



Food and Agriculture Organization
of the United Nations

>> FAO Statistics Division

Interests	
1990	1995
2000	2005
2010	2015
2020	2025

Emissions from agrifood systems

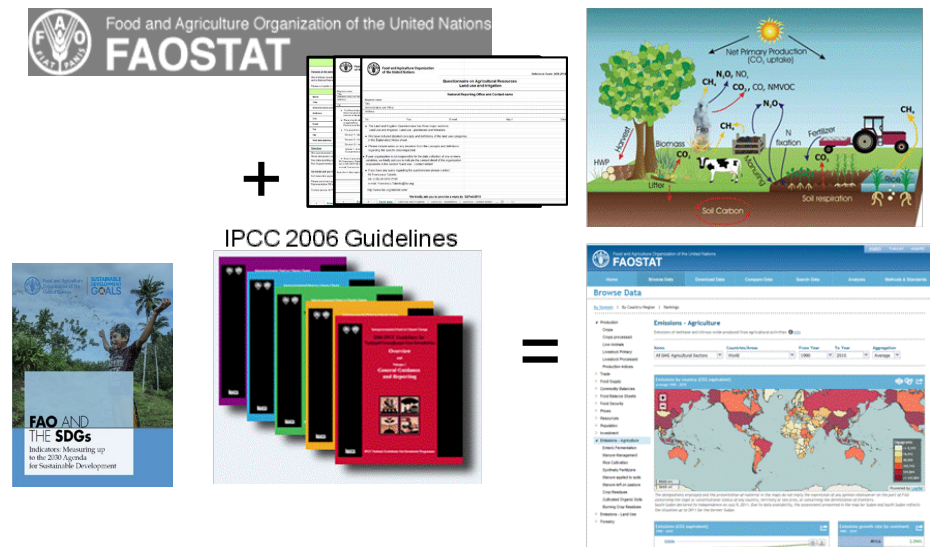
Global, regional and country trends: 1990–2020

Ninth Meeting of the Expert Group on Environment Statistics, Oct 25-28 2022



FAOSTAT GHG Emissions Statistics

- Global **knowledge and reference products** that enable analysis of food and agriculture trends at regional and world level
- Enhance capacity of countries **to collect, analyse and report** data on food and agriculture and food systems, consistently with FAO, UNFCCC and SDG processes

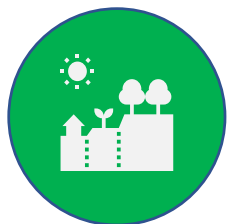


Defining Food Systems within Food and Agriculture..

Food Systems View



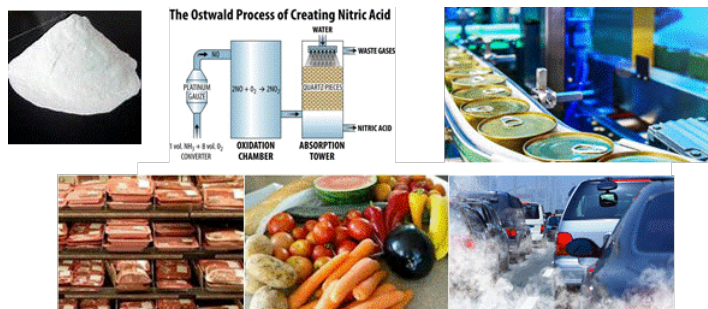
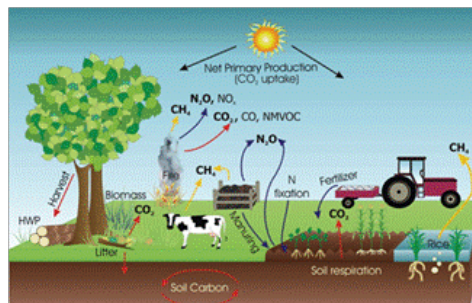
Farm gate



Land use change



Pre- and post-production

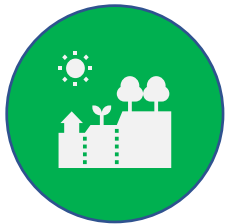


..and bridging with climate perspective

Food Systems View



Farm gate



Land use change



Pre- and post-production

IPCC	PROCESSES	FAO	
LULUCF	Wetlands, Settlements and Other Land	OTHER	
	Forest Land	FOREST LAND	
	Burning Biomass	LAND USE CHANGE	
	Forest land converted to cropland and grassland		
	Drained Organic Soils	FARM GATE	
Cultivation of Histosols			
AFOLU	Inorganic N fertilizers		FOOD SYSTEMS
	Crop Residues		
	Manure deposited on pasture, range and paddock		
	Manure Applied to Soils		
	Manure Management		
	Enteric Fermentation		
	Prescribed burning of savanna		
	Burning-Crop residues		
	Rice Cultivation		
	Liming; Urea application		
	On-farm energy use		
	Fertilizers Manufacturing		
Food Processing			
Food Retail			
Food Transport			
ENERGY	Household Consumption	PRE- AND POST-PROCESSING	
	Refrigeration		
IPPU	Refrigeration	PRE- AND POST-PROCESSING	
WASTE	Waste Disposal		

