



PHOENICIA UNIVERSITY

Food Security Knowledge

Understanding, Measuring, and Achieving Access to Food for All

A survey of concepts, data, and pathways to a food-secure world

1 The Hidden Crisis

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“physical and economic access to sufficient, safe and nutritious food”

— 1996 Rome Declaration on World Food Security

- Food insecurity has accompanied human civilization since its earliest recorded famines — this is not a new problem.
- Hunger is rising sharply across Africa and Western Asia even as global rates edge slightly downward.
- Progress remains far off pace: without faster action, 512 million people may still be chronically undernourished in 2030.



673 million

people faced hunger in 2024 — 8.2% of the world's population

2.3 billion

people experienced moderate or severe food insecurity in 2024 — more than one in four people on Earth

2

A History of Food Insecurity

Famine, policy failure, and price shocks have shaped the fight against hunger for centuries.

1845–52

Great Irish Famine

Potato blight destroys the era's staple crop; roughly 1 million die and a million more emigrate.

1943

Bengal Famine

Wartime grain diversion and export policy failures contribute to an estimated 3 million deaths.

1974

World Food Conference

Rome conference sets the goal of eradicating hunger within a decade.

1996

World Food Summit

The Rome Declaration adopts the now-standard four-pillar definition of food security.

2007–08

Global Food Price Crisis

Staple prices spike sharply; food riots erupt across more than 30 countries.

2020–24

Pandemic, Conflict & Inflation

COVID-19, war, and food-price inflation push global hunger to a decade-high.

3

The Four Pillars of Food Security

The framework agreed at the 1996 World Food Summit still anchors how food security is defined and measured today.

Availability

Sufficient quantities of food are consistently available, through domestic production, stocks, or trade.

Utilization

Food is used appropriately, supported by clean water, sanitation, and adequate health care.

Access

Households have the economic and physical resources to obtain nutritious food

Stability

Access to adequate food holds steady over time, without sudden shocks or seasonal shortages.

The UN Committee on World Food Security added two further dimensions in 2020 — Agency and Sustainability — reflecting a broader view of food systems.



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Measuring Food Security

Multiple tools track hunger from different angles — no single measure captures the full picture.

5

IPC phases, from Minimal to Famine — the global standard for classifying acute food insecurity

512M

people projected to be chronically undernourished by 2030 on current trends

3

Global Hunger Index indicators: child stunting, child wasting, and mortality



IPC Scale

The Integrated Food Security Phase Classification ranks severity from Phase 1 (Minimal) to Phase 5 (Famine), guiding humanitarian response.



Global Hunger Index

A composite score (0–100) combining undernourishment, child wasting, child stunting, and child mortality.



Food Insecurity Experience Scale

A survey-based tool asking people directly about constraints on their access to food.

5

Three Drivers of Hunger

Conflict, climate extremes, and economic shocks rarely act alone — and increasingly compound one another.



Conflict

The leading driver behind the world’s most severe food crises, from Sudan to Gaza to Yemen — fighting disrupts farming, trade, and aid access alike.



Climate Extremes

The 2020–23 Horn of Africa drought was the region’s worst in 40 years, following five consecutive failed rainy seasons.



Economic Shocks

The 2021–23 food price surge, driven by the pandemic and the war in Ukraine, made healthy diets less affordable worldwide.

46.3M

people affected by the Horn of Africa drought and floods (2023)

~43,000

estimated excess deaths from the 2022 Somalia drought

545M

people in low-income countries unable to afford a healthy diet in 2024

6

Global Policy Frameworks

Food security moved from a humanitarian concern to a formal legal and policy commitment over the 20th century.

Right to Food

ICESCR, Article 11 (1966)

Recognizes the right of everyone to adequate food as part of the right to an adequate standard of living, binding on ratifying states.

Rome Declaration

World Food Summit (1996)

Sets the four-pillar definition of food security and a global target to halve the number of hungry people.

SDG 2: Zero Hunger

UN Sustainable Development Goals (2015)

Commits all UN member states to end hunger, achieve food security, and promote sustainable agriculture by 2030.

Committee on World Food Security

Reformed 2009

The foremost inclusive platform for food security policy, bringing governments, agencies, and civil society together.

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The Green Revolution

A mid-century turning point that reshaped global food availability — with a mixed legacy.



