

The Geography of Global Food Demand Is Changing

The challenge to 2050 may be less about aggregate food supply than whether production, trade, infrastructure, and capital can adjust to where demand is growing fastest.

By Cedric Habiyaremye, Robert L. Woods, and Solana S. Martinez

The emerging mid-century challenge may not simply be how much food the world can produce, but whether the infrastructure, finance, and trade systems connecting production to demand can keep pace with where demand is growing fastest.

Coverage: **Global** Focus: **Food demand, trade, land, and capital**

Analytical basis This Origencia Analysis interprets IFPRI's Global Agrifood Systems Outlook to 2050 (September 2026), read against external evidence on trade capacity, food-system finance, and near-term market outlooks.

Global food demand is not simply growing. Its center of gravity is projected to shift.

Over the next quarter century, some of the strongest growth in food demand is expected in regions where populations are expanding, incomes are rising, and diets are diversifying. At the same time, population growth is slowing or reversing in parts of the world, while food demand in many higher-income economies grows more slowly.

That shift has consequences far beyond agriculture.

The International Food Policy Research Institute's new Global Agrifood Systems Outlook to 2050 projects global demand for major food commodity groups to increase by roughly 25 to 47

percent between 2025 and 2050. Much of that growth occurs in low- and middle-income regions. In West and Central Africa, total food demand is projected to rise by more than 80 percent. In East and Southern Africa, the increase is nearly 80 percent.

Production is projected to rise as well, with productivity improving across most regions. Yet the geography of additional production does not always align with the geography of additional demand.

The emerging question is not simply whether the world can produce enough food overall. It is whether productive capacity, trade systems, infrastructure, and investment can adjust to a changing demand map.

25 to 47% Projected growth in global food demand by commodity group, 2025 to 2050	80%+ Demand growth in West and Central Africa, where cereal imports are projected to triple	\$180bn Africa's estimated annual agrifood financing gap
---	---	--

Source: IFPRI, Global Agrifood Systems Outlook to 2050 (2026); AGRA, Impact, Learning and Foresight Report 2026.

A global production question becomes a geographic one

For decades, discussion of the world's food future has often centered on a familiar question: can agricultural production keep pace with a larger and wealthier global population?

The IFPRI outlook broadens that framing by showing how production and demand patterns vary across regions.

Under its baseline scenario, production increases across most commodities and regions through 2050. Productivity growth is expected to provide much of that increase, supported by technological change, research and development, mechanization, and efficiency gains.

At the global level, the projection points to continued production growth. Regional patterns, however, vary considerably.

In West and Central Africa, domestic production grows substantially, but demand grows faster. Cereal imports are projected to triple between 2025 and 2050, while the region moves away from self-sufficiency even in roots, tubers, and bananas.

East and Southern Africa follow a similar pattern. Domestic output and yields increase, yet maize imports more than triple, wheat imports nearly double, and pulse imports triple by 2050.

Across the six CGIAR regions examined by IFPRI, net imports of cereals, oils and sugars, and pulses are projected to more than double over the next 25 years. Latin America and the rest of the world, meanwhile, remain net exporters and are projected to increase their exports.

The projections point less to simple global scarcity than to growing geographic interdependence.

Rising imports are not necessarily evidence of agricultural failure

This distinction changes how import dependence should be interpreted.

A country or region can improve agricultural productivity, expand domestic production, and still become more dependent on imported food if demand is growing even faster.

That is precisely what the IFPRI projections suggest for parts of Africa.

Rising imports, then, should not automatically be read as evidence that domestic agriculture has failed. Nor does resilience necessarily require producing every commodity domestically.

When markets function well, trade can help balance regional supply and demand by allowing food to move from regions where production exceeds domestic needs to those where domestic production falls short.

But increased dependence on trade changes the architecture of food security.

If a growing share of consumption must move across borders, then the reliability of ports, roads, storage, processing, customs systems, trade finance and foreign-exchange markets becomes more consequential.

