

## Overview

# AGRIFOOD SYSTEMS TRANSFORMATION IN SOUTH ASIA

## *An Agenda for Impact and Learning at Scale*

Purnima Menon and Timothy Krupnik

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South Asia is undergoing a profound transformation in both regional dietary patterns and agrifood production systems. Driven by rapid urbanization, rising incomes, changing lifestyles, and evolving food environments and market systems, the region faces a dual challenge: improving diets while ensuring sustainable and equitable food production. Recent surveys and research by CGIAR and partners across several South Asian countries highlight the urgency of action to address poor diet quality, rising consumption of unhealthy foods, and the limitations of current agricultural systems.

### **INSIGHTS ON AGRIFOOD SYSTEMS IN SOUTH ASIA: FROM PLATE TO FARM**

**South Asians are at high risk of nutritional inadequacy and diet-related diseases.** Unbalanced diets are a major cause of the burden of disease globally and impose large costs on early childhood survival and quality of life, including rising prevalence of noncommunicable diseases. Over the past few decades, South Asian diets have

shifted dramatically. Dietary transitions are evident across both urban and rural areas, and among all income groups. Data from national surveys and small, but comprehensive local agrifood systems assessments reveal widespread consumption of unhealthy foods – sweet beverages, salty snacks, and fried items – among adults and adolescents (Chapters 1 and 2). In India, Bangladesh, and Nepal, diets are dominated by starchy staples such as rice and wheat, with limited intake of fruits, vegetables, nuts, and animal-source foods. These diets signal moderate to high risk of dietary inadequacy and noncommunicable diseases. Adolescents (Chapter 9), particularly in some settings, consume significantly more fried and processed foods than adults, suggesting that unhealthy eating habits are being established early. Driving this problem is the relatively high cost of nutrient-dense foods (Chapter 2).

**Food environments are diverse and challenging to regulate.** Local food environments and markets play a critical role in shaping diets (Chapter 4). Research in this report shows that markets are a

principal source of what is on people's plates, even in rural farming areas. Markets themselves are diverse. For instance, a market census in Nalanda, a district in the Indian state of Bihar, revealed a mix of formal and informal vendors, with limited infrastructure and poor waste management (Chapter 5). While grocery stores and greengrocers are common, access to animal-source foods and nutrient-dense products varies widely. Informal food enterprises dominate retail, accounting for the vast majority of food businesses. These vendors operate outside regulatory frameworks, making it difficult to enforce taxes or labeling on unhealthy foods. Moreover, markets are not the only source of unhealthy foods – many unhealthy items are home-cooked – further complicating policy interventions.

**Agricultural policy reform is needed to produce healthy foods for all.** While demand-side changes are reshaping diets, supply-side constraints in agrifood systems limit access to healthy foods. South Asia's agricultural landscape is dominated by cereal production, especially rice, wheat, and maize, as a result of historical food security policies (Chapter 11). This focus has contributed to soil degradation, groundwater depletion, and stagnating productivity. Surveys across the region show that rural households primarily produce these starchy staples as well as tubers and a few vegetables (Chapter 6). Production of nutrient-rich foods including fruits, legumes, and orange vegetables is limited. Livestock production is increasing, particularly poultry and dairy, but varies by region. For example, fish predominates in Bangladesh, while poultry is more common in Nepal. Landholding patterns reveal that many households are landless or operate on small plots, suggesting improving diets for these households requires food sources beyond own production.

**Much of the burden of producing, acquiring, and preparing food falls on women.** A key finding from recent research is that women's empowerment is closely linked to their agency in household

decision-making, particularly in agriculture and food preparation. Strong gendered dynamics across the food system are illustrated by findings that women are engaged in agriculture, livestock care, and markets, while also bearing nearly sole responsibility for domestic food systems activities (Chapter 8). This contributes to imbalanced and unequal task-sharing in households. Delivering more equitable outcomes will require innovations that help to equalize gendered burdens across the food system, including within households.

