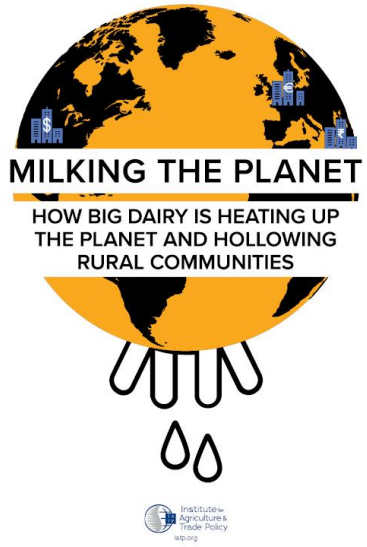
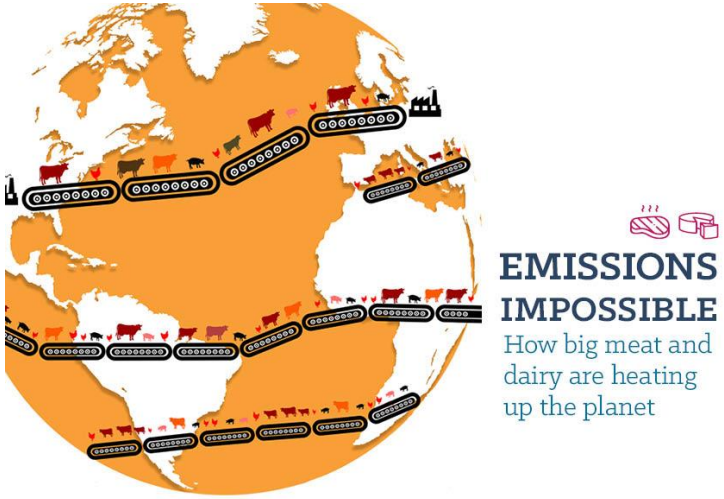




Emissions Impossible Series (2018-2022): Learnings

Shefali Sharma
Institute for Agriculture and Trade Policy
15 June 2023

EMISSIONS IMPOSSIBLE

How big meat and dairy are heating up the planet

The top 35 meat and dairy companies (by volume) and their emission calcualtions using FAO/GLEAM methodology

JBS (Brazil)
280.03 Mt

Tyson (U.S.)
118.1 Mt

Cargill (U.S.)
86.30 Mt

Dairy Farmers of America (U.S.)
52.15 Mt

Fonterra (New Zealand)
41.54 Mt

National Beef (U.S.)
41.46 Mt

Marfrig (Brazil)
40.03 Mt

Minerva (Brazil)
34.71 Mt

Smithfield / WH Group (China/Hong Kong)
30.11 Mt

Groupe Lactalis (France)
23.85 Mt

BRF (Brazil)
23.09 Mt

Arla (Denmark)
22.43 Mt

Nestlé (Switzerland)
22.17 Mt

FrieslandCampina (Netherlands)
19.90 Mt

Dean (U.S.)
19.12 Mt

Danish Crown (Denmark)
16.51 Mt

Vion (Netherlands)
15.19 Mt

California Dairies (U.S.)
14.29 Mt

Saputo (Canada)
14.29 Mt

Danone (France)
14.25 Mt

DMK (Germany)
12.32 Mt

New Hope Group (China)
12.15 Mt

Groupe Bigard (France)
10.21 Mt

Tönnes (Germany)
10.91 Mt

Yurun Food Group (China)
10.29 Mt

Guangdong Wens (China)
10.28 Mt

NH Foods (Japan)
8.69 Mt

Hormel (U.S.)
8.1 Mt

Coren (Spain)
6.7 Mt

CP Group (Thailand)
6.3 Mt

ABP Foods (Ireland)
5.4 Mt

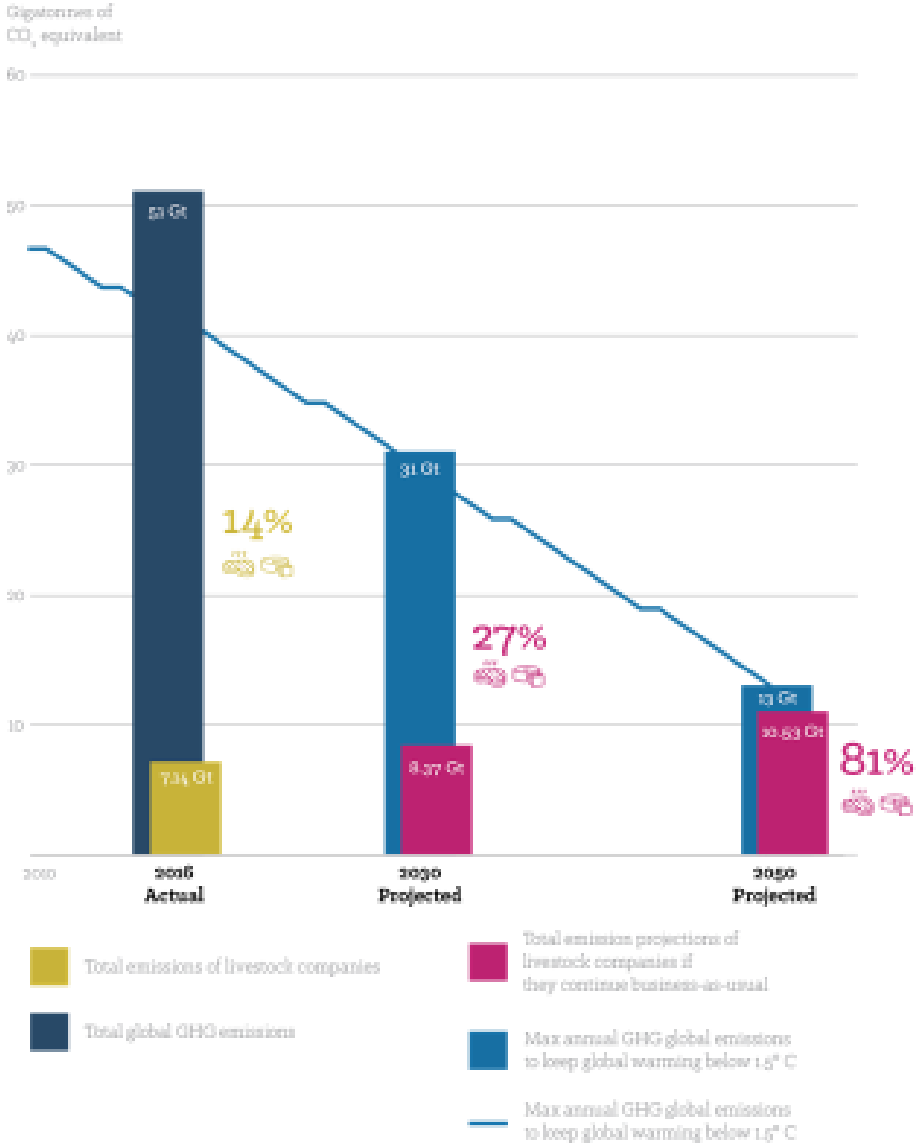
Perdue (U.S.)
3.72 Mt

Industrias Bachoco (Mexico)
3.7 Mt

Koch Foods (U.S.)
3.44 Mt

ACOLID (Saudi Arabia)
3.26 Mt

FIGURE 1: Estimated global greenhouse gas emission (GHG) targets to keep within a 1.5°C rise in temperature compared to emissions from global meat and dairy production based on business-as-usual growth projections.



From *Emissions Impossible*, GRAIN & IATP 2018

2018 report looked at 35 meat and dairy companies

FIGURE 4: The top 5 meat and dairy companies combined emit more greenhouse gases than ExxonMobil, Shell or BP