In that sense, trade infrastructure becomes food-security infrastructure.

The strategic question is therefore not simply how countries can minimize imports. It is how they determine the appropriate balance between domestic productive capacity and trade, where concentration creates vulnerability, and what systems are required to make that balance resilient.

That is a different policy problem from maximizing self-sufficiency.

The constraint may lie between production and consumption

The same shift has implications for investment.

Growing food demand does not translate automatically into functioning food markets. Between production and consumption lies an extensive system of aggregation, storage, processing, refrigeration, transportation, wholesale distribution, retail and finance.

As diets diversify, that connective layer can become even more important. Higher-value and perishable foods generally place different demands on logistics, cold chains, quality assurance and processing than staple grains.

The projections also raise an important question:

Will the systems connecting producers and consumers expand at the same pace as the markets they are expected to serve?

The question is particularly consequential in Africa, where the IFPRI projections show rapid population growth, rising incomes, dietary change, and increasing import requirements occurring together.

AGRA provides one measure of the financing challenge. Its 2026 Impact, Learning and Foresight Report estimates Africa's annual agrifood financing gap at about \$180 billion, including roughly \$65 billion in unmet financing needs for small and medium agribusinesses. The report also highlights the role of agribusinesses across aggregation, processing, storage, logistics and other activities connecting production to markets. Taken together, the evidence suggests that financing constraints extend well beyond the farm gate.

This financing estimate is not part of IFPRI's projection. It provides context for the scale of the capital constraint facing the broader agrifood economy as demand and trade requirements grow.

Increasing farm production without corresponding downstream capacity can simply move the constraint elsewhere in the system. Greater output is less valuable if processing, storage, or distribution cannot move it efficiently to consumers. Likewise, greater reliance on imports can introduce new exposure if the infrastructure and financial systems needed to move food reliably across borders do not keep pace.

A broader unit of analysis is therefore not simply agricultural production, but the system connecting production to demand.

Productivity is also a land-use strategy

Another pressure emerges from how additional production is achieved.

Globally, productivity growth is projected to account for much of the increase in food production. But that pattern is not uniform.

In Latin America, just over half of the projected increase in crop production through 2050 comes from increased harvested area. In sub-Saharan Africa, expansion in harvested area contributes nearly half. Together, Latin America and sub-Saharan Africa account for more than 70 percent of the additional 131 million hectares of harvested area in IFPRI's baseline.

That matters because additional harvested area can place pressure on pasture, rangeland and forest, with implications for biodiversity, carbon sequestration and other ecosystem services.

It also broadens how productivity investment can be evaluated. Higher yields are typically assessed in terms of output, farm income or food availability. But when demand grows rapidly, and land expansion carries environmental costs, productivity gains can also affect how much additional land is needed to meet future demand.

Climate change complicates that calculation. IFPRI projects that yields will continue to increase for most crops and regions, but often by less than they would have in the absence of climate change. Technology and management can continue raising productivity while climate change simultaneously erodes part of those gains.

Productivity therefore shapes more than output: it can influence land pressure, import requirements, resource use, and resilience. Investment in agricultural research, adaptation, water management and technology can therefore have consequences well beyond the farm.

Food security can improve while exposure rises

The outlook also illustrates the limits of relying on any single indicator to assess the condition of a food system.

In East and Southern Africa, the share of the population facing insufficient food availability and access is projected to fall from 24.3 percent in 2025 to 12.2 percent in 2050. The absolute number of undernourished people declines from 136 million to 107 million. During the same period, net imports of cereals, pulses and animal-source foods increase.

West and Central Africa present a different combination. The share of people facing insufficient food falls from 18.3 percent to 14.4 percent, but rapid population growth means the absolute

number of undernourished people increases from 123 million to 168 million. At the same time, production rises while net imports increase across most food commodity groups.

