



Food Systems
Countdown
Initiative

The Food Systems Countdown Initiative Webinar: Tracking progress and managing interactions

29 April 2025 at 16:00 CET

Countdown Co-Chair Organizations:



Food and Agriculture
Organization of the
United Nations



gain
Global Alliance for
Improved Nutrition



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The Food Systems Countdown Initiative Background & baseline analysis

Dr. Mario Herrero
Cornell University

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UNFSS catalyzed food system transformation pathways

Country progress on national pathway operationalization

127 countries have developed a pathway today

- **60%** have started to develop implementation/action plans for their national pathways
- **70%** have integrated the FST vision of their national pathway into national strategies and/or sector plans
- **40%** are linking finance to national pathways



But no monitoring system was agreed upon



- The SDG framework is insufficient to guide food systems transformation
- Evidence-based decision-making needs indicators and data to guide decisions
- Demand for a multisectoral, multi-scale indicator framework to monitor food systems change and transformation

The Food Systems Countdown Initiative formed to fill this gap

Objectives:

To provide actionable evidence to track progress
and guide decisions for transformation

Complement other monitoring and tracking
initiatives

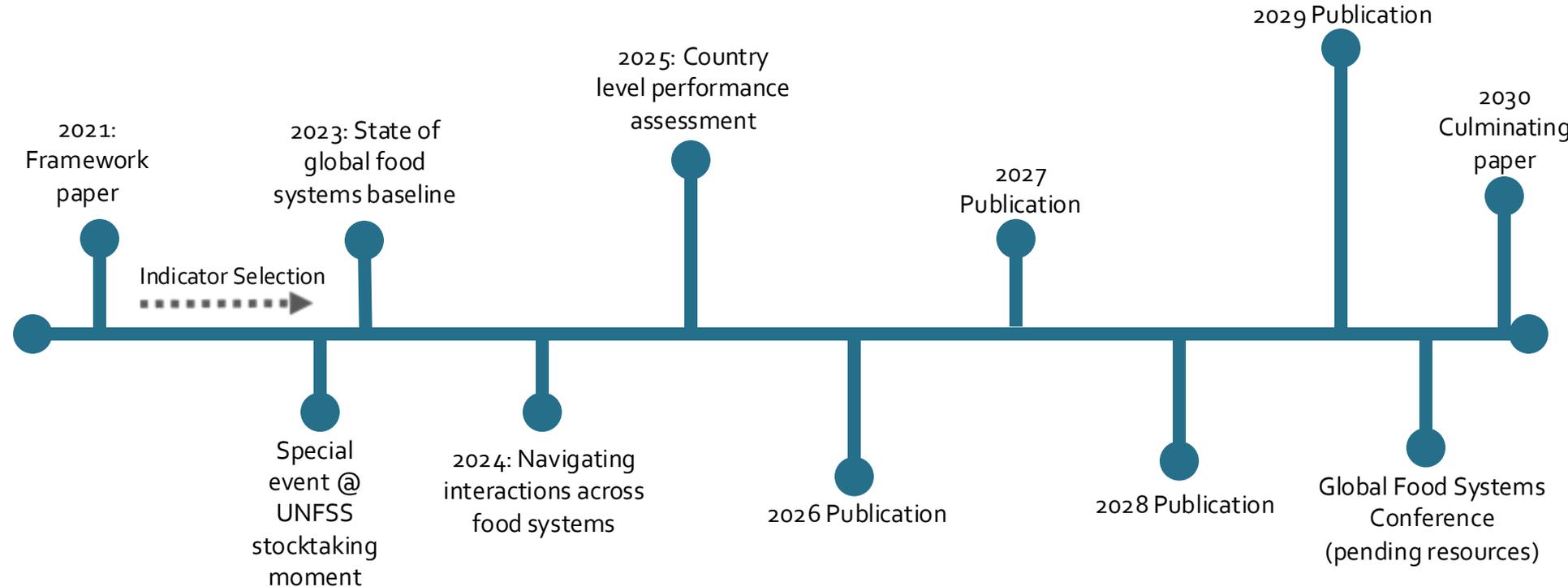
Contribute to advancing the science of food
systems and their transformation

The Countdown is an interdisciplinary, multi-
institution scientific partnership to monitor global
food systems in service of meeting the SDGs and
other global goals

