



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



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Global Alliance for  
Improved Nutrition



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# The Food Systems Countdown Initiative Background & baseline analysis

Dr. Mario Herrero  
Cornell University

Countdown Co-Chair Organizations:



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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

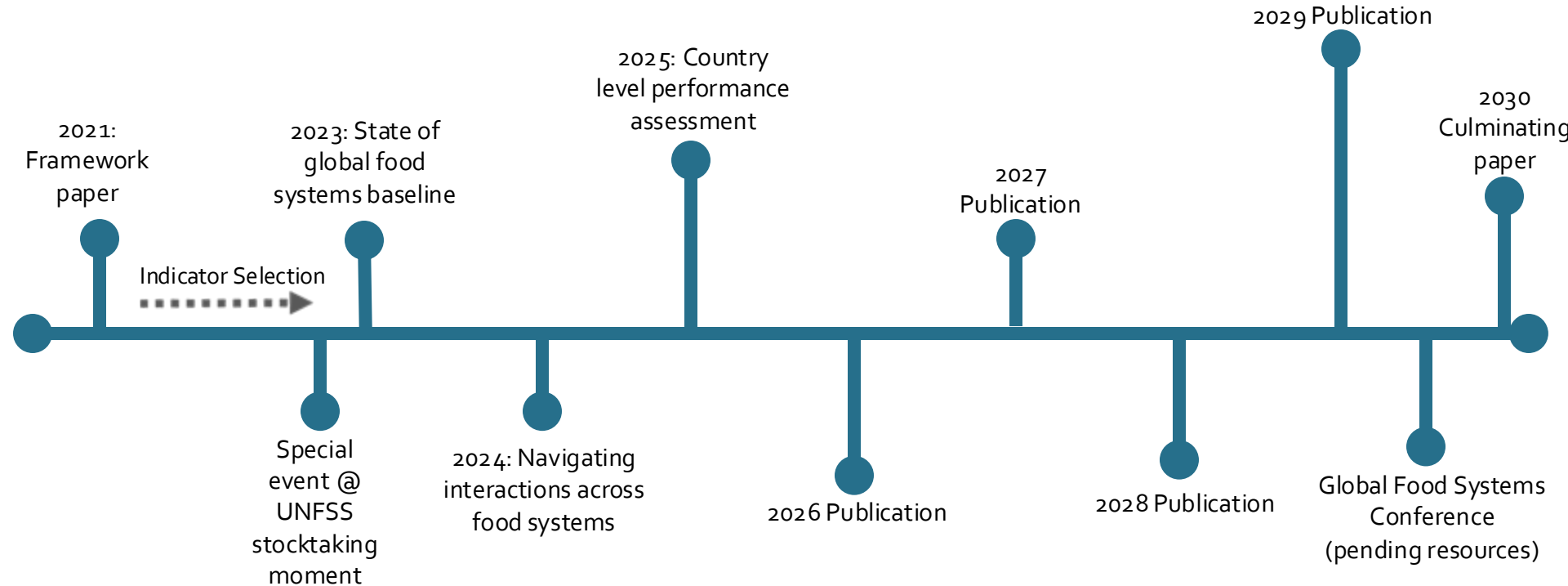
The Countdown is an interdisciplinary, multi-institution scientific partnership to monitor global food systems in service of meeting the SDGs and other global goals





