



Food & Bio Global
SUMMIT'23
26-27 September

**The future of sustainable food
value chains and clusters**

www.foodbioglobal.com



Emiliano Duch

Independent Consultant

Lead Private Sector Specialist (Retired) –
World Bank, Washington, DC

Trustee – Foundation Clusters and
Competitiveness, Barcelona

The future of sustainable food value chains and clusters

- Food clusters were shaped first by **food security**. When did they become a global **Fast Moving Consumer Goods (FMCG) business**?
- Why are those consumer **"FMC Bads"** killing us now? And our **planet, too**?
- Why did **environmental sustainability in agriculture arrive decades later** than in manufacturing or energy?
- Is the **problem policy**? Why do governments **keep subsidizing negative externalities**?
- Are **consumers the problem**? Is **"individual choice"** a right or **"informed choice"** a duty?
- How can policymakers **use technology** to help "informed choice" and change the food model **into sustainable nutrition**?

Food clusters were shaped first by food security



Lange, Dorothea. "Migrant Mother". March 1931



Wolcott Marion Post. "Corn shocks. Smokey Mountains near Black Mountain, North Carolina."

The Great Depression in the US, the Holodomor in Ukraine, and the Bengal famines, weather-related or man-made, **marked the policymakers of the 20th Century to avoid that happening again (In their countries)**

When did Food clusters become a global Fast Moving Consumer Goods (FMCG) business?



A K-Ration breakfast. It includes a packet of Nescafé instant coffee, energy biscuits (they look like crackers), gum, a tin of chopped ham and eggs, the key to open the can, and cigarettes.
US Army Signal Corps, 1943.

WWII required **mass production of packaged calories** because most GIs were undernourished. They are given **a 3000-calorie diet based on spam and powdered milk** (including Nescafé and M&Ms). Those diets **would change their habits and their food suppliers forever.**

Why are those consumer “FMC Bads” killing us now?



