

DE PLANTAARDIGE VOEDSELTRANSITIE



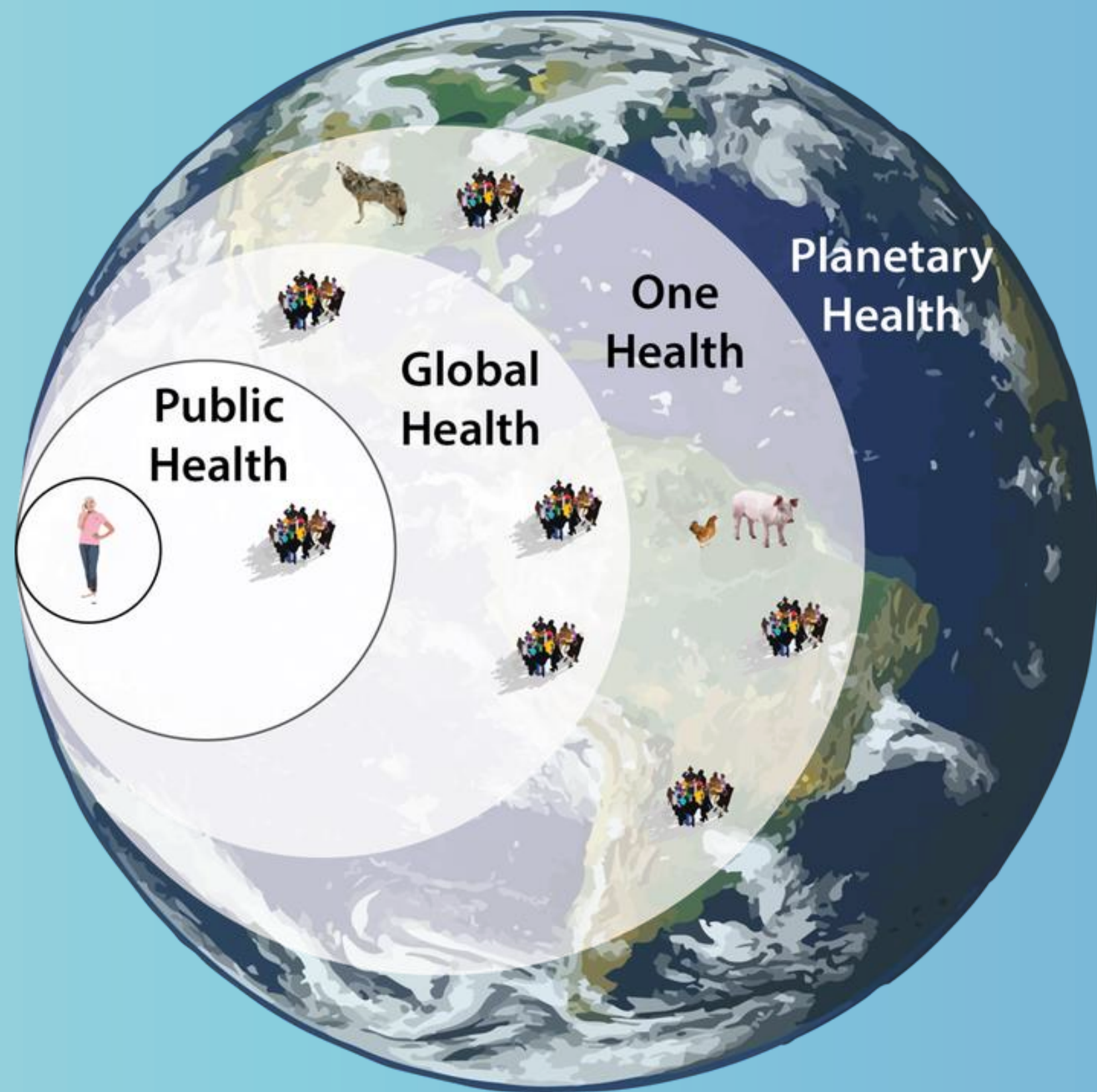
Patrick Deckers

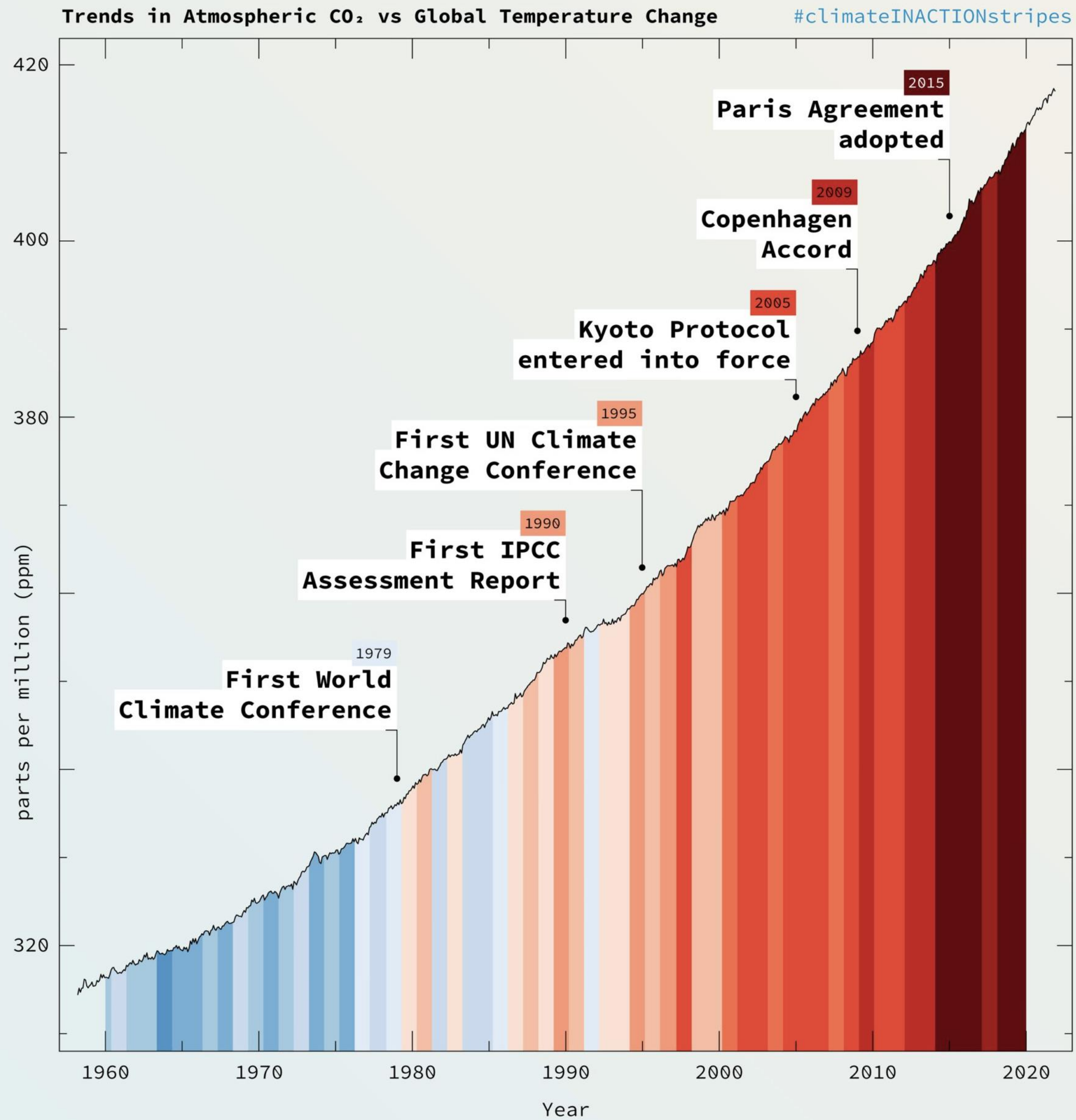
Noodzakelijke transitie van een
dierlijk naar een plantaardig
voedselsysteem;

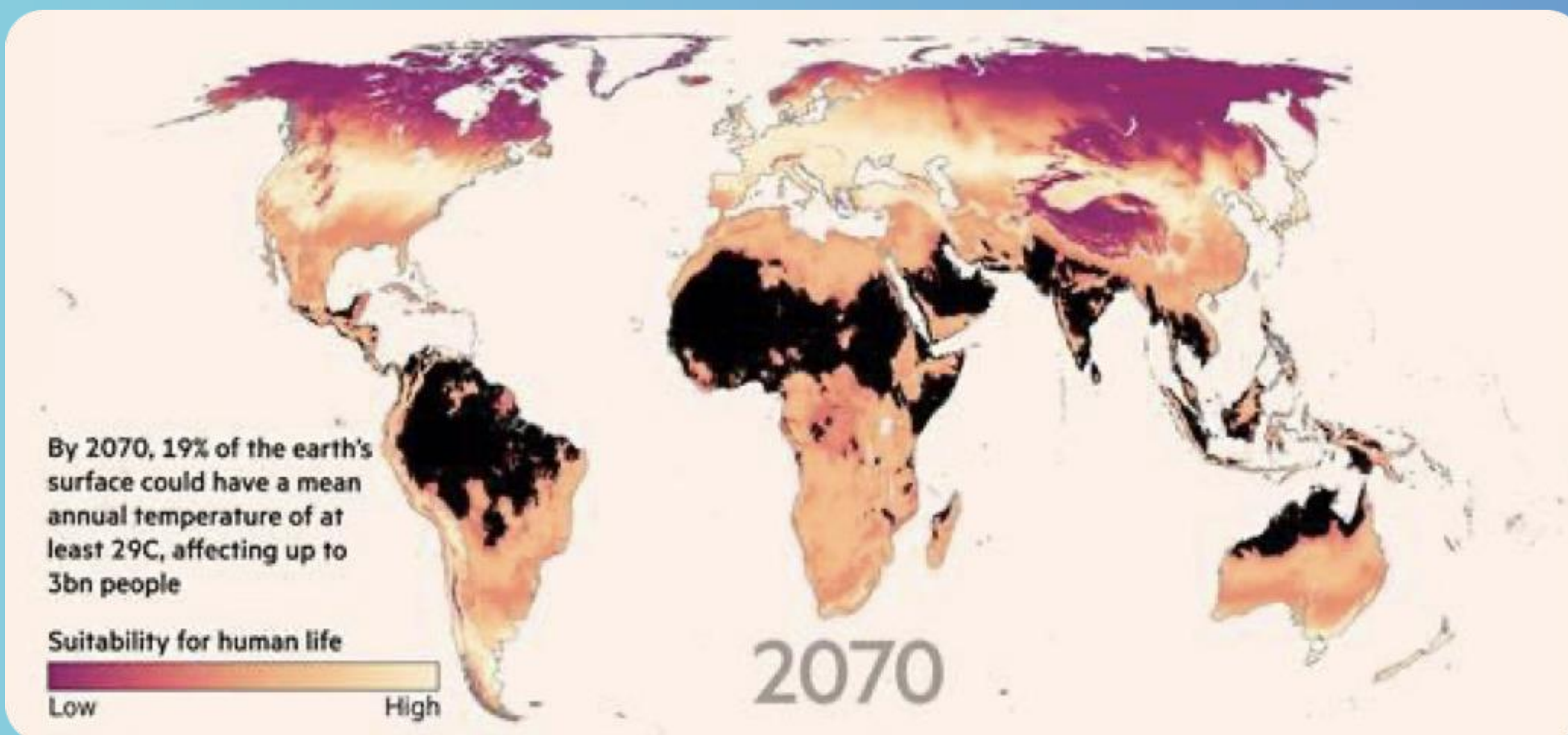
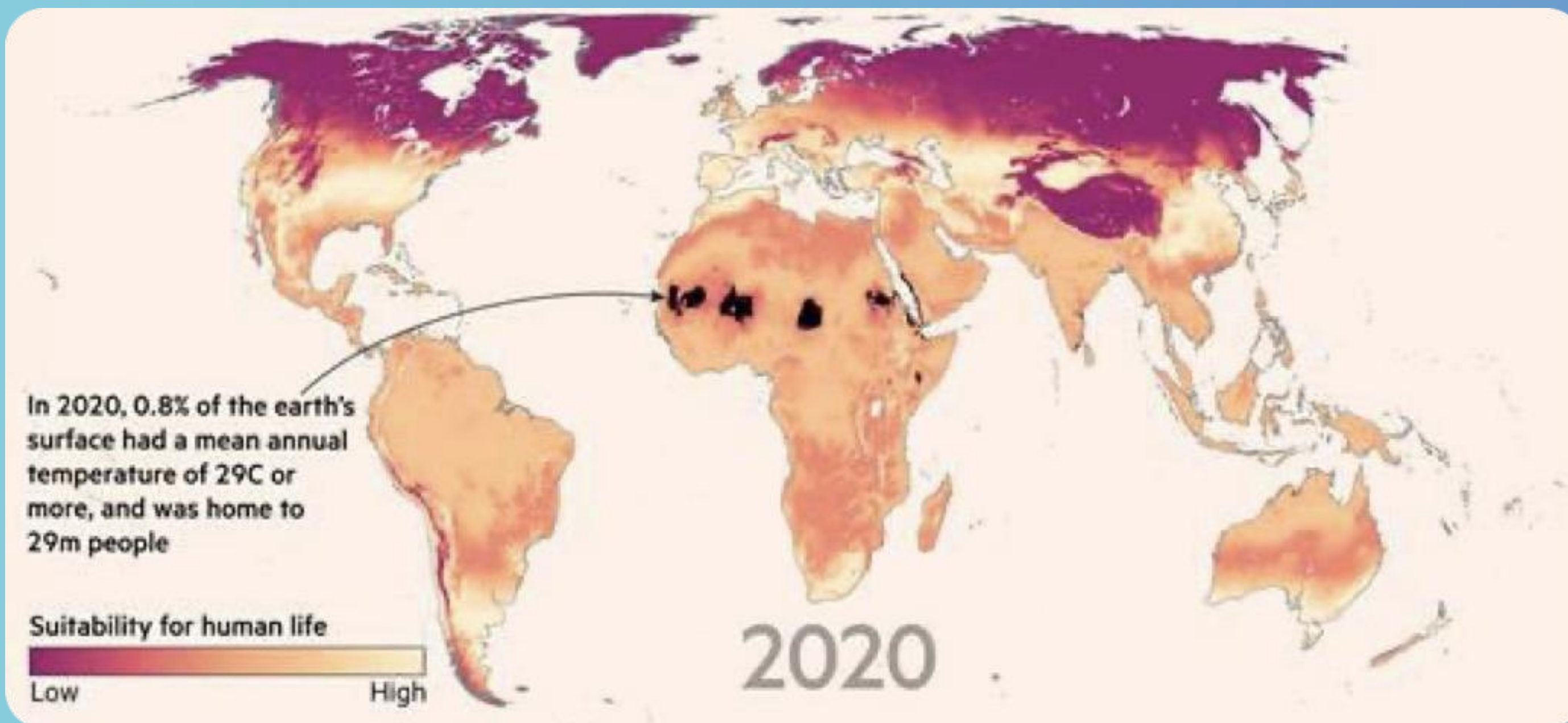
Voor mens, dier en natuur