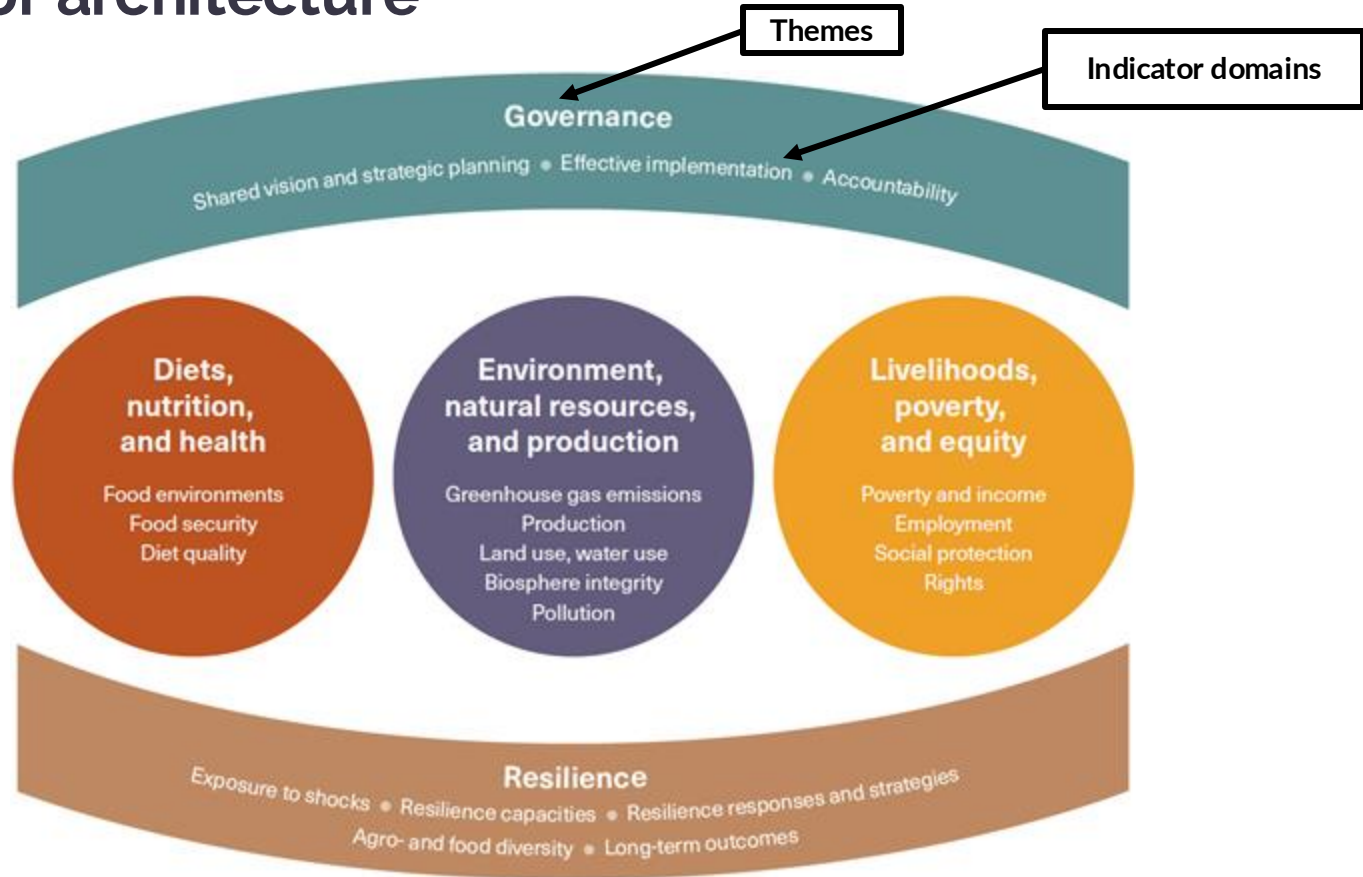
# FSCI timeline to 2030

All available on the Countdown website





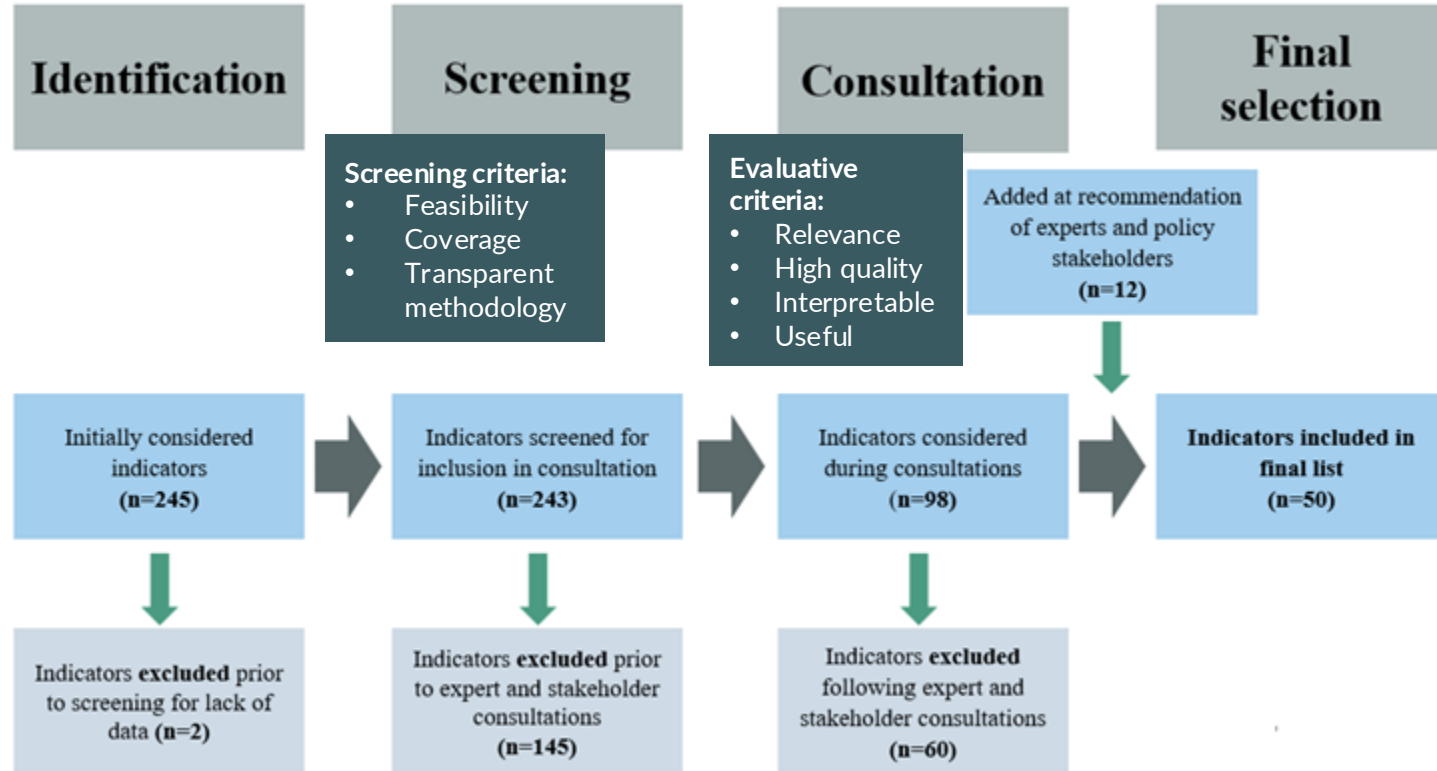
# Indicator architecture





# Indicator selection: transparent, inclusive, rigorous

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