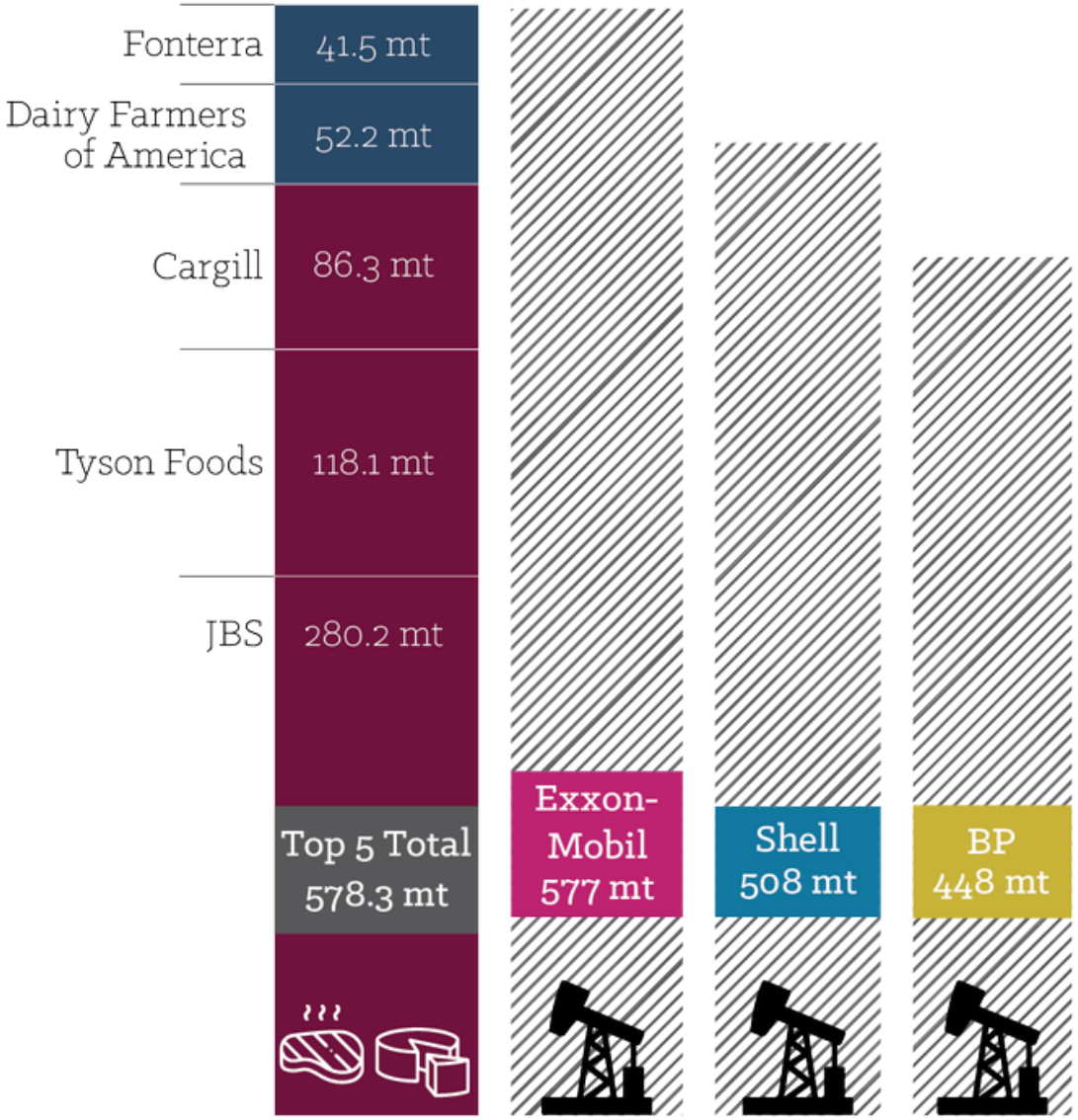
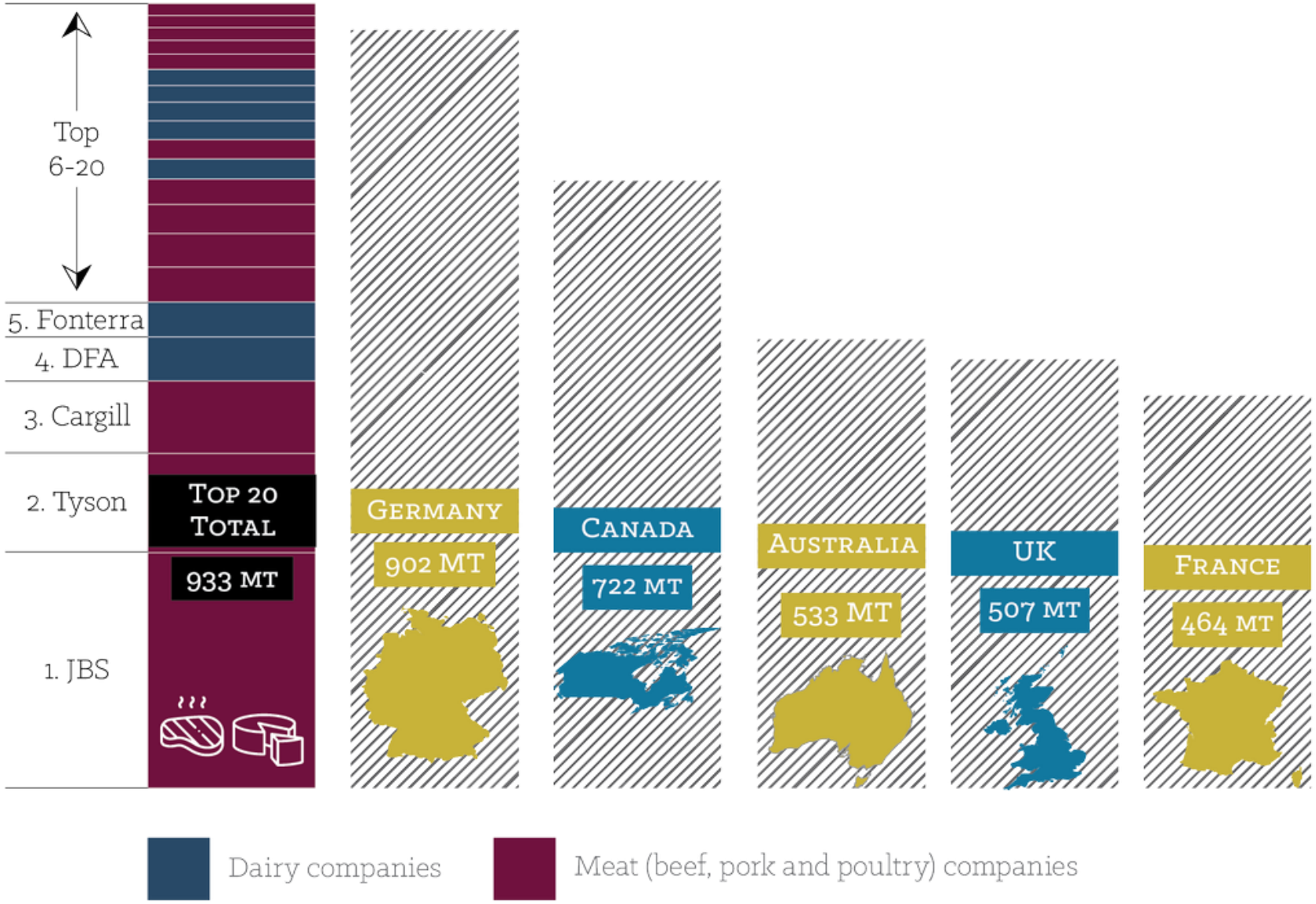


FIGURE 5: The top 20 meat and dairy companies combined emit more greenhouse gases than Germany, Canada, Australia, the UK or France



Emissions Impossible, GRAIN & IATP 2018

2018

Data on emissions from the largest beef, pork, poultry and dairy processing corporations is incomplete, mostly incomparable among companies or across years and in the majority of cases, simply absent.

Food and Agriculture Organization of the United Nations

ENHANCED

العربية 中文 English Fra

Global Livestock Environmental Assessment Model (GLEAM)

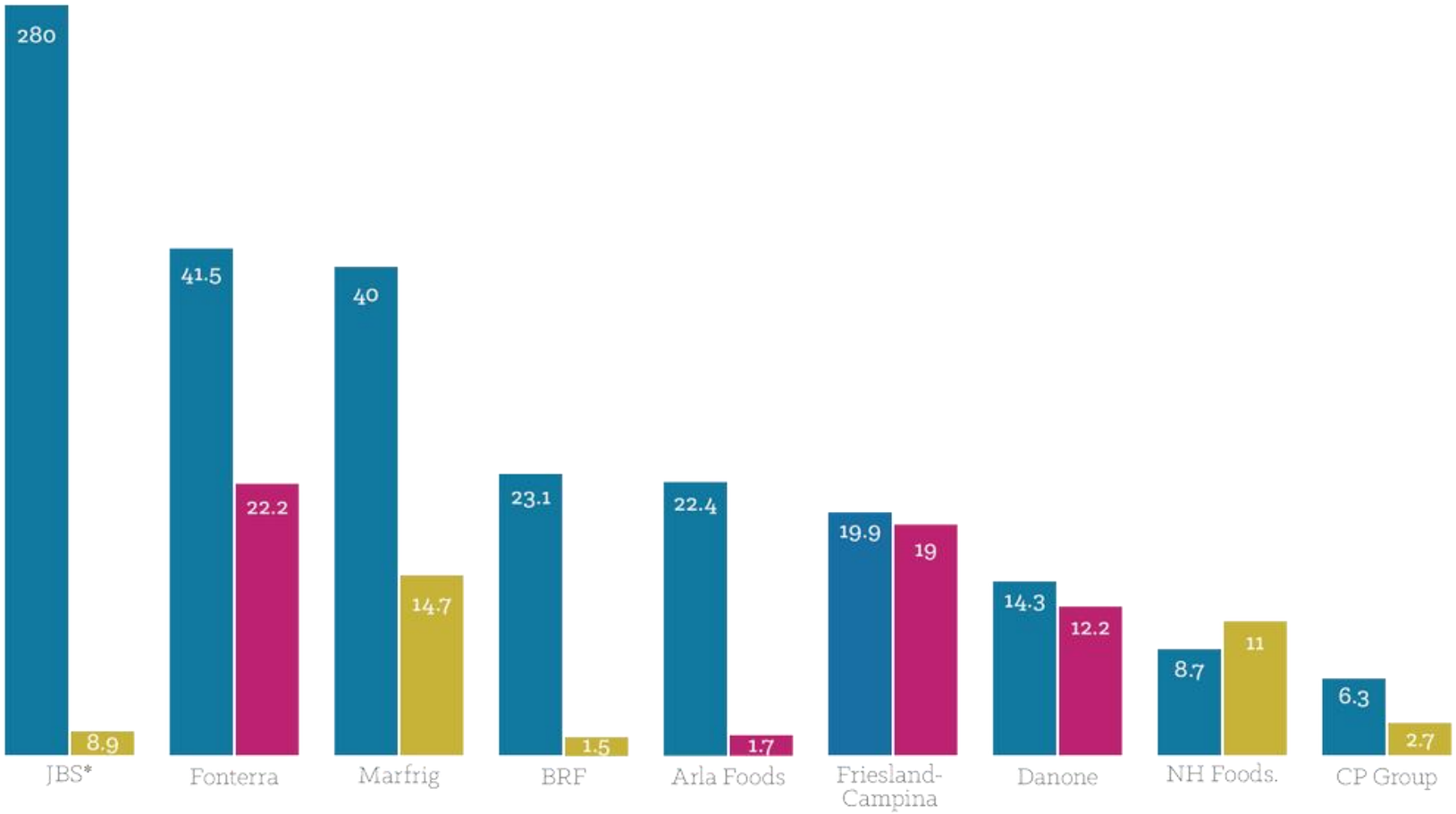
Model description | In practice | Dashboard | Resources | Team | FAQs