PLANETARY HEALTH







BUSINESS AS USUAL

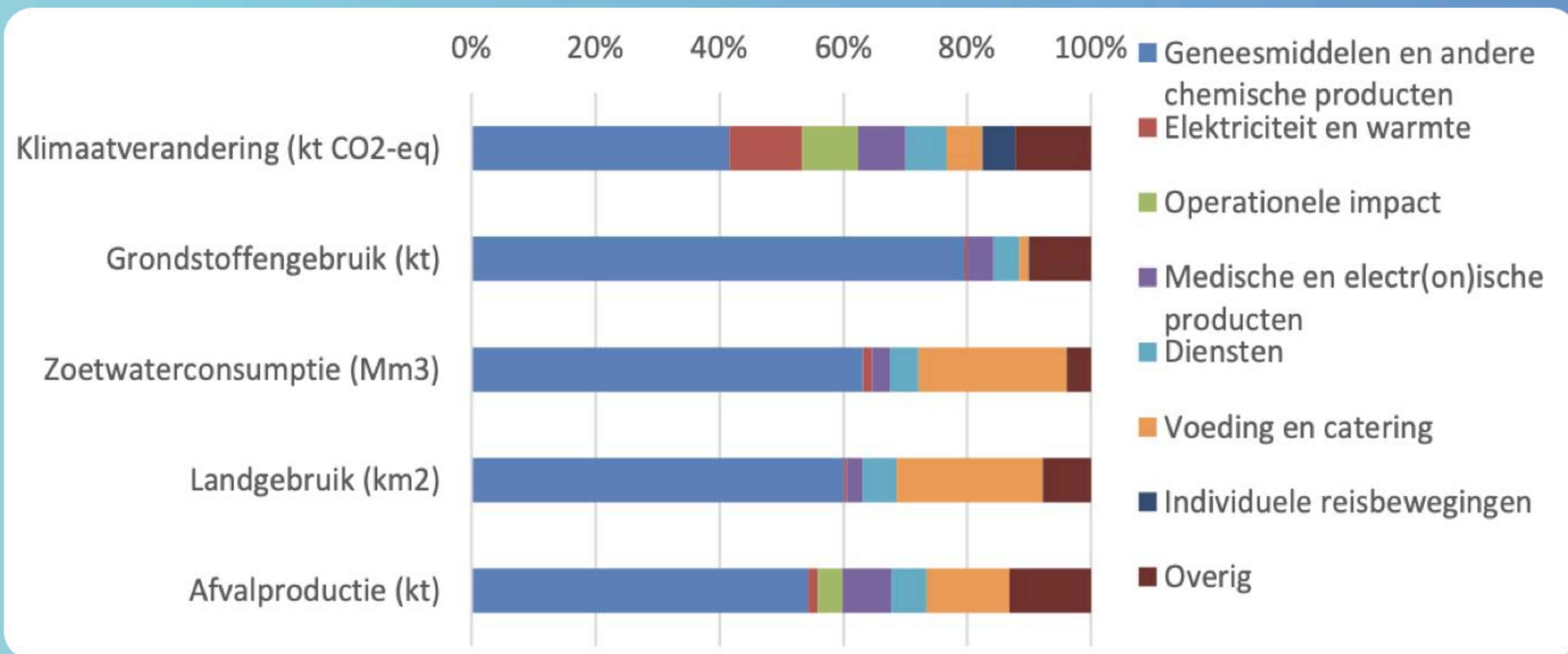
JIP VAN DEN TOORN



BRENDA HAD BESLOTEN OM MILIEUBEWUSTER TE LEVEN

8% VAN DE CO₂ UITSTOOT IN NL DOOR DE ZORG


16% VAN DE CO₂ UITSTOOT IN NL DOOR DE LANDBOUW



VLEES EN ZUIVEL

- klimaat opwarming
- ontbossing
- watertekorten
- bodem/lucht/watervervuiling
- gezondheid problematiek



United Nations  @UN · 4d

The meat industry is responsible for more greenhouse gas emissions than the world's biggest oil companies. Meat production contributes to the depletion of water resources & drives deforestation.



VOEDING

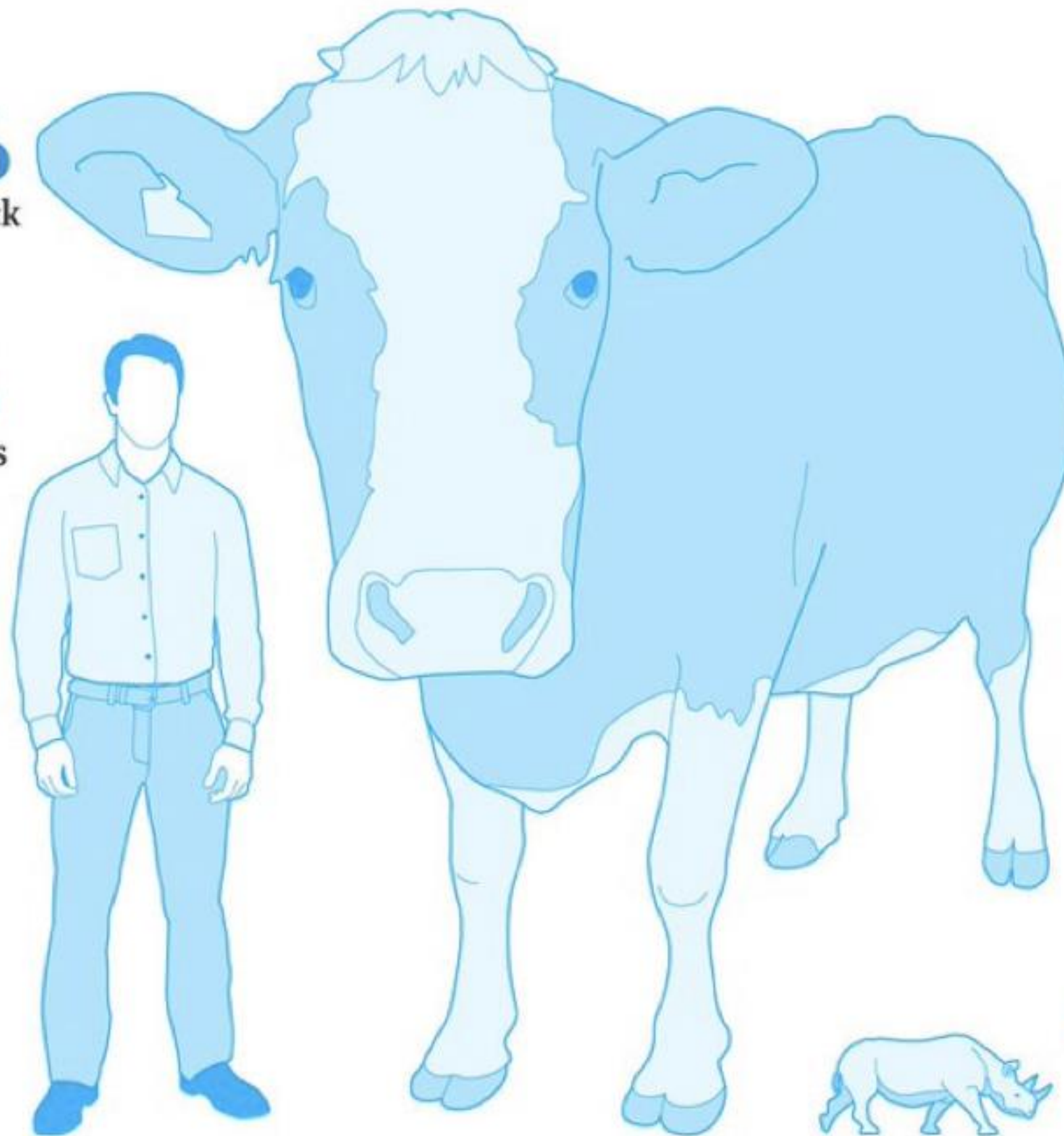
- Rundvlees creëert 105 kg CO₂ en gebruikt 370 m² land per 100 gram eiwit. Bonen, erwten en andere plantaardige eiwitten slechts 0,3 kg CO₂ (incl. alle verwerking, verpakking en transport) en gebruikt slechts 1 m² land per 100 gram eiwit.

- Een vijfde minder rundvlees consumptie kan ontbossing met 50% reduceren.

Of all the mammals on Earth, 96% are livestock and humans, only 4% are wild mammals

60%
are livestock

36%
are humans



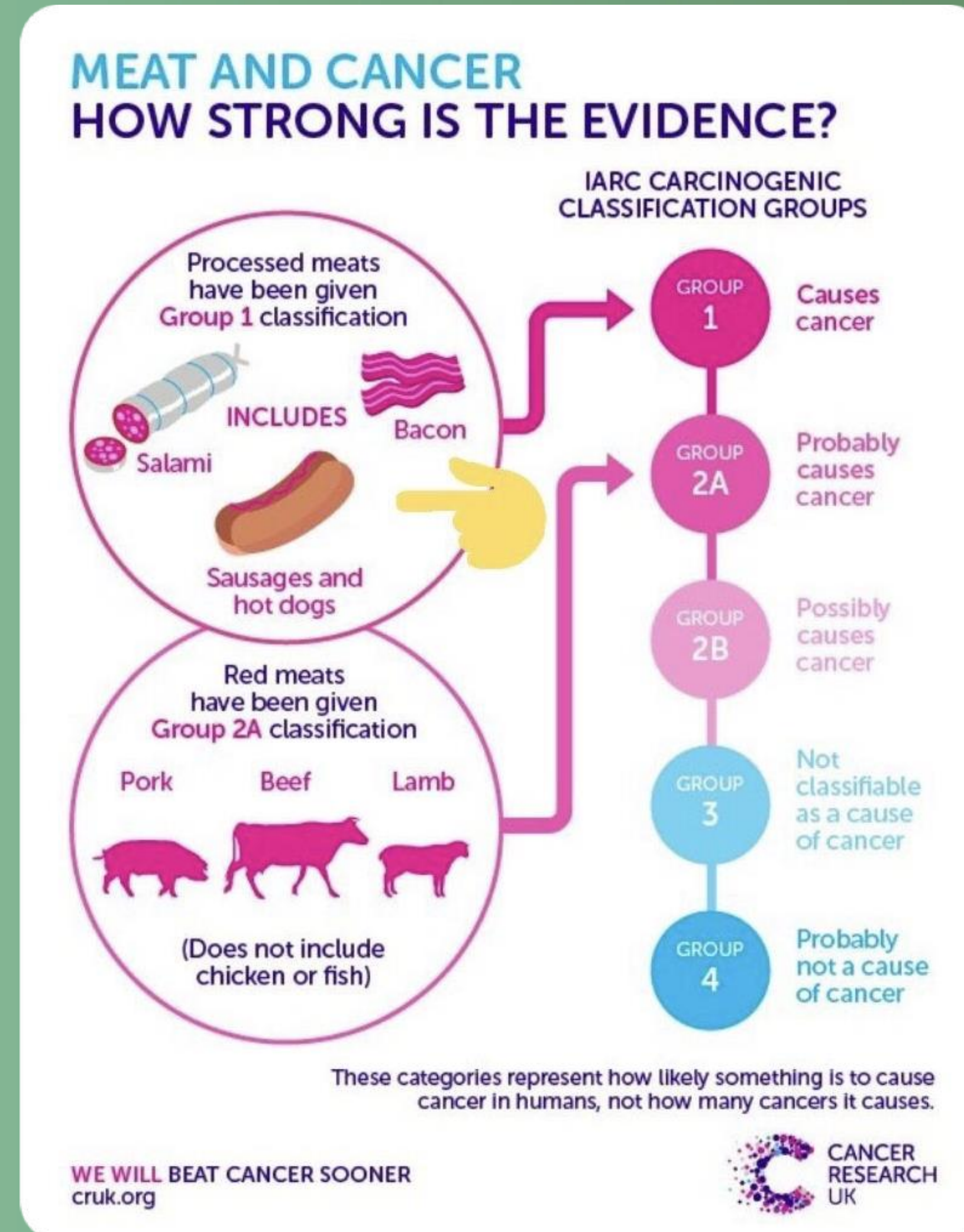
4%
are wild mammals

GEZONDHEIDSSCHADE DIERLIJK VOEDSELSTEL

- Human Health

Een willekeurige opsomming.

