can be exhausting for both the child and caregiver, often leading to emotional distress.
- **Weight Gain Issues:** Challenges in breastfeeding or complementary feeding can result in malnutrition, delaying critical surgery.

### Low or inadequate nutritional intake in children with clefts can result in the following:

- **Slow Growth and Development:** Malnourished children with clefts risk delayed growth. Proper nutrition is vital for their physical and cognitive development, and undernourishment can worsen health issues.
- **Pre- and Post-Surgery Nutrition:** Good nutrition is crucial before surgery to ensure readiness and after surgery to support healing, strengthen immunity, and prevent complications.
- **Strengthening the Immune System:** Malnourished children have weaker immune systems, increasing infection risk. Proper nutrition strengthens immunity, which is crucial for children with clefts facing frequent health challenges.

*A woman smiles while carrying her child, radiating warmth and happiness.*



## Smile Train's Approach to Nutrition for Children with Clefts

Smile Train, the world's largest cleft-focused NGO, works across 75+ countries with a comprehensive cleft care model that focuses on both treatment and the holistic well-being of children with clefts. By investing in early nutrition intervention, Smile Train not only ensures the survival and healthy development of cleft-affected children but also strengthens the foundation for

their long-term health outcomes and overall quality of life.

## Nutritional Support for Early Growth and Surgery Preparation

Smile Train's nutrition program is designed to guide the mothers with emotional counseling and support, helping them to learn feeding techniques and alternate feeding methods to alleviate stress and foster confidence. Over the years, this program has shown encouraging results and

being scaled up and supported in multiple hospitals across India equipping partners to deliver better care and ensure early surgical intervention.



*We have been running the nutrition program for over 10 years now, and I can confidently say it has been one of the most impactful interventions for children with clefts. By addressing their nutritional needs early on, we not only improve their overall health but also ensure they are better prepared for surgery and recovery.*

—Dr. Subodh Kumar Singh, Plastic Surgeon, G S Memorial Hospital, Varanasi, Uttar Pradesh

## Educational Initiatives for Cleftcare Professionals

Regular workshops and knowledge exchange sessions are organized under Smile Train's nutrition program to engage nutritionists, healthcare providers, nurses, and paramedical staff to disseminate essential information about cleft nutrition and feeding practices. Smile Train also collaborates with the Federation of Obstetric and Gynaecological Societies of India (FOGSI) to raise awareness among obstetricians and gynaecologists about the importance of early feeding for babies with clefts and the tools available to help mothers feed their cleft-affected children.



*The nutrition trainings provided by Smile Train have been transformative in offering hands-on guidance about cleft nutrition. These sessions equip the nutritionists and other primary cleftcare providers with the skills and knowledge to ensure cleft-affected children receive the right nourishment at every stage of their development. This practical support directly impacts the lives of beneficiaries, helping them grow healthier and better prepared for surgery.*

— Manasi Puranik, Nutritionist, Bhagwan Mahaveer Jain Hospital, Bengaluru, Karnataka

## Extending Outreach and Community Engagement

**Nutrition Vans:** In collaboration with local treatment partners, Smile Train has supported launch of nutrition vans in several states to spread nutritional knowledge to underserved communities in remote areas. This year with Bhagwan Mahaveer Jain Hospital, Bengaluru, a custom-made mobile cleft clinic was launched with an aim to improve and expand access to comprehensive cleft care services including nutrition care. Partner Hospitals in different states also perform community activities like workshops, rallies to highlight the importance of cleft nutrition.



*Feeding Ayush was extremely difficult as milk would ooze out of his nose. He was three months and weighing 2.6 kgs when we brought him to Dube Surgical and Dental Hospital in Jabalpur. With Smile Train's support our son gained weight and got operated when he weighed 6 kgs on 8th month," said Ayush's mother.*



Ayush Marawi at three months



Ayush Marawi at six months after surgery

Smile Train's nutrition program emphasizes the vital importance of proper feeding and nourishment in cleft care, giving children the foundation they need for a healthy start and preparing them for life-changing medical procedures. Through ongoing education, empowerment, and support for families and healthcare professionals, Smile Train enables thousands of cleft-affected children to flourish.





# GROWING SOLUTIONS: POSHAN VATIKAS AND THE PATH TO ZERO HUNGER

Project SuPoshan, led by Adani Foundation, combats malnutrition in 11 states with sustainable food solutions, enhancing nutrition, gender equity, and healthier futures through knowledge retention and 4Fs framework

By Kavita Sardana, Advisor, Health & Nutrition, Adani Foundation

**F**ood is a crucial link amongst all 17 United Nations (UN) Sustainable Development Goals (SDGs), reflecting its significant role in the socio-economic and environmental dimensions of the

society. Food provides more than just fuel – it provides information to our body, mind, and soul. However, the impact of food consumption on the planet often goes unnoticed.

## The Present Scenario

India's ranking of 94th out of 113

countries in the Global Food Policy Report 2023 highlights significant challenges in food security and nutrition. This underscores the urgent need for investments in agriculture, infrastructure, and social change.



Understanding nutrition security and food sustainability requires a focus on awareness, availability, accessibility, and affordability. The COVID-19 pandemic, along with economic, climate, and conflict shocks, has driven global food prices higher. According to the Micronutrient Forum, a 5% increase in real food prices could raise the risk of wasting by 9%, particularly affecting children and women in low and middle-income countries. Immediate action is needed to scale up nutrition interventions to build resilience and prevent the intergenerational impacts of malnutrition.

The EAT-Lancet Commission on Food, Planet, Health, warns that without urgent action, the world risks failing to meet the SDGs and the Paris Agreement, leading to a degraded planet where much of the population suffers from malnutrition and disease.

Project SuPoshan, led by the Adani

Foundation, operates across 17 sites in 11 states, including the challenging terrains of Gujarat's Narmada – an aspirational district. Here, the initiative focused on combating malnutrition and creating sustainable food solutions over the past five years. Working in this terrain was challenging but gratifying as the efforts yielded impressive results, enhancing nutritional outcomes, gender equity and a healthier future for many. During the intervention, focus was on the retention of the knowledge and practices. The process was based on basic understanding of 4Fs.

## The 4 Fs of Sustainability

**Food:** As a vital source of energy for all living beings, food's distribution is influenced by geographical, environmental, and socio-economic factors. Consuming and promoting local produce is a key factor in ensuring food and nutrition sustainability.

**Finitude:** The earth's resources

are finite, and there are limits to how they can be used. Recognizing this finitude challenges the notion of limitless economic growth on a finite planet. Every inch of the earth is precious. Even using the backyard of the households can yield immense benefits.

**Fragility:** From small water bodies to the entire planet, our ecological systems are vulnerable. This fragility demands careful stewardship of resources available and action for their mindful management and conservation.

**Fairness:** Social and economic justice must guide the distribution of land, water, food, and access to services. Inequities, particularly those affecting women and marginalized communities, must be addressed as these are major contributors towards malnutrition.



# Project SuPoshan: Promoting Food Sustainability

It is a community-based intervention to combat malnutrition in children under five years of age and improve the nutritional status of adolescent girls and women in the reproductive age group. It is an initiative of Adani Wilmar, implemented by the Adani Foundation. Village level volunteers are identified and trained to become SuPoshan Sanginis, who play a pivotal role in spreading awareness and promoting referrals. They catalyze behavioural change by engaging community members in a gamut of activities like screening of target groups, cooking demonstrations, and counselling sessions for families. Supplementing the Government of India's Poshan Abhiyaan, SuPoshan is striving to break the vicious cycle of malnutrition and promoting access to Government services.

