MONITORING FOOD SYSTEMS in India

KEY MESSAGES

- India has built a strong policy foundation with extensive food systems policies across agricultural, environmental, and health sectors.
- Through India's position as a global leader in agriculture and its extensive social protection programs that support over 800 million people, the country has made considerable progress in improving access to affordable, healthy diets. While almost 70% of the population could not afford a healthy diet in 2017, this has dropped dramatically to 40% in 2024.
- Identifying and bridging data gaps at the state and district levels is essential for comprehensive tracking of food systems outcomes, policy coherence, and for advancing progress toward the SDGs and the vision of Viksit Bharat 2047.
- There is an opportunity to develop an integrated monitoring framework and coherent implementation to translate India's strong policy foundation into measurable, coordinated, and effective action towards holistic food systems transformation.

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Food Systems Countdown Initiative

gain Global Alliance for Improved Nutrition

Food and Agriculture Organization of the United Nations

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Introduction

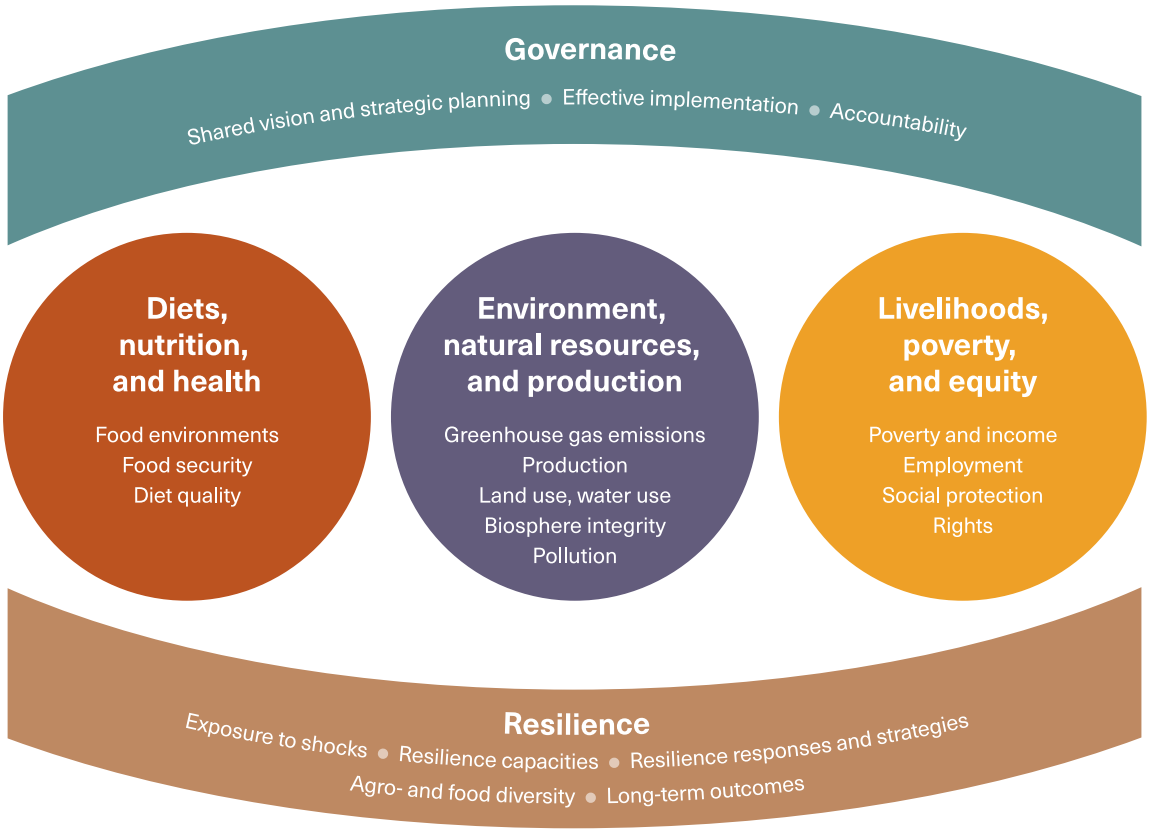
As the world's most populous nation with over 1.4 billion people and the fifth largest economy globally, India has demonstrated growing political commitment to food systems transformation through comprehensive policy frameworks spanning agriculture, livelihoods, nutrition, and environment. The country's engagement in global initiatives, including the United Nations Framework Convention on Climate Change, and alignment with Sustainable Development Goals (SDGs), reflects its recognition of food systems as central to achieving the vision of Viksit Bharat by 2047—the Government of India's ambitious vision to transform the nation into a developed country by 2047.

India's food systems are characterised by their diversity and complexity. Agriculture contributes 16% to GDP[1] while providing livelihoods to 46% of the population.[1] The Green Revolution successfully increased food production, making India the second-largest producer of rice and wheat globally, leading to greater food security and poverty reduction.[2] However, this production-focused approach focused on staple foods has resulted in a triple challenge—ecological stress and environmental consequences including soil degradation, groundwater depletion, and reduced crop diversity due to unsustainable farming, fragile farmer livelihoods and persistent malnutrition in all its forms.