- Overgewicht
- Diabetes type 2
- Hart- en vaatlijden
- Kanker (oa darm, prostaat en borst)
- Beroerte



Bron:
Cancer Research
Nutrition
Cardiology Association
Diabetes Research
Neurology
PAN

GEZONDHEIDSSCHADE

DIERLIJK VOEDSELSTEL

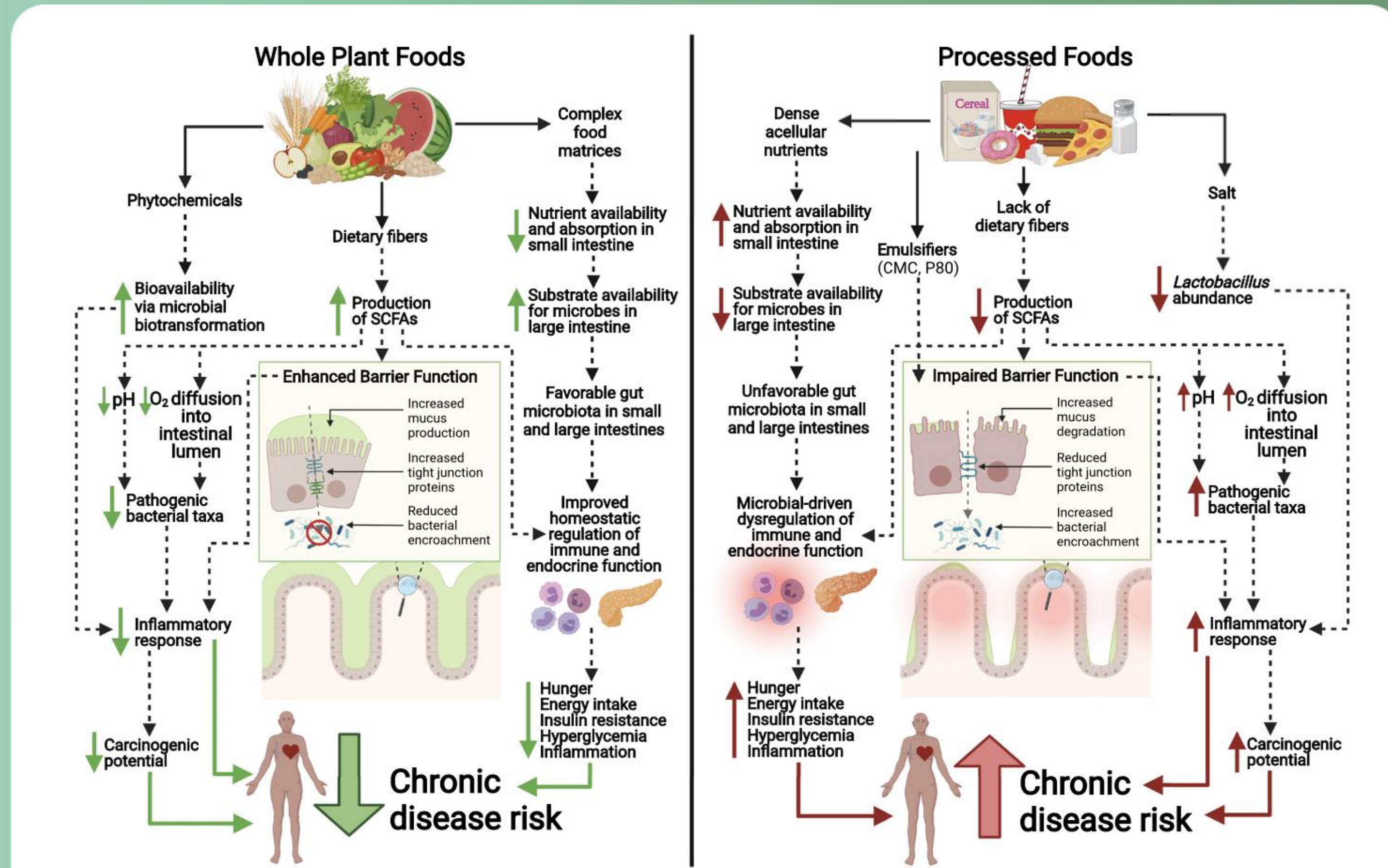


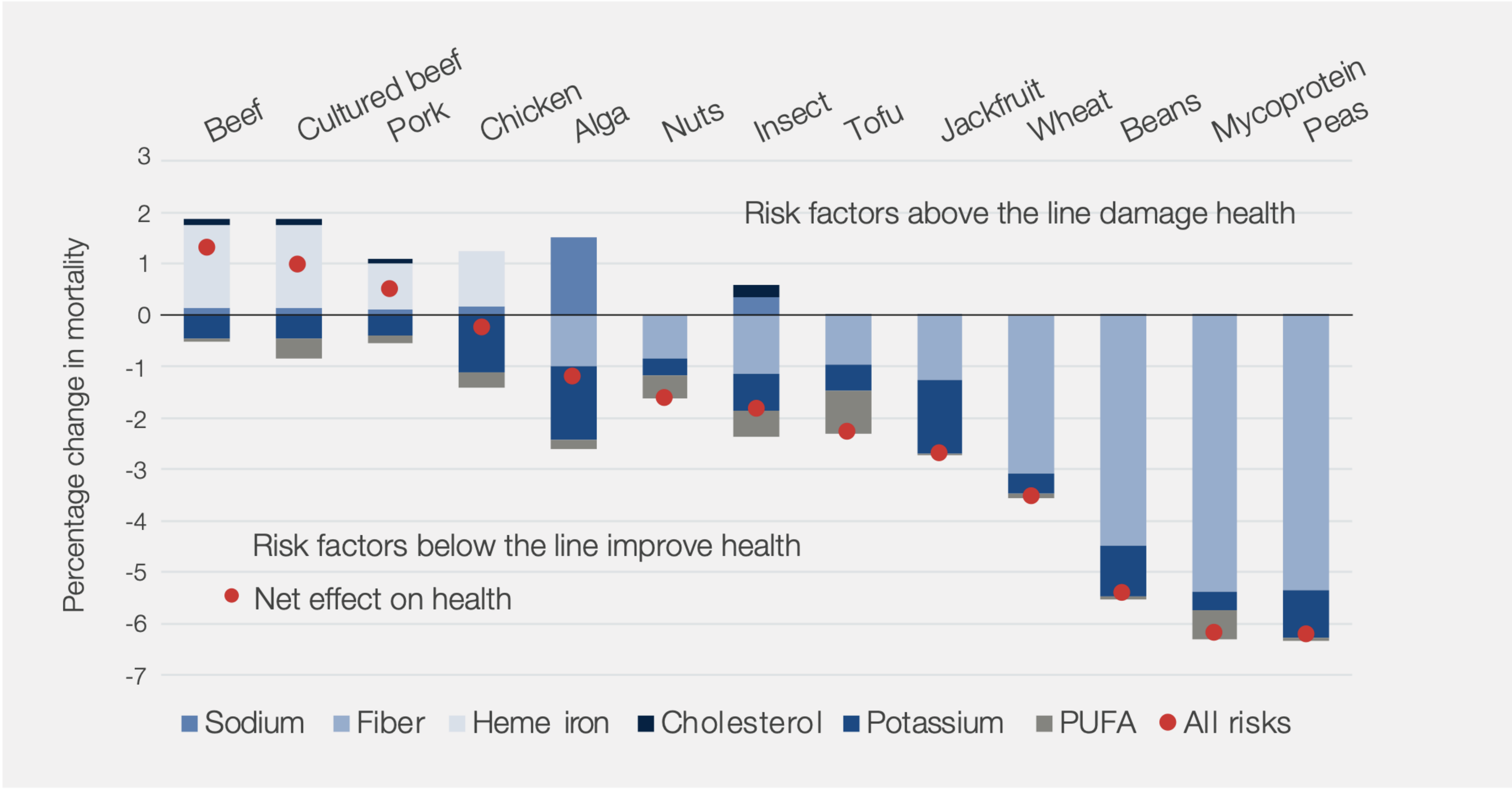
Figure 1. Comparison of the effects of whole-plant foods and processed foods on the gut microbiome and implications for host physiology, immunology, metabolism, and disease risk

Whole-plant foods provide phytochemicals and dietary fibers that, via their biotransformation by gut microbiota, are health-promoting through numerous mechanisms. In contrast, processed foods elicit negative effects on the gut environment due to the absence of these compounds and the presence of emulsifiers, salt, and acellular nutrients. CMC, carboxymethylcellulose; P80, polysorbate 80; SCFA, short-chain fatty acid.

Bron:
Cell Host & Microbe

GEZONDHEIDSEFFECT SOORT EIWIT

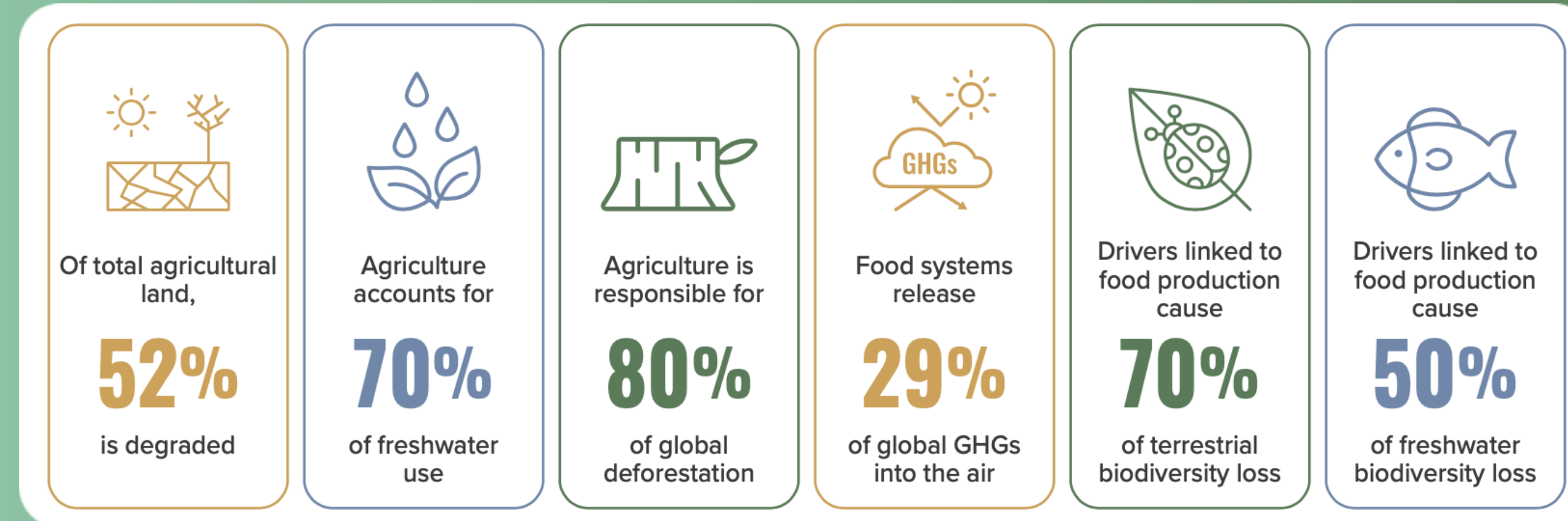
Figure 3 : The health effects of consuming an additional portion of different alternative proteins