As part of Project SuPoshan, the creation of Poshan Vatika, or kitchen gardens, in the backyards of the households has proven to create positive outcomes in achieving the 4Fs. Each Vatika provides a sustainable source of fresh, seasonal vegetables, ensuring nutrition at the doorstep for families and communities at large.

**Key Activities and Approaches**  
**Awareness and consumption of Local and Seasonal Foods:** Encouraging the use of locally available, seasonal produce.

**Nutrition Security:** Ensuring communities have access to clean, safe, and healthy home-grown food to meet their nutritional needs.

**Food Democracy:** Connecting people to their food, fostering

responsibility, and ensuring fairness, especially among women and girls.

**Guidance and Cooking Demonstrations:** Providing practical demonstrations of recipes to promote behavioural change regarding food consumption and hygiene.

**Action Points**  
**Scaling Up in Narmada:** In Narmada district, the project has scaled up to 5,000 Poshan Vatikas across five blocks, ensuring nutrient-rich and varied foods are accessible and affordable.

**Strengthening Health and Social Protection Systems:** Our efforts focus on preventing malnutrition in all forms and building population resilience against future shocks.



**Real-Time Nutrition Data Collection:** Prioritizing the collection and analysis of nutrition data to ensure actions meet the nutritional needs of target populations.

**Promoting Rural-to-Rural Interaction:** Encouraging rural exchanges to improve nutritional outcomes.

**Real-Life Example**  
In Junaraj village in Nandod block of Narmada, the family of Meena Vasava, pregnant with her second child, developed a Poshan Vatika. With training from SuPoshan Sangini Karishma Panchiya (village-level health volunteer) and support from the Adani Foundation, the family is equipped with knowledge on diet diversity, immunization, and health practices. This example illustrates how a Poshan Vatika is developed and provides a practical solution for ensuring nutrition security.

**Area and Setup**  
**Backyard Size:** 100 to 200 sq. ft.  
**Water Requirements:** 50-100 litres per week, sourced from hand pumps.

**Manure:** Vegetable peels and dried leaves are composted in a pit to create natural manure.

**Plant Varieties: Seasonal Plants:** Radish, Carrot, Spinach, Fenugreek, Ladyfinger, Cluster beans, Brinjal, Lobia, Tomatoes, etc.  
**Perennial Plants:** Moringa, Lemon, Indian gooseberry, etc.

**Harvest Yield**  
**Seasonal Plants:** 3-5 harvests per season.

**Perennial Plants:** Yield can last up to 30 years.

**Family Involvement**  
**Training and Maintenance:** The family receives training from the Krishi Vigyan Kendra along with

Sanginis' efforts, which include ploughing, sowing, and daily maintenance. Gender roles vary, with men handling initial tasks and women managing ongoing care.

**Gender Roles:** This approach also sensitizes men to the economic and nutritional benefits of the vatika, while empowering women as primary caretakers.

**Challenges**  
**Chickens:** Household chickens often peck at seeds, leading families to enclose the vatika. Old sarees or sheets used for fencing the vatika.

**Excessive Rain:** Occasionally, heavy rains can wash away seeds, but families persist due to the benefits.

**Outcomes**  
**Nutritional Security:** Women, as custodians of the vatika, gain autonomy over food preparation and consumption. The surplus availability of vegetables ensures that they no longer must consume minimal left out portion. Instead, they can enjoy ample, nutritious meals, breaking the cycle of intergenerational malnutrition.

**Sustained Food Supply:** Continuous replanting and seed storage ensure a year-round food availability with a 65% increase in Take Home Ration (THR) utilization.

**Health Improvements:** Notable health improvements in children, adolescents, and women with the community's food security index doubling.

**Community Empowerment:** Fosters ownership and social bonds through shared produce and engagement.

**Economic Benefits:** Families save approximately ₹100 daily by growing their own vegetables. This highlights the principles of

availability, accessibility, and affordability.

Culinary and Nutritional Impact  
Beneficiaries learn diverse cooking methods conducted by Sanginis, ensuring a variety of micronutrients and vitamins through vatika produce.

**Cultural Shift:** Integrated knowledge sharing, counselling, and cooking demonstrations are changing nutritional mindsets among tribal communities, spreading the positive impact of the vatika model.

**Sustainability:** Poshan Vatikas are designed for long-term sustainability, with replanting and seed storage practices maximizing harvests and minimizing time between them.

**Community Involvement**  
**Tips for Poshan Vatika**  
**Engage Local Leaders:** Involve influential community members to promote and support the vatika initiative.

**Raise Awareness:** Use community meetings and local media to spread awareness about Poshan Vatika and its benefits.

**Involve Families:** Make it a family project, encouraging shared responsibilities and gender inclusivity.

**Resource Sharing:** Set up seed/tool banks and promote knowledge exchange.

**Address Challenges:** Hold problem-solving sessions and encourage collective action.

**Monitor and Celebrate:** Track progress and celebrate achievements.

**Provide Support:** Conduct regular check-ins and gather feedback to ensure sustainability.



In a country like India, where malnutrition rates remain high despite economic growth, the Adani Foundation promotes Poshan Vatika concept and provides a practical solution that can be scaled to make a significant impact on public health and social justice. The success of Poshan Vatika exemplifies the principles of sustainability—balancing the finite limitations of resources with the need for equitable distribution. This model not only addresses immediate nutritional needs but also contributes to achieving the Sustainable Development Goals (SDGs) by empowering communities to take ownership of their food and nutrition security. ■

## About the Adani Foundation

Since 1996, Adani Foundation, the community engagement arm of the Adani Group, has remained agile and deeply committed to making strategic social investments for sustainable outcomes across India. It is empowering and enriching the lives of children, women, youth, and marginalized communities in the core areas of education, health and nutrition, sustainable livelihood, community development, and climate action. The strategies of the Foundation are integrated in national priorities and global Sustainable Development Goals. Adani Foundation is currently operating in 6,769 villages across 19 states, positively impacting 9.1 million lives.







# FORGING AN ANEMIA- FREE FUTURE

## The path to India's nationwide adolescent anaemia control programme

India has the largest universal adolescent anaemia control programme in the world, targeting 116 million adolescent girls and boys. The programme plays a pivotal role in protecting adolescents from the debilitating effects of anaemia, breaking the country's inter-generational cycle of malnutrition and safeguarding the health and potential of future generations. Good nutrition – including sustaining adequate iron stores – puts all adolescents on the same starting line. India's 15-year journey towards nationwide expansion of its adolescent anaemia control programme offers vital lessons to other countries.

### A Generation of Untapped Potential

India is home to around 120 million adolescent girls and 133 million adolescent boys – about 20 per cent of the world's population of adolescents aged 10–19. Many of these adolescents suffer from anaemia – a condition that limits their capacity to learn, participate, and develop into productive adults.

2 Adolescent girls who are anaemic during pregnancy face an increased risk of maternal death, premature delivery and delivering a low-birth-weight baby. Their children are also more likely to become anaemic, transferring the risk of poor growth and development to the next generation.

c UNICEF



## Evidence: a Springboard to Action

Adolescent anaemia has long been recognized as a public health problem in India – but political momentum to address the issue was lagging, in part, because of the lack of national evidence on the magnitude of the situation and potential solutions. The second National Family Health Survey undertaken in 1998 was an important turning point for action.

The survey findings revealed that anaemia affected 56 per cent of all adolescent girls

between the ages of 15–19 and 69 per cent in tribal communities. These alarming results drew attention to the scale of the anaemia burden in India, especially among the most vulnerable groups.