More than half of the world will be overweight or obese by 2035, report predicts

Story by Reuters

Published 10:40 AM EST, Fri March 3, 2023

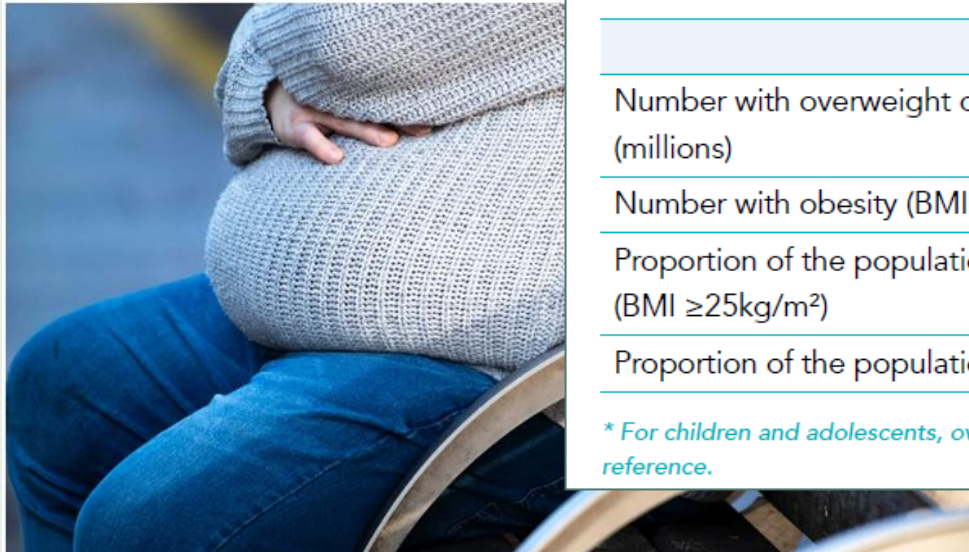


Table 1.1: Global overweight and obesity 2020–2035

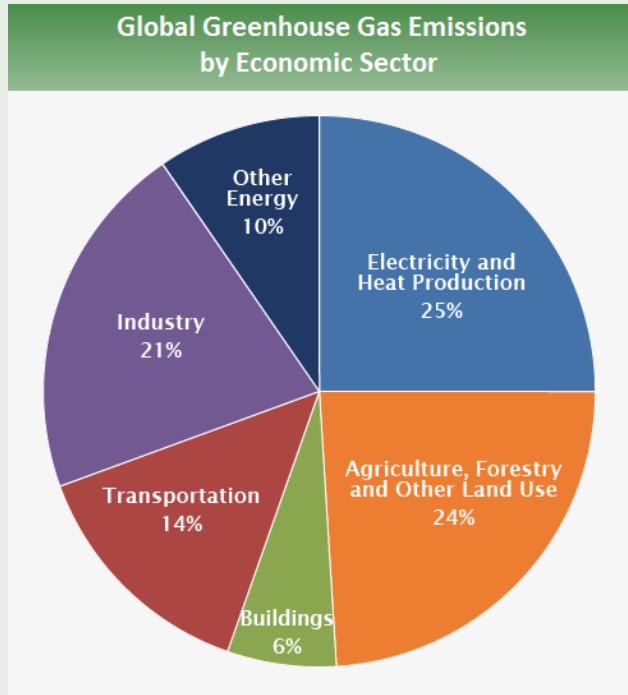
Numbers of people (aged over 5 years) and percentage of the population with overweight or obesity*

	2020	2025	2030	2035
Number with overweight or obesity (BMI $\geq 25\text{kg/m}^2$) (millions)	2,603	3,041	3,507	4,005
Number with obesity (BMI $\geq 30\text{kg/m}^2$) (millions)	988	1,249	1,556	1,914
Proportion of the population with overweight or obesity (BMI $\geq 25\text{kg/m}^2$)	38%	42%	46%	51%