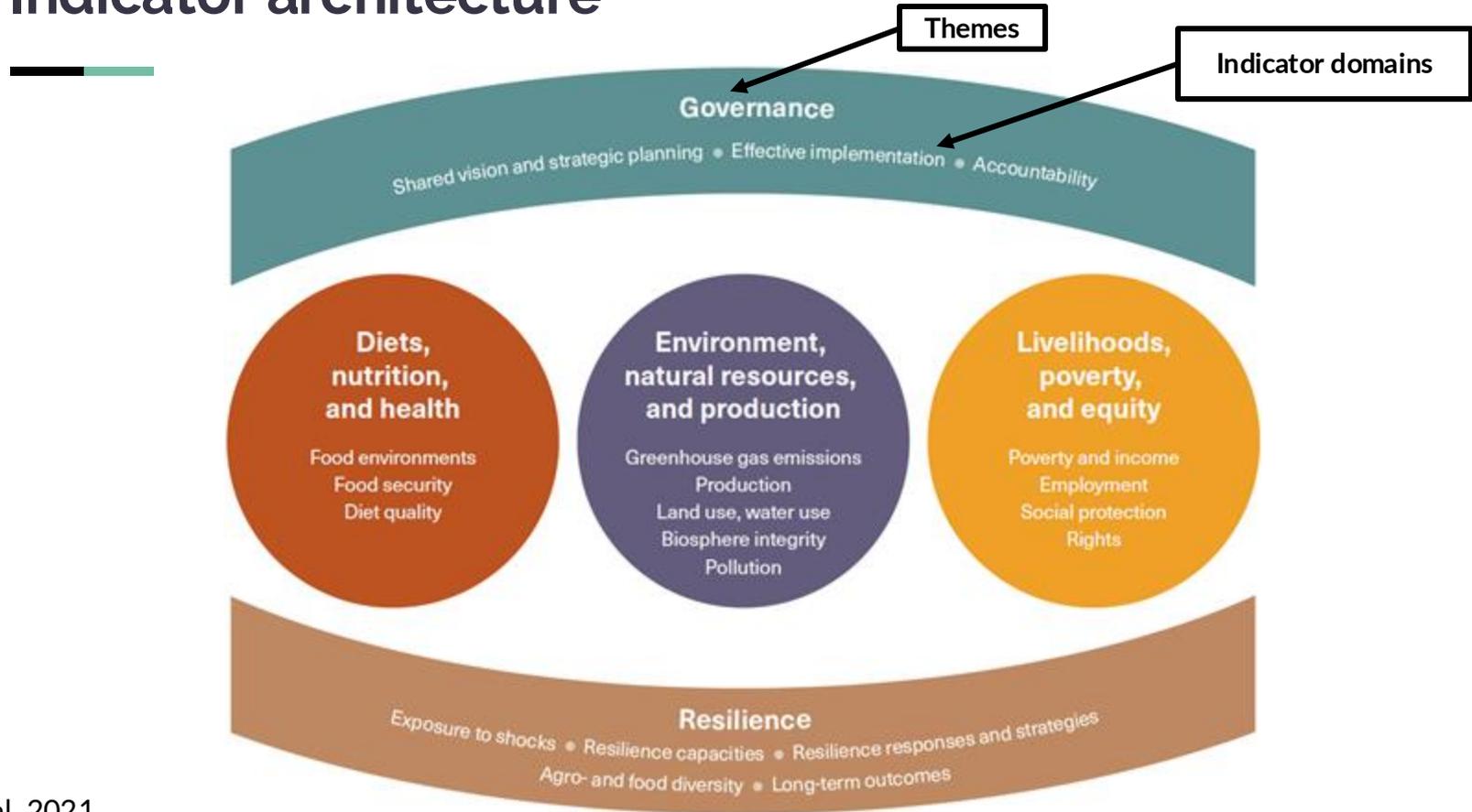


FSCI timeline to 2030

All available on the Countdown website



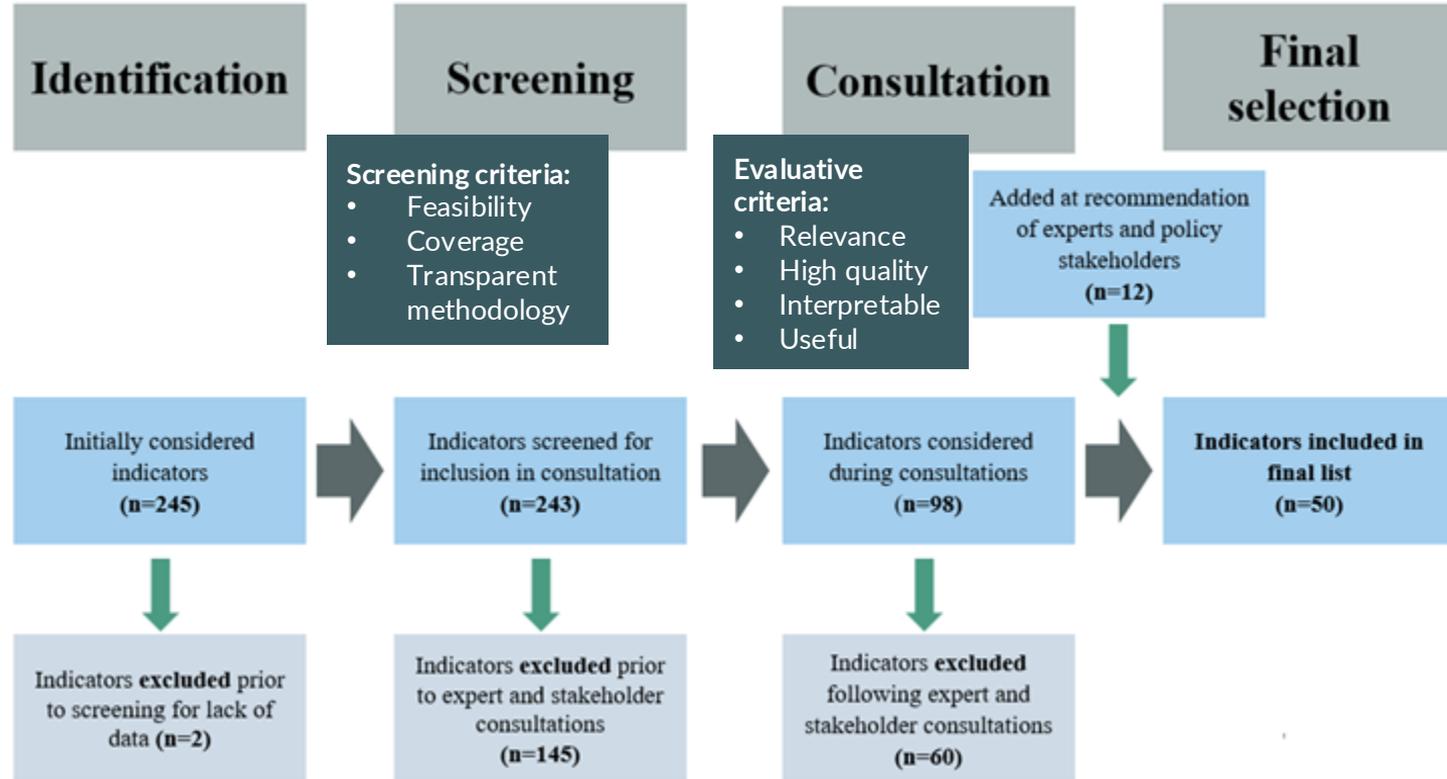
Indicator architecture



Indicator selection: transparent, inclusive, rigorous

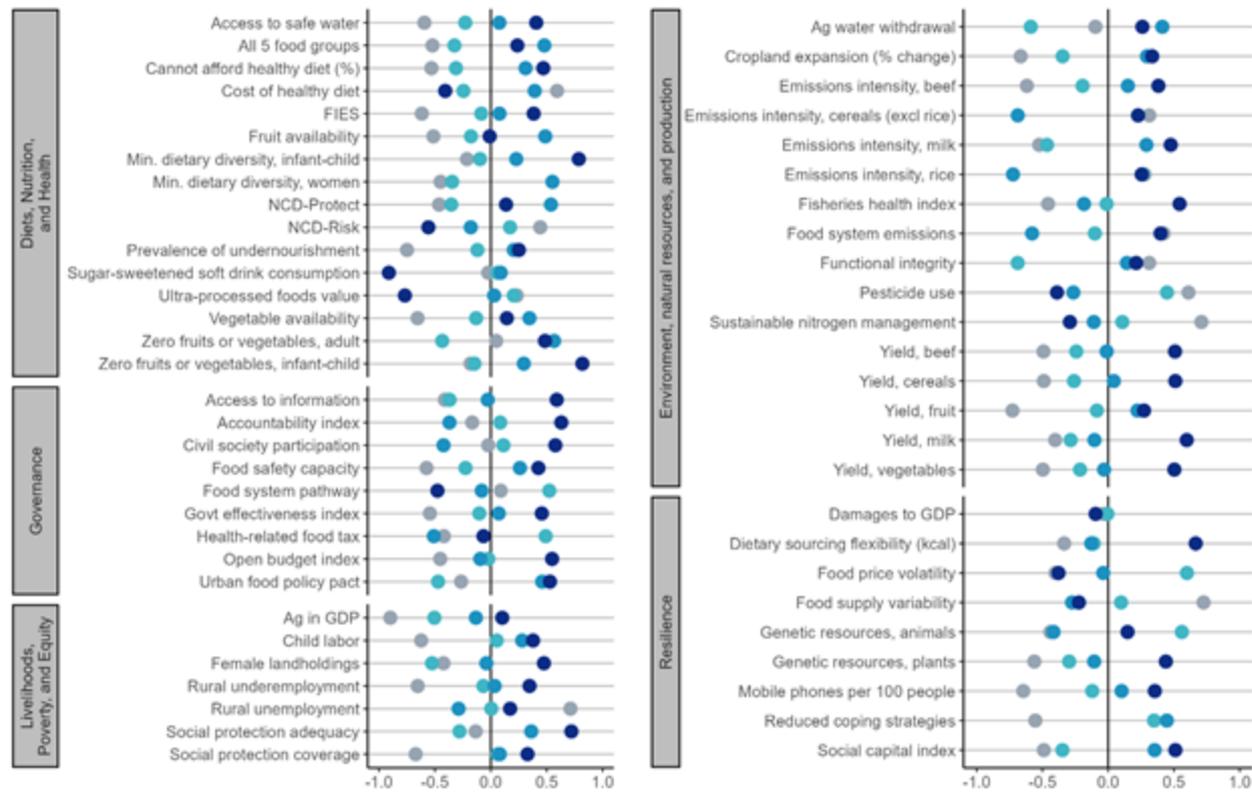
57 scientists in the FSCI collaboration conducted identification, screening, and final selection

Dozens of additional scientists and over 550 policy stakeholders participated in the consultations



Global food systems baseline

Food system success is not synonymous with country income



Normalized distance to global mean (max-min scaling relative to global country-level values). Black vertical line indicates global mean, centered at 0. Sign aligned to desirable direction.

Income group ● Low income ● Lower middle income ● Upper middle income ● High income



Food Systems
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Main lessons from the 2024 analyses

Monitoring progress and navigating interactions

Roseline Remans, PhD Ir.
glocolearning and the Alliance of Bioversity & CIAT