Around the same time, national evidence emerged about the positive impact of supervised weekly iron and folic acid supplementation on reducing adolescent anaemia. Studies conducted in different sites across India assessed the effectiveness of weekly iron and folic acid supplementation.

They found that supplementation reduced the prevalence of anaemia and was a safe, practical and effective strategy for reaching adolescent girls.<sup>3,4</sup> These findings were also in line with the growing evidence base from around the world on the effectiveness of such programmes in addressing iron deficiency anaemia among adolescent girls.

Guided by these two key pieces of evidence showing the scale of India's anaemia problem and presenting weekly iron and folic acid supplementation as a feasible and effective solution, the Government of India, with technical support from UNICEF, agreed to explore the effectiveness of an adolescent girls' anaemia control programme delivered through existing government service delivery systems.

Iron deficiency is a major cause of anaemia in India. The dietary intake of iron-rich foods among India's adolescents has remained persistently low, particularly in resource-poor settings, where many families are dependent on a cereal-based staple diet. Income constraints and cultural norms also pose barriers to adequate iron intake in India.





# INDIA'S 'MILLET MOTHERS'

Millet's sturdy stocks flourish in a variety of soils, requiring little water, no fertilizers and a shorter growing period than many other cereals

In the eastern Indian village of Singarpur, farmer Subasa Mohanta is known as 'Millet Mother' for her success in growing and promoting the hardy, nutritious grains.

"Millet is like goddess Lakshmi," says Mohanta, comparing the crop's bountiful harvest with the Indian deity of wealth and prosperity. "It is three times what I got from paddy," she adds, comparing her first millet harvest to her previous rice output.

Mohanta counts among more than two hundred thousand millet farmers across India's Odisha State who have become the first line of defense against hunger and uncertain weather - made more volatile with climate change. Millet's sturdy

And because the protein- and fiber-rich grains can be stored for long periods, they serve as an important 'famine reserve' for many struggling families.

Today, the state-run Odisha Millets Mission is promoting millet's resurgence in Odisha as a climate-resilient cereal for nutritional security. The WFP-supported effort also aims to inspire similar initiatives in other Indian regions as well as other countries.

"Millet is environmentally friendly and ideal

stocks flourish in a variety of soils, requiring little water, no fertilizers and a shorter growing period than many other cereals.



*In her eastern Indian village, farmer Subasa Mohanta has become the go-to expert in cultivating millet.*  
Photo: WFP/Shyamalima Kalita

for rain-dependent smallholder farmers," says Pradnya Paithankar, who heads WFP's climate change, resilient food systems and disaster risk reduction work in India. "It is indeed the crop of the future."

"Millet was part of our diets," says another millet grower, Pabitra, describing earlier days when the grain was eaten especially by pregnant and malnourished women. Like a number of other of the women participating in the millet project, she comes from tribal peoples.



*Farmers like these in India's Odisha state are helping cultivate millet's comeback.*  
Photo: WFP/Shyamalima Kalita

"But people stopped eating it when rice became the leading food and all the farmers grew it," she adds. "Millet started being seen as the poor people's food, only eaten when you have nothing."



*Millet's many varieties are all powerful sources of vitamins and minerals*  
Photo: WFP/Shyamalima Kalita

Harsher weather and Odisha State's promotion of the crop have changed mindsets. Today, the ancient grains - many millet varieties exist, all powerful sources of vitamins and minerals - have emerged as a popular superfood in India, one of the world's leading millet producers.

In Singarpur, farmer Mohanta's yields have turned her into the area's go-to millet expert. "People respect me," she says, "and farmers from far-off villages come to seek advice."





# GUARDIANS OF HERITAGE: TRIBAL PRACTICES IN SEED CONSERVATION AND NUTRITIONAL SOVEREIGNTY

Tribal communities have long safeguarded traditional seed conservation practices—such as seed preservation, exchange, and the use of natural fertilizers—helping to preserve both the seeds and the valuable knowledge associated with them

**S**eeds are the foundation of life, holding the potential to sustain entire ecosystems and human communities. The diversity of seeds and their quality directly influence the nutritional value of the food we consume. This diversity ensures that communities have access to a variety of foods that contribute to overall health and well-being. Indigenous seeds, in particular, are often rich in nutrients and well-suited to the local

environments where they have been cultivated for generations. These seeds produce crops that are not only climate-resilient but also nutritionally dense, providing the essential nutrients needed to combat malnutrition and maintain health. However, the decline of indigenous seeds is not only a challenge for biodiversity but also a threat to the cultural heritage of the communities that have nurtured these seeds for generations. Tribal communities, in particular,



have long been custodians of traditional seed conservation practices. Their practices—such as seed conservation, seed exchange, and the use of natural fertilizers—ensure the preservation of both the seeds and the knowledge associated with them. These practices are crucial for maintaining food sovereignty and nutritional diversity, offering a counterbalance to the homogenization brought by hybrid seeds.

Promoting indigenous seeds is therefore essential, not just for environmental sustainability but also for cultural preservation and the resilience of local food systems. This involves recognizing the value of traditional knowledge, supporting community-driven seed banks, and facilitating the creation of policies that protect indigenous seed varieties from being overshadowed by commercially-driven hybrids.

With the aim of restoring and promoting the significance of indigenous seeds, VAAGDHARA facilitated the community in organizing Beejotsav (Seed Festival) in June 2024, which included over 90 village-level events and dialogues under the aegis of Krishi evam Adivasi Swaraj Sangathan, the people's organization of tribal communities. This seed festival focused on conserving and ensuring the availability of high-quality

traditional and climate-friendly seeds. Given that many seed varieties are now endangered, Beejotsav aimed to address this issue through various actions, including revitalizing traditional agricultural practices, encouraging indigenous seed conservation methods within the community, making traditional seeds accessible to every family at the local level, reducing reliance on commercial seed markets, and promoting traditional varieties.







## Impact

More than 10,000 farmers across the tri-junction area of Rajasthan, Madhya Pradesh, and Gujarat participated in the festival, with a particularly encouraging role played by women tribal farmers. Traditional indigenous seeds were displayed, and information about their characteristics, nutritional significance, and other key details was exchanged. The Beejotsav was especially significant for preparations related to the Kharif harvest, as seeds were sown with the onset of the rains. Thus, the exchange of seeds and information was crucial at this time to enhance both the diversity and success of the harvest. These efforts have contributed to creating a supportive environment for the protection and preservation of seeds in the region.

More than 70 varieties of traditional seeds were exhibited, including some that are threatened with extinction, such as Black Foxtail (Kang), Red Maize, Santhi Maize, Finger Millet (Ragi), and Amaranth (Rajgira) in the cereals category; Bailadiya Urad in the pulses category; Brown Gourd and Aabka in the vegetables category; Gundi, Arudu, Kosch, Nagfali, Timru, and Ramphal in the crops category. The farmers dedicated to protecting these seeds were honored as Seed Mitras or Seed Mothers.

## Lessons Learned & Replication

The concept of largely self-reliant rural communities, known as Gram Swaraj, strongly advocated by Mahatma Gandhi during the freedom movement, has been embraced by VAAGDHARA as one of its guiding principles. Central to this vision is the idea of Beej Swaraj (Seed Self-reliance) and the protection of indigenous seeds. While VAAGDHARA has been consistently working to safeguard indigenous seeds for several years, this Beejotsav marks a significant milestone in this effort.

Around 90 village-level events were convened during the festival, with enthusiastic participation from the farmers. There is now a growing demand within the community to make this seed festival an annual event. It is hoped that these indigenous seed festivals will become enduring symbols of hope and determination in the ongoing effort to protect the rich diversity of indigenous seeds. The way forward is not to view the preservation of indigenous seeds as an isolated activity but to integrate it into a more holistic vision of Swaraj—emphasizing village development rooted in the resilience and self-reliance of communities.