India's Government has made significant strides in addressing food security through robust initiatives such as the Public Distribution System, which supports over 800 million people. The country's efforts in ensuring widespread access to food, alongside various safety net programs, demonstrate a strong commitment to social welfare. India has also made considerable progress in promoting nutrition security, with the percent of the population who cannot afford a healthy diet dropping dramatically from almost 70% in 2017 to 40% in 2024.[3]

India's governance structure, with shared responsibilities across federal, state, and local governments, creates both opportunities and challenges for food systems transformation. The Government has enacted comprehensive policies across sectors—from the National Mission for Sustainable Agriculture to POSHAN Abhiyaan (National Nutrition Mission) and Sustainable Development Goals (SDGs), which have created opportunities to coordinate monitoring across sectors and districts to better target interventions and track progress toward integrated transformation goals.

Countdown themes and indicator groups. Outer shapes refer to cross-cutting themes. Interior circles refer to long-term outcomes.



1 Ministry of Statistics and Program Implementation (MOSPI). https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap09.pdf

2 Bjornlund, V., & Bjornlund, H. (2024). Reviewing the Green Revolution strategy in view of lessons from Mexico and India – Africa. *International Journal of Water Resources Development*, 41(2), 229–273. https://doi.org/10.1080/07900627.2024.2363954

3 FAO. 2025. FAOSTAT: Cost and Affordability of a Healthy Diet. Available from: https://www.fao.org/faostat/en/#data/CAHD

This policy brief examines the current state of food systems monitoring in India and provides recommendations for building integrated, accountable systems that can drive sustainable transformation.

Food Systems Countdown Initiative

The Food Systems Countdown Initiative emerged from the United Nations Food Systems Summit as an interdisciplinary collaboration that now includes over 65 food systems experts from dozens of institutions worldwide. The Countdown developed a global monitoring framework, comprising five themes: (1) Diets, nutrition, and health; (2) Environment, natural resources, and production; (3) Livelihoods, poverty, and equity; (4) Governance; and (5) Resilience and undertook a consultative process to select a set of 50 indicators across these themes, which constitutes the global indicator framework. The Countdown publishes annual monitoring updates and additional analysis in an effort to monitor global food systems transformation. The Countdown's global indicator framework is being adapted at the country level to meet local needs and priorities. India is one of the first countries to undertake this process through a collaboration between the Global Alliance for Improved Nutrition (GAIN) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Prioritised Indicators

The Food Systems Countdown Initiative adaptation process for India, conducted through stakeholder consultations and technical workshops, identified critical priorities for strengthening monitoring systems to support evidence-based transformation. A stakeholder engagement workshop was held in April 2025 and a follow-up workshop in October 2025, as part of the process to adapt the Countdown global indicator framework to the Indian context. These workshops brought together stakeholders across government, UN agencies, academia, and civil society in a participatory process to identify India's priority indicators across the Countdown's five themes. Stakeholders reviewed indicators with publicly available data, emphasizing relevance to policy, methodological soundness, feasibility, and coverage. Cross-cutting indicators emphasized by multiple thematic groups included food insecurity prevalence, women's empowerment measures, social protection coverage, and access to agricultural inputs and services, highlighting the interconnected nature of food systems challenges.

In the **Diets, nutrition, and health** theme, Indian stakeholders prioritised indicators focusing on comprehensive nutritional outcomes and food access. These include minimum dietary diversity for infants, young children, and women, consumer preferences for ultra-processed foods, nutritional status through Body Mass Index, micronutrient deficiency prevalence, and utilization of Integrated Child Development Scheme (ICDS) services. The emphasis on gender-disaggregated dietary intake data and fortified food availability reflects India's focus on addressing specific nutritional gaps and ensuring equitable access to nutrition programs across diverse populations.

For **Environment, natural resources, and production**, stakeholders emphasised agricultural sustainability and resource management across India's diverse agroecological zones. Priority indicators encompass yields by crop group, soil health monitoring, groundwater overexploitation assessment, greenhouse gas emissions intensity across agricultural sectors, and sustainable fisheries management. The inclusion of post-harvest losses across different perishability categories and agroforestry coverage reflects India's specific challenges in managing vast agricultural production systems and minimizing food waste throughout complex supply chains.

In the **Livelihoods, poverty, and equity** theme, stakeholders identified comprehensive social protection and employment indicators alongside traditional poverty measures. Key indicators include coverage under the National Food Security Act 2013, Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA) employment provision, female landholdings, agriculture workforce productivity, and beneficiary coverage across multiple schemes including ICDS, pension systems, and tribal welfare programs. These selections reflect India's extensive social protection architecture and the need to measure actual beneficiary reach rather than program enrollment.