Proportion of the population with obesity (BMI $\geq 30\text{kg/m}^2$)	14%	17%	20%	24%

** For children and adolescents, overweight and obesity are defined using the WHO classification of +1SD and +2SD above median growth reference.*

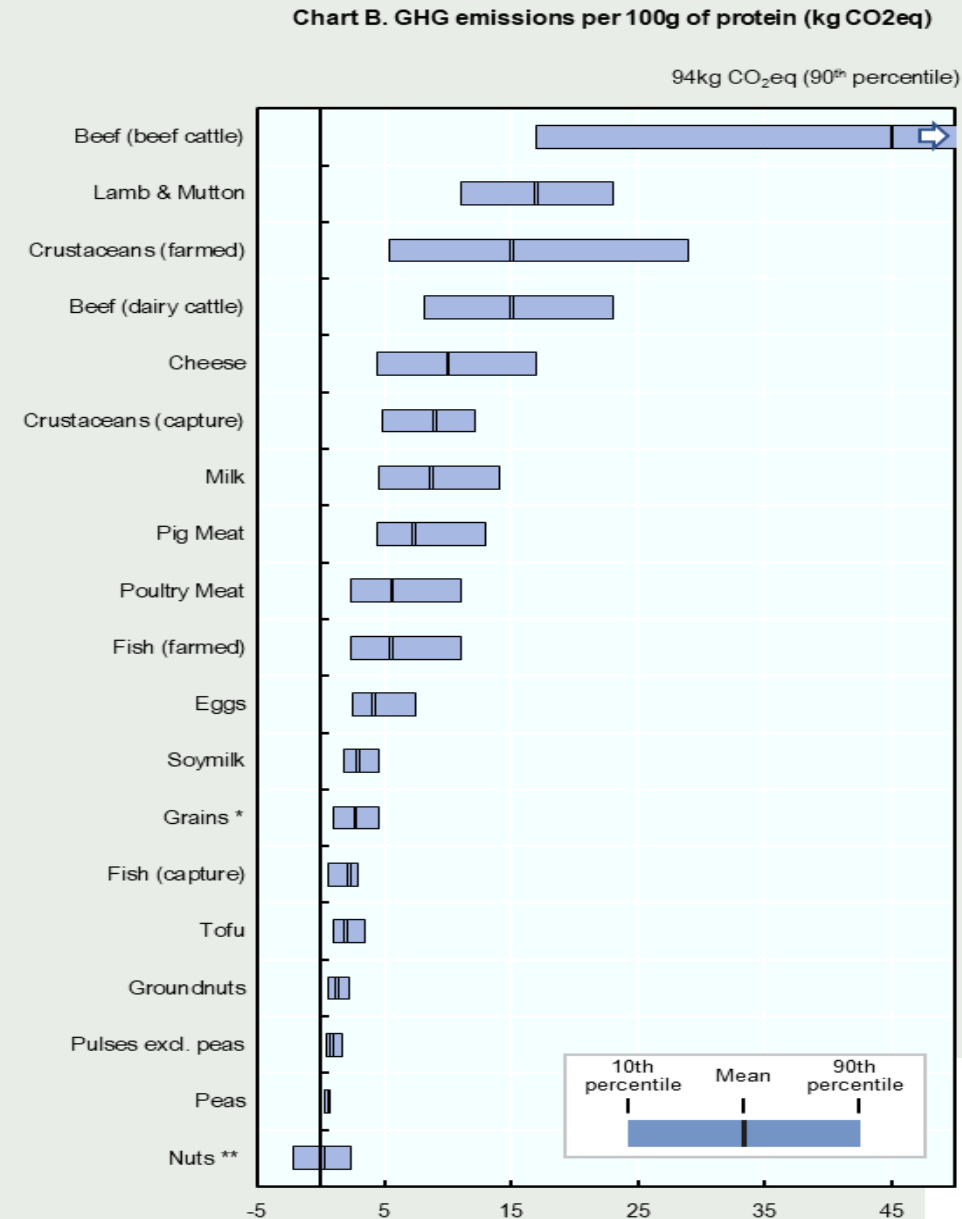
Foods as “**Fast Moving Consumer Goods**” moved fast to edible “**Fast Moving Consumer Bads**”, promoting edibles as status symbols (as steak or shrimp) or pure addictive drugs (such as sugar-based beverages) **without any regard for their nutritional value**, leading us to where we are now, a global obesity pandemic.”