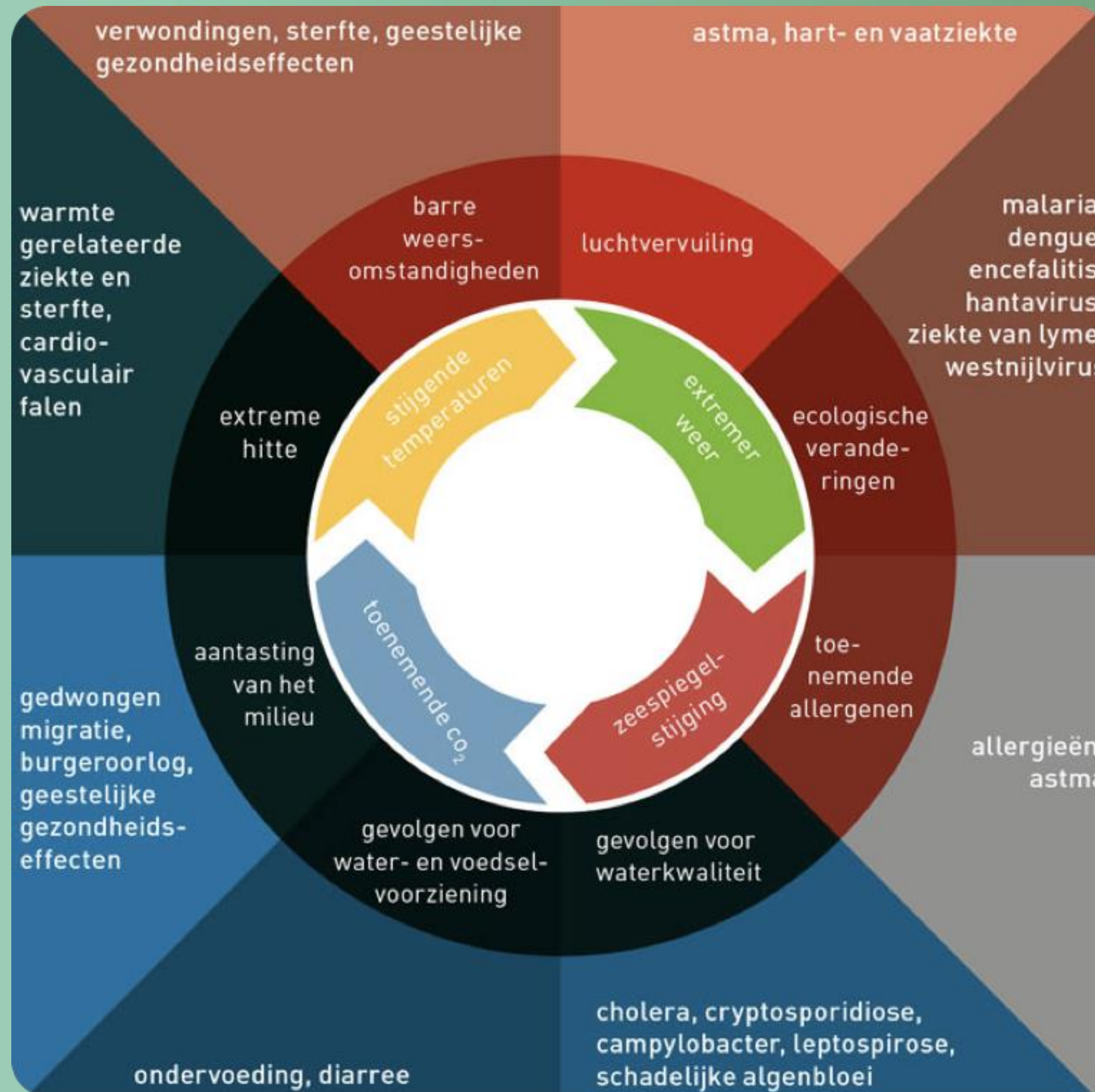
Bron: Oxford University

GEZONDHEIDSSCHADE DIERLIJK VOEDSELSTELSEL

- Planetary Health
 - Voedselschaarste
 - Waterschaarste
 - Neuropathie (oa Parkinson)
 - Asthma / COPD
 - Antibiotica resistentie
 - Zoonose Pandemie



KLIMAAT ZIEKTES



Bron: UN, RIVM

VOEDING

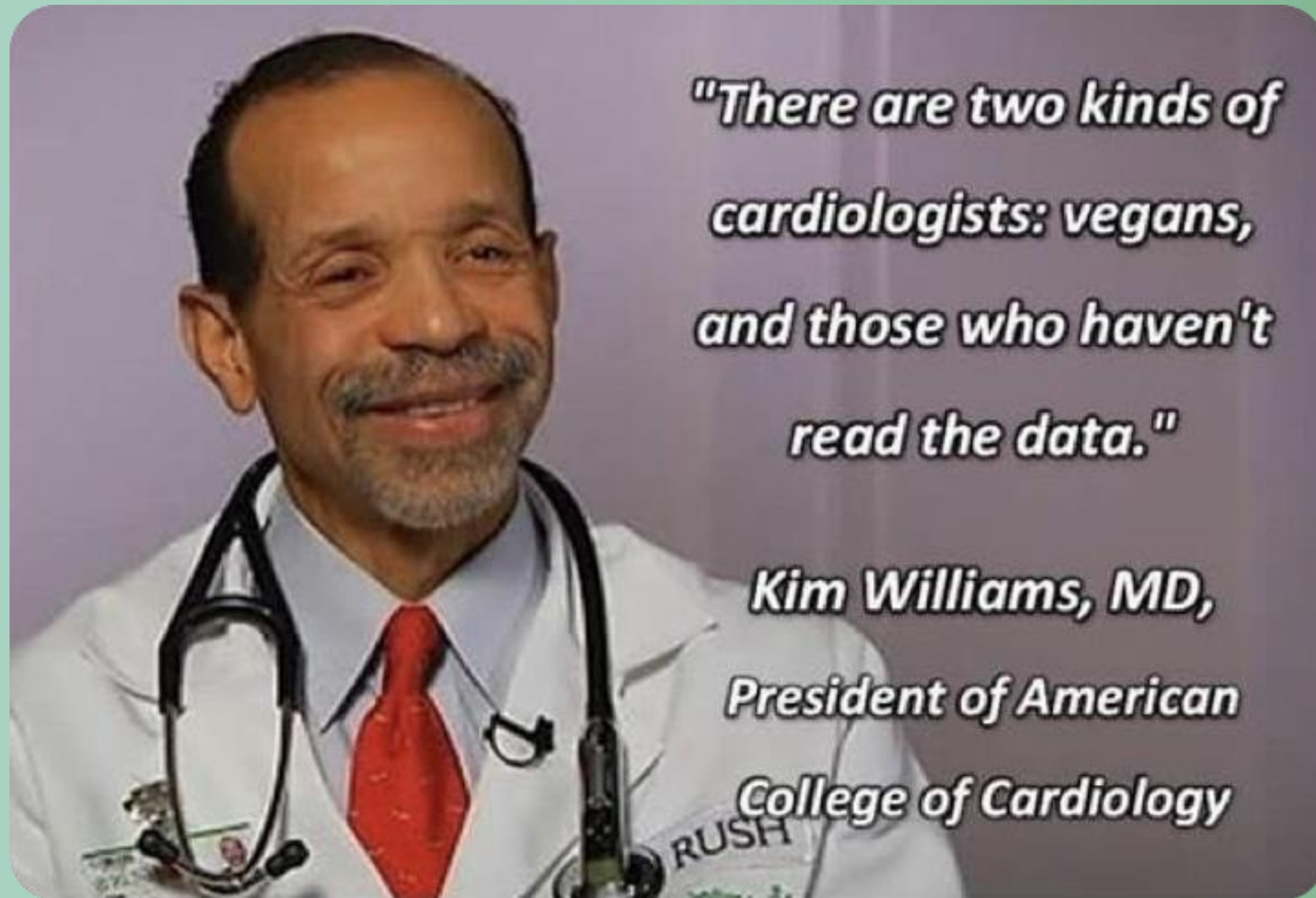
“People are fed by the food industry,
which pays no attention to health.

And are treated by the health industry,
which pays no attention to food.”

Wendell Berry



VOEDING



VOEDING

- Ongezonde voeding draagt voor ruim 8%, ofwel 6 miljard euro, bij aan de Nederlandse ziektelast. Met steeds meer chronisch zieken en vergrijzing zal dit toenemen.
- Ongezonder eten levert behalve duurdere zorg, ook meer klimaatverandering en de daarmee gepaard gaande kosten.
- Supermarkten bepalen onze keuze. In supermarkten komt bijna 80% van de aangeboden producten niet voor in de Schijf van Vijf.
- Van de producten die wel in de Schijf van Vijf staan, bevat 70% van de groenten en 85% van het fruit (meerdere) gifresten.
- Nederland consumeert de minste groente en fruit van Europa. Maar ook eten ze 48% (38 kg) meer dierlijke eiwitten dan het Voedingscentrum (26 kg) aanraadt. EAT Lancet 16 kg.
- Nederland is een netto importeur van voedsel maar de export productie is niet afgestemd op een gezond dieet, maar vooral dierlijke producten en suiker



Bron: RIVM, CBS

Bron: Lancet

Bron: WUR

Bron: NVWA

Bron: FAO

Bron: WUR

NATIONAAL PREVENTIE AKKOORD 2018

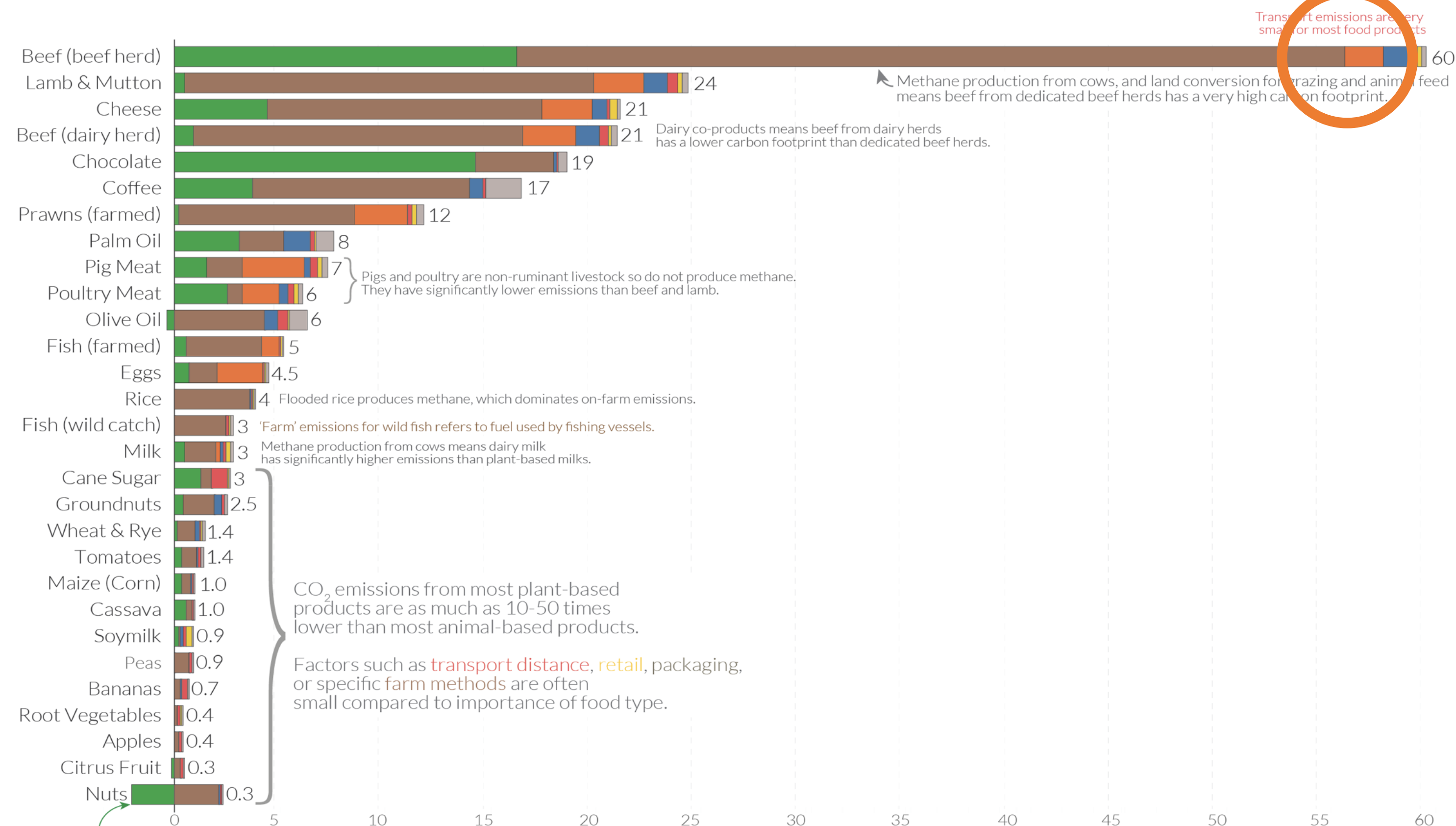
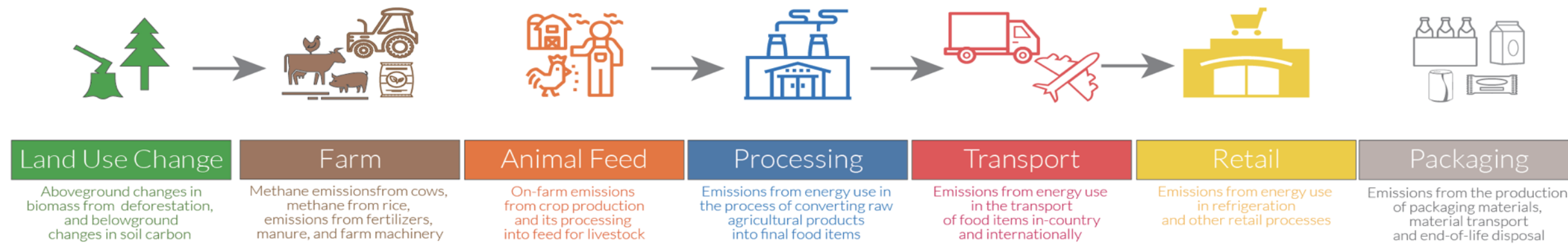
In 2021 had de helft van de volwassenen overgewicht. Dit is evenveel als in 2018 bij de start van het Nationaal Preventieakkoord.