These outcomes are not contradictory. A food system can become more productive, more internationally integrated, and better able to provide food on average while remaining exposed to different forms of risk.

Higher production does not automatically guarantee food access. Higher imports do not necessarily indicate worsening food security. Declining hunger rates do not necessarily mean that the absolute scale of hunger is falling. For decision-makers, the important question is how those outcomes interact.

Structural transformation raises the requirement for productivity

IFPRI projects agriculture's share of employment and labor income to fall across regions as urbanization, education, technology and growth in industry and services draw workers toward other sectors. The decline is particularly significant in parts of South Asia and sub-Saharan Africa.

This does not mean agriculture becomes unimportant. Rather, its economic role is likely to change. Growing urban populations will likely require larger and more differentiated food systems, even as fewer workers depend directly on primary agriculture.

That could place greater weight on productivity, commercialization, processing, and distribution. The food economy of 2050 in many emerging markets may need to move more food, with more differentiation, through more sophisticated supply chains, while relying on a smaller share of the labor force for primary production.

The transition is therefore not exclusively agricultural; it also has industrial, infrastructure and investment dimensions.

Greater interdependence may make the resilience of trade and logistics increasingly consequential.

A more interconnected food system raises a different resilience question

An important feature of the IFPRI baseline is its defined scope.

The baseline is a projection, not a forecast. It uses specified assumptions about population, income, technology, and climate to examine one plausible path to 2050. IFPRI emphasizes that outcomes will depend on choices made by governments, firms, investors, and consumers.

IFPRI also identifies several factors outside the main scope of the analysis, including geopolitical instability, conflict and trade disruption, some climate extremes, migration, digital innovation and artificial intelligence.

An interconnected system can help balance regional supply and demand under normal conditions while also transmitting disruption across markets under stress. Export restrictions, transport interruptions, foreign exchange shortages, conflict, or production shocks in exporting regions can alter trade reliability even if long-term supply and demand remain broadly balanced.

THE ORIGENCIA READ

Risks outside the baseline become increasingly relevant as trade plays a larger role in balancing regional production and demand. OECD-FAO notes that low-income countries, particularly in sub-Saharan Africa, face macroeconomic constraints that can limit both investment in domestic production and the ability to finance food imports. Insufficient transport infrastructure, storage, and trade facilitation can further restrict market access.

The OECD-FAO Agricultural Outlook 2026-2035 also includes a scenario analysis indicating that disruptions associated with the 2026 Middle East conflict could constrain fertilizer use and cereal production, with particularly large effects in low-income countries.

As IFPRI notes, the baseline represents one plausible reference scenario rather than a forecast. It therefore provides a useful foundation for considering how additional risks and alternative scenarios could affect future outcomes.

That does not imply that greater self-sufficiency is necessarily the answer. It suggests that efficiency and resilience are not the same objective. As trade becomes more important, resilience may increasingly depend on diversification, infrastructure quality, institutional capacity, financing and the ability to substitute among suppliers and routes.

The two price outlooks add a time-horizon dimension. Over the coming decade, the OECD-FAO Agricultural Outlook expects real agricultural prices to stay broadly stable. Over the longer run to 2050, IFPRI expects them to rise.

	OECD-FAO Outlook	IFPRI Outlook
Horizon	To 2035 (ten years)	To 2050 (twenty-five years)
Real agricultural prices	Broadly stable, at or below current levels	Rising for most food and agricultural commodities

Source: OECD-FAO Agricultural Outlook 2026-2035; IFPRI, Global Agrifood Systems Outlook to 2050 (2026).

The difference is consistent with their distinct horizons, assumptions, and modeling frameworks. Together, they highlight a distinction that matters for long-horizon decisions: a relatively stable medium-term market can coexist with accumulating longer-term structural pressure.

That could matter particularly for investments in infrastructure, processing, irrigation and other assets whose useful lives extend well beyond a ten-year market outlook.