Beej Swaraj, or seed self-sufficiency, has become a vital component of our broader vision of Swaraj. The indigenous community has been the custodian of the heritage of its natural resources for ages, including traditional seeds—a crucial role in an era where multinational corporations increasingly dominate the global seed industry. By organizing such seed festivals, we aim to set a precedent for other communities, encouraging them to conserve local seeds in their regions. These efforts will not only help revitalize Beej Swaraj but will also ensure that diverse, nutritious food sources remain available, upholding Seed Sovereignty and its role in promoting health and nutrition.

## - Jayesh Joshi

Secretary  
VAAGDHARA





# THE POWER OF FOOD AND NUTRITION LITERACY

Behavior change communication empowers community members to adopt better practices and improves their access to government nutrition schemes and entitlements

**T**he Centre for World Solidarity's (CWS) approach to implementing nutrition-related programs is through food and nutrition literacy campaigns. These campaigns aim to bring about behavioral change in communities by making them nutrition-conscious and encouraging them to make nutrition-sensitive decisions in their daily diets, hygiene practices, as well as crop and livestock production activities.



## Community Mobilization

The community is mobilized through literacy and awareness initiatives using interactive learning methods such as Participatory Learning Approach (PLA) and Linking Agriculture, Natural Resource Management to Nutrition

Security (LANN+). These methods include games, storytelling, pictorial displays, practical demonstrations, and participatory discussions involving pregnant and lactating mothers, as well as the broader community. Topics of discussion include understanding the intergenerational cycle

of undernutrition, the Tricoloured Food Game exercise, and the Snake and Ladder game for WASH (Water, Sanitation, and Hygiene) literacy. Behavior change communication not only enables all community members to participate and adopt appropriate practices but also helps improve access to government-run nutrition schemes and entitlements, such as ICDS, ASHA/ANM services, and NRCs/MTCs.

## Nutrition Camps

Nutrition camps are community-level malnutrition rehabilitation activities conducted over 15 days. Tools such as height meters (stadiometers), length meters, weighing scales, and MUAC tapes are used for the periodic screening and assessment of children's nutritional status. For these 15 days, identified Moderately Acute Malnourished (MAM) and borderline Severely Acute Malnourished (SAM) children, along with their parents, participate in various counseling sessions covering Infant and Young Child Feeding (IYCF) practices, diet diversity, spot feeding practices, WASH-related topics, and demonstrations of local recipe preparation.

## Household-Level Planning to Improve Food Access and Diet Diversity

- **Access to diverse food crops in the diet:** Crop diversification is promoted, focusing on millets, pulses, vegetables, and uncultivated foods (naturally available). Multi-layered nutrition gardens are also encouraged for families with malnourished children, featuring 8-12 types of seasonal vegetables, leafy greens, roots, tubers, legumes, spices, medicinal plants, and small grafted fruit plants.
- **Improved access to livestock products:** Nutrition-sensitive integrated farming systems are promoted within households, integrating poultry, goat husbandry, duckery, piggery, and fisheries with diverse crop production and forest-based food products. This helps households increase their consumption of eggs, meat, dairy, and fish.





## Multistakeholder Approach

Prevailing malnutrition in communities is due to multidimensional and multifaceted issues. Addressing chronic undernutrition requires input from many sectors. CWS collaborates with various government departments, including Women, Child Development and Social Security, Agriculture and Animal Husbandry, Health, Medical Education and Family Welfare, Food, Public Distribution and Consumer Affairs, and Drinking Water and Sanitation. This collaboration ensures positive engagement and better access to government services such as ICDS, Malnutrition Treatment Centers (MTCs), Auxiliary Nurse Midwives (ANMs), the National Rural Health Mission (NRHM), and the Swachh Bharat Mission (SBM), all contributing to food and nutrition security for communities.

Through its food literacy campaigns, CWS has reached approximately 20,000 households across 143 project villages in Jharkhand, Bihar, Odisha, Andhra Pradesh, Telangana, and Tamil Nadu.

## Impact

- Mothers and communities have gained knowledge about different food groups and their health benefits. Approximately 48% of households with nutrition gardens now consume produce from their gardens. The percentage of women consuming at least five food groups increased from 16% (baseline survey) to 46% in one year.
- There is greater awareness of the critical first 1,000 days (from conception until a child is two years old) and the importance of antenatal and postnatal care services.
- 77% of children identified as MAM or borderline SAM have returned to normal nutritional status (1,584 out of 2,049). SAM children referrals to MTCs have increased.
- Capacity-building efforts for Anganwadi workers have improved ICDS services,



particularly IYCF practices. Communities are increasingly accessing schemes related to food, health, and livelihoods.

- 80% of target women adopted safe drinking water practices, with most households now storing water in clean, covered containers.
- 86% of households have access to adequate handwashing facilities, with 95% practicing good hand hygiene. Communities are also using greywater for nutrition gardens and improving hygiene practices overall.

## Lessons Learned & Replication

- Food and nutrition literacy is a prerequisite for optimizing the use of government schemes that address food and nutrition security.
- Participatory learning and action using interactive communication tools are effective in fostering behavioral change among rural communities.
- A multisectoral approach is essential to effectively address malnutrition in communities.

## Sustainability

A cadre of village-level volunteers, mainly women or adolescent girls, has been trained to support and guide communities in achieving sustainable behavior change in nutrition, WASH, and agricultural practices. These volunteers will act as future changemakers in their families and communities. Additionally, Anganwadi and health extension workers have been empowered through the use of LANN+PLA tools, enhancing ICDS service delivery and fostering better multisectoral integration at the local level.



Inculcating nutritional consciousness among pregnant women, lactating mothers, and mothers of young children, along with other household members, is crucial for the successful implementation of nutrition-related programs. Food and nutrition literacy campaigns that use interactive tools to engage communities and frontline government workers can bring about significant behavioral change. Promoting activities like nutrition gardens and nutrition-sensitive integrated farming systems helps households achieve self-reliance in maintaining a balanced diet.

**- B. Ramkumar**  
Programme Director  
CWS





# MILLET – THE GRAIN OF HEALTH AND PROSPERITY

The SHREE ANNA ABHIYAN, a government initiative led by the Mahashakti Foundation, is a five-year project to revitalize millet farming, empower women, and boost climate resilience

The Mahashakti Foundation, in collaboration with the SHREE ANNA ABHIYAN, Government of Odisha, has been instrumental in advancing millet cultivation and processing through various initiatives. These efforts include promoting millet-based Farmer Producer Organizations (FPOs), providing hands-on support to farmers, facilitating millet processing, and organizing seminars, webinars, and awareness programs. In

2023-24, the Mahashakti Foundation spearheaded several key activities to enhance millet production and consumption:

- Organized millet 'Mahotsav' festivals, fairs, and millet-based lunches.
- Conducted workshops and collaborations with government departments and academic institutions to boost millet promotion.
- Motivated farmers through district development managers to cultivate millets.



Showcasing a range of millet-based products to Dr. Arabinda Kumar Padhee, IAS, Principal Secretary of the Agriculture and Farmers' Empowerment Department, Government of Odisha.

## Primary Objectives of these Initiatives

- To increase production and productivity, ensuring income security for farmers.
- To foster entrepreneurship in the millet sector by engaging with FPOs, agri-startups, and millet entrepreneurs.
- To promote the use of low-cost, decentralized processing machinery near consumption centers.
- To introduce millets in nutritional programs for improved dietary security, involving all relevant state government Shree Anna Abhiyan stakeholders.