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Main lessons from the 2024 analyses

Monitoring progress and navigating interactions

nature food



Analysis

<https://doi.org/10.1038/s43016-024-01109-4>

**Governance and resilience as entry points
for transforming food systems in the
countdown to 2030**





nature food

Article

Governance and resilience as entry points for transforming food systems in the countdown to 2030

<https://doi.org/10.1038/s43747-024-0058-z>

Global food systems trends 2000-2022

Show 20 out of 42 indicators moving in the desirable direction

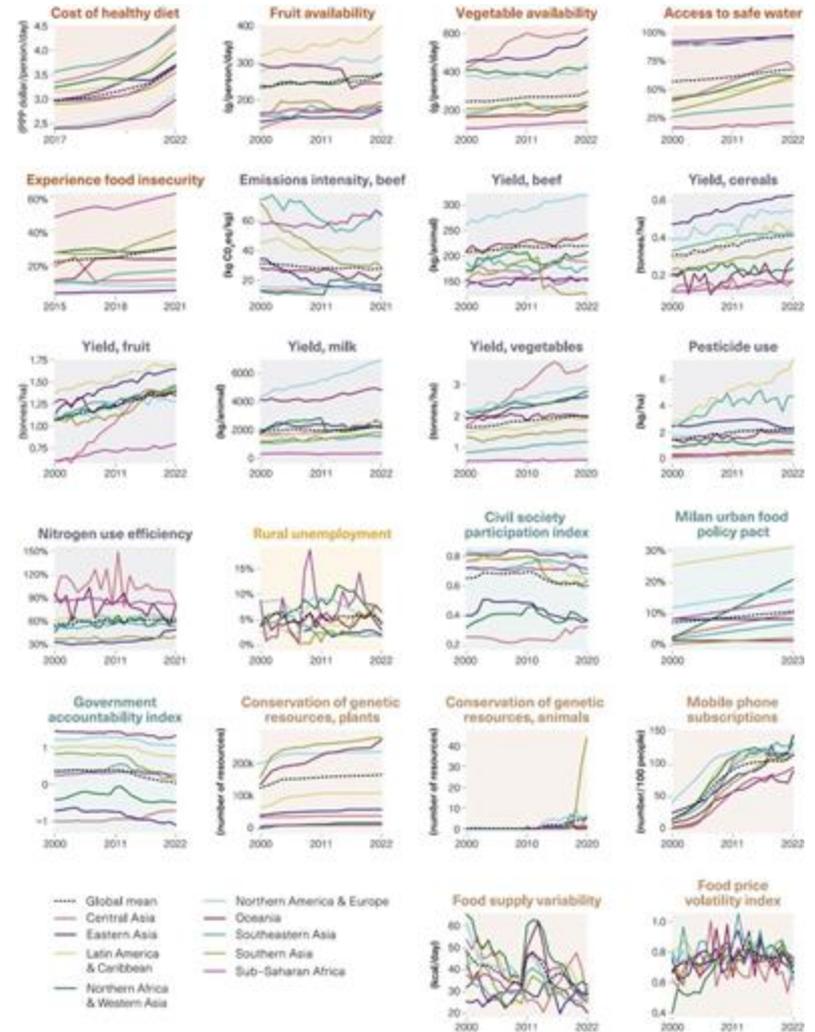
7 indicators trend undesirably, and the rest show no change, which is also undesirable



Regional trends

For some indicators, similar trends across regions can be observed e.g. cost of a healthy diet, mobile phone subscriptions

For other indicators, trends differ greatly between regions, e.g. food insecurity, fruit yield, pesticide use



Thematic trends

Nuance within themes, some indicators moving in desirable directions, some indicators moving in undesirable directions, or not changing