Why are those consumer "FMC Bads" killing our planet too?



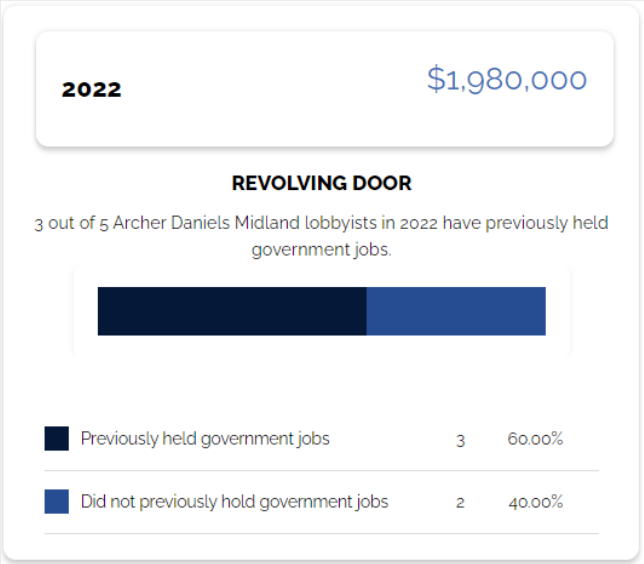
The **FMC Bads** are destroying our health and are one of the largest contributors to Global Greenhouse Gas emissions (equal to Energy production).

And the **worst impact comes from those "steaks and shrimp"**. Their emissions are 18 and 6 times higher than the equivalent plant-based protein.

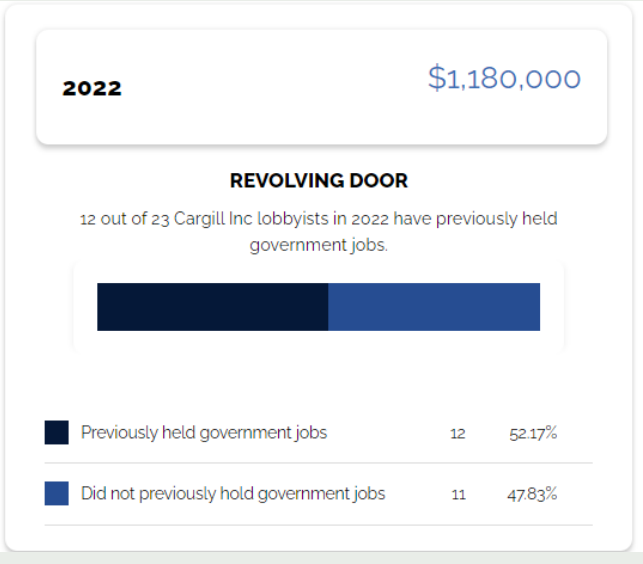


Why did environmental sustainability in agriculture arrive decades later than in manufacturing or energy?

