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FSCI BASELINE

EUROPE

The Food Systems Countdown to 2030 Initiative (FSCI) Baseline State of Food Systems for the Europe region

February 2025

Food systems connect people and the Earth and offer a clear entry point to address the numerous health, environmental, and socioeconomic challenges. Yet food systems around the world face formidable challenges and future risks necessitate their urgent and comprehensive transformation.

Notwithstanding these challenges, food systems around the world exhibit remarkable diversity across the supply chains and sub-regions, from production to distribution to the diversity of diets. Every region's agricultural potential is substantial, and, coupled with a rich tapestry of traditional agricultural practices and emerging technologies, presents a unique opportunity for revolutionizing the entire functioning of food systems.

Such a holistic approach is imperative to address the multi-faceted challenges facing the world's food systems and to harness the immense potential for food system innovation and development. This transformation must transcend mere production increases, encompassing improved market access, enhanced food security, diversified nutrition, climate resilience, and overall sustainability.

Food systems transformation is central to meeting the Sustainable Development Goals (SDGs) by their 2030 deadline as well as to meeting the targets and commitments established in the three Rio Conventions on climate change (UNFCCC), the Convention on Biological Diversity (UNCBD), and the UN Convention to Combat Desertification (UNCCD). Meeting these goals is possible, but decisive and deliberate decisions are required to set countries, companies, and consumers on a more sustainable, healthy, equitable, and resilient path. Choosing those right actions requires rigorous evidence.

This policy brief provides the Europe region with a snapshot of the current state of their food systems, establishing a baseline understanding of key challenges and strengths across different food system dimensions.

Overview of the Food Systems Countdown to 2030 Initiative

Food systems actors and stakeholders (e.g., civil society, governments, and international organizations) need actionable evidence to make decisions that can transform food systems, yet no such mechanism currently exists. The Food Systems Countdown to 2030 Initiative (FSCI) is a collaborative effort to fill that gap and monitor global food systems. It brings together indicators that span food systems and provides annual analysis to track the holistic nature of food systems, align policy, business, and non-governmental organizations around crucial priorities, incentivize action, sustain commitment, and enable course corrections. It is hoped that the FSCI 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.

Baseline monitoring of the FSCI

As a starting point, the FSCI published its first baseline peer review **publication** and **report** in late 2023. This report established the architecture of thematic areas, the indicators, and the current state of food systems worldwide. The architecture comprises five themes that address the challenges and benefits of food systems described above. Three themes focus on the outcomes of food systems: (1) diets, nutrition, and health; (2) environment, natural resources, and production; and (3) livelihoods, poverty, and equity. The two cross-cutting areas focus on (4) governance and (5) resilience. Each thematic area is described by several domains, under which specific indicators are identified to be tracked (Figure 1).

Figure 1: Thematic areas of the FSCI

Through a multistakeholder consultative process, **50 indicators** were identified to be monitored over the next five years (end date of 2030 in line with the SDGs) to jointly provide a snapshot of the current state of food systems across all five themes. The FSCI baseline of shows that no single region has a monopoly on food system success. Every region and country have room for improvement, and countries can learn from each other. Governments must step up and restore the power balance and play a more active role in shepherding food systems in positive directions. Investment in place-based solutions is critical to understanding what works, where, in what context, and for whom.

The FSCI baseline of the Europe region: Trends across food systems

Using the FSCI baseline and following trends over time across select indicators of the 50 FSCI indicators, this section provides patterns of how food systems are progressing in the European region. Figures 2-6 show the distribution of country-level data points per indicator per year (light gray) within each region relative to the weighted mean for that region (maroon) and the global weighted mean (dark gray). The variable by which the mean is weighted varies by indicator and is shown in Table 1 in the Annex. Only indicators whose data can be viewed as a time series are depicted; all indicators that are based on survey data are excluded because the data come from different countries each year.

Across the diets, nutrition, and health thematic area (Figure 2), the European region exhibits more positive trends than globally. This is the case on every indicator shown here, except for sales of ultra-processed food. The prevalence of undernutrition remains relatively low at 4.7% in 2021, though it has shown a concerning upward trend since 2017, rising from 3.2%. The prevalence of people experiencing food insecurity (7.5%) and an inability to afford a healthy diet (5.7%) are lower than the global mean. As is the case globally, the cost of a healthy diet has been on an upward climb in recent years, standing at 3.3 PPP dollar/day in 2022. Europe significantly exceeds the global mean in ultra-processed food sales at 666.4 PPP dollar/day - more than four times the global average of 153.6 PPP dollar/day. Europe ranks the highest of any region on this indicator. In addition, this indicator has been increasing since 2019.