Table 1. The Countdown indicators

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

Diets, nutrition, and health		
<p>➤ 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)</p> <p>➤ Consumption of all five food groups: Share of the adult population consuming all five food groups typically recommended for daily consumption</p> <p>➤ Population who cannot afford a healthy diet: Share of the population whose food budget is less than the cost of a healthy diet</p> <p>➤ 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</p> <p>➤ 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)</p>	<p>➤ 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)</p> <p>➤ 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)</p> <p>➤ 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</p> <p>➤ 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</p>	<p>➤ Prevalence of undernourishment: Share of the population that goes hungry—that is, lacks enough calories for a healthy, active life (SDG 2.1.1)</p> <p>➤ Soft drink consumption: Share of adults who consumed a sugar-sweetened soft drink, which are generally known to be unhealthy, during the previous day</p> <p>➤ Ultra-processed food sales: Annual per-person sales of ultra-processed foods, which are known to be associated with poor health outcomes</p> <p>➤ 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)</p>
Environment, natural resources, and production		
<p>➤ Agricultural water withdrawal: Water withdrawn for irrigation each year, as a percentage of the total renewable water resources available</p> <p>➤ 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</p> <p>➤ Greenhouse gas emissions intensity, by product group: Greenhouse gas emissions (kg CO₂ equivalents) per kilogram produced of certain important food commodities (4) 🌱 beet → cereal 🥛 milk → rice</p>	<p>➤ Fisheries Health Index: An indicator summarizing the availability and sustainability of fish, which are at risk of overfishing or environmental degradation</p> <p>➤ Food systems greenhouse gas emissions: Greenhouse gas emissions (kt CO₂ equivalents) from food systems</p> <p>➤ Agricultural ecosystem functioning: 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</p>	<p>➤ Pesticide use: The use of pesticides per area of cropland (kg active ingredient per hectare); pesticide use can cause pollution and harm health</p> <p>➤ Nitrogen use efficiency: A measure of the efficiency of nitrogen application in agricultural production</p> <p>➤ 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)</p>
Livelihoods, poverty, and equity		
<p>➤ 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</p> <p>➤ 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</p>	<p>➤ Percentage of agricultural landowners who are female: A measure of the share of women among owners or rights-bearers of agricultural land</p> <p>➤ 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)</p>	<p>➤ Social protection adequacy: An indicator showing the extent to which social protection is sufficient to meet household needs</p> <p>➤ Social protection coverage: Percentage of people who live in households that benefit from social protection programs, like cash transfers and health insurance</p>

Navigating interactions between indicators



- Change (or lack of change) in one indicator can have direct or indirect impacts on other indicators
- History has many examples where food systems challenges have arisen owing to unintended consequences and systemic conflicts among multiple objectives
- Understanding interactions can help anticipate and manage tradeoffs or synergies and highlight entry points for decision-making

Identifying interactions: Methods

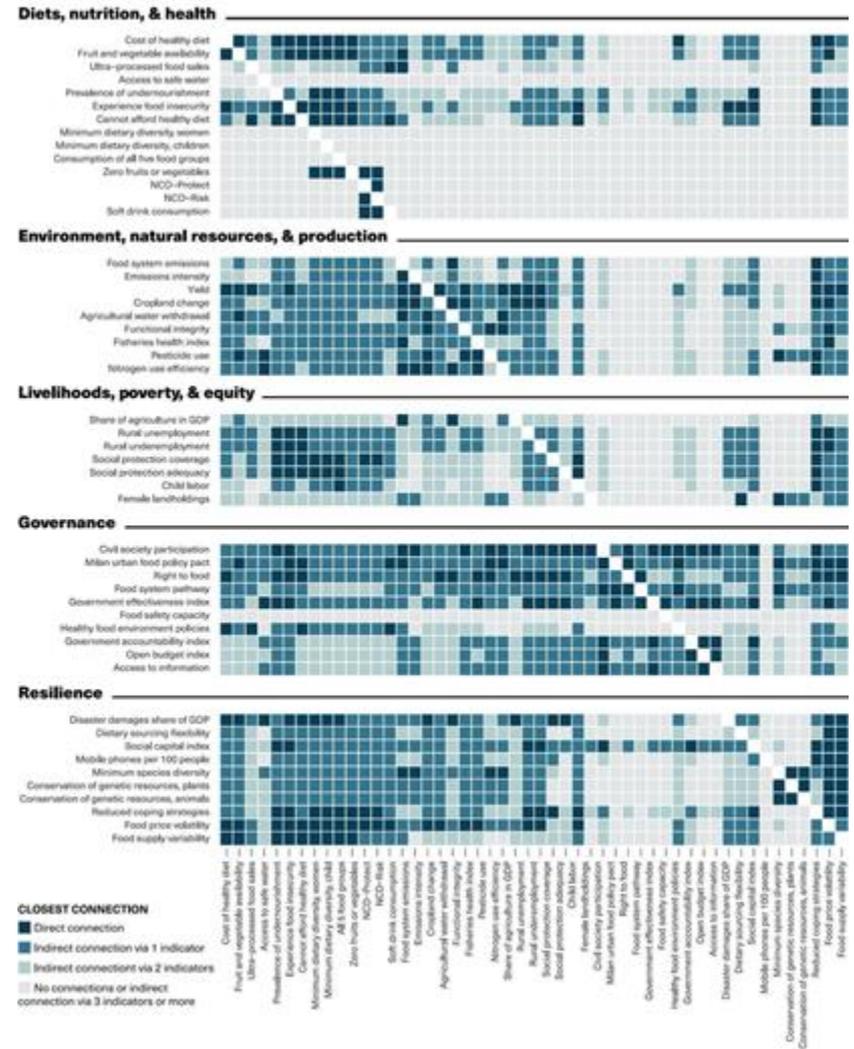
1. Expert elicitation with FSCI coauthors
1. Automated literature search
1. Country case studies with country expert panels