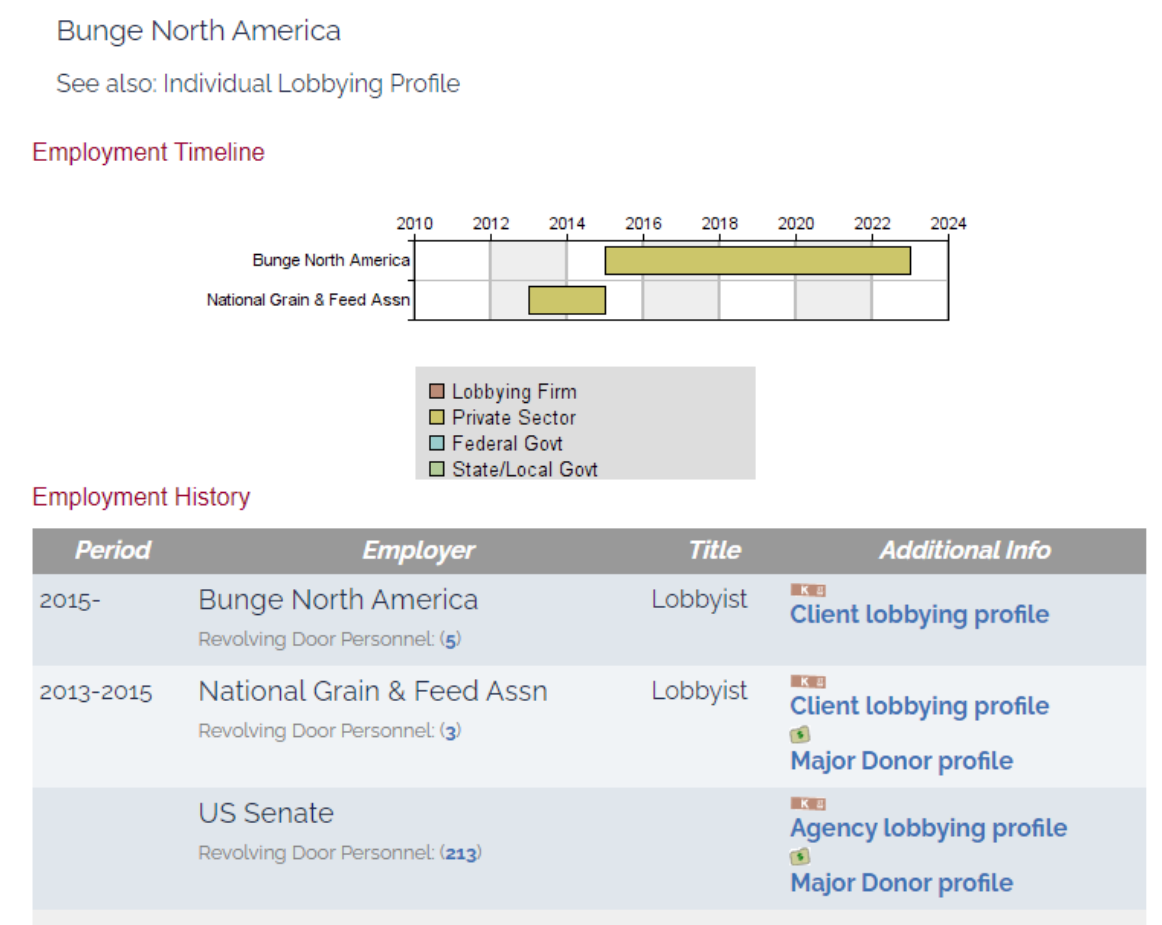
ADM Revolving Door



Cargill Revolving Door



Bunge Lobbyist Profile

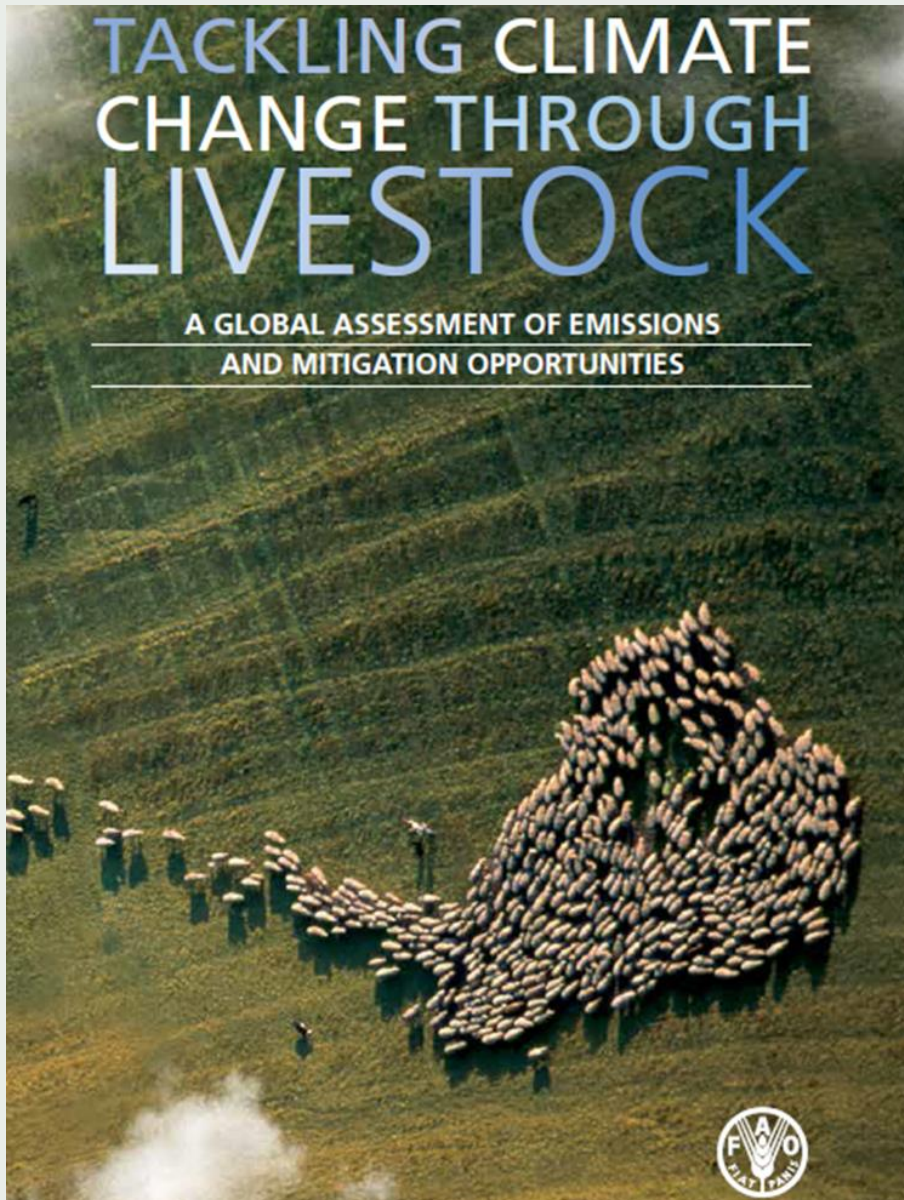


Probably for **the same reason why we kept saying that tobacco** was harmless for many years after it had been scientifically proven that it was producing cancer: **Lobbying by the industry.**

The **Food industry's** "revolving door" works marvelously!

Source: *Opensecrets.org*, 2023

Why did environmental sustainability in agriculture arrive decades later than in manufacturing or energy?