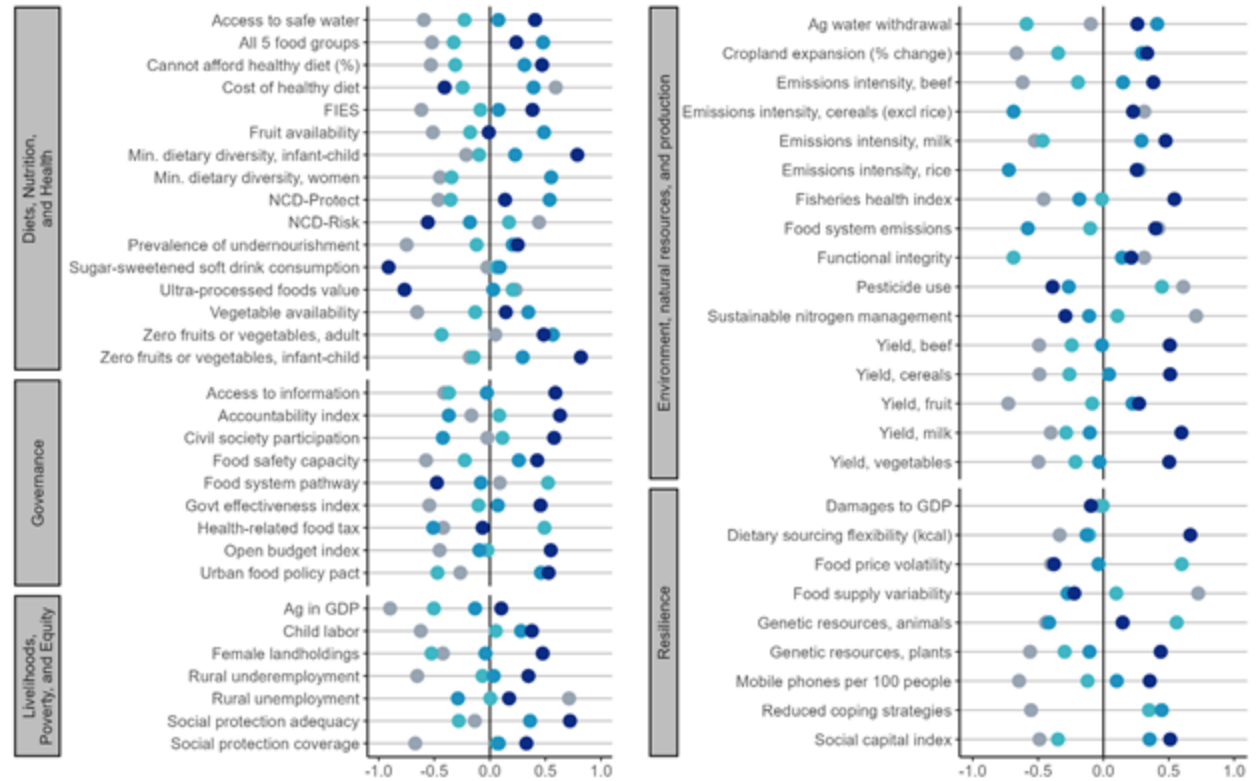


Dozens of additional scientists and over 550 policy stakeholders participated in the consultations



# 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





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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