For **Governance** indicators, stakeholders emphasized accountability and implementation effectiveness across India's multi-tiered governance system. Priority measures included government expenditure on health and social protection, agricultural policy coherence, food safety regulatory framework effectiveness, participation in food policy decision-making, and transparency measures through Right to Information responses. The emphasis on actual expenditures versus budgetary allocations and the inclusion of grievance redressal mechanisms reflect India's focus on bridging the implementation gap between policy design and ground-level delivery.

Under the **Resilience** theme, stakeholders identified indicators spanning market stability and climate adaptation capacity. Priority measures included national stock levels, food inflation monitoring, multi-hazard early warning system coverage, and agroclimatic zone-level risk indices for floods, droughts, and heatwaves. The focus on varietal threat indices and rural-urban migration due to agrarian distress reflects India's need to maintain agricultural biodiversity while managing climate-induced population movements across its vast geographic and climatic diversity.

Data Availability and Gaps

India's data ecosystem reflects considerable strengths that support food systems monitoring, alongside areas where further integration could enhance its impact. The country has developed robust mechanisms for routine data collection and monitoring across key sectors such as agriculture and nutrition. Established systems like the National Family Health Survey, Comprehensive National Nutrition Survey, and Periodic Labour Force Survey demonstrate India's commitment to evidence-based policymaking and informed decision-making. At the same time, there is an opportunity to build on these strengths by enhancing coordination across ministries and departments. While sectoral data collection is well institutionalized, greater convergence and integration through a unified platform for food systems tracking could further strengthen India's capacity to address multi-sectoral, complex challenges and support holistic, sustainable outcomes. Key data gaps identified in the workshop include:

1. **Subnational data availability** represents a major constraint. While national-level data exists for most Countdown indicators, state- and district-level disaggregation is limited, particularly for environmental, governance, and resilience indicators. This mismatch limits targeted interventions and accountability mechanisms, as states play crucial implementation roles.
2. **Gender and equity data gaps** are pervasive across thematic areas. Despite women comprising nearly half the agricultural workforce, gender-disaggregated data on agricultural productivity, incomes, and decision-making remains largely absent. Similarly, data disaggregated by social groups (e.g., tribal populations, migrant workers, youth) is inadequate for tracking equity outcomes and designing targeted interventions.
3. **Real-time monitoring capacity** is insufficient across most domains. While systems like the POSHAN Tracker provide near real-time nutrition monitoring, equivalent systems for tracking sustainability, market disruptions, or policy implementation are lacking. This limits adaptive management and early warning capabilities essential for resilient food systems.
4. **Environmental and sustainability indicators** face spatial and temporal data challenges. While agricultural statistics are well-covered, indicators on soil health, water quality, food loss and waste, and biodiversity lack systematic, regular collection at appropriate scales. The absence of farm-level data around sustainable practices limits understanding of agricultural transformation progress.
5. **Policy coherence monitoring** remains underdeveloped. Despite extensive policy frameworks, systematic tracking of policy implementation, inter-sectoral coordination, budget allocation and outcome attribution are limited. This constrains evidence-based policy refinement and accountability for transformation goals.

Recommendations for Strengthening Monitoring-Policy Linkages

1. **Adopt inclusive and integrated participatory governance mechanisms**, spanning government departments, local governments, civil society, and academia to ensure comprehensive monitoring and policy action in pursuing sustainable food system goals.[4] For example, a multi-sectoral, multi-stakeholder task force could be established to monitor progress against national targets, regularly update key performance indicators based on emerging data and scientific evidence, assess the effectiveness of current policies and interventions, and provide transparent reporting on achievements and gaps to inform policy refinement.
2. **Establish a unified food systems data platform** that integrates existing sectoral monitoring systems, enables real-time data sharing across ministries, and mandates standardised subnational data collection (state and district), to support equitable, evidence-based decision-making and targeted interventions at all levels.
3. **Align proposed indicators with SDGs and India's Viksit Bharat 2047 agenda** to leverage food systems progress toward its broader international and national commitments and facilitate cross-country benchmarking. Indicator selection should similarly reflect the four pillars of the Viksit Bharat 2047 vision (economy, infrastructure, inclusion, and governance), ensuring that food systems monitoring is embedded within India's long-term national development planning rather than treated as a siloed sectoral concern.
4. **Ensure data is gender- and equity- disaggregated**, to identify which populations are being left behind, and for designing targeted interventions that reduce structural inequities. To operationalize this, data collection instruments including national surveys such as the NFHS, NSSO, and agricultural censuses should be reviewed and updated to capture intersectional disaggregation consistently. Capacity-building investments in state-and district-level statistical systems will be essential to ensure that subnational bodies can generate, analyze, and act on equity-disaggregated data, rather than relying solely on nationally representative estimates that obscure local heterogeneity.

4 Das, P., Singh, V., Stevanović, M., Kumar Jha, C., Bodirsky, B.L., Beier, F., Humpenöder, F., Leip, D., Chen, D. M.C., Crawford, M., von Jeetzen, P., Molina Bacca, E., Soergel, B., Springmann, M., Dietrich, J.P., Popp, A., Kumar Gosh, R., & Lotze-Campen, H. (2023). A healthy, sustainable, and Inclusive Food System transformation for India.