What is GLEAM?

The Global Livestock Environmental Assessment Model is a GIS framework that simulates the bio-physical processes and activities along livestock supply chains under a life cycle assessment approach.

The aim of GLEAM is to quantify production and use of natural resources in the livestock sector and to identify environmental impacts of livestock in order to contribute to the assessment of adaptation and mitigation scenarios to move towards a more sustainable livestock sector.

FIGURE 10B: Emissions reporting: FAO's GLEAM methodology vs. company calculations



Emissions reporting using the FAO's GLEAM methodology (in megatonnes of CO2 equivalent)

Meat companies' emissions reporting (in megatonnes of CO_2 equivalent)

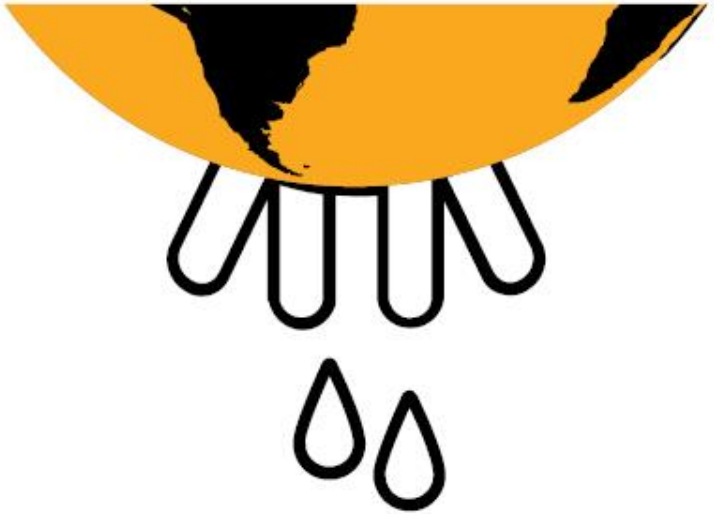
Dairy companies' emissions reporting (in megatonnes of CO_2 equivalent)

*With JBS' high emissions, this bar is not proportional to the bars for the other companies.

NOTE: Nestlé reports Scope 1, 2 & 3 emissions but its disaggregated numbers for dairy are not available, and we were thus not able to make a comparison with our calculations.

MILKING THE PLANET

HOW BIG DAIRY IS HEATING UP THE PLANET AND HOLLOWING RURAL COMMUNITIES



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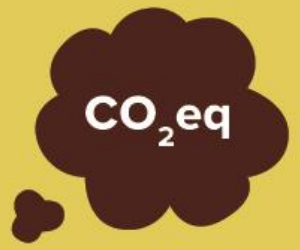
iatp.org