Assessed relationships between indicators

Many interdependencies

One third of interactions occur across themes

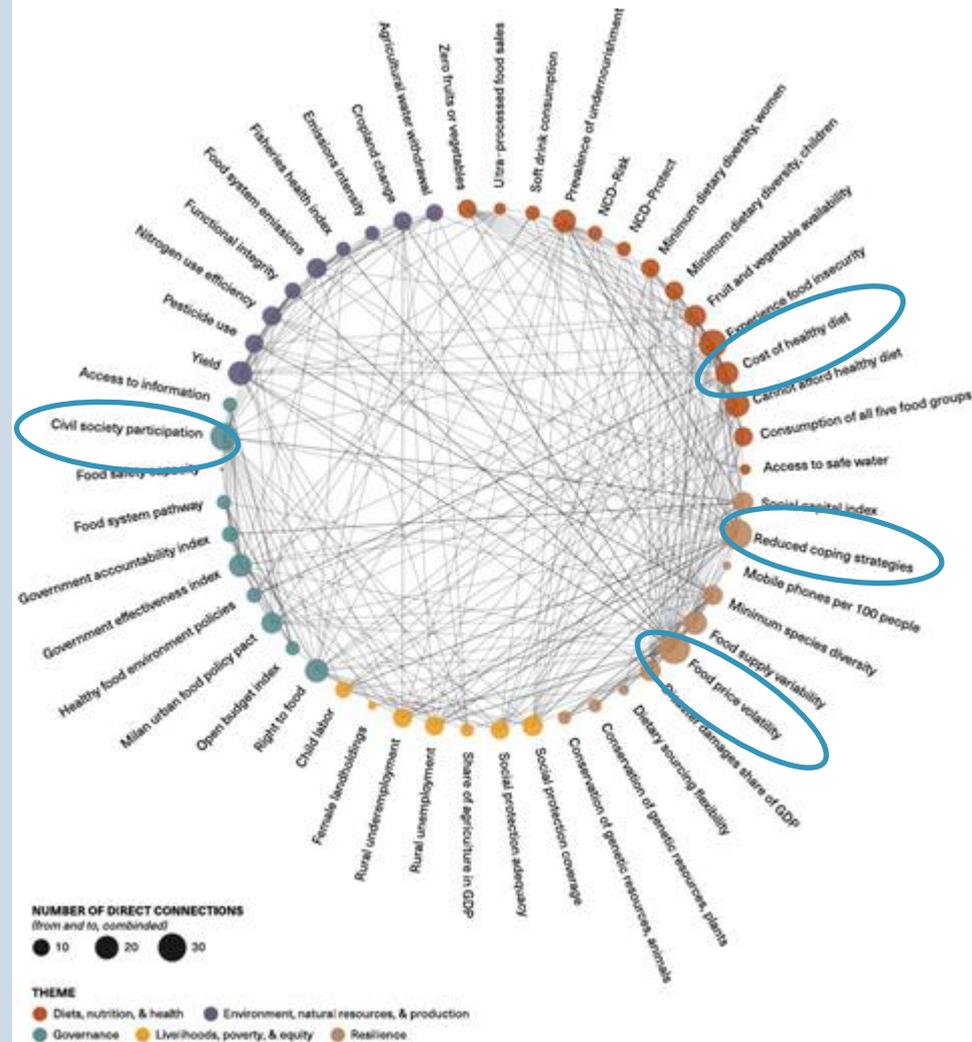
Governance and resilience show the largest number of connections to other themes



Highly connected indicators

Change in these indicators could have broad impact on others and/or require multiple coordinated actions

Explore on the Food Systems Dashboard



Assessed relationships between indicators

Rows highly connected across columns show where changes in these indicators could have broad impact on others



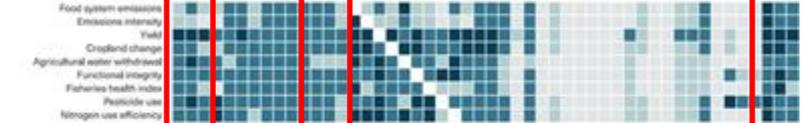
Assessed relationships between indicators

Columns with many influencing rows suggest indicators where multiple coordinated actions are needed to drive change

Diets, nutrition, & health



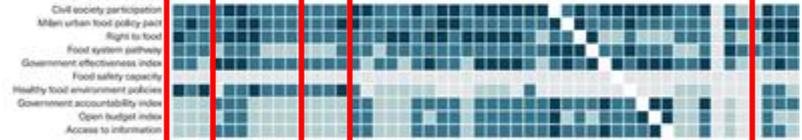
Environment, natural resources, & production



