

# THE FOOD SYSTEMS COUNTDOWN REPORT 2023

THE STATE OF FOOD SYSTEMS WORLDWIDE | Summary



**Food Systems  
Countdown  
Initiative**

Food systems are a foundation of human and planetary well-being and central to achieving the Sustainable Development Goals. Yet they also contribute to ill health, inequity, environmental degradation, and greenhouse gas emissions.

These challenges demand urgent food systems transformation. Such a transformation requires understanding the status of food systems across their diverse functions. The Food Systems Countdown Initiative (“the Countdown”) aims to enable this understanding by monitoring the state of food systems transformation through relevant data, independent of any established monitoring processes. Such monitoring can help align decision makers around key priorities, incentivize action, hold stakeholders accountable, sustain commitment by demonstrating progress, and enable course corrections.

The Countdown is an interdisciplinary collaboration of scientists that emerged from the 2021 United Nations Food Systems Summit. Over a two-year process, the collaboration developed a framework to monitor food systems that includes five themes: (1) diets, nutrition, and health; (2) environment, natural resources, and production; (3) livelihoods, poverty, and equity; (4) governance; and (5) resilience. The Countdown then used a rigorous, multistakeholder process to arrive at 50 indicators to monitor change across these five themes. The 50 indicators provide a comprehensive yet concise picture of food systems. They also reveal data gaps that need to be filled for better future food systems monitoring.

This first annual Countdown report depicts the current state of national food systems, providing a baseline that can be used to guide priorities for investment, research, and policymaking and assess future progress. The Countdown baseline data show that the world’s food systems face many shared challenges. For example, in 54 countries (of 140 with data), over half the population cannot afford a healthy diet. Only 29 countries (of 187 with data) explicitly recognize the right to food, and only 4 countries approach equitable distribution of landownership between men and women. There is also considerable inequality in indicator performance across countries (and likely within countries, although subnational dimensions are not yet systematically tracked globally).

While every country shows relatively strong performance in some parts of its food systems, no country, region, or income group shows such performance for all 50 indicators. For example, low- and middle-income countries generally lack sufficient fruits and vegetables to allow their populations to meet dietary recommendations, while high-income countries have widespread availability of the ultra-processed foods that are associated with poor health outcomes. Additionally, health-related food taxes exist in 38 countries spread across all continents and income groups but are absent in most. This variation in countries across income levels and regions indicates that there are considerable opportunities for regional collaboration and cross-country learning.

Although the Countdown has assembled a comprehensive set of food systems data, its work has also revealed many gaps in available data. Some gaps, like data on food loss and waste, cut across themes. Other gaps pertain to country coverage, food value chains beyond production, and livelihoods of food system workers other than farmers. These data gaps must be filled to better guide action to transform food systems.

When interpreted with careful attention to the local context, the Countdown data provide a strong starting point for assessing food systems challenges as well as opportunities to secure access to healthy diets and good livelihoods for all while ensuring environmental sustainability.

Based on “The food systems countdown report 2023: The state of food systems worldwide,” which was written by Stella Nordhagen, Ty Beal, and Kate Schneider and reflects a peer-reviewed publication in *Nature Food* by collaborators and colleagues of the Food Systems Countdown Initiative. Input was provided by Andrea Cattaneo, Piero Conforti, Francesco Tubiello, Patrick Webb, and the Food Systems Countdown Initiative co-chairs: Jessica Fanzo, Lawrence Haddad, Mario Herrero, and José Rosero Moncayo. Editing is by Heidi Fritschel. Graphic design is by Danielle DeGarmo. Read the full report here: <https://doi.org/10.36072/fsci2023>, or the associated peer reviewed paper here: <https://doi.org/10.1038/s43016-023-00885-9>.

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## THE COUNTDOWN INDICATORS



### Diets, nutrition, and health

**Access to safe water:** Share of the population that gets drinking water from an improved source, providing the clean water essential for food security (SDG 6.1.1)

**Consumption of all five food groups:** Share of the adult population consuming all five food groups typically recommended for daily consumption

**Population who cannot afford a healthy diet:** Share of the population whose food budget is less than the cost of a healthy diet

**Cost of a healthy diet:** Per-person cost of the least expensive locally available foods to meet daily needs, based on food-based dietary guidelines

**Population experiencing moderate or severe food insecurity:** Share of the population experiencing food insecurity, measured according to the Food Insecurity Experience Scale (FIES) (SDG 2.1.2)

**Availability of fruits and vegetables:** Amounts of fruits and vegetables—an underconsumed yet highly nutritious food group—available in a country's food supply per capita per day (2)

**Minimum dietary diversity for women (MDD-W) and Minimum dietary diversity for infants and young children (MDD-IYCF):** Share of women (or young children) who consumed at least the minimum recommended food groups the previous day, which makes it more likely they consume adequate micronutrients (2)

**NCD-Protect:** Average score for adults on an indicator of dietary practices protective against non-communicable diseases, like eating enough fiber, on a scale from 0 to 9