THE TOP 13 GLOBAL DAIRY COMPANIES COMBINED INCREASED GREENHOUSE GAS EMISSIONS BY 11% IN TWO YEARS



11%

increase in combined global GHG emissions

=

13.6

billion litres

of gasoline burned

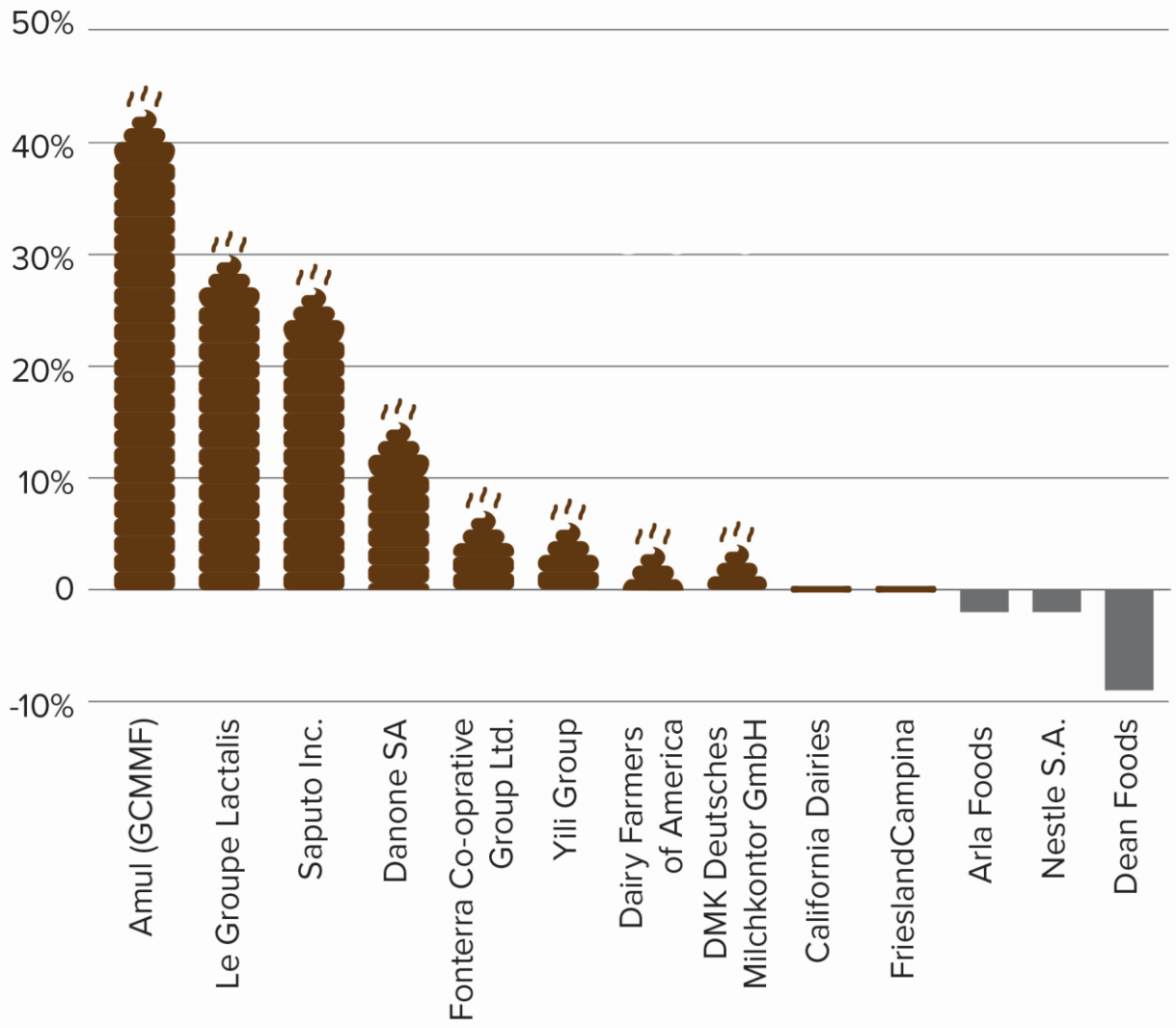
or

16

billion kilograms

of coal burned

CHANGE IN THE GREENHOUSE GAS EMISSIONS OF THE TOP 13 GLOBAL DAIRY CORPORATIONS IN TWO YEARS

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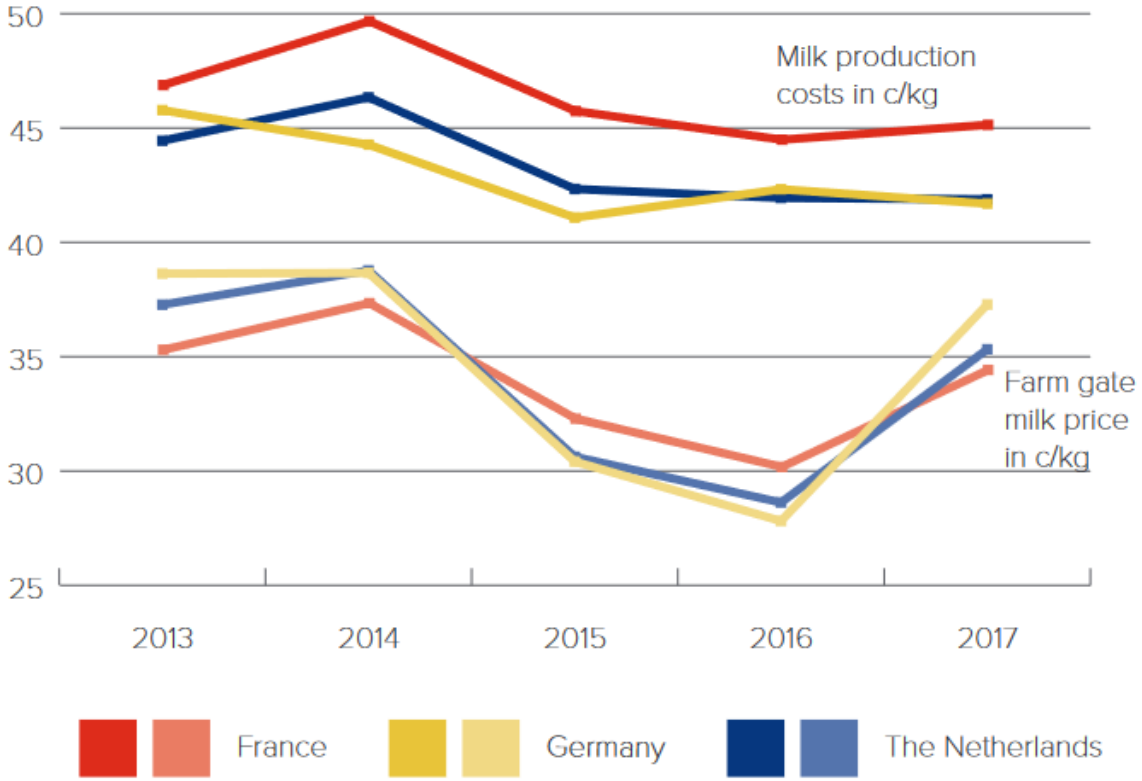
OUT OF THE TOP 13 GLOBAL DAIRY CORPORATIONS HAVE PUBLISHED PLANS TO CUT THEIR OVERALL (ABSOLUTE) EMISSIONS FROM THEIR DAIRY SUPPLY CHAINS.

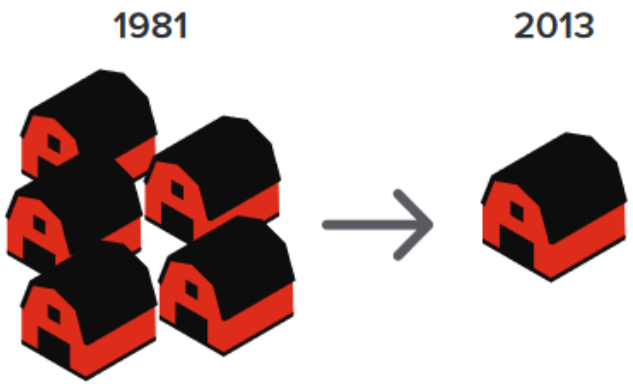
Figure 5A: Milk production costs vs. milk price in Germany, France and the Netherlands



Source: European Milk Board. "What is the cost of producing milk?" accessed February 20, 2020. http://www.europeanmilkboard.org/fileadmin/Dokumente/Milk_Production_Costs/Gesamtbroschuere/Cost_study_2017_new.pdf/.

Figure 5B: EU dairy corporations

Figure 5C: Disappearing farms



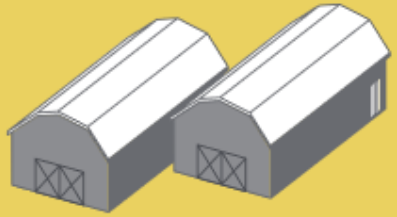
In a 30 year period, 4 out of 5 farms in the EU disappeared

FIGURE 6: THE UNITED STATES AND THE DAIRY INDUSTRY

Change in number of dairy farms over 20 years

1997

125,000
dairy farms



2017

54,000
dairy farms

SINCE 2012

38%
decrease in net farm income

Source: Siena Chrisman. "The FoodPrint of Dairy," FoodPrint, accessed March 23, 2020. https://foodprint.org/wp-content/uploads/2019/07/2019_07_17_FP-Dairy-Report_1.pdf.

"Rebuilding America's Dairy Farms," Dairy Together, accessed March 23, 2020. https://3725e235-d9ba-4970-b621-58e8d9573e38.filesusr.com/ugd/629d75_e217c5b7093945dda62698dca467106a.pdf.

New Zealand

- 50% of its emisisons come from Ag
- 95% of its milk exported (Fonterra)

Doubled its dairy herd, increased fertilizer use by 600%

Farm debt increased by 270% over 20 years to over 60 billion NZ USD

Methane legislation…story of debt and pollution missing in the international sphere about

Nz/Fonterra producing climate efficient milk (Fonterra climate target, says set SBTi, 30% reduction in manufacturing emissions. Net zero by 2050 aspiration…

India

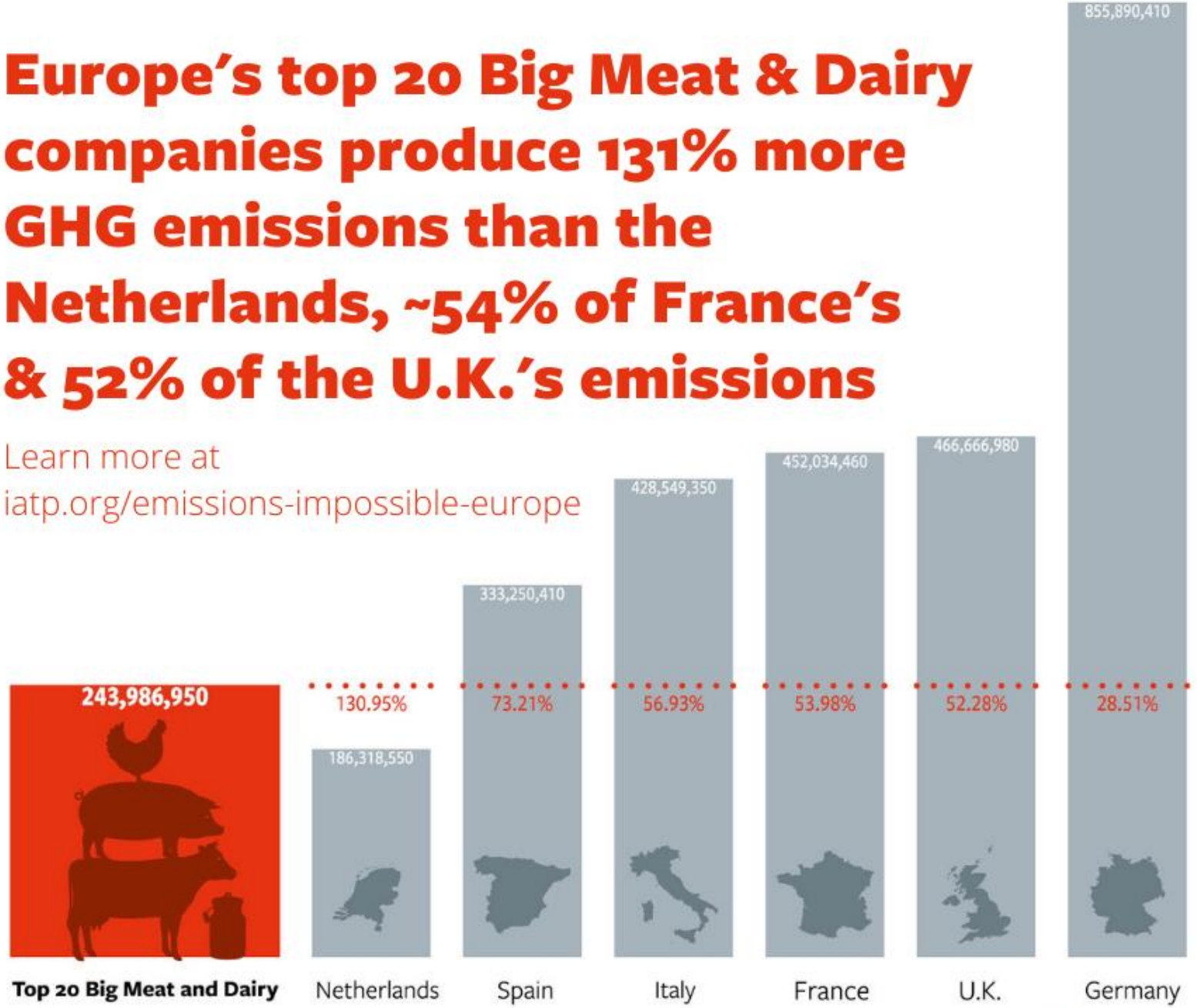
- Produces 20% of the world's milk; less than half in the formal sector---
- Network of complex relationships, sustaining livelihoods of some of the poorest populations with 1-2 cows….70 million people in dairying in 2010
- However, their livlihoods impacted by the rise of mega dairies in India…7% decline between 2000-2016, this translates to literally millions of people
- Amul, though a cooperative, acting like a major corporation…exports and when price slumps dumping in local markets
- Lactalis, Fonterra, others want access to Indian market….
- Number of cow herds growing….in some places up to 30%....feed/fodder deficiencies