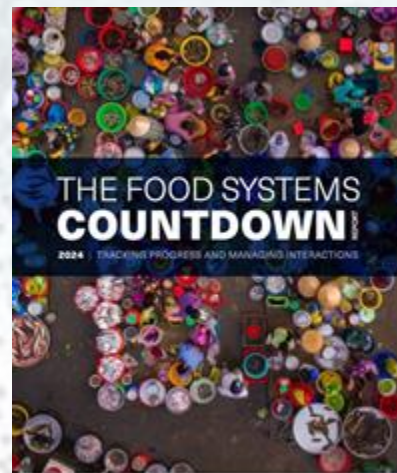
nature food



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**



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Agroecology

CCAFS

Center for  
Agroecology  
and Food  
Systems

CCAFS

Center for  
Agroecology  
and Food  
Systems





# 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

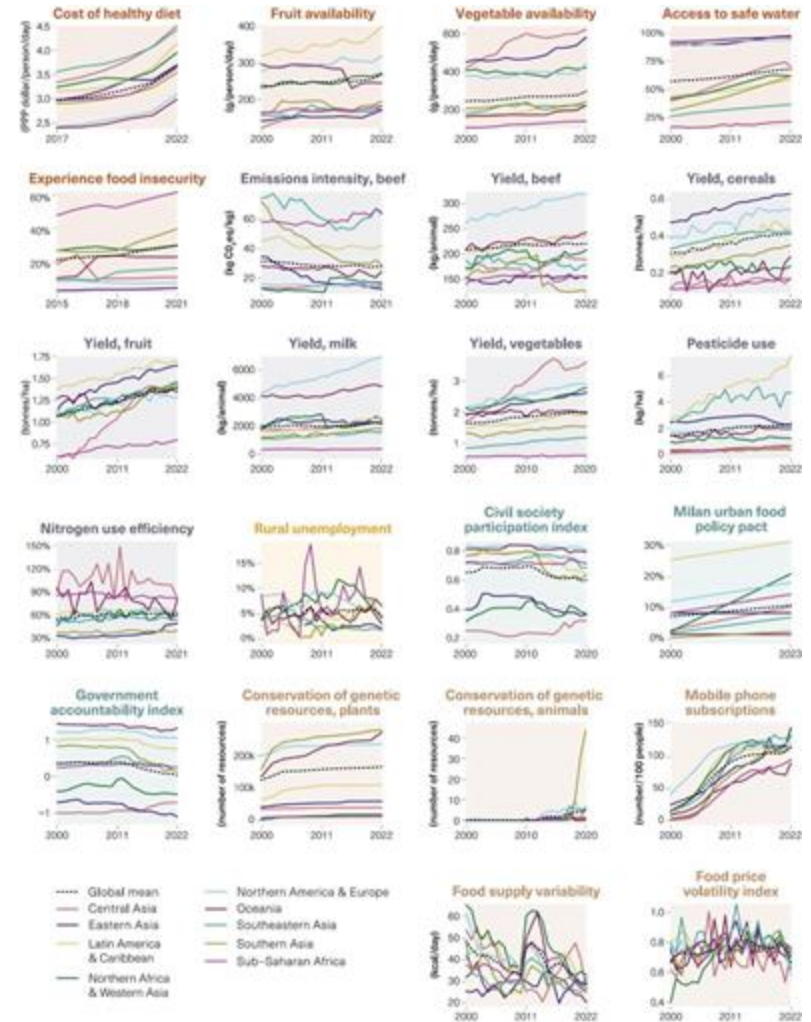




# Regional trends

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>➡ <b>Access to safe water:</b> 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>➡ <b>Consumption of all five food groups:</b> Share of the adult population consuming all five food groups typically recommended for daily consumption</p> <p>➡ <b>Population who cannot afford a healthy diet:</b> Share of the population whose food budget is less than the cost of a healthy diet</p> <p>➡ <b>Cost of a healthy diet:</b> Per-person cost of the least expensive locally available foods to meet daily needs, based on food-based dietary guidelines</p> <p>➡ <b>Population experiencing moderate or severe food insecurity:</b> Share of the population experiencing food insecurity, measured according to the Food Insecurity Experience Scale (FIES) (SDG 2.1.2)</p>	<p>➡ <b>Availability of fruits and vegetables:</b> 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>➡ <b>Minimum dietary diversity for women (MDD-W) and Minimum dietary diversity for infants and young children (MDD-IYCF):</b> 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>➡ <b>NCD-Protect:</b> 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>➡ <b>NCD-Risk:</b> 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>➡ <b>Prevalence of undernourishment:</b> Share of the population that goes hungry—that is, lacks enough calories for a healthy, active life (SDG 2.1.1)</p> <p>➡ <b>Soft drink consumption:</b> Share of adults who consumed a sugar-sweetened soft drink, which are generally known to be unhealthy, during the previous day</p> <p>➡ <b>Ultra-processed food sales:</b> Annual per-person sales of ultra-processed foods, which are known to be associated with poor health outcomes</p> <p>➡ <b>Zero fruit or vegetable consumption:</b> 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>➡ <b>Agricultural water withdrawal:</b> Water withdrawn for irrigation each year, as a percentage of the total renewable water resources available</p> <p>➡ <b>Cropland area change:</b> 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>➡ <b>Greenhouse gas emissions intensity, by product group:</b> Greenhouse gas emissions (kg CO<sub>2</sub> equivalents) per kilogram produced of certain important food commodities (4) (➡) beef, (➡) cereal, (➡) milk, (➡) rice</p>	<p>➡ <b>Fisheries Health Index:</b> An indicator summarizing the availability and sustainability of fish, which are at risk of overfishing or environmental degradation</p> <p>➡ <b>Food systems greenhouse gas emissions:</b> Greenhouse gas emissions (kt CO<sub>2</sub> equivalents) from food systems</p> <p>➡ <b>Agricultural ecosystem function:</b> 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>➡ <b>Pesticide use:</b> The use of pesticides per area of cropland (kg active ingredient per hectare); pesticide use can cause pollution and harm health</p> <p>➡ <b>Nitrogen use efficiency:</b> A measure of the efficiency of nitrogen application in agricultural production</p> <p>➡ <b>Food product yield, by food group:</b> 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>➡ <b>Share of agriculture in GDP:</b> Percentage of a country's GDP derived from agriculture, a measure of the level of economic development of the country</p> <p>➡ <b>Child labor:</b> 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>➡ <b>Percentage of agricultural landowners who are female:</b> A measure of the share of women among owners or rights-bearers of agricultural land</p> <p>➡ <b>Rural unemployment and ➡ Rural underemployment:</b> Percentage of working-age people in rural areas who are unemployed or underemployed (i.e., worked fewer hours than expected) (2)</p>	<p>➡ <b>Social protection adequacy:</b> An indicator showing the extent to which social protection is sufficient to meet household needs</p> <p>➡ <b>Social protection coverage:</b> 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

## Diets, nutrition, & health

Cost of healthy diet  
Fruit and vegetable availability  
Ultra-processed food sales  
Access to safe water  
Prevalence of undernourishment  
Experience food insecurity  
Cannot afford healthy diet  
Minimum dietary diversity: women  
Minimum dietary diversity: children  
Consumption of all five food groups  
Zero fruits or vegetables  
NCD-Risk  
NCD-Risk  
Soft drink consumption

## Environment, natural resources, & production

Food system emissions  
Emissions intensity  
Yield  
Cropland change  
Agricultural water withdrawal  
Functional integrity  
Fisheries health index  
Pesticide use  
Nitrogen use efficiency

## Livelihoods, poverty, & equity

Share of agriculture in GDP  
Rural unemployment  
Rural underemployment  
Social protection coverage  
Social protection adequacy  
Child labor  
Female landholdings