Climate Policy View



Land Use, Land Use Change and Forestry (LULUCF)



Agriculture



Energy



Industry



Waste

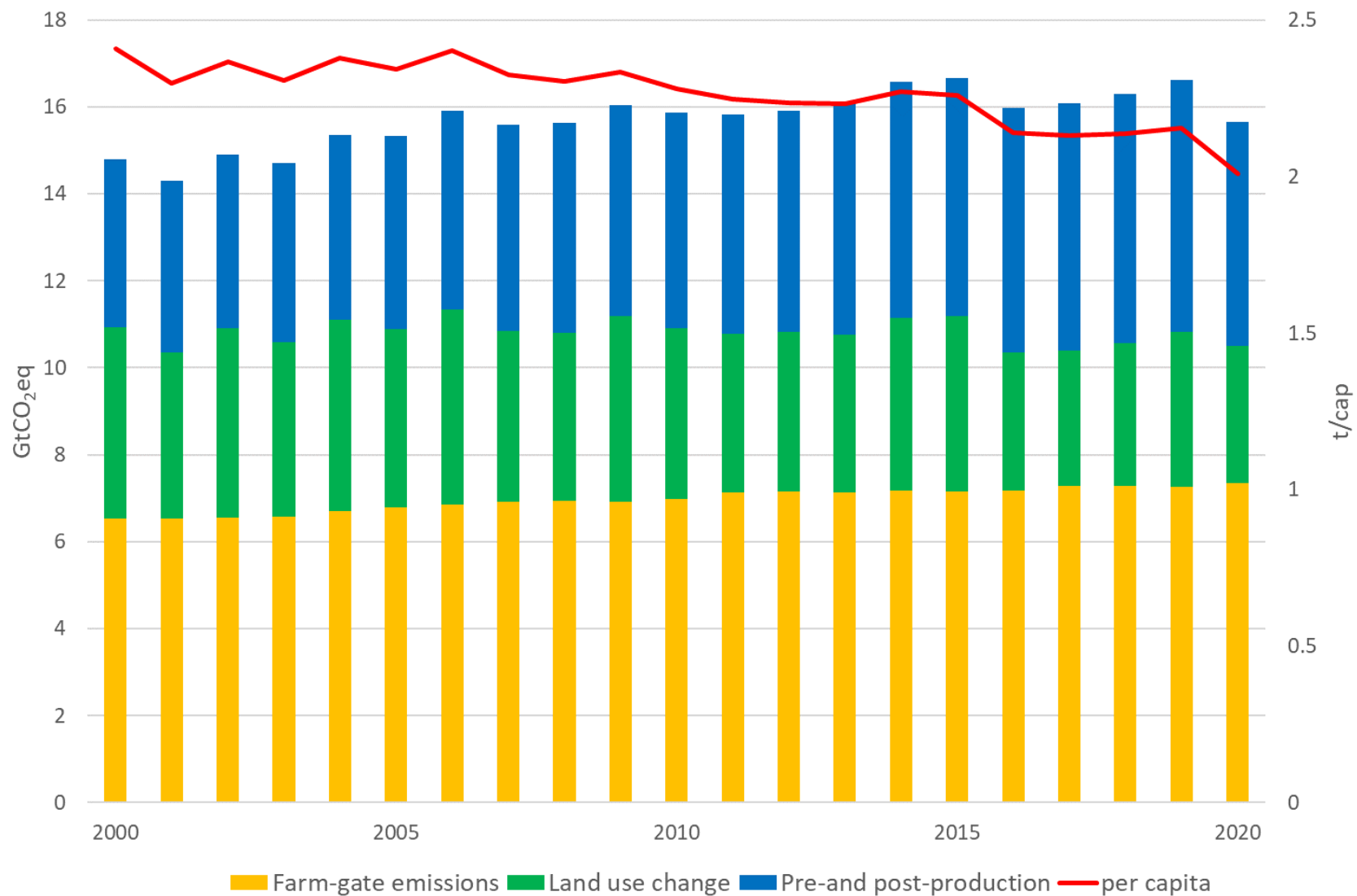
FAOSTAT Emissions Domain

	GHG Emissions
Greenhouse gas	CO ₂ ; N ₂ O; CH ₄ ; F-gases – Quantities and indicators (per capita, per commodity, per total economy)
Spatial Coverage	194 Countries and 36 Territories
Temporal Coverage	1990-2020
Thematic Coverage	All IPCC sectors, all food system processes