### **Extreme weather threatens farmer livelihoods.**

Climate change is affecting food production in South Asia in diverse ways. Rising temperatures, erratic rainfall, and extreme weather events are projected to reduce yields of rice, wheat, and maize by 2050. Groundwater depletion and crop residue burning further exacerbate environmental degradation. Climate shocks directly impact farm productivity and household food access (Chapter 7). Without climate-resilient agricultural practices and diversified cropping systems, food security and diet quality will remain vulnerable. South Asia's robust social safety net programs are a lifeline for families who experience shocks, suggesting that making these programs more responsive and adaptive can strengthen household resilience (Chapter 10). Solutions are thus within reach in this region.

## **WHAT LIES AHEAD FOR IMPACT AT SCALE AND NEW RESEARCH IN SOUTH ASIA?**

Several recommendations emerge for scaling up actions that contribute to healthier agrifood systems across South Asia.

**To shape demand and affordability of healthier diets,** governments should implement integrated policy tools such as corrective taxes on unhealthy foods, especially sugary beverages, and pair them with targeted subsidies for fruits, vegetables, and pulses. These fiscal measures must be designed to avoid regressive impacts that primarily affect

low-income households. Behavioral change strategies must be scaled through school curriculums, mass media, and digital platforms to promote nutrition literacy and healthier cooking practices.

**To shape food environments and markets for healthy diets and economic benefits,** labeling regulations should be expanded to include informal and home-cooked foods, possibly through vendor training and community-based monitoring. In addition, informal food vendors must be engaged as partners in nutrition transformation, with incentives to improve food safety and reduce unhealthy ingredients.

**To shape new directions for resilient and diverse production systems,** nutrition-sensitive agrifood systems will need to align agricultural production with nutrition goals. Identifying how to truly scale crop diversification, home gardens, and livestock rearing to improve dietary diversity will be a challenge, but it must be explored, incentivized, and supported.

**To shape agrifood systems that deliver equitable benefits to all individuals,** policies in South Asia should emphasize gender-sensitive approaches, extension services, and integration of agriculture with the health and education sectors. Scaling nutrition-sensitive agriculture requires sustained investment, local adaptation, and strong governance, including attention to agricultural subsidies.

**Scaling efforts must also be informed by robust data and research.** Key questions as we look to the future include: How can informal food environments be transformed to support healthier diets at scale? What are the most cost-effective combinations of fiscal and behavioral interventions for reducing consumption of unhealthy foods? How do gender dynamics influence the scalability of nutrition-sensitive agriculture? What governance models best support coordination among agriculture, health, and education sectors? How can digital tools be

leveraged to monitor diet quality and food environments in real time? What are the pathways to scale for community-led innovations in food production and nutrition education?

## SEIZING OPPORTUNITIES

South Asia stands at a crossroads. The region's rapid dietary transition, coupled with unsustainable production systems and social inequalities, threatens public health and food security. However, South Asia is also a vibrant region with robust institutions, growing economies, and a real opportunity to deliver impact through government, business, and social efforts operating at scale. An opportunity to reshape food systems through integrated, evidence-based policies is at hand. Improving diet quality will require continued action on both the demand and supply sides – making healthy foods more available, affordable, and desirable, while curbing the spread of unhealthy food consumption. Governments, civil society, and the private sector must collaborate to build food environments that support healthier choices and sustainable production, and legislation and regulation will be crucial ingredients for change.

Bold, coordinated efforts can fuel a South Asian movement toward a future where nutritious, culturally appropriate, and climate-resilient diets produced in sustainable agrifood production systems are within reach for all.

*This report presents clear, actionable insights for policymakers seeking to address affordability, dietary quality, and climate vulnerability across South Asia's agrifood systems. Its findings underscore the need for coordinated multisectoral strategies. CIMMYT remains committed to supporting evidence-based interventions that strengthen resilience, improve nutrition, and enhance systemwide performance.*

**Bram Govaerts**

Director General  
International Maize and Wheat Improvement Center (CIMMYT)

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*IIDS is proud to have been a core partner in the food systems survey from Nepal and neighboring countries that supports several chapters of this report. The findings show clear commonalities across Bangladesh, India, and Nepal in diets, food environments, and climate risks, yet also point to Nepal-specific challenges in affordability, market connectivity, and adaptation. Such locally grounded evidence is critical for informed policymaking in Nepal's agrifood sector.*