Het aandeel volwassenen met overgewicht en obesitas, was hoger onder degenen met een lagere welvaart of lager onderwijsniveau.

VOEDSEL INDUSTRIE

Food: greenhouse gas emissions across the supply chain

Our World in Data



Transport emissions are very small for most food products

Methane production from cows, and land conversion for grazing and animal feed means beef from dedicated beef herds has a very high carbon footprint.

Dairy co-products means beef from dairy herds has a lower carbon footprint than dedicated beef herds.

Pigs and poultry are non-ruminant livestock so do not produce methane. They have significantly lower emissions than beef and lamb.

Flooded rice produces methane, which dominates on-farm emissions.

'Farm' emissions for wild fish refers to fuel used by fishing vessels.

Methane production from cows means dairy milk has significantly higher emissions than plant-based milks.

CO₂ emissions from most plant-based products are as much as 10-50 times lower than most animal-based products.

Factors such as transport distance, retail, packaging, or specific farm methods are often small compared to importance of food type.

Nuts have a negative land use change figure because nut trees are currently replacing croplands; carbon is stored in the trees.

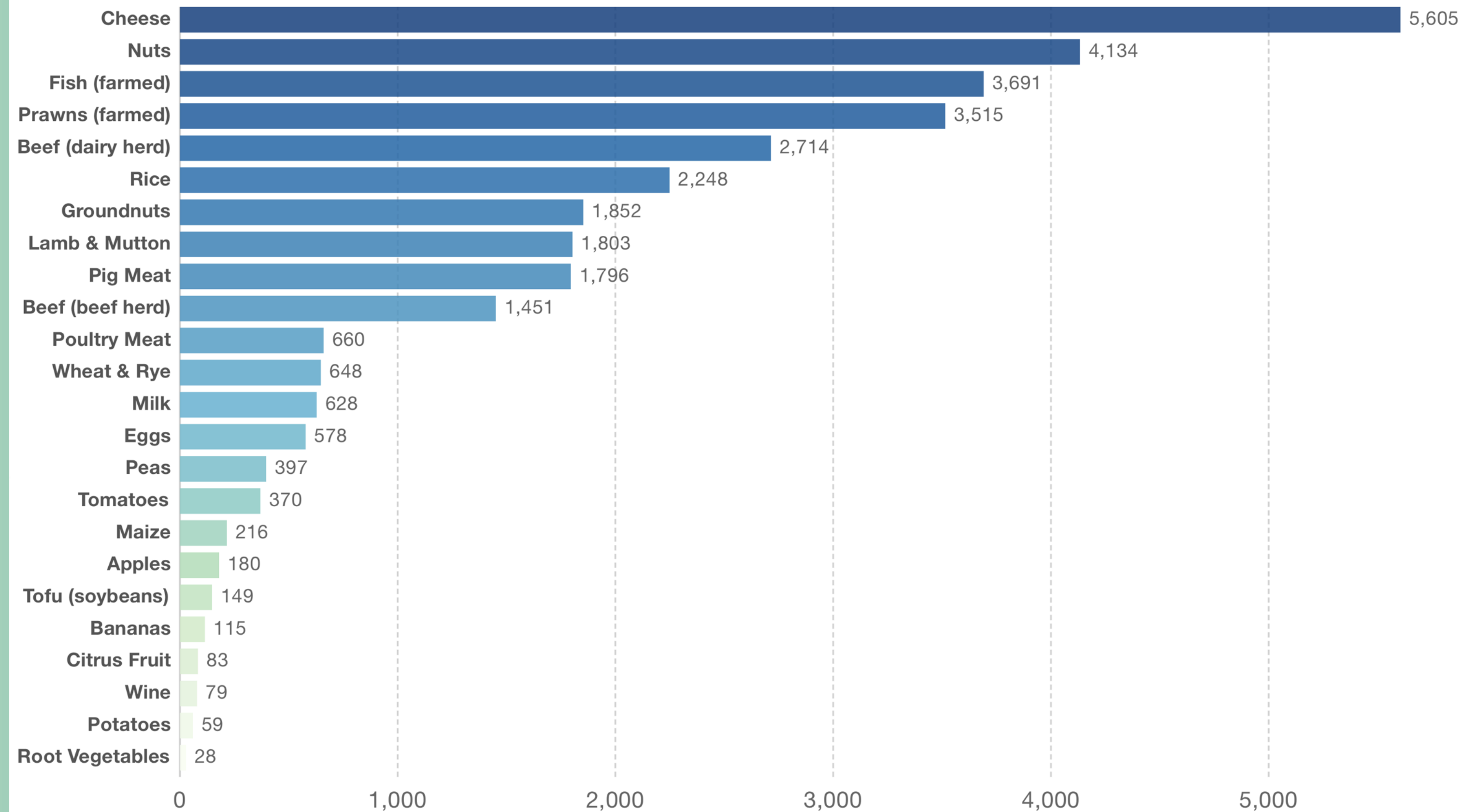
Greenhouse gas emissions per kilogram of food product (kg CO₂-equivalents per kg product)

VOEDSEL INDUSTRIE

Freshwater withdrawals per kilogram of food product

Freshwater withdrawals are measured in liters per kilogram of food product.

Our World
in Data



Source: Poore, J., & Nemecek, T. (2018). Reducing food's environmental impacts through producers and consumers. [OurWorldInData.org/environmental-impacts-of-food](https://www.ourworldindata.org/environmental-impacts-of-food) • CC BY
Note: Data represents the global average freshwater withdrawals from food products based on a large meta-analysis of food production covering 38,700 commercially viable farms in 113 countries.

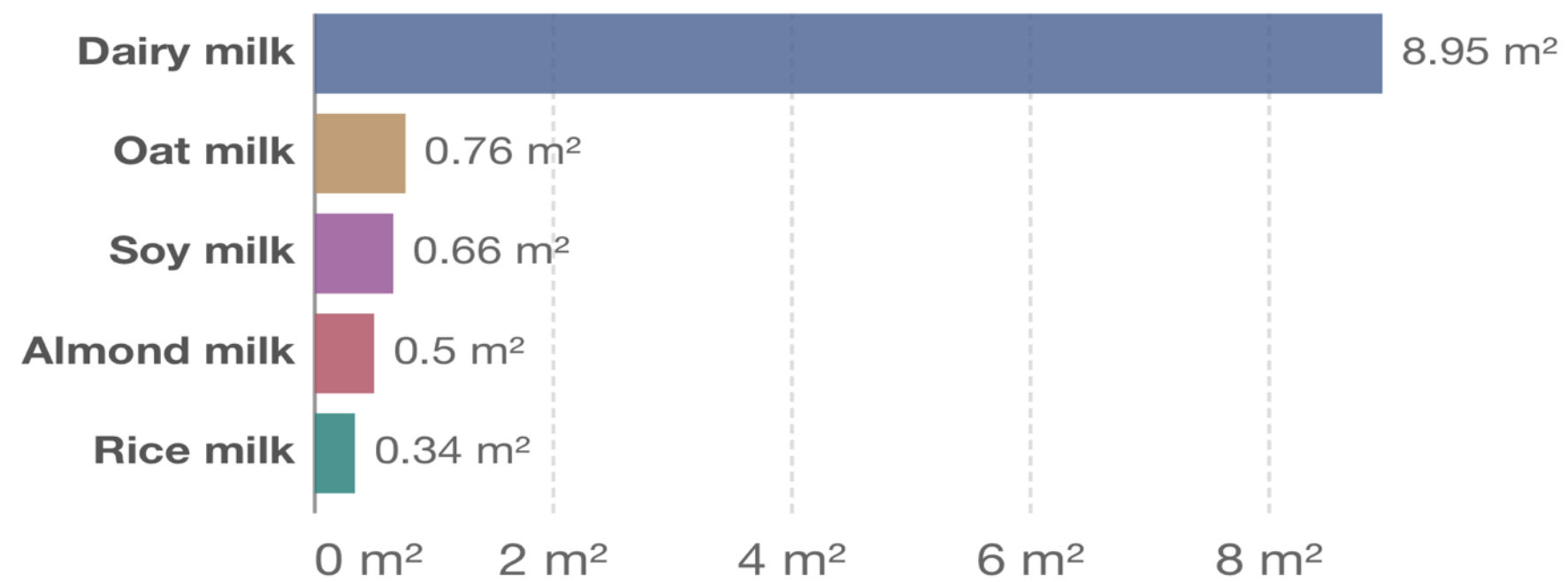
ZUIVEL INDUSTRIE

Environmental footprints of dairy and plant-based milks

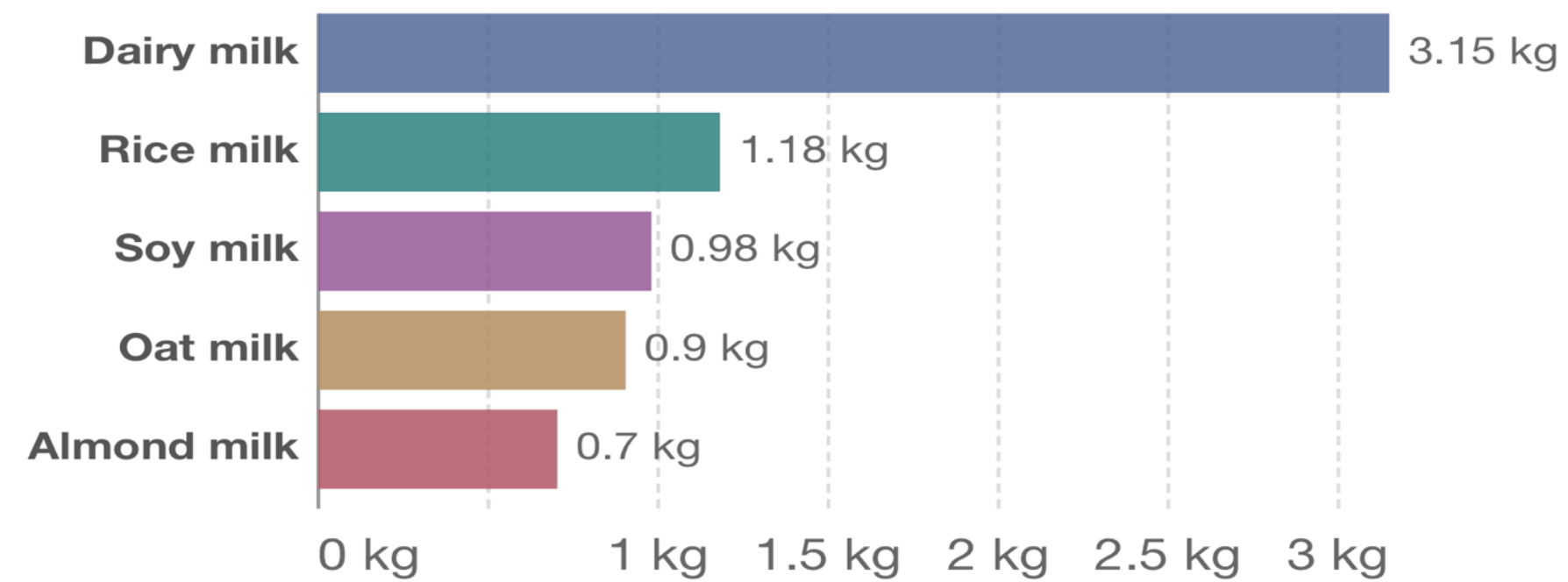
Our World
in Data

Impacts are measured per liter of milk. These are based on a meta-analysis of food system impact studies across the supply chain which includes land use change, on-farm production, processing, transport, and packaging.