How Europe's Big Meat and Dairy
are heating up the planet

Learn more at iatp.org/emissions-impossible-europe

Europe's top 20 Big Meat & Dairy companies produce 131% more GHG emissions than the Netherlands, ~54% of France's & 52% of the U.K.'s emissions

Learn more at
iatp.org/emissions-impossible-europe



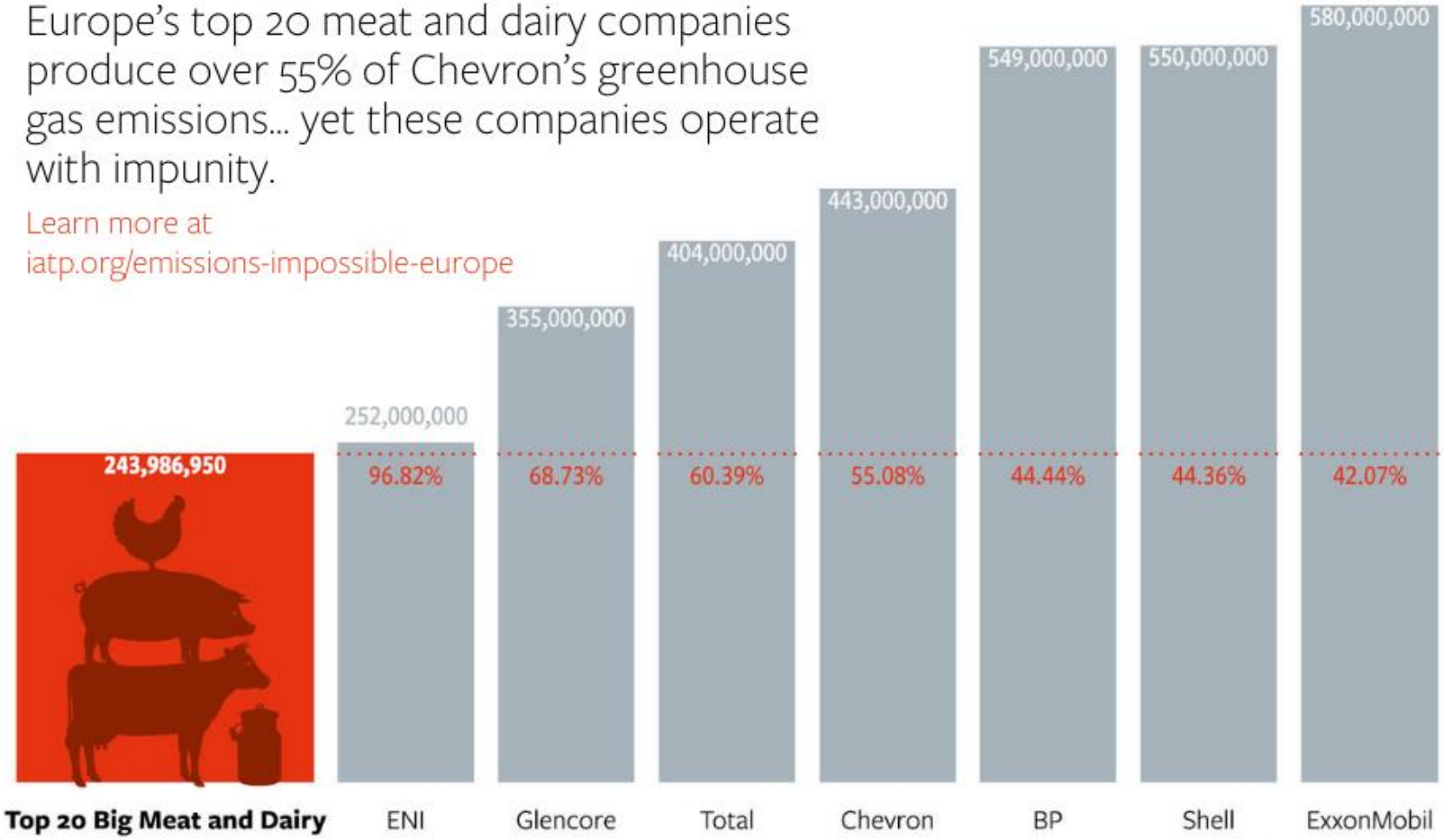
Comparing the combined CO_2 equivalent emissions (tonnes) of the top 20 Big Meat and Dairy companies to national emissions of EU countries. Source: IATP, "Emissions Impossible Europe" 2021.

Institute for Agriculture & Trade Policy

It's time for governments to get serious about Big Meat & Dairy's climate footprint and begin regulating agribusiness.

Europe's top 20 meat and dairy companies produce over 55% of Chevron's greenhouse gas emissions... yet these companies operate with impunity.

Learn more at
iatp.org/emissions-impossible-europe



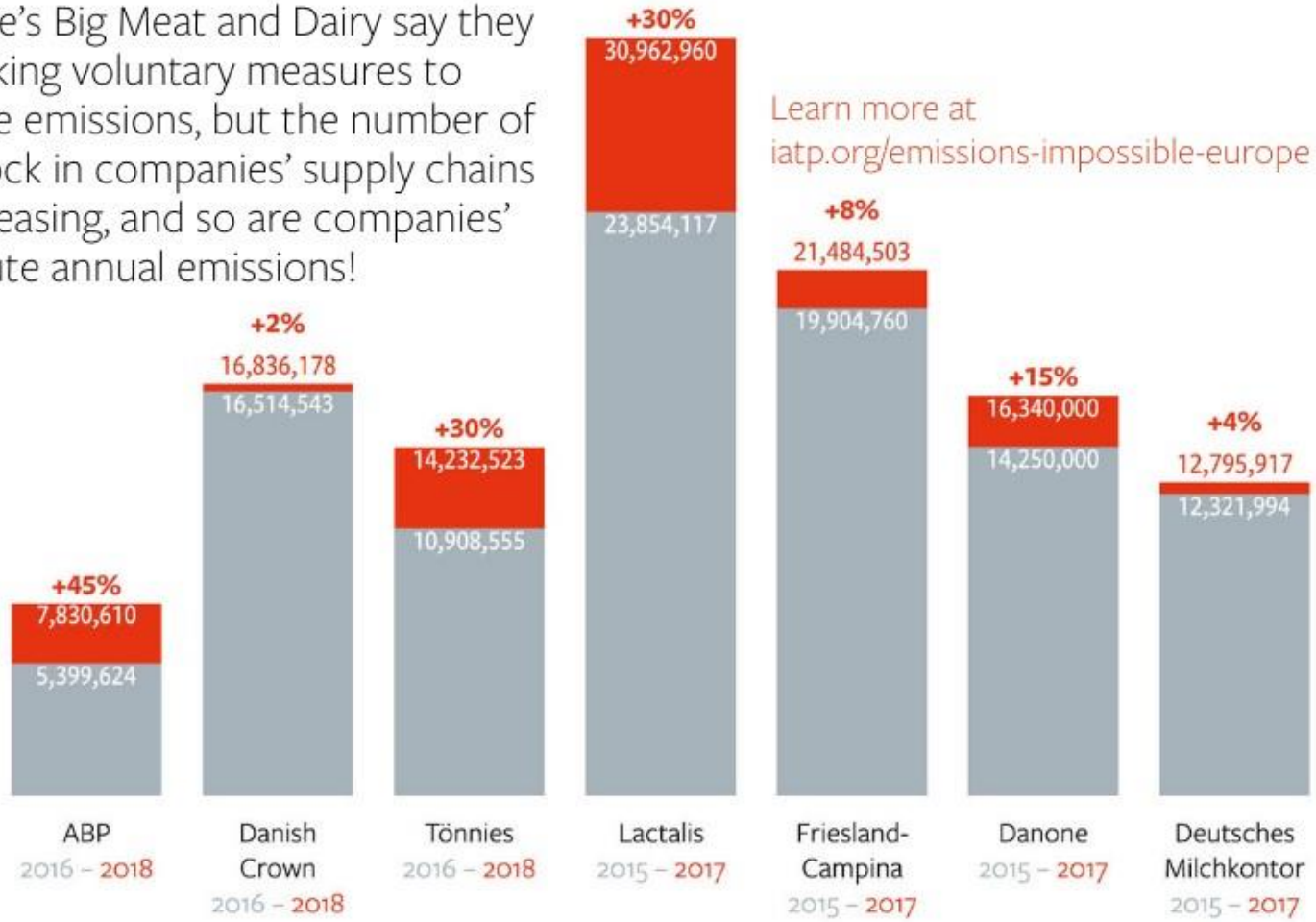
Comparing the combined CO_2 equivalent emissions (tonnes) of the top 20 Big Meat and Dairy companies to some major fossil fuel companies. Source: IATP, "Emissions Impossible Europe" 2021.