**Biswash Gauchan**

Executive Director  
Institute for Integrated Development Studies (IIDS)

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*ACIAR has long supported research on food systems in South Asia, including the TAFSSA work that enabled this report's high-resolution insights. I especially appreciate the insights in the report and its attention to women and youth – groups often missing in food systems evidence – and its focus on climate adaptation, both core themes of ACIAR's strategic priorities in the region.*

**Pratibha Singh**

Regional Manager, South Asia  
Australian Centre for International Agricultural Research

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*Transforming South Asia's agrifood system requires making healthy diets more affordable, nutrient-rich, and climate-resilient. By fostering integrated, resilient food systems backed by sound policies and robust research, the region can close nutritional gaps, strengthen production-consumption links, and ensure sustainable, equitable access to diverse, safe, and nutritious foods for everyone.*

**Nazma Shaheen**

Professor  
Institute of Nutrition and Food Science, University of Dhaka

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*The agrifood system in South Asia is transforming, creating opportunities to scale solutions for sustainable, healthy diets. In Bangladesh, strong collaboration between the government and CGIAR partners supports climate-smart agriculture, nutrition-sensitive value chains, and evidence-based policies. These joint actions aim to enhance food security, dietary diversity, and overall system resilience.*

**Mostafa Faruq Al Banna**

Research Director  
Food Planning and Monitoring Unit (FPMU), Ministry of Food, Bangladesh

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*We cannot wait for perfect data to build healthier food systems. What we need is a commitment to act on the best evidence we have today, and the humility to refine our approach as new insights emerge. This report offers a clear direction for redesigning food environments and reminds us that systems must remain adaptive to drive real transformation.*

**Soumya Swaminathan**

Chair  
MS Swaminathan Research Foundation (MSSRF)

*Sustained economic and agricultural growth has eased calorie shortages in South Asia, yet undernutrition and poor-quality diets persist, revealing deeper structural challenges in our food systems. Addressing these requires high-resolution, disaggregated data to guide actionable policies for healthier, resilient food systems. This report is an important contribution towards that.*

**Shahidur Rasid**

Director, South Asia  
International Food Policy Research Institute (IFPRI)

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*Dietary patterns change rapidly in a developing world, and while data from South Asia are limited, available evidence shows only modest improvements in the consumption of healthy diets. This is deeply concerning as it threatens both human and planetary health, and calls for immediate action! This publication, grounded in extensive research, outlines priority policy actions that should be embedded in agrifood system transformation efforts in South Asia and supported by the CGIAR research portfolio.*

**Inge D. Brouwer**

Director  
CGIAR Science Program Better Diets and Nutrition

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*South Asia's agrifood systems face unprecedented challenges, but also immense opportunities. By harnessing robust evidence and fostering strong partnerships, we can catalyze transformative change, ensuring healthy, affordable diets and sustainable food production for all. This report charts a path forward, using evidence to identify recommendations for policies to build resilient, equitable, and nutrition-sensitive food systems across the region.*

**Mark Smith**

Director General  
International Water Management Institute (IWMI)

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*This comprehensive report charts a clear path to scaling agrifood systems solutions that tackle the coinciding nutrition and sustainability challenges affecting millions in South Asia. Backed by rigorous evidence produced with an adept set of partners, the editors and authors provide must-read lessons for anyone engaging in research, practice, and policy aimed at sustainable healthy diets.*

**Johan Swinnen**

Director General  
International Food Policy Research Institute (IFPRI)

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*This report reinforces our shared vision for a nutrition-secure South Asia. By acknowledging the critical role of rice along the continuum from production to consumption, it underscores the potential of science and innovation to bring about meaningful change. IRRI is proud to contribute to this effort through its research on one of the region's dominant staple cereals and on local food environments and fully supports the publication and impact of this report*

**Yvonne Pinto**

Director General  
International Rice Research Institute

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*This report brings together evidence from across the food system – from consumers and food environments to markets, production, and policy. Understanding these interconnected drivers of poor diets is essential for designing solutions that translate to better health and nutrition outcomes for people across South Asia.*

**Deanna Olney**

Director, Nutrition, Diets, and Health  
International Food Policy Research Institute