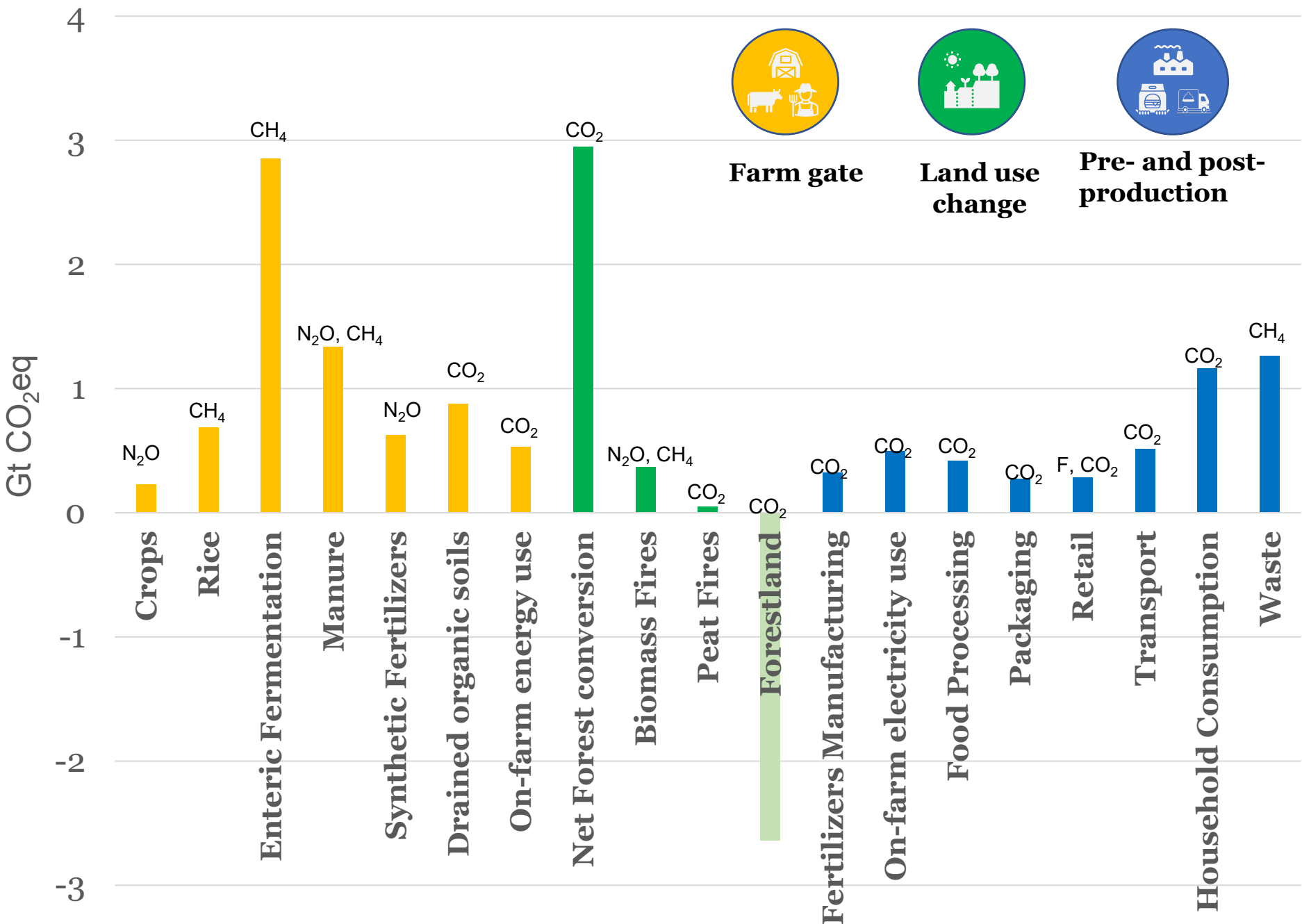
2000-2020 Global highlights

- Global agri-food systems emissions were **16 billion tonnes CO₂eq**, an increase of 6% since 2000
- Their share in total emissions decreased **from 39% to 31%** —due to much faster growth in non-food emissions
 - The **farm gate** was nearly half of all food emissions
 - **Pre- and post-production processes** (e.g. manufacturing, retail and transport) about one third
 - **Land use change**, mostly deforestation, one fifth
- On a per capita basis, they decreased by 17%, to 2.0 tonnes per capita