Institute for Agriculture & Trade Policy

We're calling companies' greenwashing bluff!

Europe's Big Meat and Dairy say they are taking voluntary measures to reduce emissions, but the number of livestock in companies' supply chains is increasing, and so are companies' absolute annual emissions!

Learn more at iatp.org/emissions-impossible-europe



Change in seven of the top 20 Big Meat and Dairy companies' CO_2 equivalent emissions (tonnes) over a two-year period.

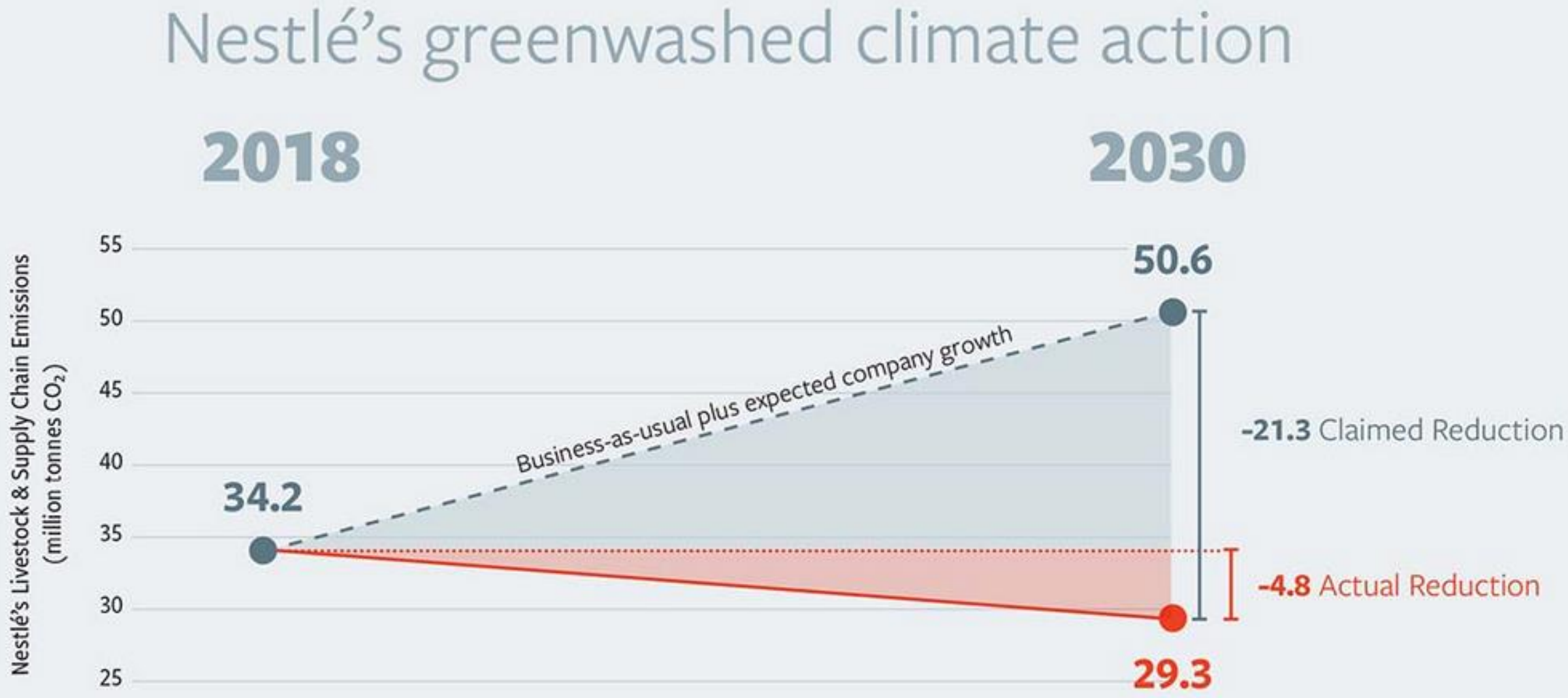
Source: IATP, "Emissions Impossible Europe" 2021.

Institute for Agriculture & Trade Policy

Massive change in landscape since 2018:

Strategic narratives and greenwashing

Illustration © Ethan Cornell / Climate Land Ambition Rights Alliance (CLARA)



igure 5: Nestlé's carbon reduction targets using their projected 2030 business-as-usual emissions as the baseline rather than their actual mission numbers from 2018. Source: Nestlé, "Accelerate, Transform, Regenerate: Nestlé's Net Zero Roadmap," 2021, 12.

- co-opting the narrative on regenerative and agro-ecological agriculture;
- focus on reductions of emissions per kilo of meat or litre of milk (emissions intensity reductions), which are drowned out by the companies' continued expansion of overall production;
- development of and plans to use impermanent soil and grassland carbon offsets sold on carbon markets;

- utilisation of unproven feed additives that claim to reduce methane; and last but not least,

- government-led incentives that perversely valorise large-scale animal agriculture through the capture of methane for “biogas” from livestock manure (see Box 3, p.15).

https://biglivestockgreenwash.com 70%

Big Livestock's
BIG GREENWASH

About Greenwashing Tactics Emissions Calculator

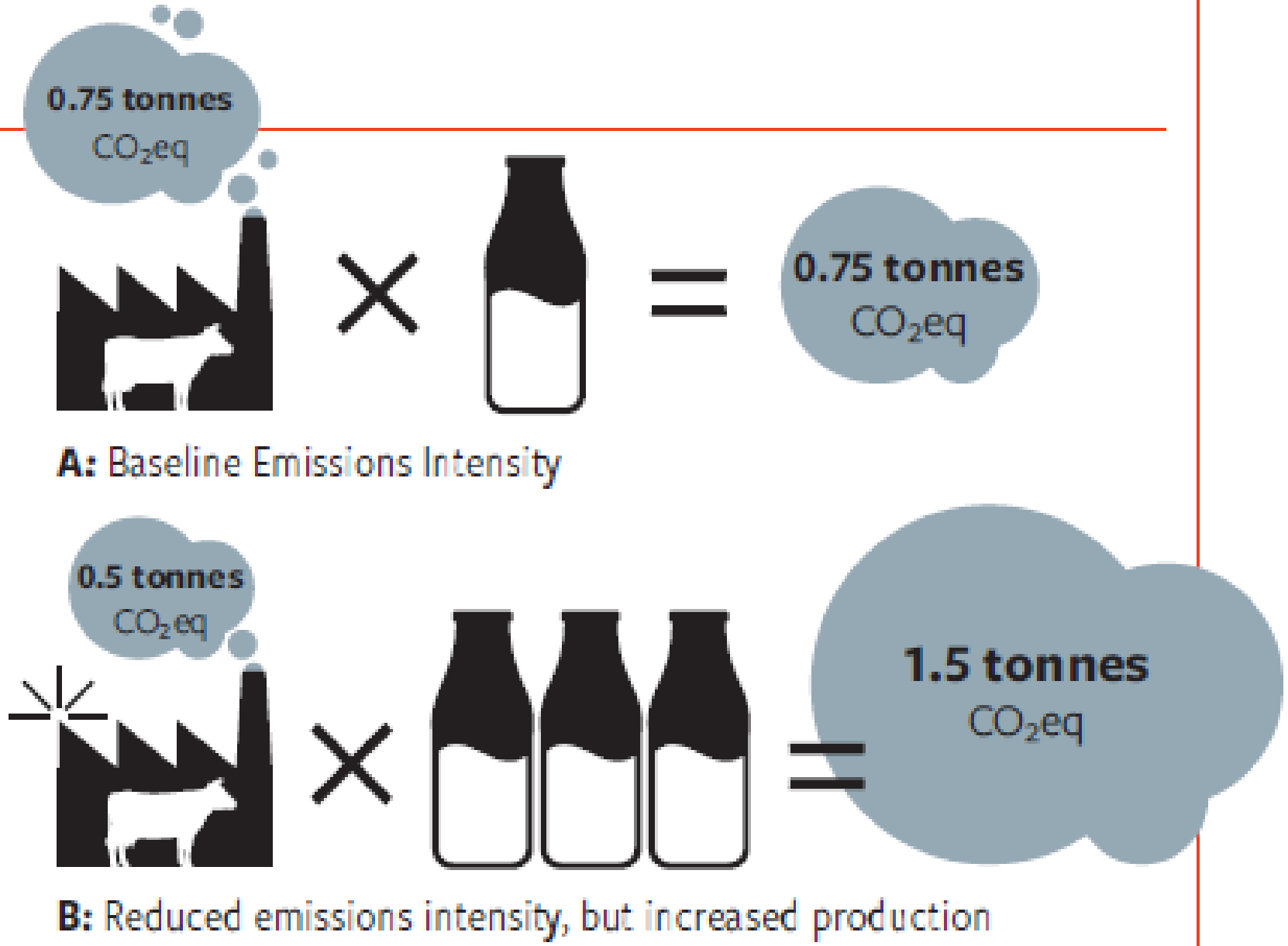
Fight back against greenwashing tactics

Lifting the curtain on greenwashing tactics used by Big Livestock

Offset versus Inset

Offset: An "offset" is the idea that emitting carbon in one location can be compensated for by reducing it elsewhere (e.g., Microsoft buys carbon credits for a project that plants trees in Romania to offset its own carbon emissions). Offset schemes turn this so-called reduction of emissions into a carbon credit or certificate that can be bought and sold on financial markets (a carbon market). In essence, such credits allow companies to continue polluting in exchange for buying these credits.