## Governance

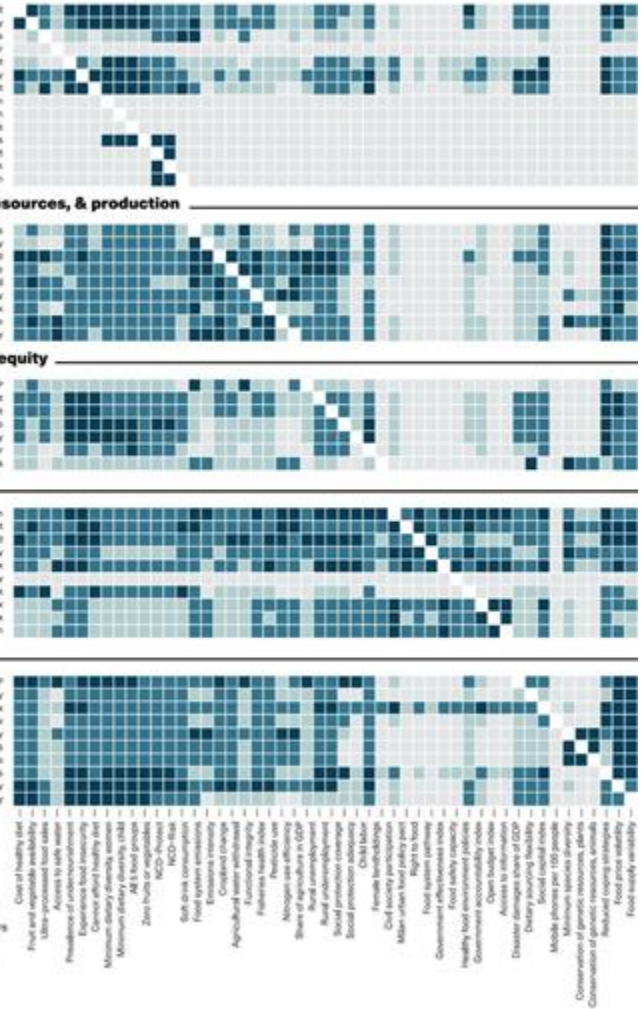
Civil society participation  
Mean urban food policy pact  
Right to food  
Food system pathway  
Government effectiveness index  
Food safety capacity  
Healthy food environment policies  
Government accountability index  
Open budget index  
Access to information

## Resilience

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  
Food price volatility  
Food supply variability