FEFAC – Feed Industry Federation / IEC – International Egg Commission
IDF – The International Dairy Federation / IPC – International Poultry Council / IMS – International Meat Secretariat

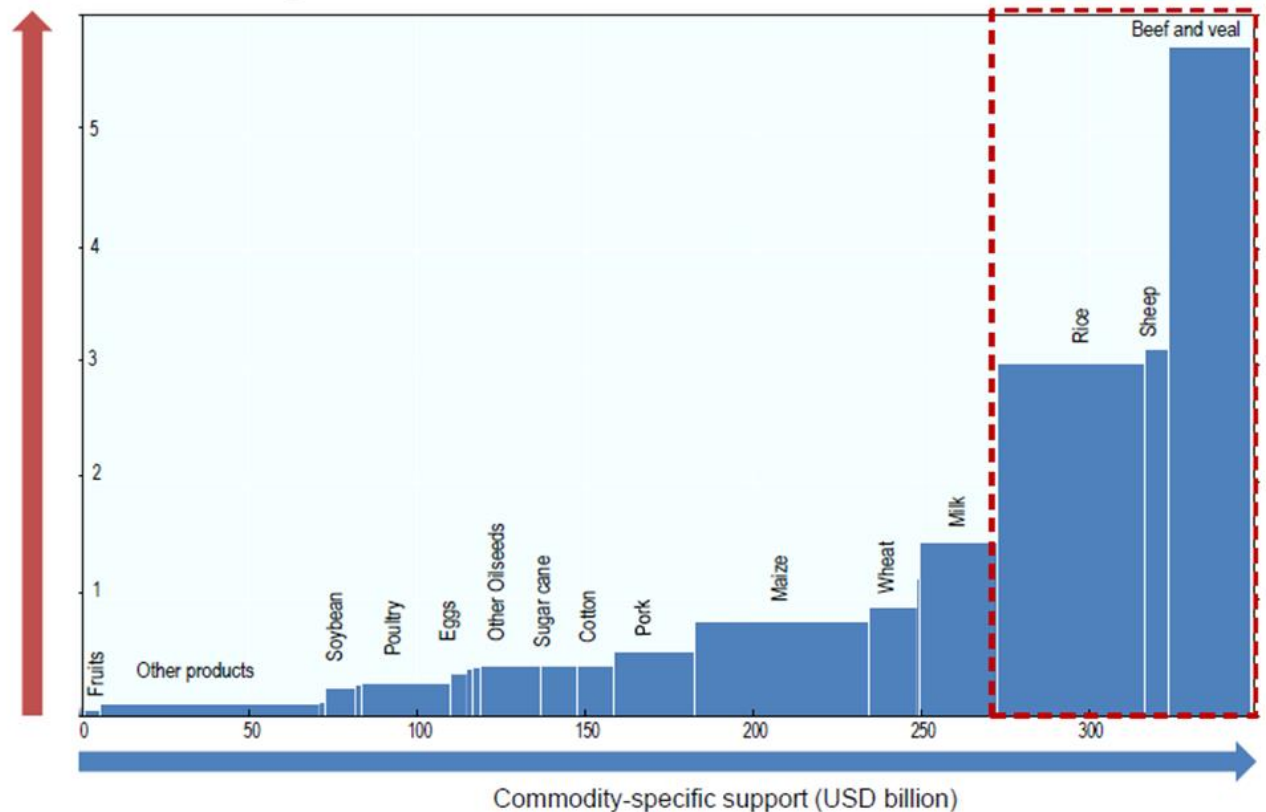
When the FAO decided to tackle the issue in 2013, it did it by working together with the “Livestock Environmental Assessment and Performance (LEAP) Partnership,” which “focuses on the development of broadly recognized sector-specific guidelines” **with the industry sitting in the Steering Committee, as if the tobacco companies had been sitting in the committee to ban tobacco.**

Is the problem policy? Why do governments keep subsidizing negative externalities?



Current policies provide significant support to high-emitting products

Emission intensity (kg CO₂/USD)



USD 76 billion of commodity-specific support for beef and veal, lamb and rice, all having high emission intensities

Probably for **all of the above** reasons.

Certainly not to protect their citizens' health or their countries' environment.

Only the **OECD dares to** tell governments to **stop giving \$817 billion per year to their farmers.**

Are consumers the problem? Is “individual choice” a right or “informed choice” a duty?