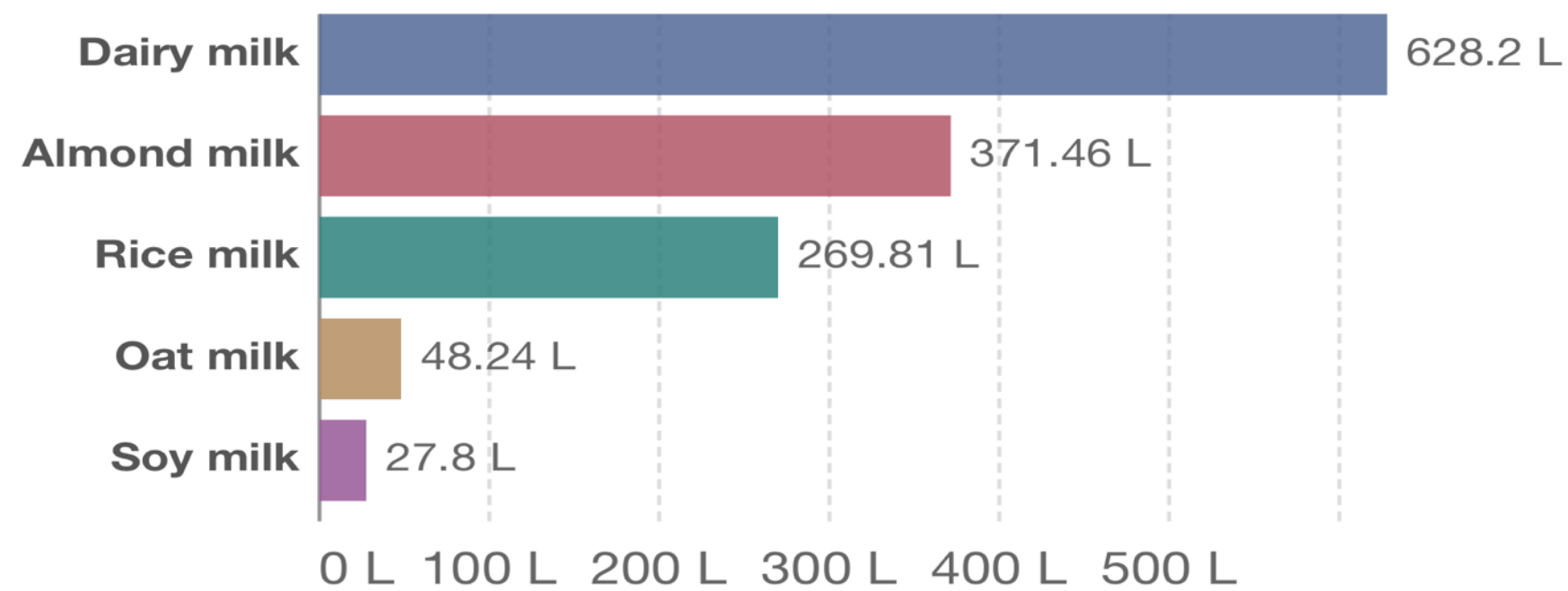
Land use



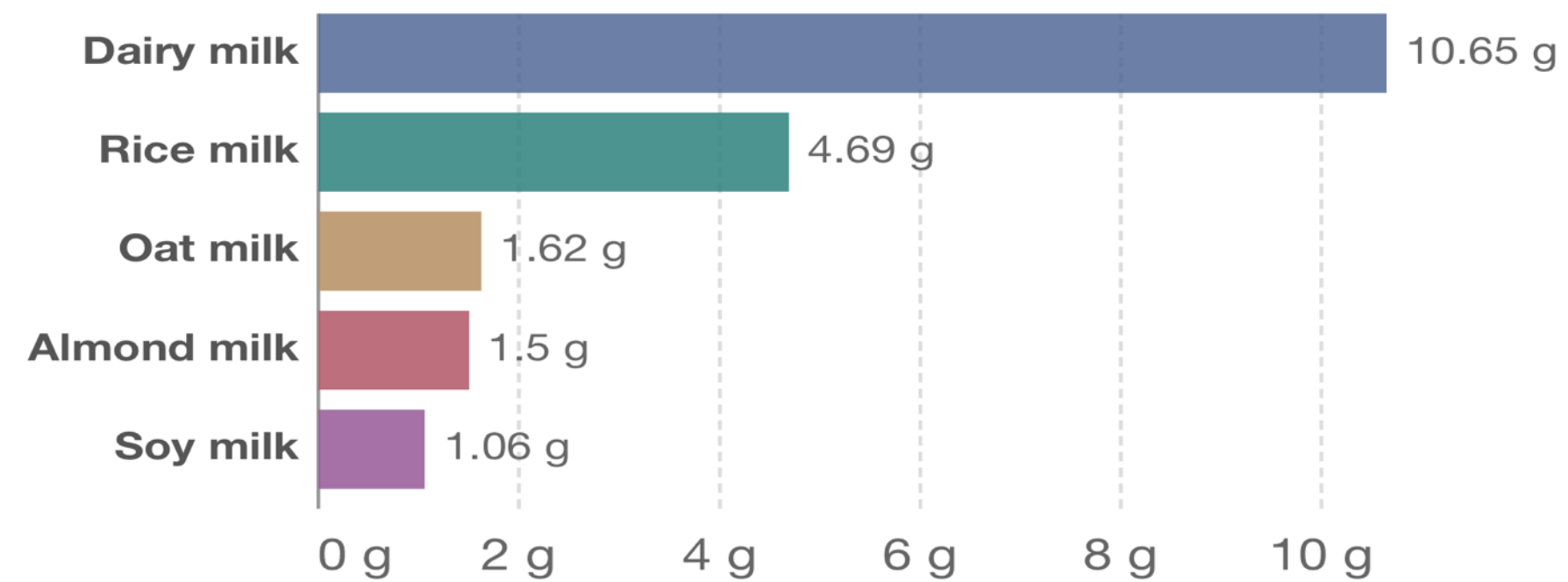
Greenhouse gas emissions



Freshwater use



Eutrophication

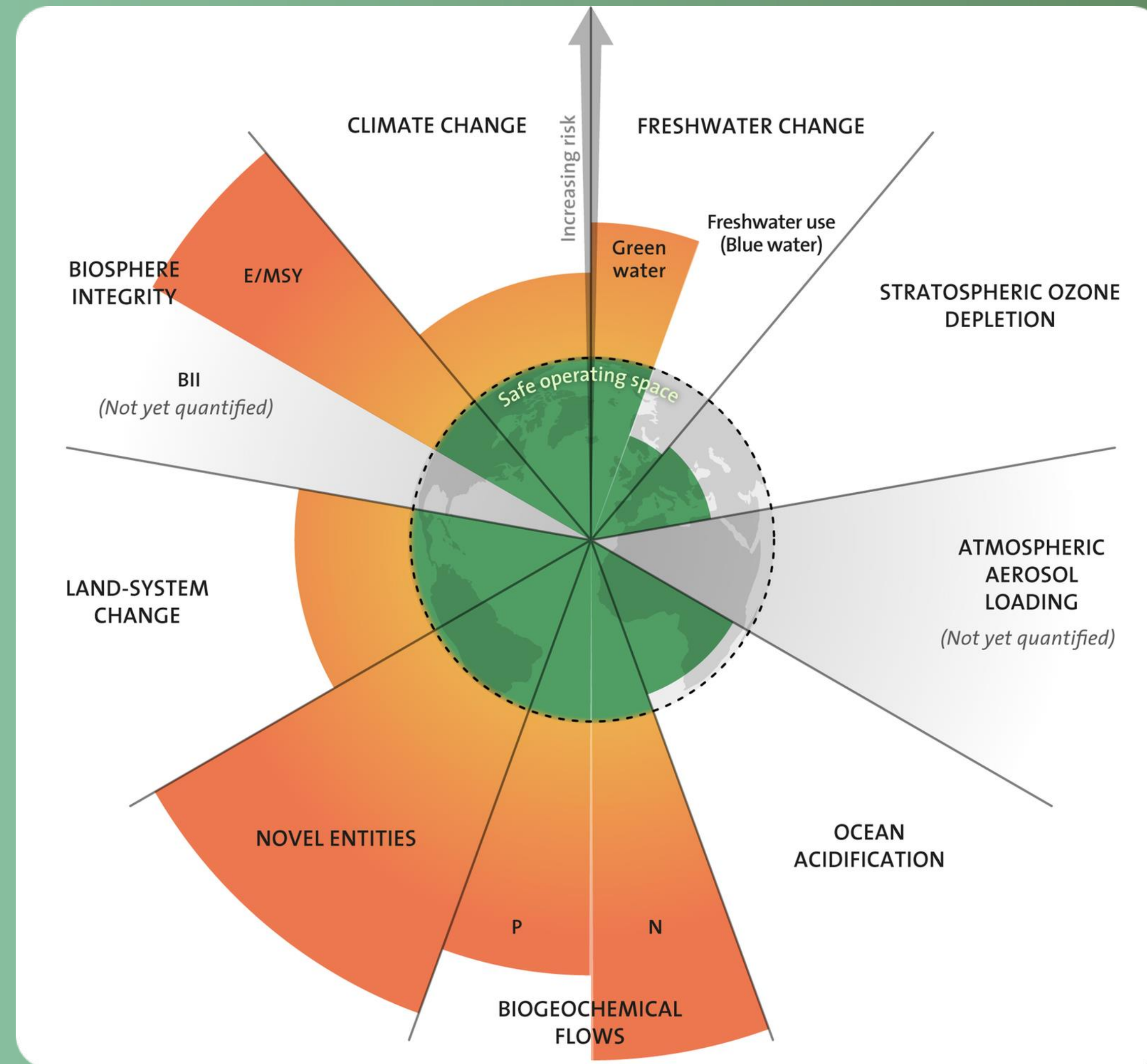


Source: Poore, J., & Nemecek, T. (2018). Reducing food's environmental impacts through producers and consumers. Science. OurWorldInData.org/environmental-impacts-of-food • CC BY

PLANETARY BOUNDARIES

Global Assessment Report on Disaster
Risk Reduction

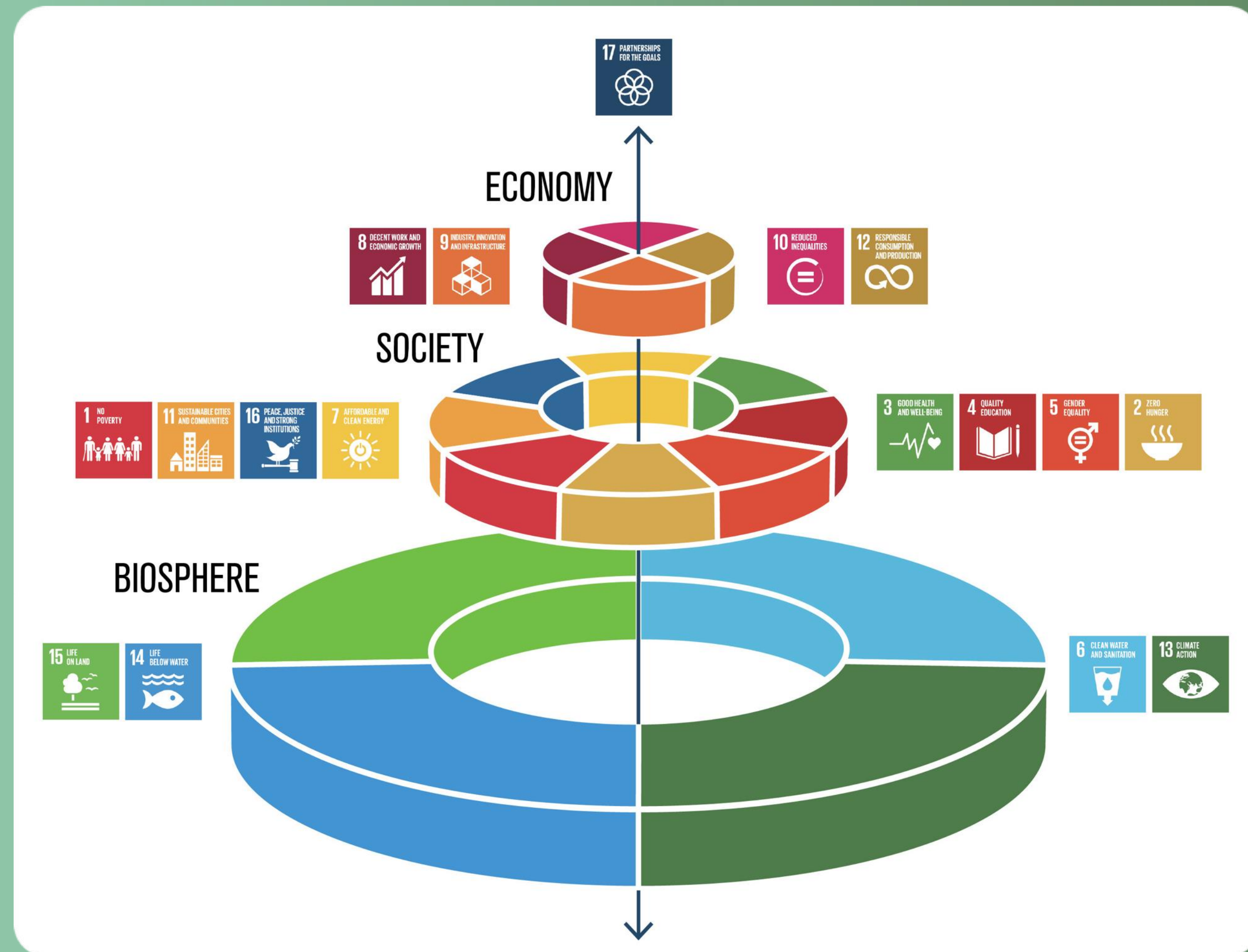
“the human material and ecological
footprint is accelerating the rate of
change. A potential impact when
systemic risks become cascading
disasters is that systems are at risk of
collapse”



BII = biosphere integrity; E/MSY = extinctions per million species per year; N = nitrogen; P = phosphorus.