Some indicators were chosen to show the environment, natural resources, and production thematic area (Figure 3). Europe's food system emissions (46,369.0 kt CO2eq) are substantially lower than the global average (83,275.5 kt CO2eq). The region's emission intensities are notably lower than global averages - beef emissions at 17.1 versus 28.3 kg CO2eq/kg globally, and milk at 0.6 vs 1.0 kg CO2eq/kg globally. Agricultural yields in Europe exceed or match global averages: milk yields are nearly triple the global mean (6,306.2 versus 2,209.3 kg/animal), beef yields are significantly higher (267.3 versus 221.0 kg/animal), and vegetable yields are above average (2.7 versus 2.0 tonnes/ha). Agricultural water withdrawal in Europe is notably low at 2.2% compared to the global mean of 16.8%. While most environmental indicators have remained stable over time, milk yields have shown consistent improvement.

Figure 2: Select FSCI indicators in the diets, nutrition and health thematic area, Europe

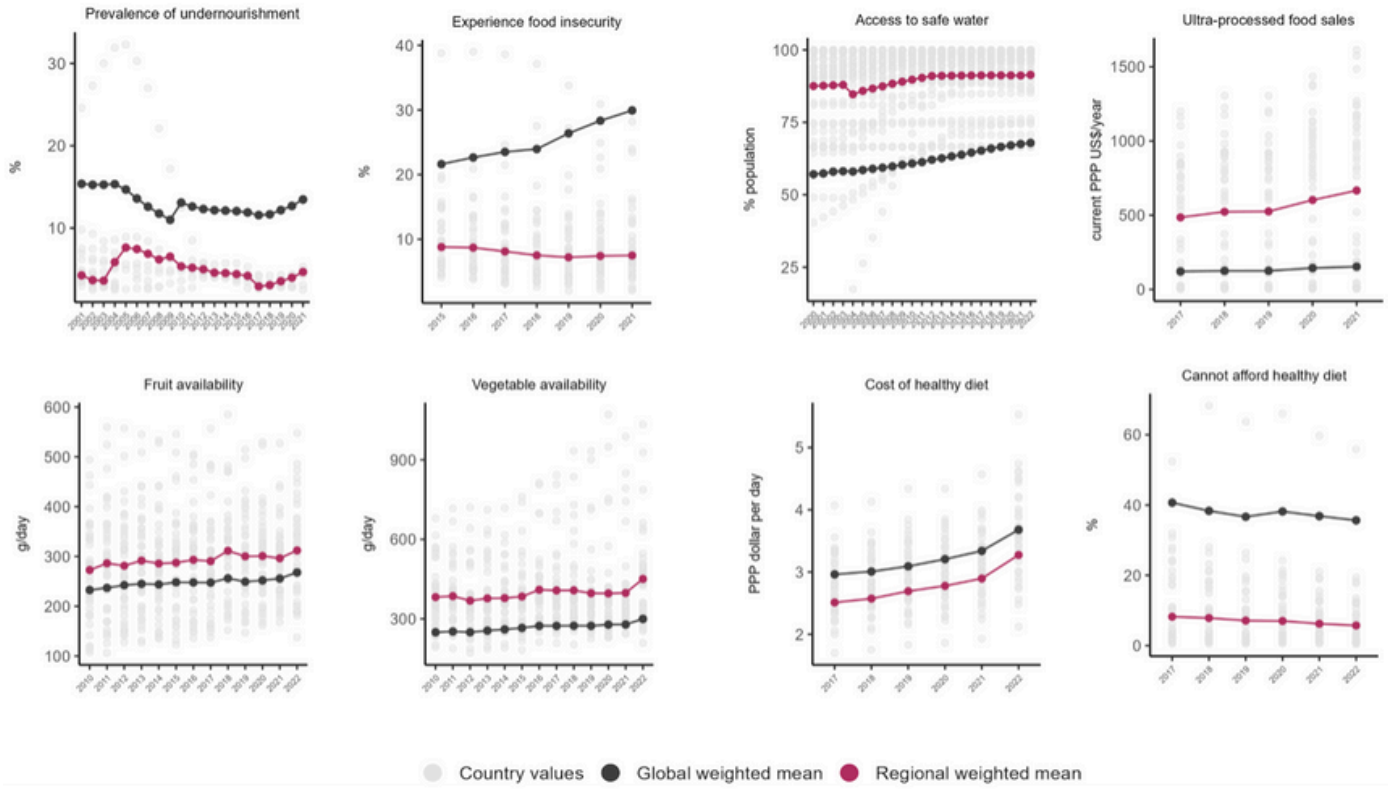
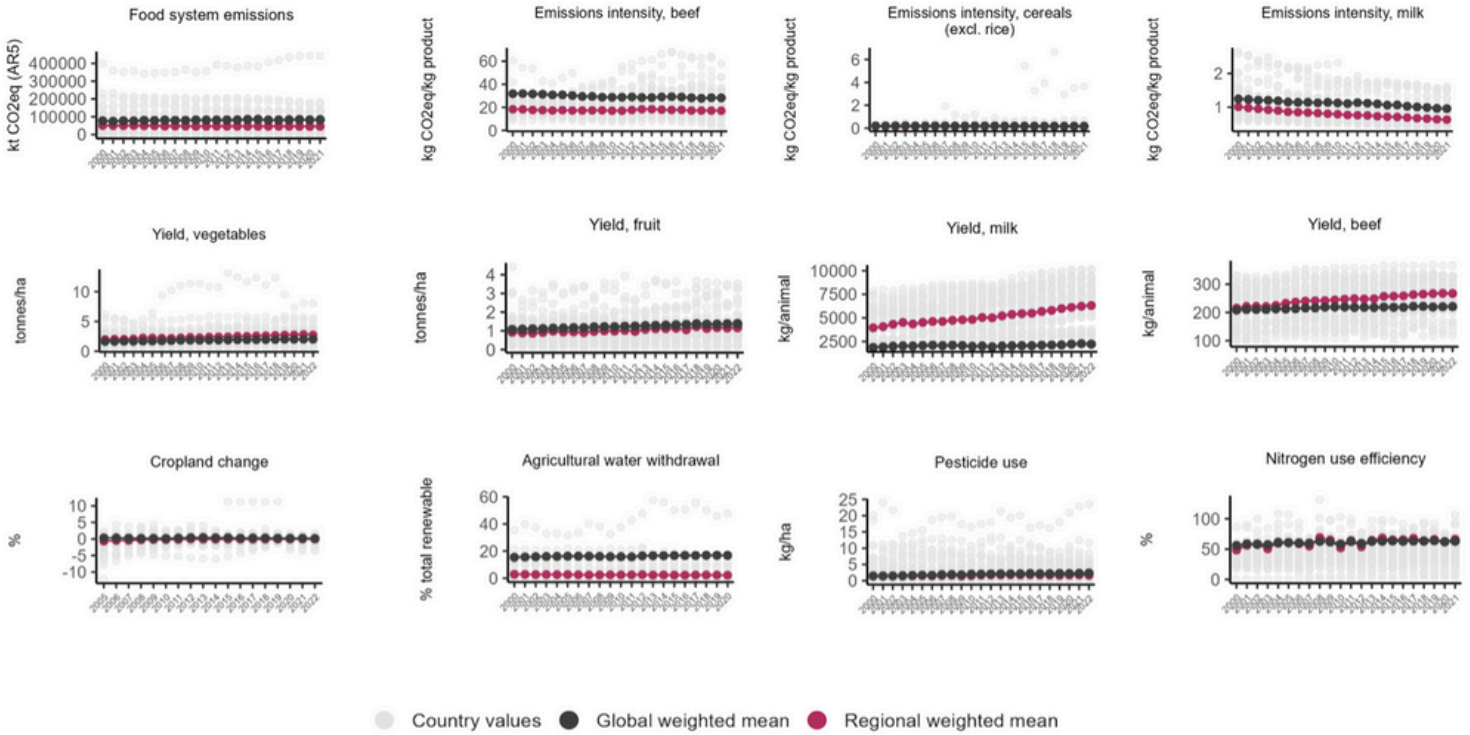
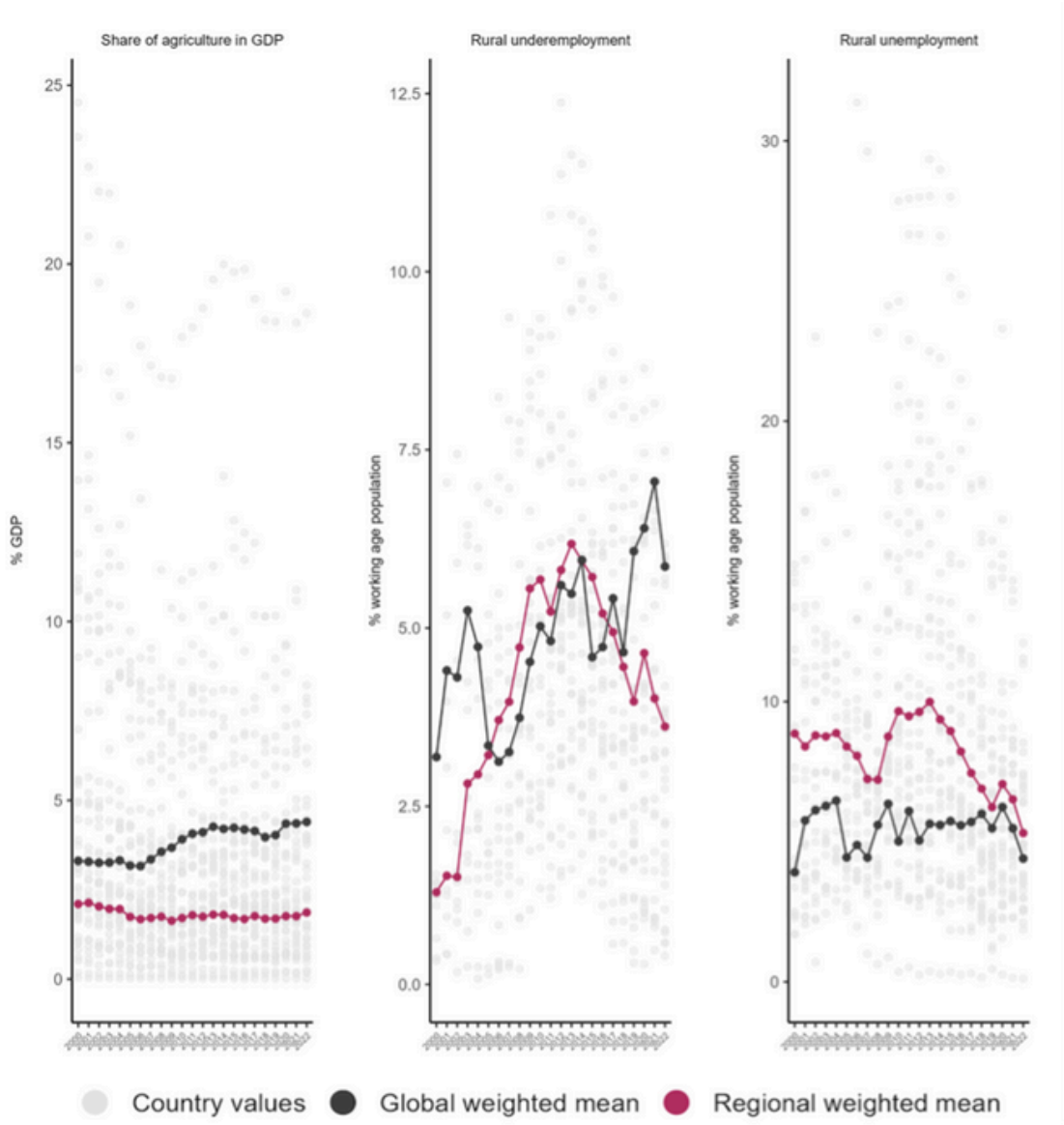