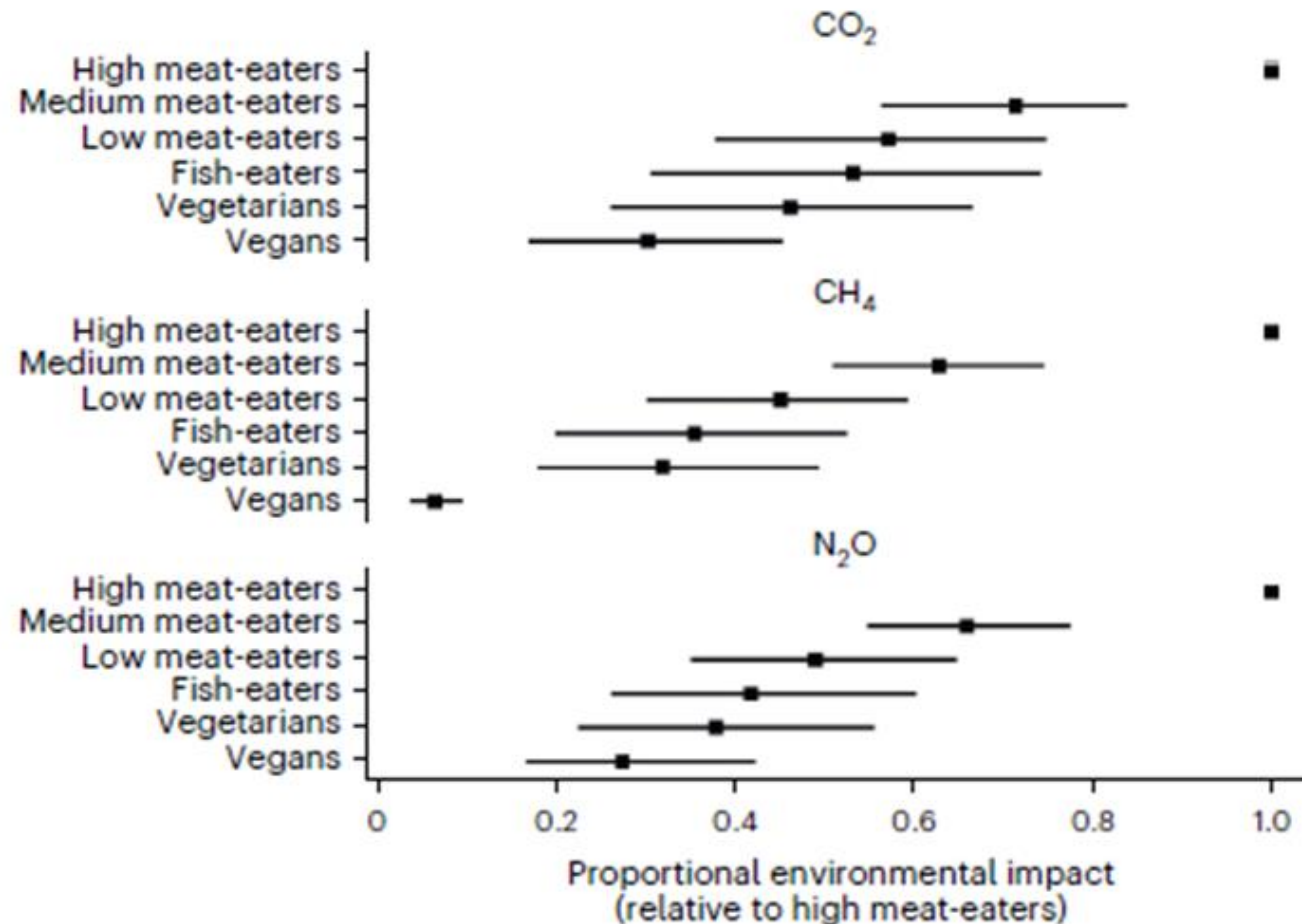
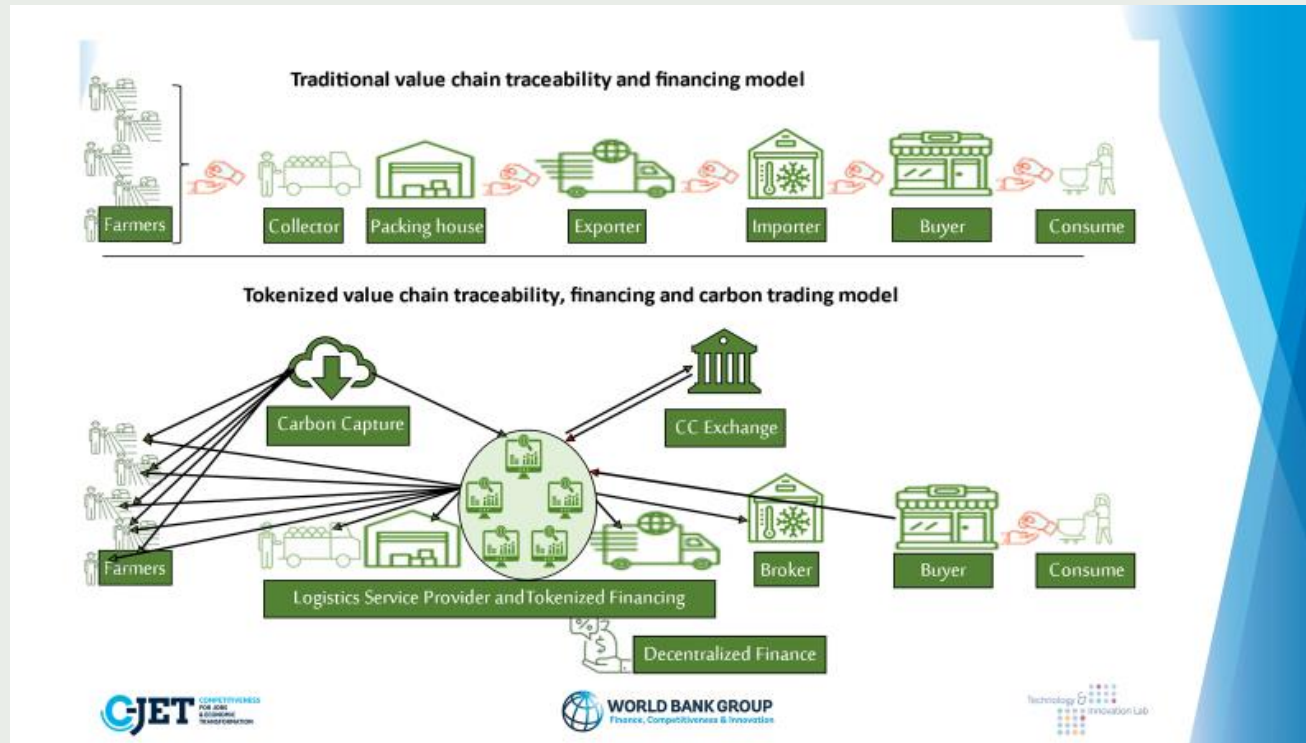