Livelihoods, poverty, & equity



Governance



Resilience

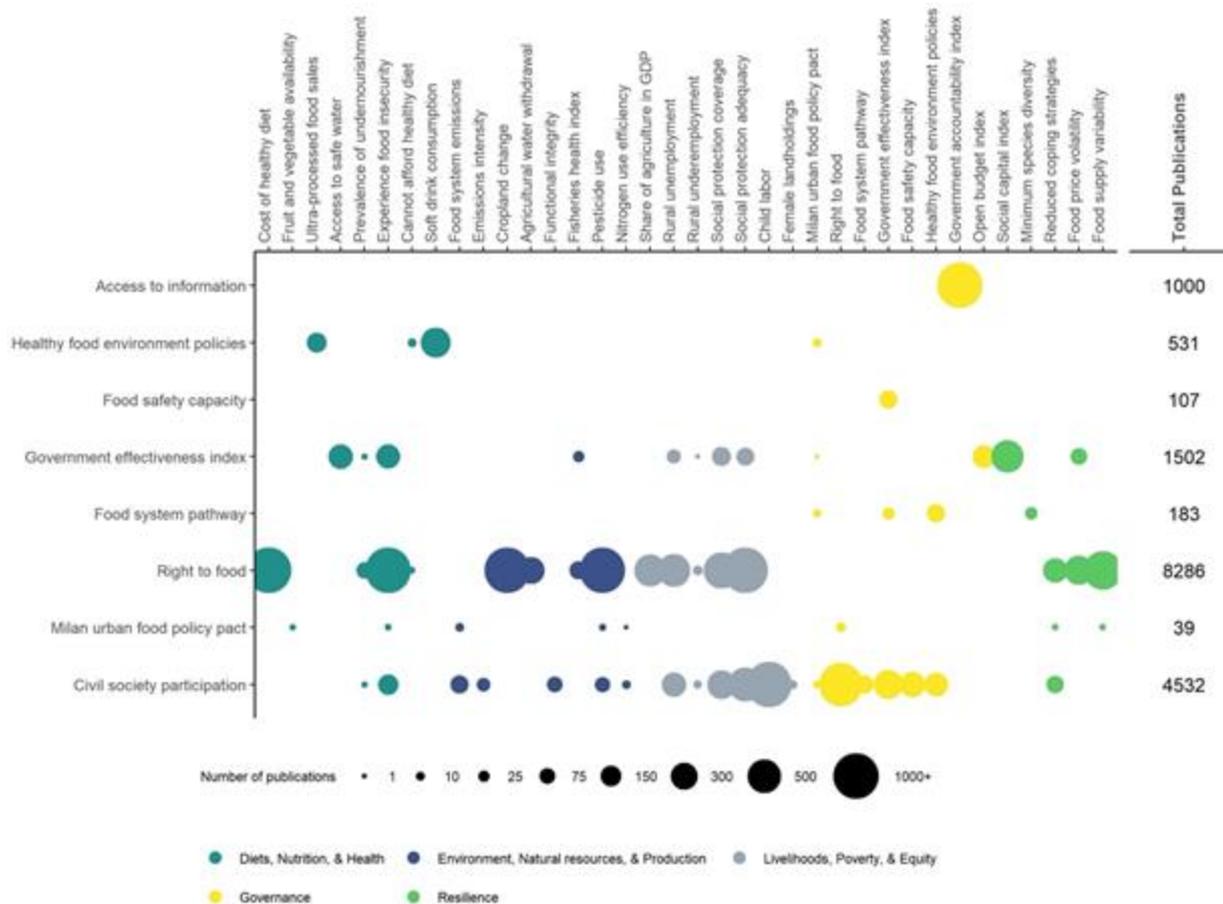


CLOSEST CONNECTION

- Direct connection
- Indirect connection via 1 indicator
- Indirect connection via 2 indicators
- No connections or indirect connection via 3 indicators or more



Volume of literature on direct relationships involving governance indicators



Country case studies on governance related interactions



Country case studies

- Ethiopia & Mexico: most interactions deemed highly relevant to achieve national transformation goals
- Increasing influence of health-related food environment policies on diet and nutrition outcomes in Mexico
- Netherlands context proved very different from Ethiopia and Mexico with less than one-third of the identified global interactions involving governance were viewed as highly relevant to achieving sustainable food systems in the country. Limited political will and industry lobbying were considered as main barriers for change
- Also noted that increased globalization has lessened government power over food systems and made it harder for governments to be effective

Conclusions

- Some parts of food systems are moving in a desirable direction
- Interactions illustrate where there are potential upstream dependencies blocking potential for change
- Governance and resilience indicators have broad influence across the food system, suggesting important leverage points
- Diet and resilience indicators are influenced by many factors, suggesting need for coordinated action

Critical data gaps exist to measure food systems



Economic value



The true cost of food



Workers and worker welfare



Food loss and waste



Levels of market concentration



Budgetary allocations



Policy coherence for transformation



Food safety



The Food Systems Dashboard

A tool for holistically examining food systems of countries and the world

Dr. Jessica Fanzo
Columbia Climate School

Dashboard Co-Chair Organizations:



What is the Food Systems Dashboard?

www.foodsystemsdashboard.org

The Food Systems Dashboard, launched in 2020, combines data from multiple sources to give users a complete view of food systems

DESCRIBE: View data for hundreds of indicators spanning every aspect of food systems

DIAGNOSE: Dive into country-specific data, including our diagnostics

DECIDE: Explore evidence-based actions to improve diets, nutrition, and environment



Global Data

Data extracted from global databases and available across most countries at a national level



Global Dashboard

View global data for hundreds of indicators spanning every aspect of food systems. >



Country Diagnostics

Dive into country and territory specific data, including our food systems diagnostics. >



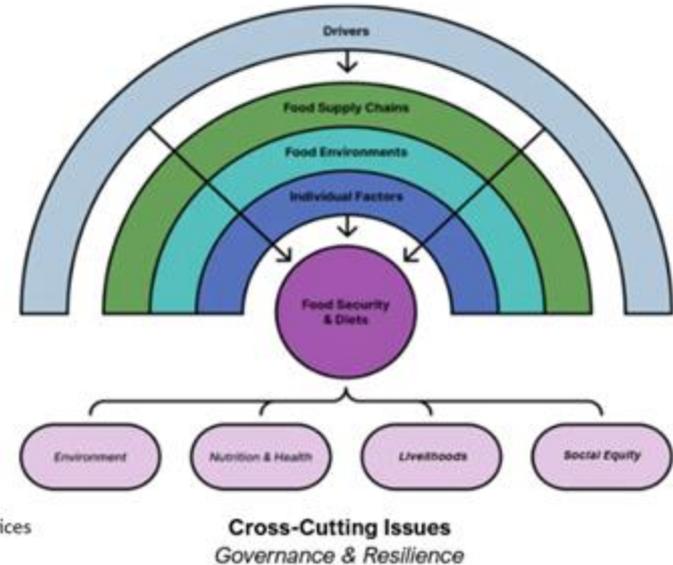
Policies and Actions

Explore evidence-based interventions that can help improve outcomes of food systems. >

The Dashboard includes almost 300 indicators from over 40 sources, organised through a food systems framework

22	<p>Drivers</p> <ul style="list-style-type: none"> Environment and climate change Globalization and trade Income growth and distribution Urbanization Population growth and migration Policies and leadership Socio-cultural context
62	<p>Food Supply Chains</p> <ul style="list-style-type: none"> Production systems and input supply Storage and distribution Processing and packaging Retail and marketing
61	<p>Food Environments</p> <ul style="list-style-type: none"> Food availability Food affordability Product properties Vendor properties Food messaging Food safety

17	<p>Individual Factors</p> <ul style="list-style-type: none"> Economic Situational Behavioural
21	<p>Cross-Cutting Issues</p> <ul style="list-style-type: none"> Governance Resilience
101	<p>Outcomes</p> <ul style="list-style-type: none"> Food security Dietary intake Infant and young child feeding practices Nutritional status Noncommunicable diseases Livelihoods, poverty, and equity Environmental impacts



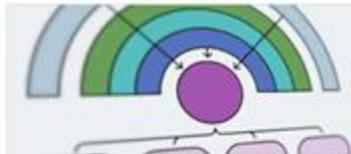
Data sources, methodology, and other resources are also available

About the Food Systems Dashboard



About the Dashboard

- What is the Food Systems Dashboard?
- How to Navigate the Food Systems Dashboard
- How to Cite the Food Systems Dashboard
- Who is the Food Systems Dashboard for?
- Who created the Food Systems Dashboard?
- Demos



About Food Systems

- A Food Systems Framework
- Components of Food Systems
- Cross-Cutting Issues
- Drivers of Food Systems
- Outcomes of Food Systems
- Food System Types



Data Sources and Methodology

- Background on the Development of the Conceptual Framework, Indicators and Their Sources
- Methodology for Developing the Food Systems Typology
- How the 12 Actions Were Identified
- How the Environmental Policies and Actions Were Identified