Figure 3: Select FSCI indicators in the environment, natural resources and production thematic area, Europe



Looking at a few indicators from the livelihoods, poverty and equity theme (Figure 4), Europe's agricultural share of GDP stands at just 1.9% compared to the global average of 4.4%, with country-level data showing considerable variation across the region. In 2022, Europe shows contrasting labor market indicators: it has the lowest rural underemployment rate among all regions at 3.6% (global average of 5.9%), yet faces a challenging rural unemployment rate of 5.3%, which is the second highest among all regions and above the global average of 4.4%. This pattern suggests a structural mismatch in rural labor markets, where despite low underemployment, full employment remains a significant challenge.

Figure 4: Select FSCI indicators in the livelihoods, poverty, and equity thematic area, Europe



For the governance theme (Figure 5), six indicators are shown. While only 40% of European countries have established food system pathways (compared to global average of 60%), the region shows stronger urban food policy engagement, with 18.1% of urban populations covered by the Milan Urban Food Policy Pact, significantly above the global average of 10.9%. Europe demonstrates strong governance indicators: food safety capacity score of 83.4 (global: 69.5), government effectiveness index at 0.5 (global: 0.0), and civic participation at 0.7 (global: 0.6). However, these metrics have shown concerning downward trends in recent years.

Regarding resilience, Europe shows mixed performance: plant genetic resource conservation is strong at 168,404.9 (global level of 166,534.7), while animal genetic resources are maintained at 9.0 (global level of 5.1). Food systems stability indicators remain close to global averages, with food supply variability at 30.7 kcal/day (global: 29.3) and price volatility at 0.6 (global level of 0.7). However, a concerning trend is the decline in minimum species diversity, which has fallen to 12.3%, significantly below the global average of 24.5% and showing substantial deterioration from 2010 to 2020.