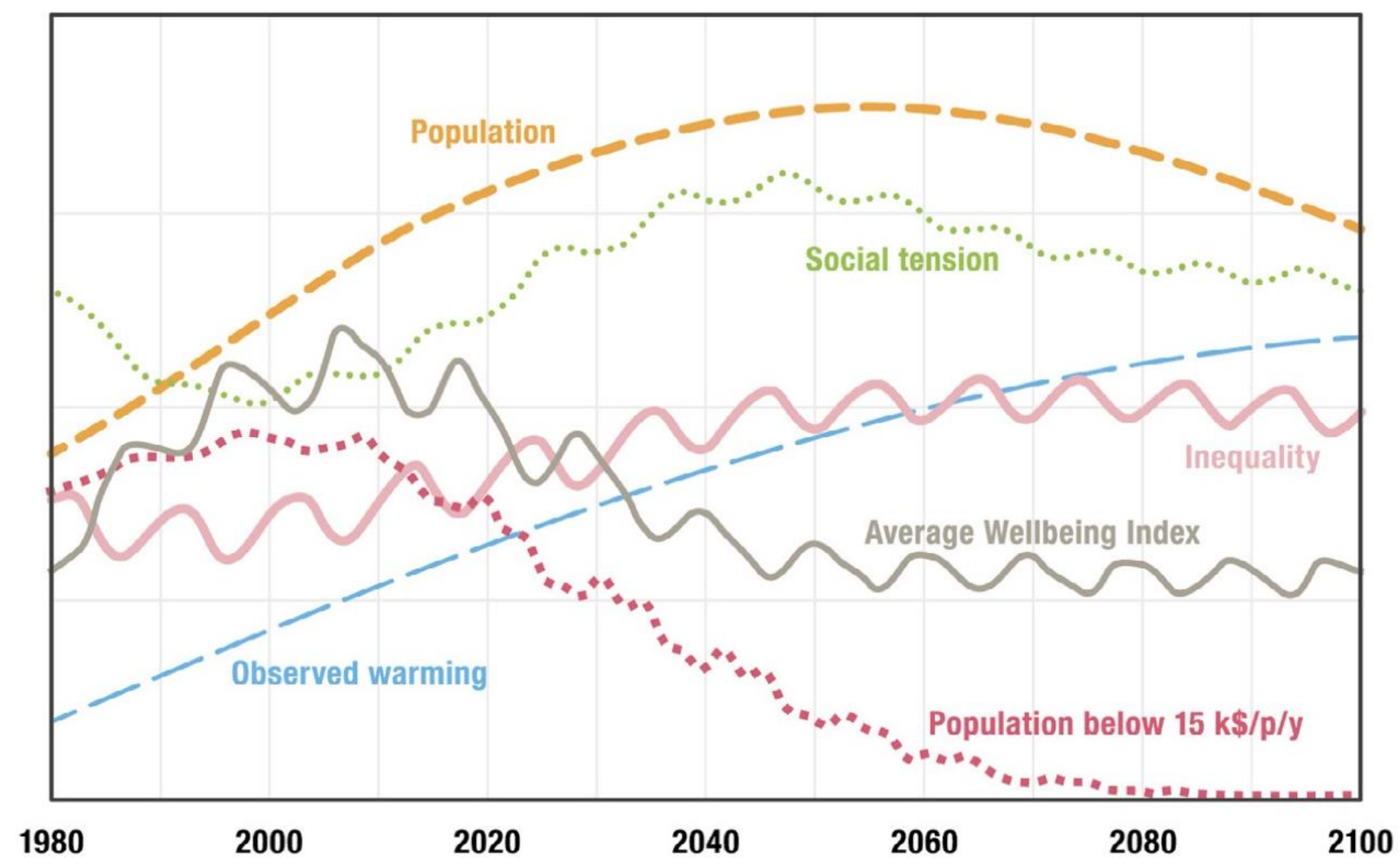
Bron:
Stockholm Resilience Center

VOEDSEL VEILIGHEID

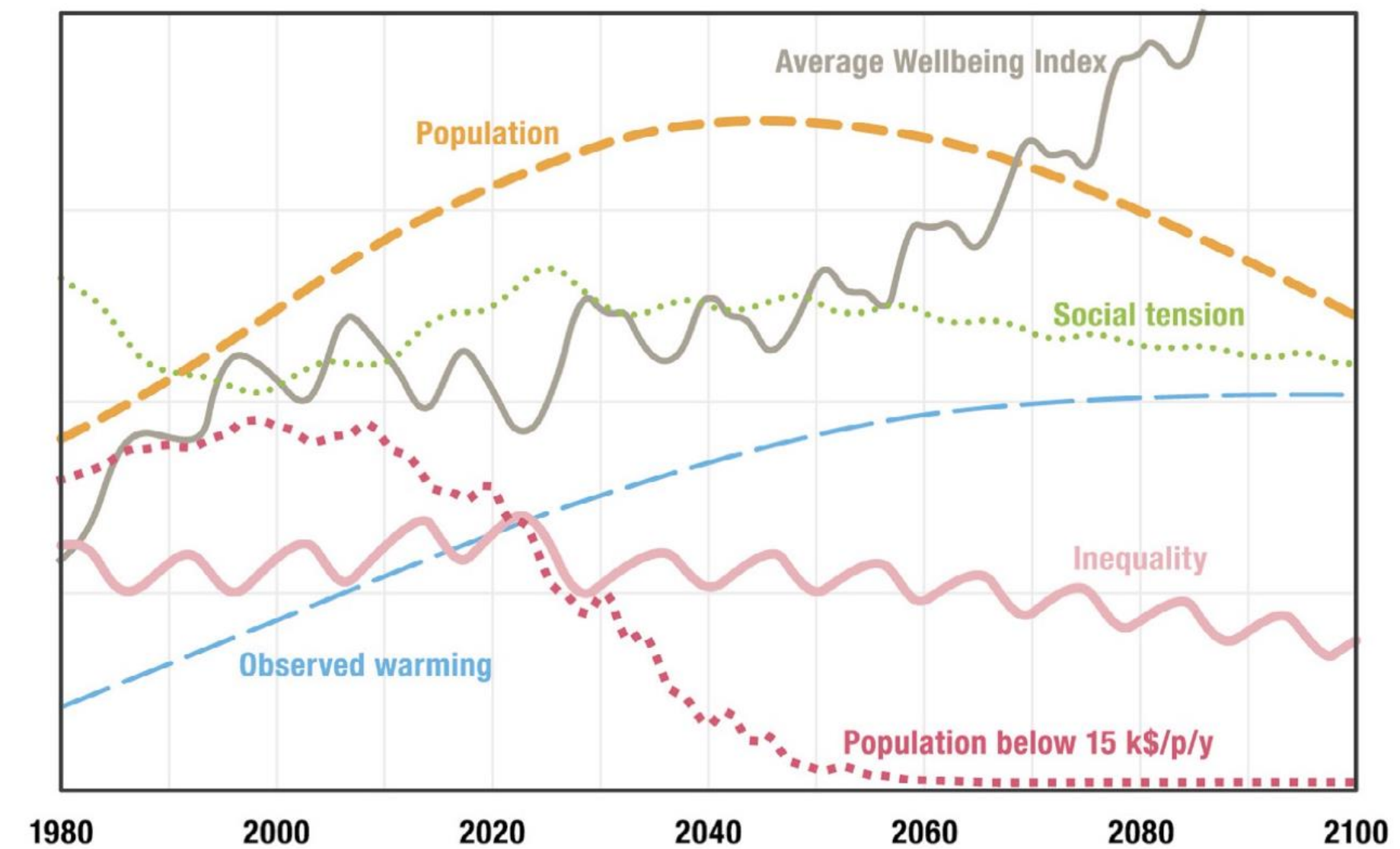


VOEDSEL VEILIGHEID

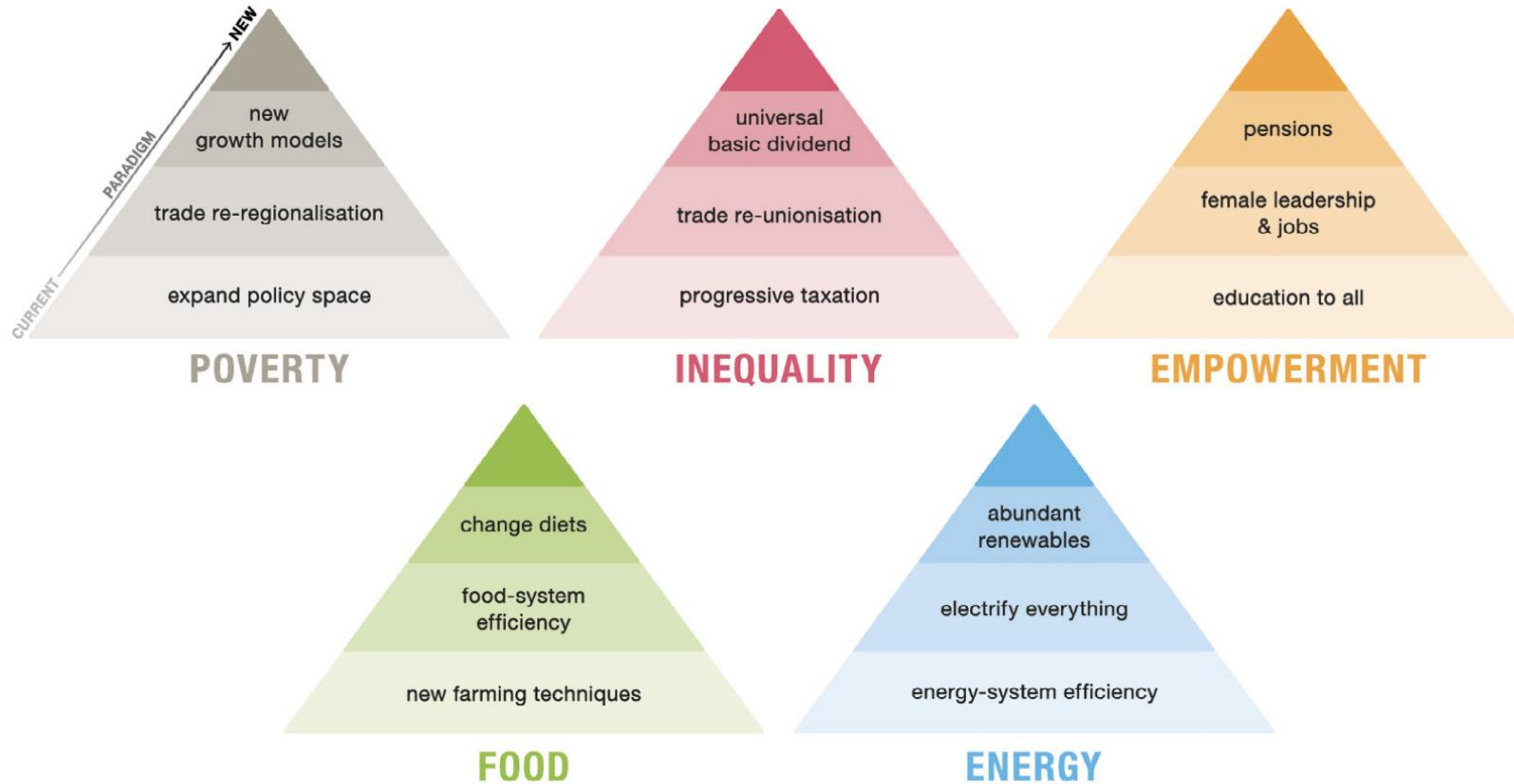
Too Little Too Late scenario



Giant Leap scenario



VOEDSEL VEILIGHEID



Food is the single strongest lever to optimize human health and environmental sustainability on Earth.