Fig. 2 | Relative environmental footprint from GHG emissions of diet groups in comparison to high meat-eaters (>100 g d⁻¹). Uncertainty intervals are 2.5th to 97.5th percentiles of a Monte Carlo analysis (n = 1,000).

Consumer's “**individual choice**” seems **to be a sacrosanct right**. Independent if that choice has been shaped by **decades of industry advertising**, is based on **assumptions made up by the industry scientists**, and with a cost/benefit analysis that doesn't consider the taxpayer's **direct subsidies** and **indirect health** and **environmental costs** associated.

It's time to move to “**informed choice**”. Like we did for tobacco, we **teach you that it will kill you**, then you **can choose** and **pay the taxes** associated with your decision's costs.

How can policymakers use technology to help “informed choice” and change the food model into sustainable nutrition?



Source: World Bank, *Tokenization Toolkit for Traceability, Financing, & Carbon Trading*, 2023

Full **transparency, accountability, immutability, and verification** by independent third parties of all data related to our food:

- **Nutritional** values
- **Carbon** accounting (both for capture and footprint)
- **Water** usage (with type of water)
- **Biodiversity**
- **Social** standards (revenue transparency along the value chain)
- **Financial** Transparency
- **Tax** Transparency to pay for negative spillovers

How can policymakers use technology to help “informed choice” and change the food model into sustainable nutrition?



This is not the future; it's the present!

Blockchain and tokenization **technology are available**, but **no one in the food** industry wants to bring **real transparency to their value chains'** nutritional, social and environmental impact.

Please join the movement!



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