1960s–1970s

High-yield, disease-resistant wheat and rice varieties, developed in large part through the work of agronomist Norman Borlaug, spread rapidly across Mexico, India, and Pakistan alongside irrigation, fertilizer, and mechanization.

Cereal yields in participating countries roughly doubled within a generation, a shift widely credited with averting mass famine in South Asia.

A Mixed Legacy



Water-intensive

Heavy reliance on irrigation strained aquifers and rivers in many growing regions.



Reduced diversity

Favoring a few high-yield varieties narrowed crop diversity and genetic resilience.



Uneven access

Farmers who could afford seeds, fertilizer, and irrigation benefited most, widening rural inequality.

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Key Institutions

A network of UN agencies and research bodies coordinates the global response to hunger.

FAO

Food and Agriculture Organization — 1945

Leads global efforts on agriculture, nutrition, and food security data, publishing the annual SOFI report.

WFP

World Food Programme — 1961

The world's largest humanitarian organization addressing hunger, delivering emergency food assistance.

IFAD

International Fund for Agricultural Development — 1977

Finances rural development projects to help smallholder farmers build resilient livelihoods.

CGIAR

Formerly the Consultative Group on Int'l Agricultural Research — 1971

A global research partnership advancing crop science, including the innovations behind the Green Revolution.

9 Case Study: The Horn of Africa Drought

Five consecutive failed rainy seasons between 2020 and 2023 brought Ethiopia, Kenya, and Somalia their most severe drought in over 40 years, compounding existing conflict and economic pressure.

Consequences on the ground

Millions of livestock lost across Ethiopia, Kenya, and Somalia

Over 13 million people internally displaced

Widespread acute child malnutrition and rising water scarcity

An estimated 43,000 excess deaths in Somalia in 2022 alone

46.3 million

people affected by drought and subsequent flooding across the region by 2023



The International Response

UN agencies issued repeated joint statements warning of famine risk, coordinating a \$3.8 billion regional appeal. Funding shortfalls throughout the crisis meant needs consistently outpaced the response — a pattern that continues to strain food-crisis response worldwide.

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The Climate-Hunger Feedback Loop

Climate change does not create a new pillar of food security — it destabilizes all four at once.



Availability

Shifting rainfall and heat stress reduce crop yields and livestock productivity in vulnerable regions.



Access

Climate-driven crop losses push up local food prices, straining household budgets.



Utilization

Flooding and drought degrade water quality and sanitation, undermining nutrition.



Stability

More frequent extreme weather events make food access less predictable season to season.



The Horn of Africa, Sahel, and South Asia are among the regions most exposed to both climate volatility and existing food insecurity — meaning climate shocks and hunger crises increasingly strike the same places, at the same time.

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Pathways to Resilient Food Systems

How food systems are built shapes how well they withstand shocks.

More Resilient



Diversified crops and varieties, spreading climate and pest risk



Agroecological practices that build soil and water resilience



Social protection and school feeding programs that reach vulnerable households



Regional grain reserves and diversified trade partners

More Vulnerable



Monoculture farming concentrated in a few staple crops



Input-intensive systems dependent on costly fertilizer and irrigation



Thin or absent safety nets, leaving shocks to fall on households directly



Just-in-time global supply chains with few buffers against disruption

12

Persistent Gaps and the Path Forward



Funding shortfalls

Humanitarian appeals are chronically underfunded; recent aid cuts of up to 40% threaten emergency food response.



A 2030 target off track

On current trends, 512 million people could still be chronically undernourished by 2030 — far above the Zero Hunger goal.



Conflict as root cause

Most of the world's worst food crises are conflict-driven, yet conflict resolution remains outside the reach of food policy alone.



Data and early warning

Better real-time monitoring in fragile and conflict-affected states could help trigger action before crises peak.

Key Takeaways

Food security rests on four interlocking pillars — availability, access, utilization, and stability — and a shortfall in any one undermines the rest.

Global hunger has edged down for two straight years, but 673 million people still faced hunger in 2024, and progress remains far off the 2030 target.

Conflict, climate extremes, and economic shocks increasingly compound one another, concentrating the most severe crises in the same vulnerable regions.

Stronger data, sustained funding, and food systems built for resilience — not just yield — remain the clearest path forward.