**NCD-Risk:** Average score for adults on an indicator of dietary practices known to raise the risk of noncommunicable diseases, like eating too much sugar, on a scale from 0 to 9

**Prevalence of undernourishment:** Share of the population that goes hungry—that is, lacks enough calories for a healthy, active life (SDG 2.1.1)

**Sugar-sweetened soft drink consumption:** Share of adults who consumed a sugar-sweetened soft drink, which are generally known to be unhealthy, during the previous day

**Ultra-processed food sales:** Annual per-person sales of ultra-processed foods, which are known to be associated with poor health outcomes

**Zero fruit or vegetable consumption:** Share of the population (adults or young children) who did not consume any fruits or vegetables the previous day (2)



### Environment, natural resources, and production

**Agricultural water withdrawal:** Water withdrawn for irrigation each year, as a percentage of the total renewable water resources available

**Cropland expansion:** Average percentage change in cropland over the previous five years; expanding cropland is a major driver of biodiversity and ecosystem service loss and greenhouse gas emissions

**Greenhouse gas emissions intensity, by product group:** Greenhouse gas emissions (kg CO<sub>2</sub> equivalents) per kilogram produced of certain important food commodities (4)

**Fisheries Health Index:** An indicator summarizing the availability and sustainability of fish, which are at risk of overfishing or environmental degradation

**Food systems greenhouse gas emissions:** Greenhouse gas emissions (kt CO<sub>2</sub> equivalents) from food systems

**Agricultural ecosystem function:** Percentage of agricultural land area with enough semi-natural or natural habitat, relative to the amount of cropland or rangeland, to maintain biodiversity and functioning ecosystems

**Pesticide use:** The use of pesticides per area of cropland (kg active ingredient per hectare); pesticide use can cause pollution and harm health

**Sustainable nitrogen management:** A measure of the environmental efficiency of agricultural production

**Food product yield, by food group:** Yield, or production per unit area (tonnes per hectare) or per animal (kg per animal)—an indicator of how efficient production is (5)



## Livelihoods, poverty, and equity

### Share of agriculture in GDP:

Percentage of a country's GDP derived from agriculture, a measure of the level of economic development of the country

**Child labor:** Percentage of children ages 5–17 who are engaged in child labor, the majority of which is known to be in the food system and specifically in agriculture

### Female share of landholdings:

Percentage of land for which the primary decision maker is female

**Rural unemployment and Rural underemployment:** Percentage of working-age people in rural areas who are unemployed or underemployed (i.e., worked fewer hours than expected) (2)

### Social protection adequacy:

An indicator showing the extent to which social protection is sufficient to meet household needs

### Social protection coverage:

Percentage of people who live in households that benefit from social protection programs, like cash transfers and health insurance



## Governance

### Public access to information:

Whether the country has and implements guarantees for access to information (SDG 16.10.2)

**Accountability Index:** An index capturing the extent to which the government is seen as being accountable for its actions

### Civil Society Participation Index:

An indicator capturing the level of participation in civil society organizations

**Food safety capacity:** Whether functioning mechanisms exist to detect and respond to foodborne disease issues, measured as the percentage of a set of criteria met

### National food system

**transformation pathway:** Whether the country has developed a food system transformation pathway through the UNFSS process

### Government Effectiveness Index:

An index capturing the perception of how effective the government is in making and enforcing policies and providing services

### Health-related food taxes:

Whether the country has any health-related food taxes, which are used to discourage consumption of unhealthy foods

**Open Budget Index:** A score based on how easily the public can access information about how the government raises and spends money

### Urban population living in cities signed on to the Milan Urban

**Food Policy Pact:** Percentage of the urban population that lives in cities signed on to the Milan Urban Food Policy Pact, suggesting prioritization of food issues in urban planning

**Degree of legal recognition of the right to food:** An indicator that classifies countries by the extent to which national laws or policies recognize or enact people's right to sufficient food



## Resilience

### Disaster costs as share of GDP:

Cost of all damage from natural disasters, as a percentage of GDP

### Dietary Sourcing Flexibility Index:

An index capturing the diversity of pathways through which food reaches consumers, indicating how difficult it is to disrupt the food supply

**Food price volatility and Food supply variability:** How much food prices and the food supply (in calories per person per day) vary over time, indicating how well the food system can respond to shocks (2)

### Conserved genetic resources

**(plants and animals):** Number of plant and animal genetic resources for food and agriculture secured in medium- or long-term conservation facilities (2) (SDG 2.5.1)

### Mobile phone subscriptions:

Number of mobile phone subscriptions as a percentage of the population, indicating the level of infrastructure and access to information to respond to shocks

### Extreme coping strategies:

Percentage of high-risk populations who need to rely on extreme strategies to cope with food insecurity

### Social Capital Index:

An index for the social capital in the country—how much people feel they can trust and can rely on their government and one another

**Minimum species diversity:** Percentage of agricultural land (crop and pasture) containing a sufficient diversity of species, which helps cope with shocks and changes