Figure 5: Select FSCI indicators in the governance thematic area, Europe

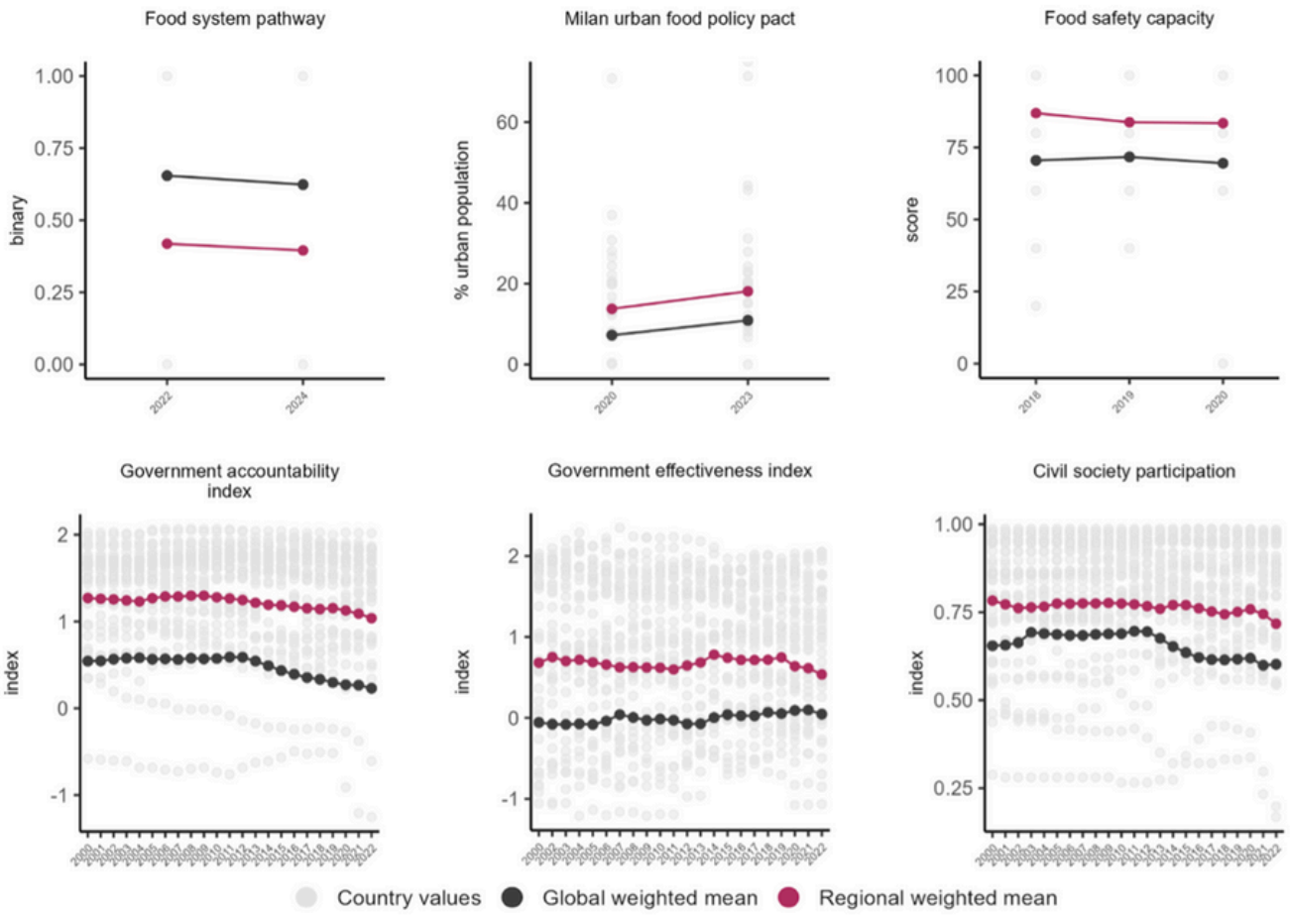
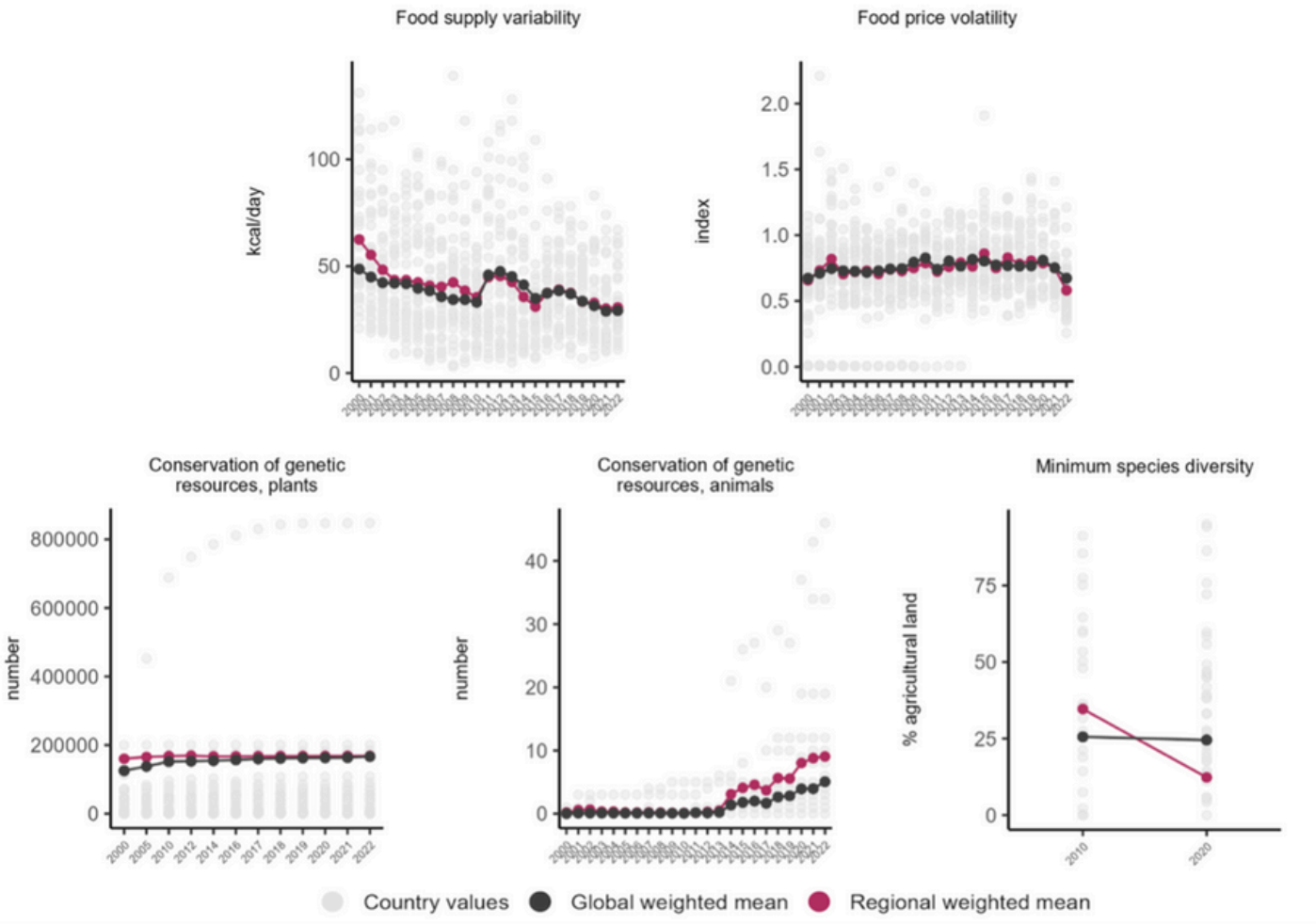