- To provide marketing support through extensive awareness campaigns, government mandis, and branding efforts, positioning millets as health foods.

## Major Interventions include

- Adoption of best practices, such as quality seed use and soil enrichment.
- Promotion of farm mechanization via custom hiring centers for farm machinery.
- Establishment of millet processing units.
- Support for marketing and branding initiatives.
- Training and capacity building in production, processing, and value-added products.



Debabrata Pradhan, a young and enthusiastic farmer, has inspired many farmers in his Gram Panchayat, Rairakhol, to cultivate millet—diversifying their income sources, accessing nutritious food, and making optimal use of their upland areas.



The SHREE ANNA ABHIYAN, a government initiative, focuses on revitalizing millet cultivation in tribal areas. Facilitated by the Mahashakti Foundation, this five-year project aims to promote millet-based agriculture, empower women, and enhance climate resilience in Bijepur and Sohela blocks of Bargarh District, and Rairakhol in Sambalpur District. Since its modest inception three years ago, the project has expanded to support 32,778 farmers in Bargarh and Sonepur Districts of Odisha, with significant progress in crop diversification. Of the 2,778 millet farmers, 21% have diversified into non-ragi millets such as Koda Millet, Little Millet, Pearl Millet, and Sorghum, leading to increased incomes and improved nutritional outcomes. On average, small and marginal farmers earn Rs. 12,886 per crop through sales via Farmer Producer Companies. However, detailed records on millet consumption by farming households and the amount sold

directly to retailers and consumers are not available.



Showcasing millet in the form of rakhis.

The promotion of millets is creating additional revenue streams for small farmers and processing units. Government incentives and support ensure fair prices and stability in the value chain, contributing to the program’s sustainability.

Key Accomplishments

- Educated 8 Women Self-Help Groups (WSHGs) on organic manure preparation (Handi Khata), resulting in entrepreneurial ventures that generated INR 7.5 lakhs in income.
- Established 8 millet tiffin centers operated

by WSHGs, each earning an average profit of INR 5,000 per month, with plans for future expansion.

Despite these successes, challenges remain. Notably, around 25% of farmers prioritize selling their produce over consuming it, highlighting the need for increased awareness of millets’ nutritional benefits, such as their rich mineral content, dietary fiber, antioxidants, and low glycemic index, which are particularly beneficial for those with high blood sugar.



Millet Tiffin Centre operated by Self-Help Groups.

Millets are increasingly becoming a staple across various demographics, with government efforts ensuring Minimum Support Prices to secure fair compensation for farmers. The Mahashakti Foundation reports a 30% annual growth in

millet cultivation within its project areas. The Farmer Producer Company plays a crucial role in providing timely inputs, technical support, and marketing, essential for the program’s continued success.



Millet soup sold by the Self-Help Group (SHG).

Alignment with Sustainable Development Goals (SDGs)

- 1. SDG 2 (Zero Hunger):** Millets are a critical component of food security in rainfed and arid regions.
- 2.SDG 3 (Good Health and Well-Being):** Millets offer significant health benefits, including minerals, dietary fiber, antioxidants, and protein, with a low glycemic index beneficial for blood sugar management.
- 3.SDG 8 (Decent Work and Economic Growth):** Millet promotion creates additional revenue opportunities for small farmers and processing units.
- 4.SDG 12 (Responsible Consumption and Production):** Millets contribute to output diversity and risk mitigation in agriculture, supporting sustainable production practices.
- 5.SDG 13 (Climate Action) and SDG 15 (Life on Land):** As climate-resilient crops, millets thrive on minimal inputs in arid conditions, demonstrating resilience to diseases and pests.



Our journey toward the development of farmers, ensuring increased income and nutritional food, has been a testament to resilience and adaptability. With the support of farmers, Mahashakti Foundation is focusing on establishing credibility and fostering an enabling ecosystem.

**- Jugal Kishore Pattanayak**  
Managing Director  
Mahashakti Foundation

**With input from Mohan K. Baliyarsingh,**  
**Director of Mahashakti Foundation**





# IMPROVING NUTRITIONAL OUTCOMES THROUGH REGENERATIVE LANDSCAPES

A key strategy to combat malnutrition is encouraging families to diversify from monoculture to mixed food crops, enhancing both food variety and nutritional quality in their diets

**I**n India, ensuring food and nutrition security is a critical step toward improving public health, particularly among women and children. Watershed Support Services and Activities Network (WASSAN), in collaboration with the Revitalizing Rainfed Agriculture Network (RRA), has implemented several successful food and nutrition security programs across the country. These initiatives aim to address malnutrition by promoting a lifecycle approach that enhances the quality of food consumption while working closely with government schemes like ICDS to improve nutritional outcomes, especially in vulnerable populations like young mothers and adolescent girls.

This project outlines a holistic approach to tackling nutritional deficiencies in Telangana and Andhra Pradesh, focusing on sustainable

agriculture, dietary diversity, and rural entrepreneurship. The goal is to create a replicable and scalable model to enhance the nutrition and health of vulnerable families. This will be achieved by increasing year-round access to diverse, nutrient-dense local foods through crop diversification and varied food baskets. The project also aims to empower communities with safe food and water management practices, and integrate poultry, dairy, and local fisheries with agriculture to boost nutrient adequacy. Additionally, developing sustainable food business opportunities will help alleviate poverty. By combining these strategies, the project ensures consistent production and consumption of safe, nutritious foods, fostering better health and economic resilience in these communities, and ultimately contributing to the overall well-being and livelihoods in the region.



This project aims to identify local gaps and resources, strengthening these assets to alleviate malnutrition and enhance community health. The key intervention focuses on expanding the food basket by leveraging resources such as land, water, and forests, while adhering to food-based dietary guidelines to improve the quality and quantity of local food systems. By involving existing institutions like ICDS, the healthcare system, agriculture, rural water supply, and gram panchayats, the project will promote desired outcomes. Despite food accessibility and availability, significant gaps in consumption persist due to food fallacies and beliefs. Translating scientific information into practical knowledge for the Community is crucial to effect change, particularly in dietary habits.

## Transforming Landscapes for Nutrition

All the supplement nutrition programmes alone cannot adequate to tackle the malnutrition where two third of food consumed at home. The way we grow, process and consume food has been changed and the knowledge around local food and nutrition has been endangered. There is no connection in the way we grow and consume.

One of the core strategies to combat malnutrition

involves encouraging targeted families to diversify their agricultural practices. Rather than relying on monoculture crops, these families are encouraged to shift toward growing mixed food crops. This shift not only increases the variety of foods available but also improves the nutritional content of their diets.

Training has been conducted to provide hands-on experience in efficient crop management, with an emphasis on natural farming inputs. Seed selection, collection, and saving techniques are integral components of this approach, ensuring that farmers become seed-sufficient in critical crops like millets, pulses, and oilseeds.

## Expanding the Food Basket with Local Resources

In addition to crop diversification, another key intervention has been expanding the food baskets of these families to include local fruits, greens, vegetables through nutri-gardens, and fish. Communities are also encouraged to collect and use forest and uncultivated foods from their fields and nearby forests. This not only increases dietary diversity but also helps revive traditional knowledge about wild edibles that had fallen out of practice.





Reviving this knowledge posed challenges, but local workshops were held with elders from the villages to pass down this traditional wisdom to younger generations. One of the most notable results of shifting from chemical farming to natural methods was the reintroduction of edible weeds into the food basket, adding nutritional variety.

### Training and Community Engagement

Success in these programs has largely been driven by strong community engagement. Local-level interventions such as training, recipe demonstrations, small videos, discussions, and exhibitions were key to the effective dissemination of knowledge. The dietary diversity scores—a key proxy indicator for nutritional status—revealed that the targeted groups were consuming foods from 5 to 6 out of 10 food groups.