### CLOSEST CONNECTION

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

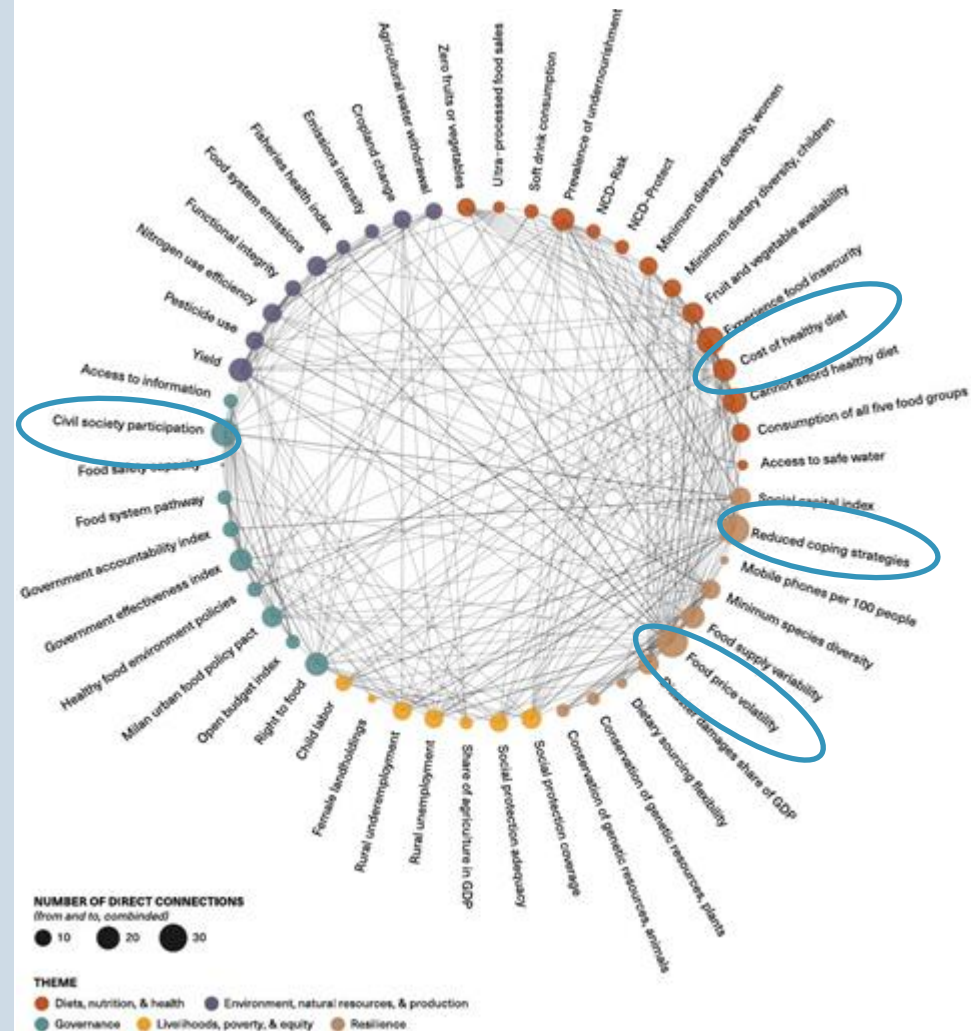




# Highly connected indicators

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

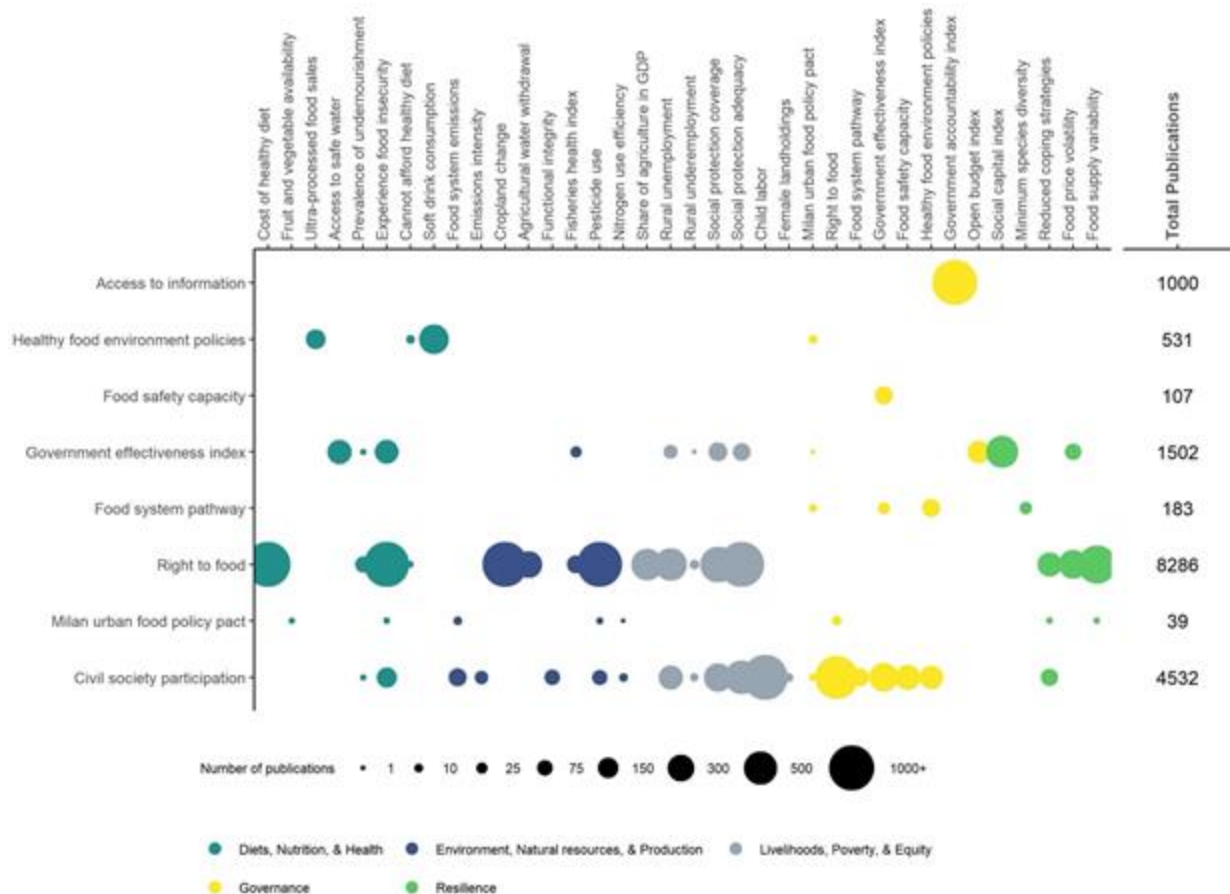
### CLOSEST CONNECTION

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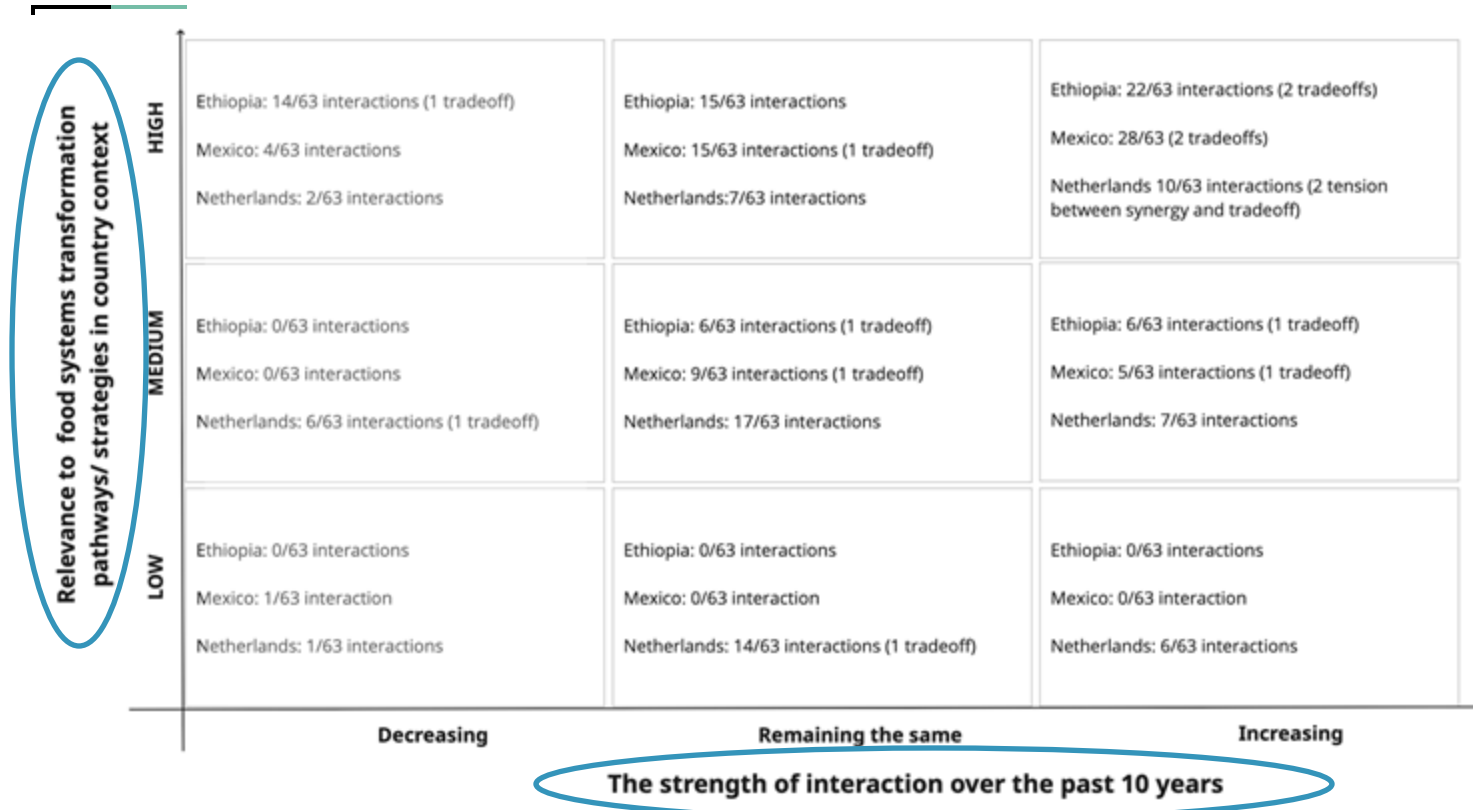