Inset: The idea of an "inset" follows the same principle as an offset. The difference is that the compensation project and actions take place within a company and its value chain (e.g., a company accounts for its emissions reductions through compensation projects in the form of biogas digesters or soil carbon sequestration activities on its supplier farms), whereas an "offset" can be a project completely independent from a company's business operations.



The perverse logic of “emissions intensity reduction” :

Bigger, more intensive is better

use of biogas and other offsets rather than a reduction in the size of animal herds. ABP, the only meat company in the group, increased (Figure 4).

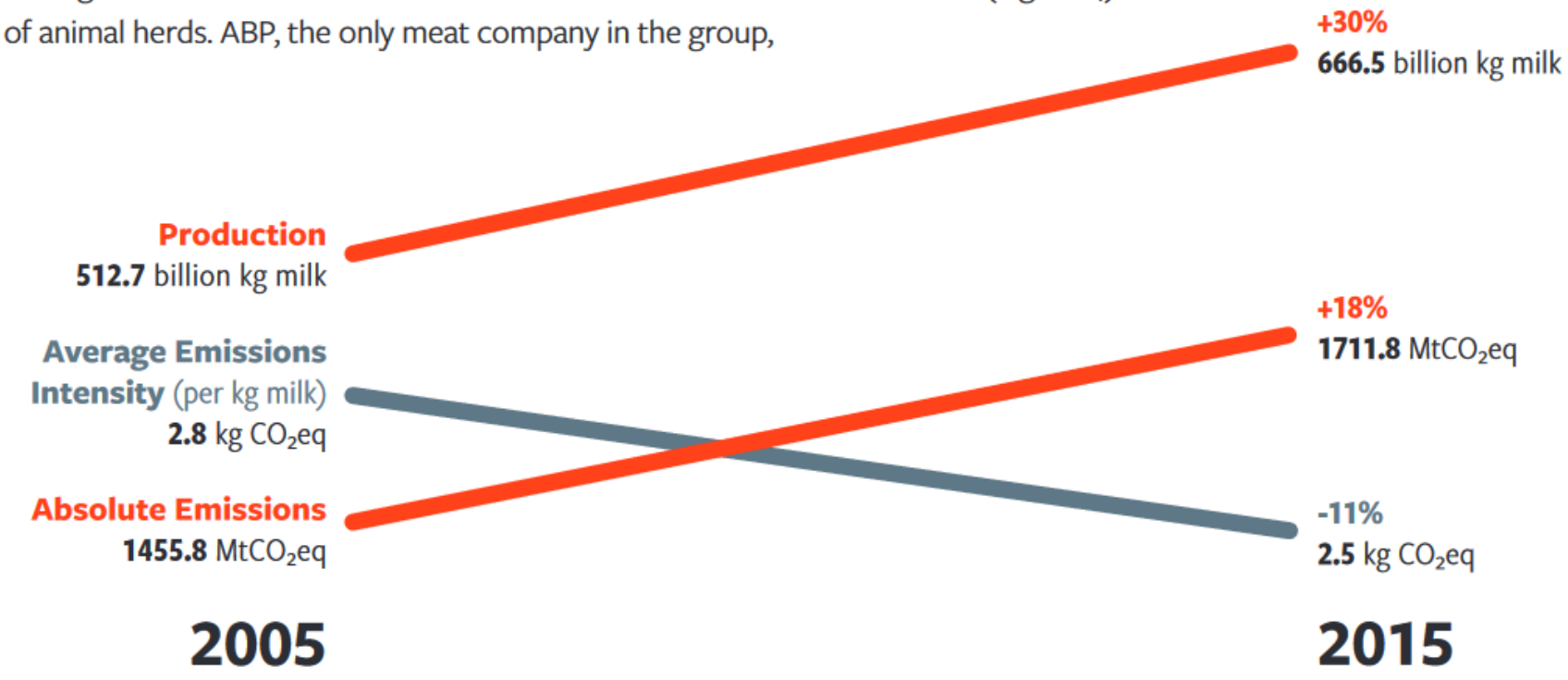


Figure 4: Over a 10-year period, even as the global dairy industry reduced its emissions intensity, absolute emissions continued to grow because of increased production. FAO and Global Dairy Platform, "Climate Change and the Global Dairy Cattle Sector - The Role of the Dairy Sector in a Low-Carbon Future," 2019, 16-24.

86% all meat and dairy in the EU plus U.K. comes from 10 European countries

Germany, France, Spain

Poland, Italy, Netherlands

Denmark, Ireland, Belgium

Plus U.K.

Methane Edition

Emissions Impossible:

How emissions from big meat and dairy are heating up the planet

FIGURE 2: **TOTAL METHANE EMISSIONS OF KEY COUNTRIES (TONNES CO_2e GWP100) AND METHANE EMISSION BY MAJOR MEAT AND DAIRY COMPANIES**