However, there is still room for improvement in complementary feeding practices, particularly when it comes to young children’s diets. Ongoing efforts focus on educating families about proper feeding techniques and the importance of diverse, balanced diets for early childhood development.

### Conclusion: Toward Malnutrition-Free Communities

Through regenerative landscapes and community-based food systems, WASSAN and RRA have made

significant strides in addressing malnutrition in Andhra Pradesh and Telangana. By working closely with the government and providing targeted interventions, these initiatives are transforming the way vulnerable families access and consume nutritious foods. Expanding the food basket, reviving traditional knowledge, and promoting sustainable farming practices have laid a strong foundation for achieving nutrition security in these regions.

Moving forward, continued focus on enhancing dietary diversity, improving complementary feeding practices for children, and scaling up these successful models will help build healthier, malnutrition-free communities across these locations.

### Regenerative Landscapes: Transforming Nutrition for Women and Children in Andhra Pradesh and Telangana

In India, achieving food and nutrition security is essential to improving public health, especially for women and children. Watershed Support Services and Activities Network (WASSAN), in collaboration with the Revitalizing Rainfed Agriculture Network (RRA), has implemented successful initiatives nationwide. These projects aim to address malnutrition by promoting sustainable agricultural practices and strengthening community food systems,

particularly in vulnerable populations like children, young mothers and adolescent girls.

Their latest initiative, “Regenerative Landscapes for community-based food systems (RLCFS),” is being carried out in select villages of Telangana and Andhra Pradesh. This project follows a lifecycle approach, integrating sustainable agriculture, dietary diversity, and rural entrepreneurship to ensure access to diverse, nutrient-dense foods year-round. By collaborating with government schemes like ICDS and including the local governments like panchayat raj, WASSAN aims to create a replicable, scalable model to enhance community health and empower rural families.

### Expanding the Food Basket and Diversifying Agriculture

One of the project’s core strategies is to encourage families to diversify their agricultural practices, moving away from monoculture and towards mixed cropping systems. Families are growing local fruits, greens, vegetables, pulses, millets, and oilseeds, which increases the variety and nutritional content of their diets. This is vital for year-round access to nutrient-rich foods, improving both food security and health outcomes.

*“By shifting to mixed cropping and natural*

*farming, we are not only producing more food but healthier food. We now have access to fresh vegetables and fruits year-round,” said a farmer from Vikarabad District, Telangana, highlighting the benefits of these practices.*

To support this shift, hands-on training is provided on seed selection, collection, and saving techniques. Farmers are becoming seed-sufficient in critical crops like millets, pulses, and oilseeds, ensuring food sovereignty and resilience. The project also emphasizes the use of natural farming inputs, reducing dependency on chemical fertilizers and pesticides.

### Reviving Traditional Knowledge for Improved Nutrition

In addition to agricultural diversification, the project focuses on reviving traditional food practices, particularly around forest and uncultivated foods. These foods, once a critical part of rural diets, had been largely forgotten. Workshops with village elders helped to pass down knowledge about the collection and preparation of wild edibles to younger generations. This effort not only improves dietary diversity but also helps preserve cultural heritage.

*“Forest foods and edible weeds were a forgotten part of our diets, but now they are coming*







back into our kitchens,” shared an elder from Rayalaseema, Andhra Pradesh. The reintroduction of edible weeds has been particularly successful, adding both nutritional value and cultural richness to meals.

Linking Nutrition with Livelihoods

The initiative goes beyond improving diets by integrating livestock and fisheries with agricultural practices, ensuring nutrient adequacy and providing additional livelihood opportunities. Poultry, dairy, and local fisheries are linked with the food systems to enhance income and nutrition simultaneously. This approach is particularly beneficial for smallholder farmers and agricultural workers, who are among the most vulnerable to malnutrition and poverty.

Household Coverage: The project engages 120 households in each of the six locations (a total of 720 households), focusing on marginalized communities such as smallholder farmers and agricultural workers, including SC/ST families. By utilizing local resources such as land, water, and forests, the project enhances both food security and income generation for these communities.

Baseline Assessment

Secondary data from ICDS (Integrated Child Development Services), ANMs (Auxiliary Nurse Midwives), local PHCs (Primary Health Centers), and private medical practitioners revealed an increasing trend in malnutrition. To further assess this, we conducted anthropometric assessments, ensuring accuracy through the calibration of stadiometers and digital weight machines for

height and weight measurements. For additional indicators, Mid-Upper Arm Circumference (MUAC) was measured using tailor measuring tapes, while Triceps Skinfold Thickness (TSF) was recorded with skinfold calipers.

Comprehensive, on-the-job training was provided to volunteers at each location, covering assessment methods and proper equipment usage. Demonstrations were conducted on selected respondents to ensure consistency and accuracy across various age groups. The assessment targeted key vulnerable populations, including children aged 13 to 65 months, adolescent girls, pregnant and lactating mothers, and women of reproductive age (19 to 45 years).

The findings revealed that over 30% of the population was undernourished, with 10% identified as highly at risk. Based on these results, the individuals were grouped into categories to plan and implement targeted interventions. In parallel, a local resource mapping exercise was conducted, identifying available resources such as food crops, water bodies, and edible plant and animal sources. This included a detailed list of forest edibles (insects, animals, fruits, flowers, vegetables, gums, barks, tubers, roots, nuts, and oilseeds), poultry, domestic animals, and other livestock. This resource mapping formed the basis for activities designed to strengthen local food systems and improve nutrition outcomes.

Training and Community Engagement

Strong community engagement is at the heart

of the project. Local-level interventions such as training, recipe demonstrations, small videos, exhibitions, and discussions ensure effective dissemination of knowledge. These efforts aim to change dietary habits by translating scientific nutrition information into practical, everyday knowledge.

Dietary diversity scores—a key indicator of nutritional status—have improved, with targeted households consuming food from five to six out of ten food groups. However, there is still room for improvement, especially in complementary feeding practices for young children. Ongoing efforts are focused on educating families about proper feeding techniques and the importance of a balanced, diverse diet for early childhood development.

A Holistic Approach to Nutrition

Incorporating sustainable agriculture with health and nutrition interventions ensures that communities are not only growing diverse foods but also consuming them. The project promotes the integration of poultry, dairy, and fisheries to increase nutrient adequacy in household diets. Safe food and water management practices are also introduced, helping to ensure the long-term health of families.

By leveraging existing government institutions such as ICDS, the healthcare system, rural water supply schemes, and gram panchayats, the project works to close the gap between food availability and actual consumption. Addressing food fallacies and deep-seated beliefs around nutrition is another key intervention, with a focus on translating scientific knowledge into practical understanding for the community.

Towards Malnutrition-Free Communities

Through these regenerative landscapes approach, WASSAN and RRA have made significant strides in addressing malnutrition in Telangana and Andhra Pradesh. By focusing on food system transformation, the initiative ensures that vulnerable families have year-round access to

diverse, nutrient-rich foods.

“Our goal is to ensure that every family, no matter how small their landholding, has access to nutritious, diverse foods year-round,” said a project coordinator from WASSAN. By empowering communities through sustainable agricultural practices and reviving traditional knowledge, the project is not only improving food security but also building economic resilience.

As the initiative scales up, the vision of malnutrition-free communities is becoming a reality, offering a model that can be replicated in other regions facing similar challenges.