# Volume of literature on direct relationships involving governance indicators





# 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](http://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.



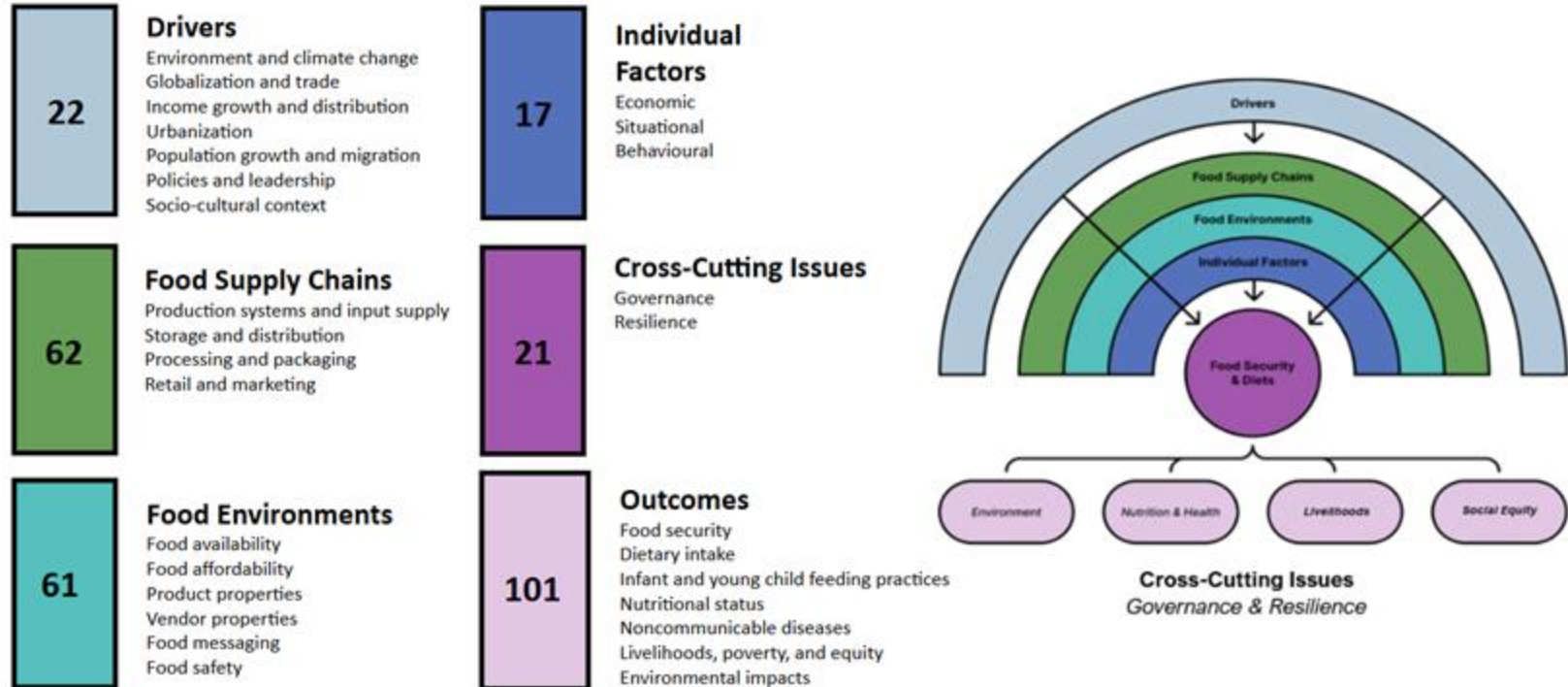
## Policies and Actions

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



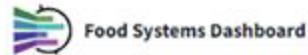


# The Dashboard includes almost 300 indicators from over 40 sources, organised through a food systems framework





# Data sources, methodology, and other resources are also available



Global Data ▾

Country Data ▾

Countdown Data ▾

Information

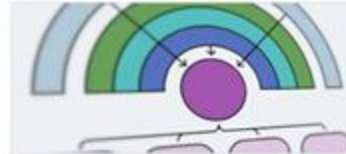
Search

## 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?  
Donors



### 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



Food Systems Dashboard

Global Data

Country Data

Countdown Data

Information

Search

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

SEARCH BY COUNTRY, TERRITORY, OR INDICATOR

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



### Global Data

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



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



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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 >](#)

