

THE FOOD SYSTEMS COUNTDOWN REPORT 2024

TRACKING PROGRESS AND MANAGING INTERACTIONS | SUMMARY



**Food Systems
Countdown
Initiative**

Food systems are facing immense challenges. Malnutrition is widespread, many food-related jobs offer low wages and poor working conditions, and the environmental burden of food production threatens planetary health.

A realignment of food systems is urgently needed to improve their contributions to social and environmental goals. The Food Systems Countdown Initiative is a global interdisciplinary scientific collaboration that aims to track the progress of this transformation by regularly providing updated data on 50 food system indicators and producing thematic analyses related to key food system topics.

The 2024 Countdown report analyzes changes in indicator values since 2000, showing the direction and pace of travel towards or away from desired outcomes. The results of the analysis offer reasons for optimism: of the 42 indicators with time trends examined, 20 have changed in a desirable direction, on average, globally. These positive trends include indicators in all five Countdown themes—diets, nutrition, and health; environment, natural resources, and production; livelihoods, poverty, and equity; resilience; and governance. For example, access to safe water—essential for food security and for keeping food safe—has increased significantly across all regions, and on average most regions' production systems have become more efficient at using nitrogen, meaning less is wasted as run-off that pollutes the environment. However, some indicators (7 of 42) have significantly worsened globally over this period. For example, food price volatility has increased, suggesting less stable prices amid food system shocks, and government accountability has decreased, indicating that governance may not be rising to the challenge of supporting food systems transformation. For 15 indicators, there has been no significant change despite the need for steady progress to meet key global goals.

The report also examines the interactions within and across the 50 Countdown indicators. Interactions are critical because change (or lack thereof) in one indicator can cause (or block) changes in others, complicating

decision-making and giving rise to trade-offs between goals as well as unintended consequences of actions. Drawing on the expertise of the Countdown members, the report finds that most indicators have theoretical interactions with other indicators. Some of these are direct while others are indirect, operating via intervening indicators. Case studies with stakeholders in Ethiopia, Mexico, and the Netherlands, focused on the governance indicators, verified that many of these interactions are relevant at the national level as well as globally. Governance and resilience indicators show the largest number of connections to other themes, reflecting their cross-cutting importance for food system outcomes. Given that changes in these areas can affect many other indicators, policymakers should prioritize actions to shift them in desirable directions. Other indicators, such as diet quality and food price volatility, have many contributing factors; for these indicators, achieving change requires substantial coordinated action across sectors and actors. These indicators should be a key focus of efforts to improve policy coherence.

The 2024 Countdown report shows that progress toward food systems transformation is occurring. Policymakers must reinforce this progress where it has occurred and refocus energy where it has not—while remaining aware that each element of the food system interacts with other elements. Progress requires a holistic approach that leverages these interconnections to drive transformative change.

Based on "The food systems countdown report 2024: Tracking progress and managing interactions," which was written by Stella Nordhagen, Ty Beal, Rebecca McLaren, and Kate Schneider and reflects the work of the peer-reviewed publication co-authored by collaborators and colleagues of the Food Systems Countdown Initiative. Input was provided by Roseline Remans 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/10.1038/s43016-024-01109-4>, or the associated peer reviewed paper here: <https://doi.org/10.36072/fsci2024>.

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THE COUNTDOWN INDICATORS

● Trending in desirable direction ● Trending in undesirable direction ● No change



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 noncommunicable 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)

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 area change:** 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 CO₂ equivalents) per kilogram produced of certain important food commodities (4) (↘ beef, → cereal, ↘ milk, → rice)

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 CO₂ 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

↗ **Nitrogen use efficiency:** A measure of the efficiency of nitrogen application in 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

Percentage of agricultural landowners who are female: A measure of the share of women among owners or rights-bearers of agricultural land

→ **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 environment policies: Whether the country has any health-related food environment policies, which are used to discourage consumption of unhealthy foods and beverages or encourage the consumption of healthy foods and beverages

→ **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