The implications differ by decision-maker

For governments in fast-growing markets, the implications extend beyond agricultural production targets. Planning may increasingly require an integrated view of domestic production, strategic imports, trade infrastructure, resource constraints and the institutional capacity needed to support each.

For investors, the changing geography of demand can shift where commercial opportunities emerge. Growing markets create potential demand for processing, logistics, technology, inputs, distribution and financing. But those opportunities need to be evaluated alongside infrastructure constraints, climate exposure, resource pressure and policy risk.

For agribusiness and food companies, future growth markets may increasingly overlap with regions where supply chains require greater adaptation. Demand opportunity and operational complexity can rise together.

And for development finance institutions and foundations, the analysis suggests that raising farm productivity alone may be insufficient. Constraints in aggregation, processing, storage, logistics, finance, and institutional capacity can shape whether production gains translate into more resilient markets.

Decision relevance therefore extends beyond agriculture ministries and food companies. The changing geography of demand has implications for trade policy, infrastructure, financial systems, land use, climate strategy and long-term capital allocation.

What to watch

Import capacity against volume. Whether port, storage and cold-chain investment in fast-growing import markets keeps pace with projected trade volumes, or whether capacity constraints become more pronounced as import requirements rise.

Intra-African trade share. Movement in intra-African trade as AfCFTA implementation advances, and whether regional integration offsets any meaningful part of extra-regional import growth.

Foreign-exchange stress. Reserve and import-financing pressure in major food-importing economies, one channel through which external shocks could transmit into food markets.

Scenario variants. Whether IFPRI or its peers publish projections that add conflict, trade disruption, or extreme-event risk to the baseline, which would help test the core claim of this analysis.

The price gap. Whether the ten-year and twenty-five-year price outlooks converge or diverge further as new editions appear.

The question that matters

The IFPRI outlook presents a world in which more food is produced, incomes rise, and important food-security indicators improve.

But beneath that progress is a redistribution of pressure. Demand grows fastest in some of the regions undergoing the largest demographic and economic transformations. Production expands, but not always quickly enough to match local demand. Trade helps bridge part of the difference. Land and water face increasing pressure in several production regions. Climate change is projected to erode some of the productivity gains on which the system depends. Structural transformation is also likely to change how food is produced, moved, and consumed.

Taken together, these dynamics suggest that the defining food-system question to 2050 may be changing. It may no longer be sufficient to ask only whether the world can produce enough food.

The more consequential question may be whether productive capacity, infrastructure, capital, trade relationships and institutions can adjust quickly enough to the changing geography of demand, and whether the systems connecting them remain resilient as they do.

For governments, that could change where policy attention is directed. For companies, it could change how future markets and constraints are assessed. For investors, it could change how long-term food-system opportunity is assessed.

Global food availability may increasingly depend not only on how much the world produces, but also on whether production, capital and infrastructure are positioned to connect supply with the places where demand is growing fastest.

About this analysis

This Analysis draws principally on Keith Wiebe et al., [Global Agrifood Systems Outlook to 2050](#), published by the International Food Policy Research Institute on September 10, 2026. The peer-reviewed report uses IFPRI's IMPACT-GLOBE modeling system and presents scenario-based projections under specified socioeconomic, technology, and climate assumptions. Its projections are not forecasts. IFPRI describes the work as a longer-horizon complement to existing near- and medium-term agrifood outlooks.

Medium-term market context is drawn from the OECD-FAO [Agricultural Outlook 2026–2035](#). Additional financing context is drawn from AGRA's [Impact, Learning and Foresight Report 2026](#). The framing around the changing geography of demand, the role of connective capacity, and the resulting implications for policy, investment and resilience represents Origencia's interpretation of the evidence.

Origencia Analysis provides systems-level intelligence for decision-makers. This analysis was not commissioned by any organization discussed in it and draws on publicly available sources. It is provided for informational and analytical purposes and does not constitute investment, legal, or other professional advice.