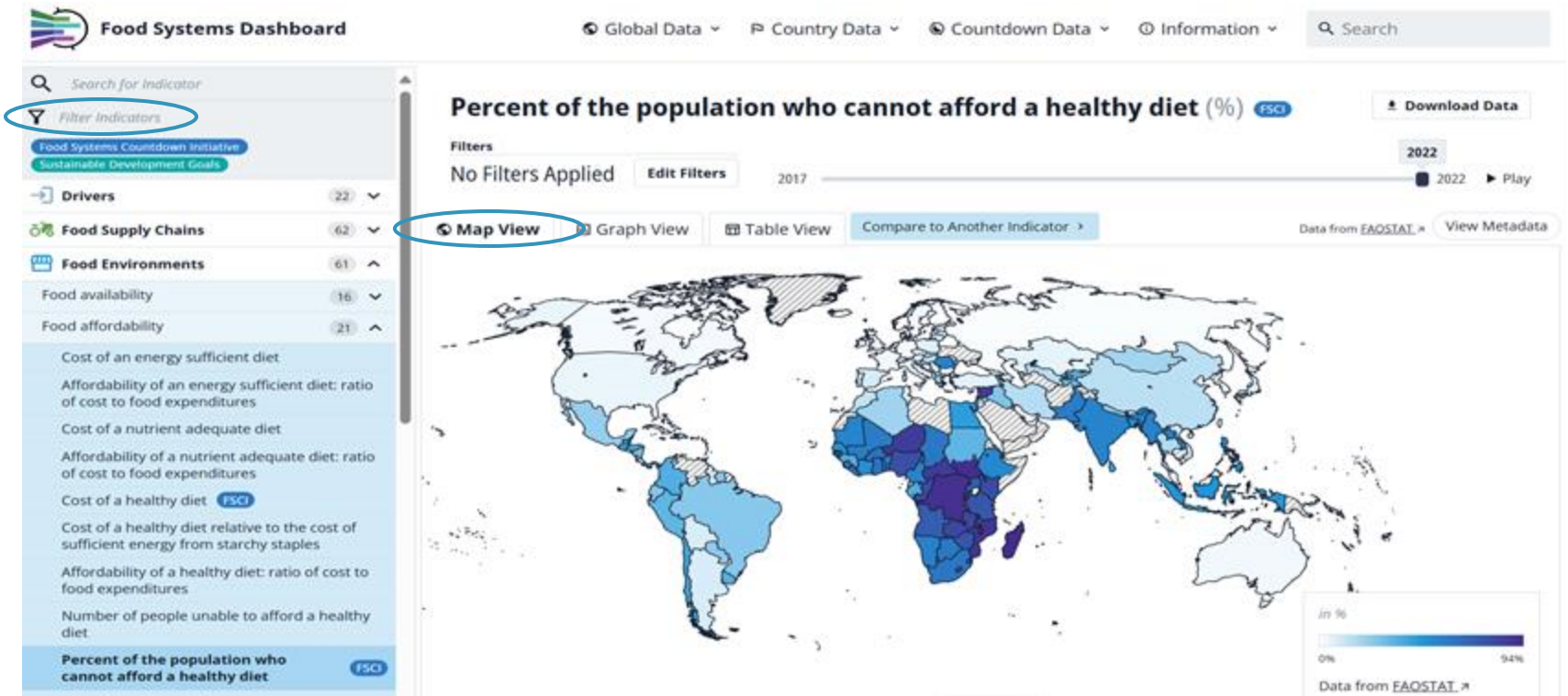
**Countdown Indicators**  
View data for hand-selected indicators belonging to the Countdown's five thematic areas. [>](#)

**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. [>](#)

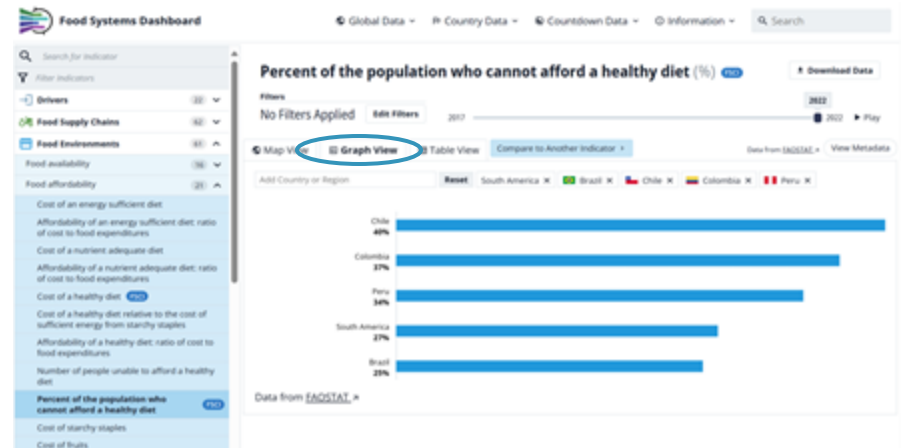


# Countdown indicators





# Countdown indicators





# Countdown country profiles

[Country Diagnostics](#)[Countdown Indicators](#)[Country Dashboard](#)

## 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

● Nigeria  
● Western Africa  
● World

## Governance



## Resilience



## Diets, Nutrition, and Health



## Livelihoods, Poverty, and Equity



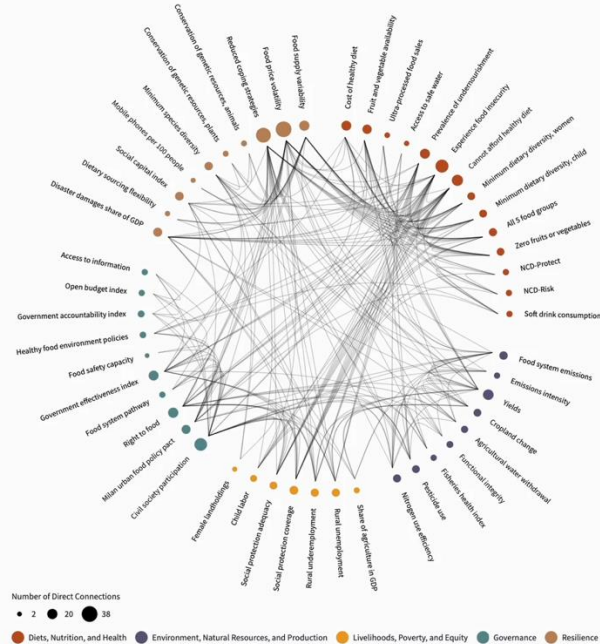
## Environment, Natural Resources, and Production





Page 10 of 10

Click on an indicator to view its direct connections to other indicators





# 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  
Rights 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