Project Locations

- 1. Vikarabad District, Telangana: 2 villages
- 2. Aswaraopet, Telangana: 2 villages
- 3. Rayalaseema, Andhra Pradesh: 4 villages in 2 Gram Panchayats
- 4. North Coast, Andhra Pradesh: 2 villages in 1 Gram Panchayat

Broad Coverage:

- Focus on smallholder farmers and agricultural workers
- 720 households total, with 120 households in each location.

Conclusion: A Path to a Healthy future

By combining regenerative landscapes with community-based food systems, WASSAN and RRA are transforming how food is grown, accessed, and consumed. These interventions not only enhance nutritional outcomes for women and children but also contribute to long-term health, economic resilience, and cultural preservation in rural communities.

As the project moves forward, continued focus on dietary diversity, sustainable farming, and community education will help build healthier, malnutrition-free communities across Andhra Pradesh and Telangana..



# THE GENETIC REVOLUTION CAN SUPPORT FOOD SECURITY, TACKLE THE CLIMATE CRISIS AND PROTECT BIODIVERSITY

At World Food Prize 2024, FAO Director-General champions ways science and innovation can contribute to transforming agrifood systems and bring people and cultures closer together

**B**reakthroughs in genetic science have brought the world to ‘the dawn of a new era’ and can propel solutions to a spectrum of interrelated global challenges, including assuring food security, tackling the climate crisis, and protecting biodiversity, QU Dongyu, Director-General of the Food and Agriculture Organization of the United Nations (FAO), said at the recently concluded Borlaug International Dialogue of the World Food Prize 2024 opening ceremony.

“The genetic revolution goes beyond increasing yields,” Qu said, noting how today it can be applied in tailored ways to improve plant and animal resistance to pests, diseases and environmental stressors including high temperatures, droughts, floods, soil salinity and more.

These advancements could also “bring people and

cultures closer together,” he added in his keynote speech, *From Genetics to the Generation: What Does the Future Hold for Agrifood Systems and Food Culture*.

The annual prize, in honor of Norman Borlaug, considered one of the fathers of the Green Revolution that lifted hundreds of millions of people out of hunger thanks to his work on higher-yielding wheat varieties, was awarded this year to Geoffrey Hawtin and Cary Fowler, in recognition of their extraordinary contribution in preserving and protecting the world’s heritage of crop biodiversity, especially in operating and funding crop gene banks all over the planet.

## Gene editing

Gene editing technology significantly accelerates breeding processes, acting faster than cross-breeding, mutation breeding and transgenesis

methods, said the FAO Director-General, who studied plant breeding and genetics and made important contributions to understanding the potato genome.

Gene or genome editing is a term encompassing various molecular biology techniques. The advent of clustered regularly interspaced short palindromic repeats, known as CRISPR, spurred a rapid increase in gene editing research and applications. CRISPR is faster and less expensive than more conventional ways of crossbreeding, opening up new horizons for environmentally-adaptive and nutrition-sensitive crops and livestock that can protect genetic biodiversity and contribute to building resilient agrifood systems.

FAO’s Director-General emphasized that gene editing can be a boon to the preservation and enhancement of the unique traits of local and indigenous foods, keeping open a “window to our own humanity”, and become “a bridge between the past and the future, connecting food cultures and fostering shared resilience in the face of global challenges.”

For this reason, the FAO Food and Agriculture Museum and Network, to be launched in 2025 at FAO Headquarters in Rome to mark the 80th anniversary of the founding of the Food and Agriculture Organization of the United Nations, will bridge global food technologies and cultures, showcasing the rich traditions and innovative approaches that have shaped the story of agrifood systems over time.

FAO’s experts have produced important contributions to the connections between gene editing and food safety and on agrifood systems more broadly.

Qu emphasized that the Science and Innovation Forum, one of the three pillars of the World Food Forum that FAO hosts each year at its headquarters in Rome, was set up precisely for Members and partners to discuss the benefits and risks of cutting-edge technologies.

It is crucial that the benefits be shared widely and equitably. It is also essential that Members invest in human and social capital needed to make optimal leverage of new technology, he added.

The new World Food Prize winners have a long history of engagement with FAO.



FAO Director-General QU Dongyu delivers a keynote speech in Des Moines, Iowa. ©FAO/Roberto Schmidt

Geoffrey Hawtin, one of the awardees, played key roles in the negotiation of the International Treaty on Plant Genetic Resources for Food and Agriculture, which is hosted by FAO, as well as the creation of the Svalbard Global Seed Vault.

Cary Fowler, currently the U.S. Special Envoy for Global Food Security, led the International Conference and Programme on Plant Genetic Resources at FAO in the 1990s and was the chief author of FAO’s Global Plan of Action for Plant Genetic Resources.

Along with Qu’s keynote address, the ceremony featured a panel discussion on achieving a hunger-free world in which Ajay Banga, President of the World Bank Group, and Akinwumi Adesina, President of the African Development Bank, both participated.

## Meetings

In a bilateral meeting with Cary Fowler, the Director-General reaffirmed FAO’s engagement with the Vision for Adapted Soils (VACS) and commitment to growing the VACS partnership, and the pair agreed on the need to mobilize resources to ensure the long-term success of the initiative.

In this regard, Qu met with Bram Govaerts, Director-General of CIMMYT (the International Maize and Wheat Improvement Center), and both agreed on the need to work better together to jointly coordinate the VACS Secretariat work and VACS implementation on the ground, including through the FAO SOILFER program.

FAO’s Director-General also met with Ambassador Terry Brandstad, President of the World Food Prize Foundation, congratulating him for their shared goal of transforming agrifood systems to improve food security and referring to the World Food Forum as an important global platform to support this transformation.■



# RESHAPING FOUNDATIONAL LEARNING FOR BETTER KNOWLEDGE THROUGH ALfA

Children are attending school but not learning effectively. Quick action and innovative teaching methods are crucial in today's educational context. The ALfA Programme aims to revolutionize how children learn foundational skills

**A** World Bank study found that 56.1% of children in India under the age of 10 struggled to read simple text. This is concerning, as strong Foundational Literacy and Numeracy (FLN) skills are crucial for keeping children in school and fostering social responsibility. Despite high enrollment rates, over 75% of Grade 3 learners lack foundational skills, making retention difficult. The Foundational Learning Study (FLS) by NCERT in 2022, which assessed 86,000 Grade 3 students from 10,000 schools in 20 languages, revealed that Indian students did not meet global proficiency levels. This indicates a pressing need to improve FLN skills.

## Can This Change?

Programs like the Integrated Child Development Schemes (ICDS), the Right to Education Act, Samagra Shiksha Abhiyan, and the recent NEP 2020 emphasize the importance of foundational skills. Additionally, innovative experiments by

various stakeholders in education are showing promising results in improving FLN skills.

One such promising initiative is the ALfA (Accelerating Learning for All) Programme, the brainchild of Dr. Sunita Gandhi, an economist, educationist, and founder of DEVI (Dignity Education Vision International) Sansthan, a non-profit organization focused on educational innovation.

## The ALfA Programme

After years of research, Dr. Gandhi believes that without foundational skills, education is incomplete. She has conducted numerous experiments on learning and advocated for educational reforms both in India and internationally.

The ALfA Programme is an innovative and effective pedagogy designed to transform education. It promotes a fast-track, holistic



approach to FLN, where children work in pairs and teachers act as facilitators rather than traditional transmitters of knowledge.

Developed after eight years of active research, the ALfA Programme was launched in various Indian states in 2022-23. It has since been replicated in 33 national and international languages, paving the way for large-scale expansion.

The ALfA Programme delivers foundational literacy and numeracy ten times faster than traditional methods, achieving FLN goals in an average of 45 days. Using peer-to-peer learning, children interact and learn from each other rather than from a teacher.