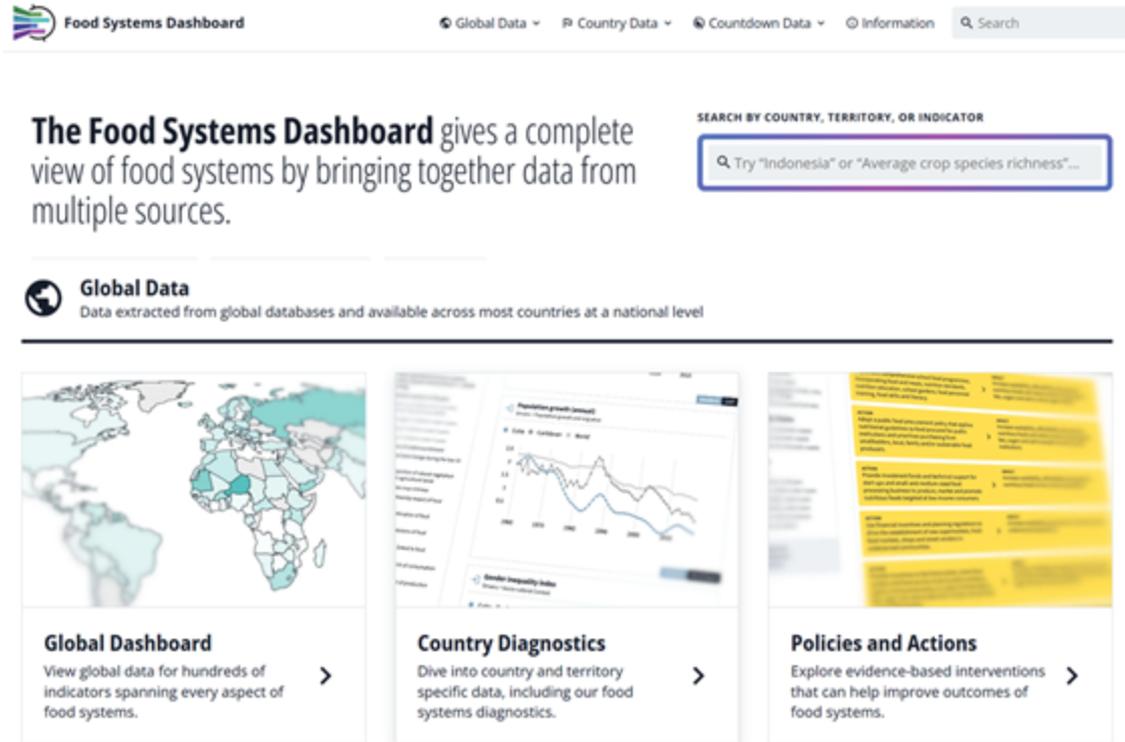
Resources

- Food Systems Transformation Briefs
- Publications
- Reports and Policy Briefs
- Webinars, Interviews, and Other Talks

The Dashboard enables visual exploration of data across countries and over time

Visualising Global Data

- All indicators can be viewed in a map form, to compare across countries
- To more easily understand relative rankings, data can also be viewed in a bar graph or as a table
- Time trends can also be viewed, where available



The screenshot displays the 'Food Systems Dashboard' interface. At the top, there is a navigation bar with the logo and menu items: 'Global Data', 'Country Data', 'Countdown Data', and 'Information', along with a search icon. Below the navigation bar, a search box contains the text 'Try "Indonesia" or "Average crop species richness"...'. The main content area features a heading 'The Food Systems Dashboard gives a complete view of food systems by bringing together data from multiple sources.' followed by a 'Global Data' section with a globe icon and the text 'Data extracted from global databases and available across most countries at a national level'. Below this, three interactive panels are shown: 'Global Dashboard' with a world map, 'Country Diagnostics' with a line graph, and 'Policies and Actions' with a list of text boxes. Each panel includes a brief description and a right-pointing arrow.

Food Systems Dashboard Global Data Country Data Countdown Data Information Search

SEARCH BY COUNTRY, TERRITORY, OR INDICATOR

Try "Indonesia" or "Average crop species richness"...

The Food Systems Dashboard gives a complete view of food systems by bringing together data from multiple sources.

Global Data
Data extracted from global databases and available across most countries at a national level

Global Dashboard
View global data for hundreds of indicators spanning every aspect of food systems.

Country Diagnostics
Dive into country and territory specific data, including our food systems diagnostics.

Policies and Actions
Explore evidence-based interventions that can help improve outcomes of food systems.



The Countdown data and analysis on the Food Systems Dashboard

Dr. Rebecca McLaren
The Global Alliance for Improved Nutrition

Countdown Co-Chair Organizations:



Countdown data and analysis on the Dashboard



Countdown Data

Food Systems Countdown Initiative

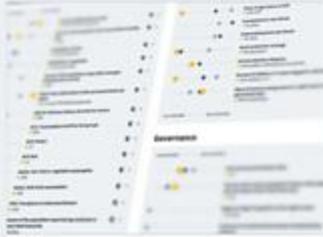
The Countdown is a collaborative effort to monitor global food systems. It brings together indicators that span food systems and provides annual analysis to inform policy, business, and NGO priorities and actions. It supports the transformation of food systems, so they become equitable, sustainable, and resilient and positively contribute to achieving the 2030 SDGs and other global goals.

[More about the Countdown](#)



Countdown Indicators

View data for hand-selected indicators belonging to the Countdown's five thematic areas.