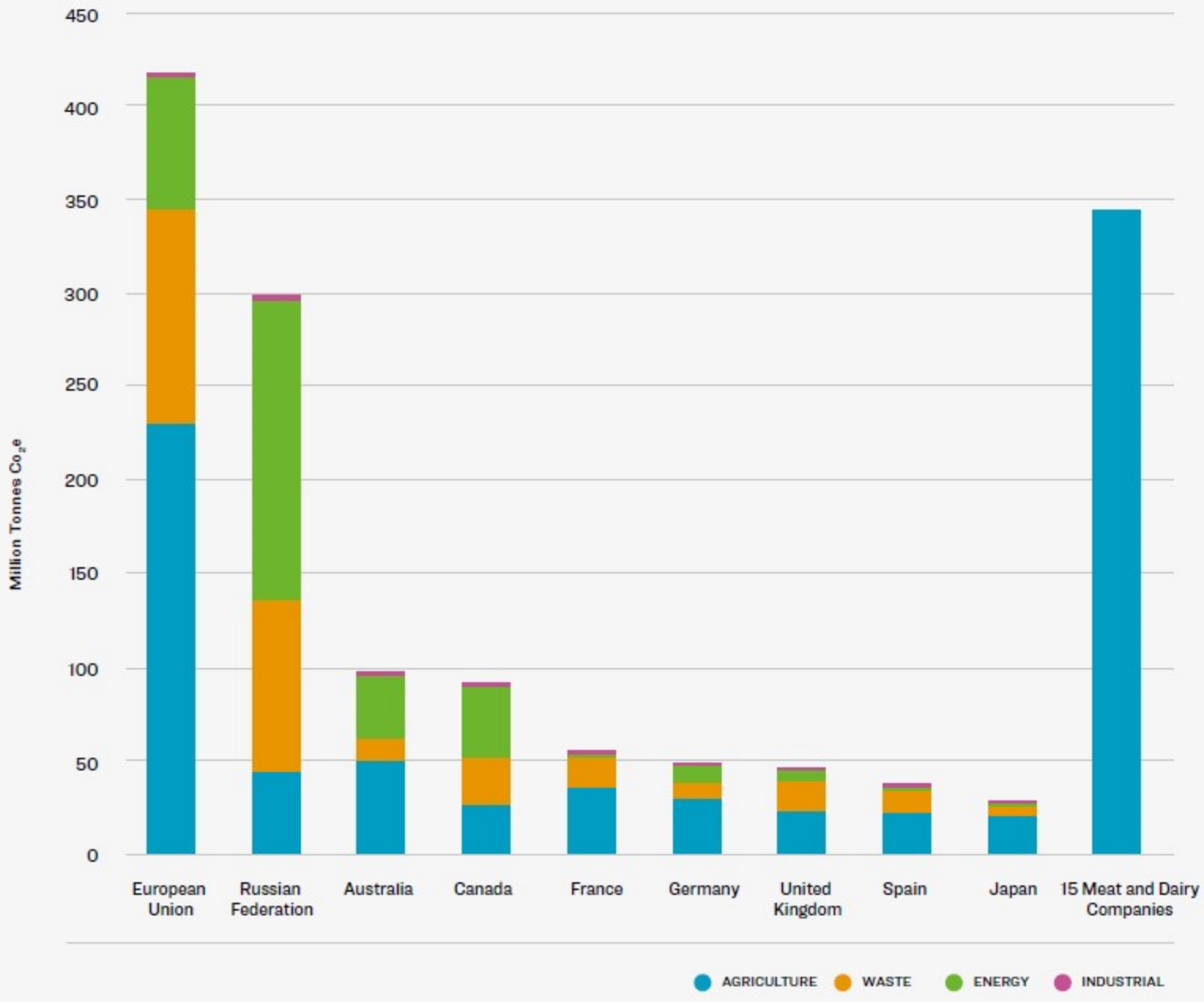
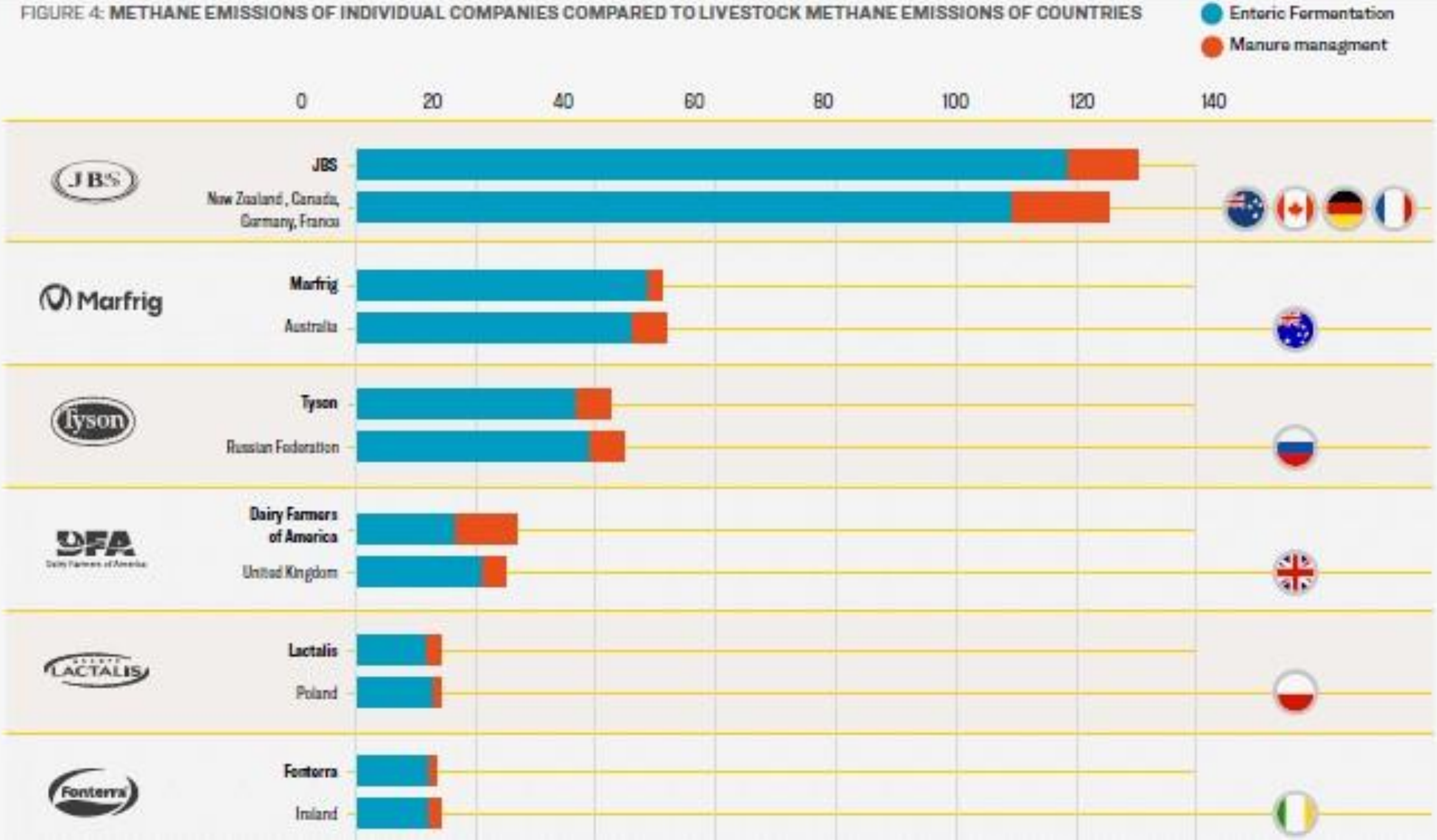
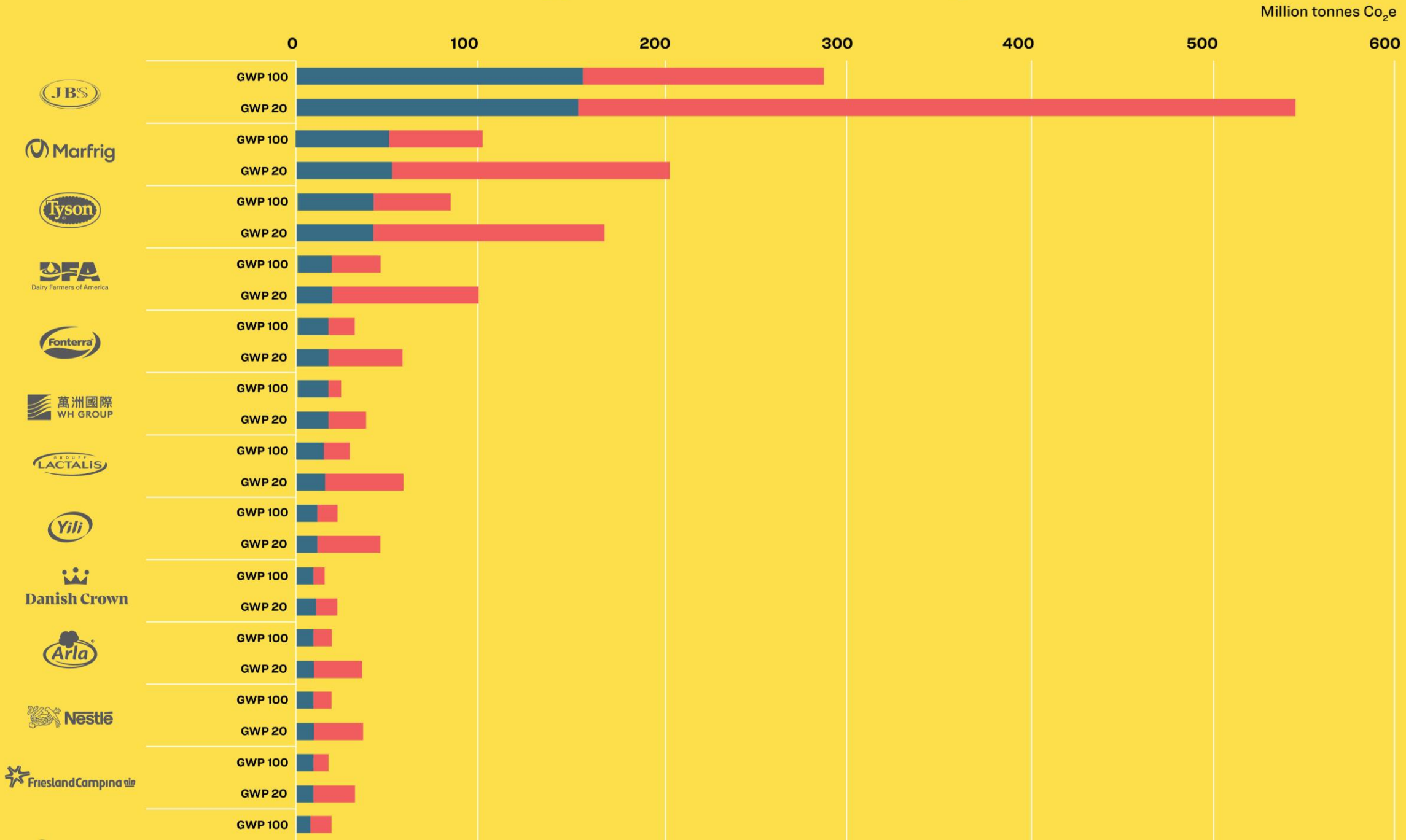


FIGURE 4: **METHANE EMISSIONS OF INDIVIDUAL COMPANIES COMPARED TO LIVESTOCK METHANE EMISSIONS OF COUNTRIES**



Big Meat & Dairy



90% of emissions from livestock come from the animals themselves, but few of the EU's top 20 Big Meat & Dairy companies have plans to reduce animals from their supply chains & change the industrial mass production model.

Learn more at iatp.org/emissions-impossible-europe

	Reporting some emissions	Full Scope 3 emissions Reporting also	Some kind of climate target (i.e. emissions intensity reduction target or less)	Clear scope 3 absolute emissions reduction target for livestock
EI 1 (2018)	19/35	10/35	6/35	0
EI 2 (2020)	5 out of 13		6/13	0
EI 3 (2021)	9/25	4/25	6/25	1
EI 4 (2022)	0/15 for methane	6 out of 15	N/A	1
				Danone now has a 30% reduction target for methane

Governance?

- EU

Corporate Sustainability Reporting Directive (Jan 2023) (50,000 companies implicated…)

(drafting

--aim investors have info they need on their financial risk arising from climate change and other sust. Issues

--apply rules for financial year 2024 for 2025 CSR report

--standards for reporting being developed by EFRAG (private association whose stakeholders include Business Europe) , supposed to be finalized mid-2023 (now

Green Claims Initiative

- US
- Securities and Exchange Commission Rule on climate disclosure
- Could include scope 1, 2 and 3
- Geared to provide information to investors
- Disclose climate risk

- SBTI and CDP

Systems based on self-reporting

Independent verification is not really independent or robust yet

Thank you!

For questions or comments, please contact
Info@iatp.org

https://www.iatp.org/emissions-impossible-series