The program employs innovative study materials, including two thin booklets that facilitate paired learning. Children create questions for each other, promoting understanding and mastery of concepts. The ALfA Programme also ensures that children

develop the 4C skills: collaboration, communication, creativity, and critical thinking, which naturally lead to the 4C traits: citizenship, climate consciousness, character, and connectedness.

To reach every child, the learning booklets are available online, and the NGO conducts Massive Online Open Trainings (MOOT) for those working with children.

## How Does the ALfA Programme Work?

The ALfA Programme is a child-friendly, process-led pedagogy where children work in pairs to decode and blend sounds to form words from the very beginning. Teachers motivate and support the process, ask questions, and observe, but do not directly teach.

In the classroom, ALfA fosters leadership and empowerment through daily role-switching pairs, benefiting even shy and specially-abled students. Once children

gain foundational literacy, they can engage with subjects like current affairs, read newspapers, and develop their own thought processes.

Aligned with the National Initiative for Proficiency in Reading with Understanding Numeracy (NIPUN Bharat), the ALfA Programme aims to ensure all children achieve FLN by the end of Grade 3. This supports the three developmental goals of foundational learning: health and well-being, effective communication, and engaged learning.

DEVI Sansthan is set to sign MOUs to implement the ALfA Programme in schools across several Indian states, including Uttar Pradesh, Mizoram, West Bengal, Odisha, Ladakh, Himachal Pradesh, Haryana, Rajasthan, and Uttarakhand. Additionally, ALfA is being implemented globally in countries such as Malaysia, Singapore, Peru, the Philippines, USA, Kenya, and the Maldives, with positive learning outcomes.



# Early warning hunger hotspots

## November 2024 to May 2025

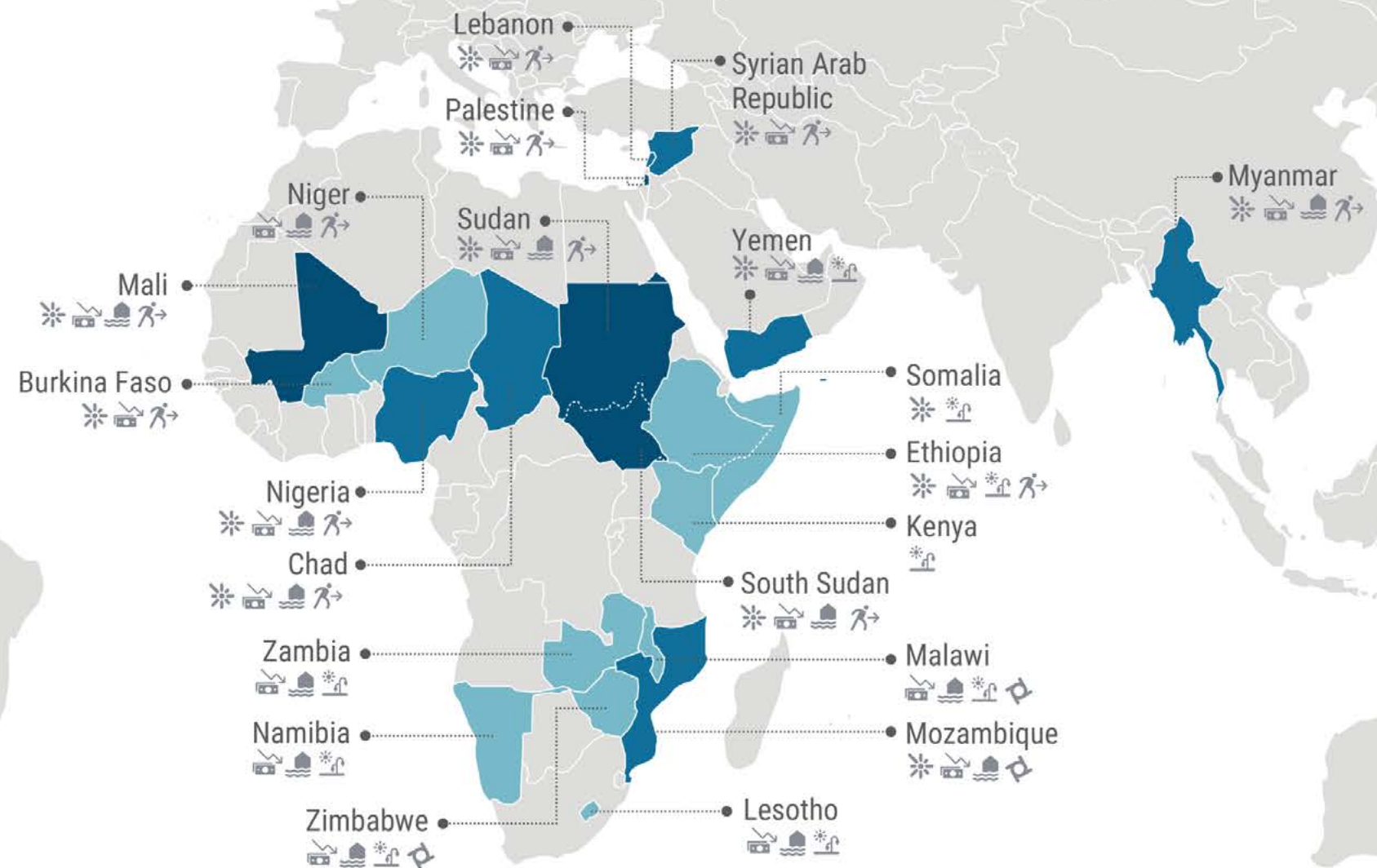
### Key drivers and aggravating factors



- Hotspots of highest concern<sup>1</sup>
- Hotspots of very high concern<sup>2</sup>
- Hotspots<sup>3</sup>

An icon applies both if the shock (for example, dry conditions) is forecast to take place during the outlook period, or if the shock already occurred, but will impact food security over the outlook period.

The displacement icon applies when it is a key driver of food insecurity or a significant factor underlying vulnerability. It applies to internally displaced people, migrants and refugees.



- <sup>1</sup> This category includes hotspots with Famine or Risk of Famine, with populations already in Catastrophe (Integrated Food Security Phase Classification [IPC]/Cadre Harmonisé [CH]); and hotspots at risk of deterioration towards catastrophic conditions, i.e. where an extremely vulnerable population in Emergency (IPC/CH Phase 4) is facing severely worsening contextual drivers and access constraints, which indicate the possibility of a further deterioration and possible occurrence of catastrophic conditions in the outlook period.
- <sup>2</sup> These are hotspots where sizeable populations – over 500 000 people or more than 10 percent of the population analysed (when at least 50 percent of the population have been analysed) – are estimated or projected to be facing Emergency levels of acute food insecurity (IPC/CH Phase 4) or are identified as severely acute food insecure as per the WFP Consolidated Approach for Reporting Indicators of Food Security (CARI) methodology; the number of people in Emergency (IPC/CH Phase 4) or severe acute food insecurity (based on WFP's CARI methodology) is expected to increase during the outlook period as based on latest data available; and contextual drivers are likely to further deteriorate.
- <sup>3</sup> Other countries/territories, in which acute food insecurity is likely to deteriorate further during the outlook period, and which were identified as hunger hotspots.

Source of data: WFP and FAO. 2024. *Hunger Hotspots analysis (November 2024 to May 2025)*. Rome. Source of map: United Nations Geospatial. 2023. Map of the World. In: *United Nations*. [Cited 7 October 2024]. <https://www.un.org/geospatial/content/map-world-1>

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of FAO or WFP concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and Republic of South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).





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