Countdown Country Profiles

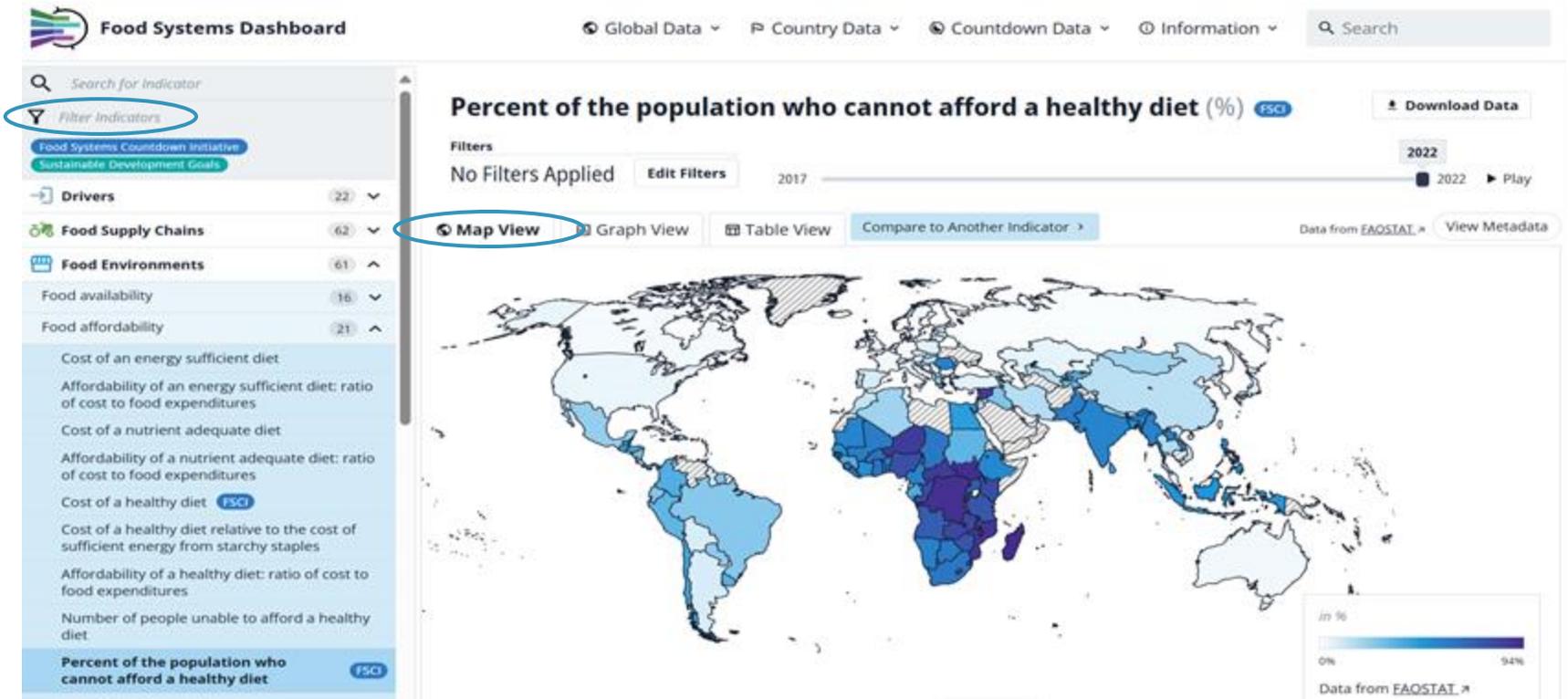
Compare Country-specific data for Countdown indicators to regional and global averages.



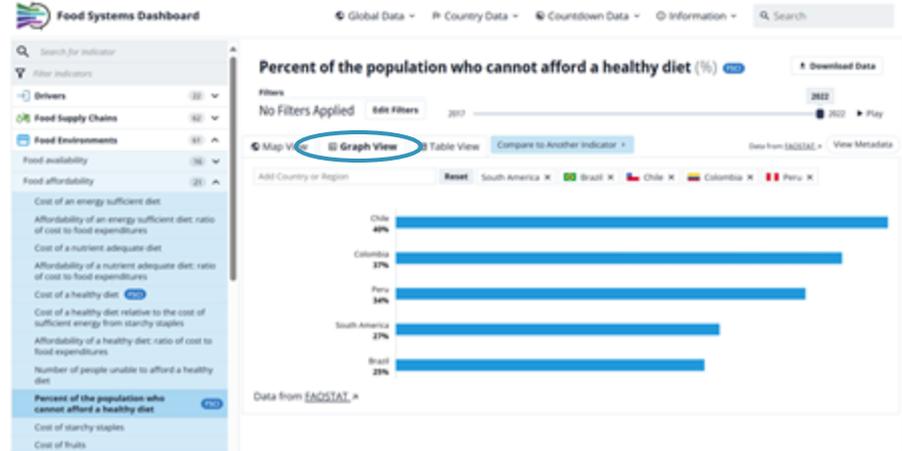
Countdown Indicator Interactions

Explore how indicators influence and are influenced by each other.

Countdown indicators



Countdown indicators



Countdown country profiles

Countdown Indicators Breakdown

The Food Systems Countdown Initiative (FSCI) is a collaborative interdisciplinary effort to monitor global food systems. The Countdown developed a framework 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 and identified 50 indicators across these themes. This page presents national level data for these 50 indicators for Nigeria.

Nigeria Income group: Lower Middle Income

Comparison: Regional Income Group

Legend:
● Nigeria
● Western Africa
● World

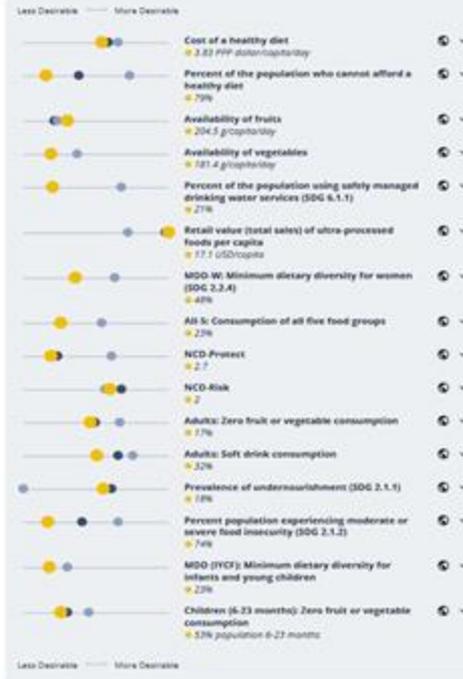
Governance



Resilience



Diets, Nutrition, and Health



Livelihoods, Poverty, and Equity



Environment, Natural Resources, and Production



Countdown indicator interactions

Food price volatility

● Resilience

How much food prices vary over time, indicating how well the food system can respond to shocks

[View Data](#) [Reset](#)

Mutually Affects 8 Indicators

Cost of healthy diet
Fruit and vegetable availability
Yields
Cropland change
Functional integrity
fisheries health index
Rural unemployment
Rural underemployment

Affects 11 Indicators

Prevalence of undernourishment
Experience food insecurity
Cannot afford healthy diet
Minimum dietary diversity, women
Minimum dietary diversity, child
All 5 food groups
Zero fruits or vegetables
NCD-Protect
NCD-Risk
Soft drink consumption
Child labor

Is Affected By 11 Indicators

Milan urban food policy pact
Right to food
Government effectiveness index
Disaster damages share of GDP
Dietary sourcing flexibility
Social capital index
Mobile phones per 100 people
Minimum species diversity
Conservation of genetic resources, plants
Conservation of genetic resources, animals
Reduced coping strategies