Figure 6: Select FSCI indicators in the resilience thematic area, Europe



Summary

The FSCI baseline data reveals critical challenges and opportunities for European food systems:

- Nutrition and Diet Quality: While Europe maintains lower rates of undernutrition (4.7%) compared to global averages (13.5%), concerning trends include rising costs of healthy diets (3.3 PPP dollar/day) and exceptionally high ultra-processed food sales (666.4 PPP/year, highest globally).

- Rural Labor Markets: Despite strong overall economic indicators, rural unemployment at 5.3% remains a persistent challenge, ranking second-highest globally and indicating structural labor market inefficiencies.

- Environmental Performance: Europe demonstrates leadership in several environmental metrics, including lower emission intensities (17.1 vs 28.3 kg CO2eq/kg globally for beef) and efficient water use (2.2% vs 16.8% global average). However, declining biodiversity indicators, particularly the drop in minimum species diversity to 12.3% (global: 24.5%), require urgent attention.

- Governance and Resilience: While Europe maintains above-average governance indicators in food safety (83.4 vs 69.5 globally) and civic participation (0.7 vs 0.6), recent declining trends in these metrics warrant monitoring and intervention.

Some priority actions for European food systems include the following:

- Address the growing ultra-processed food consumption while ensuring affordable access to healthy diets

- Develop targeted policies to resolve rural unemployment while maintaining low underemployment

- Strengthen biodiversity conservation efforts, particularly in agricultural landscapes

- Maintain and enhance governance capabilities while reversing recent declining trends

These evidence-based priorities can guide stakeholders in transforming European food systems toward greater sustainability, equity, and resilience.

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Annex: Table 1 of Indicator values across regions and global mean

Theme	Indicator	Unit	Mean weighted by	Latest year	Regional weighted mean					
					Asia	Europe	Africa	Americas	Oceania	Global weighted mean
Diets, Nutrition, and Health	Cost of healthy diet	PPP dollar per day	Population	2022	3.8	3.3	3.7	3.6	3.0	3.7
	Fruit availability	g/day	Unweighted	2022	218.6	312.2	192.6	400.7	245.1	267.9
	Vegetable availability	g/day	Unweighted	2022	384.5	450.6	177.0	235.0	225.8	299.8
	Ultra-processed food sales	current PPP US$/year	Population	2021	28.7	666.4	7.8	534.7	577.3	153.6
	Access to safe water	% population	Population	2022	71.5	91.4	25.1	74.7	96.2	67.9
	Experience food insecurity	%	Population	2021	24.8	7.5	56.6	21.9	23.1	29.9
	Cannot afford healthy diet	%	Population	2022	35.4	5.7	64.4	18.2	5.1	35.7
	Prevalence of undernourishment	%	Population	2021	12.1	4.7	19.9	7.0	23.9	13.5
Environment, natural resources, and production	Emissions intensity, beef	kg CO2eq/kg product	Total production	2021	21.7	17.1	57.1	29.9	25.1	28.3
	Emissions intensity, cereals (excl. rice)	kg CO2eq/kg product	Total production	2021	0.2	0.1	0.2	0.2	0.2	0.2
	Emissions intensity, milk	kg CO2eq/kg product	Total production	2021	1.1	0.6	3.0	0.7	0.8	1.0
	Emissions intensity, rice	kg CO2eq/kg product	Total production	2021	1.0	3.6	1.4	1.0	1.1	1.1
	Food system emissions	kt CO2eq (AR5)	Unweighted	2021	144,217.4	46,369.0	52,756.8	118,064.8	20,297.4	83,275.5
	Yield, beef	kg/animal	Producing animals	2022	161.6	267.3	161.9	279.3	242.9	221.0
	Yield, cereals	tonnes/ha	Area harvested	2022	0.4	0.4	0.2	0.6	0.3	0.4
	Yield, fruit	tonnes/ha	Area harvested	2022	1.5	1.2	0.9	1.7	1.3	1.4
	Yield, milk	kg/animal	Producing animals	2022	2,216.8	6,306.2	652.8	4,136.2	4,827.6	2,209.3
	Yield, vegetables	tonnes/ha	Area harvested	2022	2.2	2.7	0.9	2.3	2.0	2.0
	Cropland change	%	Total cropland	2022	0.0	0.0	0.8	-0.1	0.4	0.1
	Agricultural water withdrawal	% total renewable	Total cropland	2020	32.5	2.2	18.1	4.2	1.7	16.8
	Fisheries health index	score	Population	2021	19.2	30.2	10.4	34.7	27.2	21.2
	Functional integrity	% agricultural land	Agricultural land (source: ESA)	2015	0.3	0.4	0.5	0.5	0.5	0.4
	Pesticide use	kg/ha	Total cropland	2022	1.9	1.6	0.7	5.1	2.0	2.4
	Nitrogen use efficiency	%	Total cropland	2021	50.6	66.2	78.6	65.8	80.5	63.1
Livelihoods, Poverty, and Equity	Share of agriculture in GDP	% GDP	GDP	2022	7.4	1.9	15.8	2.0	3.1	4.4
	Rural underemployment	% working age population	Population	2022	5.7	3.6	8.8	5.7	6.3	5.9
	Rural unemployment	% working age population	Population	2022	3.5	5.3	6.3	4.4	3.1	4.4
Governance	Civil society participation	index	Population	2022	0.5	0.7	0.7	0.8	0.8	0.6
	Food system pathway	binary	Unweighted	2024	0.7	0.4	0.7	0.6	0.9	0.6
	Milan urban food policy pact	% urban population	Urban population	2023	6.4	18.1	14.2	31.2	1.6	10.9
	Food safety capacity	score	Population	2020	67.9	83.4	51.6	90.4	94.5	69.5