Global agrifood system emissions by component and indicators



FAOSTAT emissions database by agrifood system component, 2020



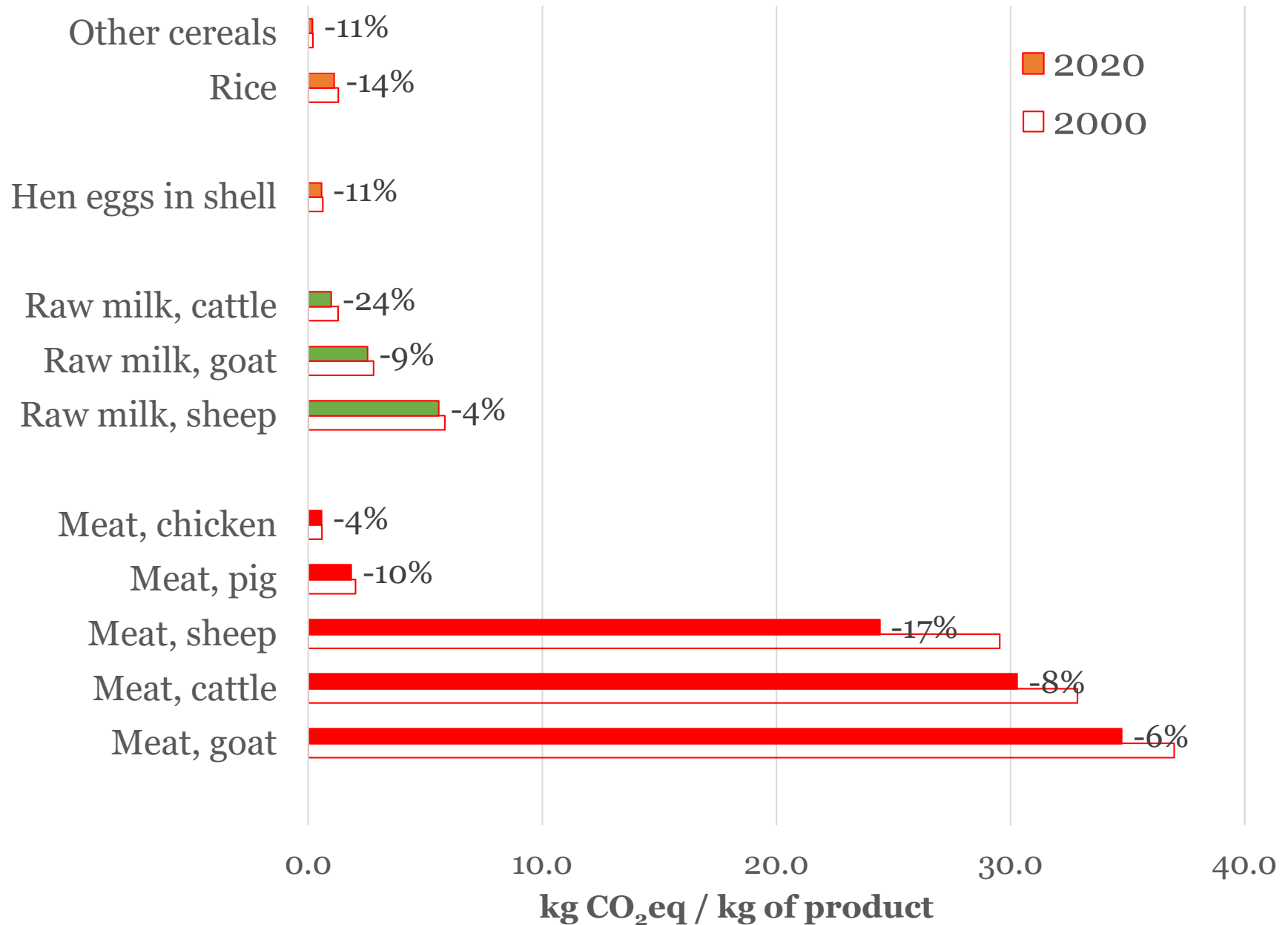
2000-2020 Global highlights

- Emissions intensity focuses on the production side
- Values ranged across and within commodity type
- Within the same type of commodity and for comparable nutritional characteristics (e.g. 1-35 kg CO₂eq / kg meat; milk GHG intensities were 2-6 kg CO₂eq)
- Emissions per commodity also decreased, typically by 10-20% for meat and milk products



Farm gate

Emissions by commodity and change





Conclusions

- FAOSTAT Emissions statistics and indicators contribute to **global knowledge on the role of agrifood systems** in climate change forcing
- Data are available by country, region to assess and compare performance across agricultural systems and supply chains, over the time series 1990-2020
- A mapping table is provided between FAO and UNFCCC terminology to facilitate interpretation of results and reporting



Thank you!

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