Theme	Indicator	Unit	Mean weighted by	Latest year	Regional weighted mean					
					Asia	Europe	Africa	Americas	Oceania	Global weighted mean
	Government effectiveness index	index	Population	2022	0.2	0.5	-0.8	0.2	0.9	0.0
	Access to information	binary	Unweighted	2023	1.0	1.0	1.0	1.0	1.0	1.0
	Government accountability index	index	Population	2022	-0.1	1.0	0.3	1.2	1.5	0.2
	Open budget index	index	Population	2021	36.1	68.7	35.8	65.2	71.9	43.0
Resilience	Disaster damages share of GDP	ratio	GDP	2022	0.0	0.0	0.0	0.0	0.0	0.0
	Conservation of genetic resources, plants	number	Total land area	2022	127,859.1	168,404.9	14,023.7	218,813.3	272,872.4	166,534.7
	Conservation of genetic resources, animals	number	Total land area	2022	12.9	9.0	0.8	3.6	0.0	5.1
	Minimum species diversity	% agricultural land	Agricultural land (source: FAO)	2020	39.6	12.3	36.6	21.2	11.8	24.5
	Dietary sourcing flexibility	index	Population	2019	0.7	0.8	0.7	0.7	0.7	0.7
	Mobile phones per 100 people	Number per 100 people	Unweighted	2022	131.9	123.6	98.8	116.5	90.3	115.7
	Social capital index	index	Population	2021	0.5	0.5	0.4	0.4	0.6	0.5
	Food supply variability	kcal/day	Unweighted	2022	30.0	30.7	28.7	29.7	20.2	29.3
	Food price volatility	index	Unweighted	2022	0.7	0.6	0.7	0.6	0.8	0.7

The Food Systems Countdown Initiative: Monitoring food system transformation to 2030 and beyond.

The FSCI 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.

The Food Systems Countdown Initiative is led by Jessica Fanzo of Columbia University, Lawrence Haddad of the Global Alliance for Improved Nutrition (GAIN), Jose Rosero Moncayo of the Food and Agriculture Organization of the United Nations (FAO), and Mario Herrero of Cornell University. Kate Schneider leads the data team and coordination together with several Johns Hopkins graduate students.

The Initiative involves dozens of collaborators from nearly as many organizations from almost all continents. For more information, see www.foodcountdown.org.

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The data and analysis presented here draws on a multitude of other collaborators and contributors. For more information, see www.foodcountdown.org.