Target 1 HEALTHY DIETS

80% Plantaardig

20% Dierlijk



Target 2 SUSTAINABLE FOOD PRODUCTION

			 GHG emissions	 Cropland use	 Water use	 Nitrogen application	 Phosphorus application	 Biodiversity loss
Food production boundary			5.0 (4.7–5.4)	13 (11.0–15.0)	2.5 (1.0–4.0)	90 (65.0–140.0)	8 (6.0–16.0)	10 (1–80)
Baseline in 2010			5.2	12.6	1.8	131.8	17.9	100–1000
Production (2050)	Waste (2050)	Diet (2050)						
BAU	Full waste	BAU	9.8	21.1	3.0	199.5	27.5	1,043
BAU	Full waste	Dietary shift	5.0	21.1	3.0	191.4	25.5	1,270
BAU	Halve waste	BAU	9.2	18.2	2.6	171.0	23.2	684
BAU	Halve waste	Dietary shift	4.5	18.1	2.6	162.6	21.2	885
PROD	Full waste	BAU	8.9	14.8	2.2	187.3	25.5	206
PROD	Full waste	Dietary shift	4.5	14.8	2.2	179.5	24.1	351
PROD	Halve waste	BAU	8.3	12.7	1.9	160.1	21.5	50
PROD	Halve waste	Dietary shift	4.1	12.7	1.9	151.7	20.0	102
PROD+	Full waste	BAU	8.7	13.1	2.2	147.6	16.5	37
PROD+	Full waste	Dietary shift	4.4	12.8	2.1	140.8	15.4	34
PROD+	Halve waste	BAU	8.1	11.3	1.9	128.2	14.2	21
PROD+	Halve waste	Dietary shift	4.0	11.0	1.9	121.3	13.1	19

WAAROM VERTRAAGDE AANPAK

Onvoldoende Leiderschap.

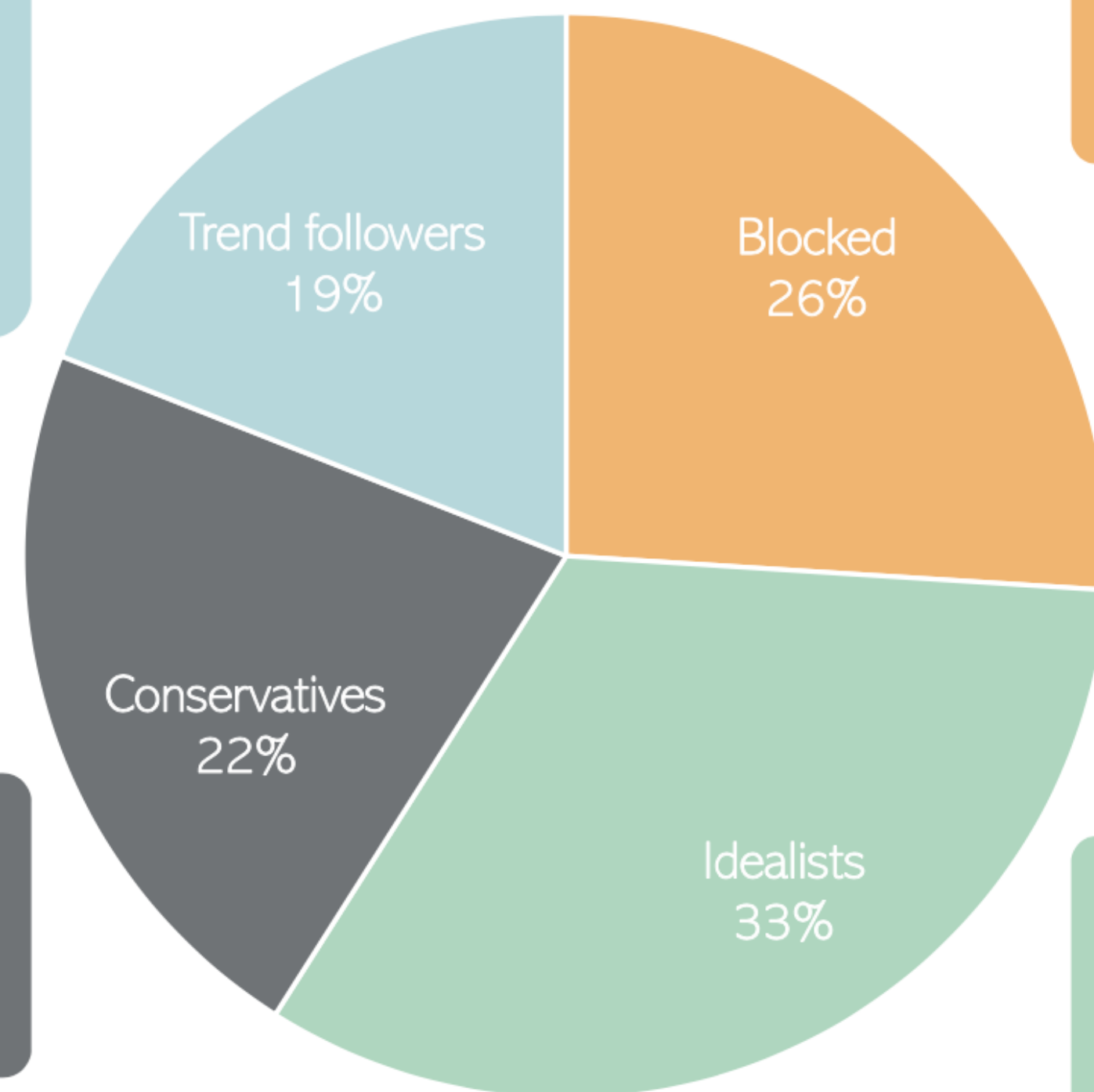
- Onvoldoende urgentie gevoel
- 'Greenwashing'
- Angst voor reactie achterban burgers / electoraat (personeel en patiënt)
- Logistiek lastig
- Duur transitie proces
- Is het wel volwaardig eten?

Onvoldoende integrale aanpak.

Druk huidige agro-complex.

KOUDWATERVREES?

Do not see as many barriers to sustainable behaviour, but are also not motivated by the climate to behave more sustainably. Are sensitive to other arguments.



Want to behave more sustainably, but experience barriers.

The different groups hardly differ in age, income and family size.

Would like everything to remain the same. Are not convinced of the need for change and do not want change.

Are concerned about the climate and act accordingly.

Future of Food report 2019



- Nieuwe cijfers TAPP coalitie en WUR laten nog meer draagvlak zien voor true pricing
- Onder embargo (april 2023)

KOUDWATERVREES?



Review

Dietary Protein and Amino Acids in Vegetarian Diets—A Review

François Mariotti ^{1,*} and Christopher D. Gardner ²

Abstract: While animal products are rich in protein, the adequacy of dietary protein intake from vegetarian/vegan diets has long been controversial. In this review, we examine the protein and amino acid intakes from vegetarian diets followed by adults in western countries and gather information in terms of adequacy for protein and amino acids requirements, using indirect and direct data to estimate nutritional status. We point out that protein-rich foods, such as traditional legumes, nuts and seeds, are sufficient to achieve full protein adequacy in adults consuming vegetarian/vegan diets, while the question of any amino acid deficiency has been substantially overstated. Our review addresses the adequacy in changes to protein patterns in people newly transitioning to vegetarian diets. We also specifically address this in older adults, where the issues linked to the protein adequacy of vegetarian diets are more complex. This contrasts with the situation in children where there are no specific concerns regarding protein adequacy because of their very high energy requirements compared to those of protein. Given the growing shifts in recommendations from nutrition health professionals for people to transition to more plant-based, whole-food diets, additional scientific evidence-based communications confirming the protein adequacy of vegetarian and vegan diets is warranted.

KOUDWATERVREES?

FROM THE ACADEMY

Position Paper



Position of the Academy of Nutrition and Dietetics: Vegetarian Diets



ABSTRACT

1
2
3
4

It is the position of the Academy of Nutrition and Dietetics that appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate, and may provide health benefits for the prevention and treatment of certain diseases. These diets are appropriate for all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, older adulthood, and for athletes. Plant-based diets are more environmentally sustainable than diets rich in animal products because they use fewer natural resources and are associated with much less environmental damage. Vegetarians and vegans are at reduced risk of certain health conditions, including ischemic heart disease, type 2 diabetes, hypertension, certain types of cancer, and obesity. Low intake of saturated fat and high intakes of vegetables, fruits, whole grains, legumes, soy products, nuts, and seeds (all rich in fiber and phytochemicals) are characteristics of vegetarian and vegan diets that produce lower total and low-density lipoprotein cholesterol levels and better serum glucose control. These factors contribute to reduction of chronic disease. Vegans need reliable sources of vitamin B-12, such as fortified foods or supplements.

J Acad Nutr Diet. 2016;116:1970-1980.

POSITION STATEMENT

It is the position of the Academy of Nutrition and Dietetics that appropriately planned vegetarian, including vegan, diets are healthful, nutritionally adequate, and may provide health benefits in the prevention and treatment of certain diseases. These diets are appropriate for all stages of the life cycle, including pregnancy, lactation, infancy, childhood, adolescence, older adulthood, and for athletes. Plant-based diets are more environmentally sustainable than diets rich in animal products because they use fewer natural resources and are associated with much less environmental damage.

Bron: Eat Right

EAT LANCET YES

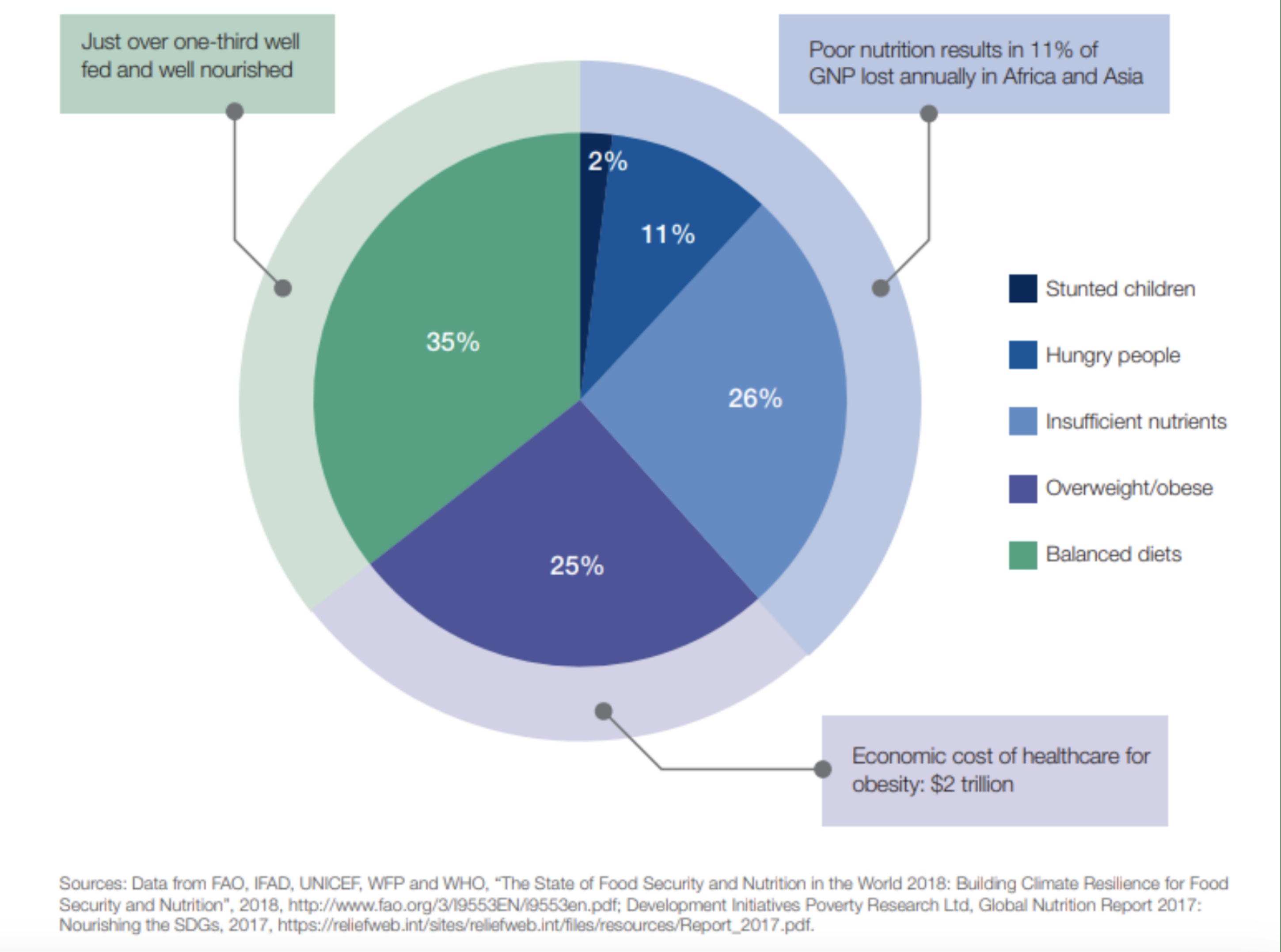
Affordability of the EAT-Lancet reference diet: a global analysis

Kalle Hirvonen, Yan Bai, Derek Headey, William A Masters



- Meer dan 2,5 miljard mensen wereldwijd lijden aan ten minste één vorm van ondervoeding.
- Ongeveer 800 miljoen mensen zijn ondervoed.
- Ongeveer 40 miljoen worden met de hongerdood bedreigd.
- Ongeveer 2 miljard volwassenen hebben overgewicht of obesitas.
- Meer dan 2 miljard mensen hebben een tekort aan micronutriënten.

EAT LANCET YES



AANPAK VOOR MENS, DIER EN NATUUR

In een hoofdzakelijk plantaardige voedsel systeem is er:

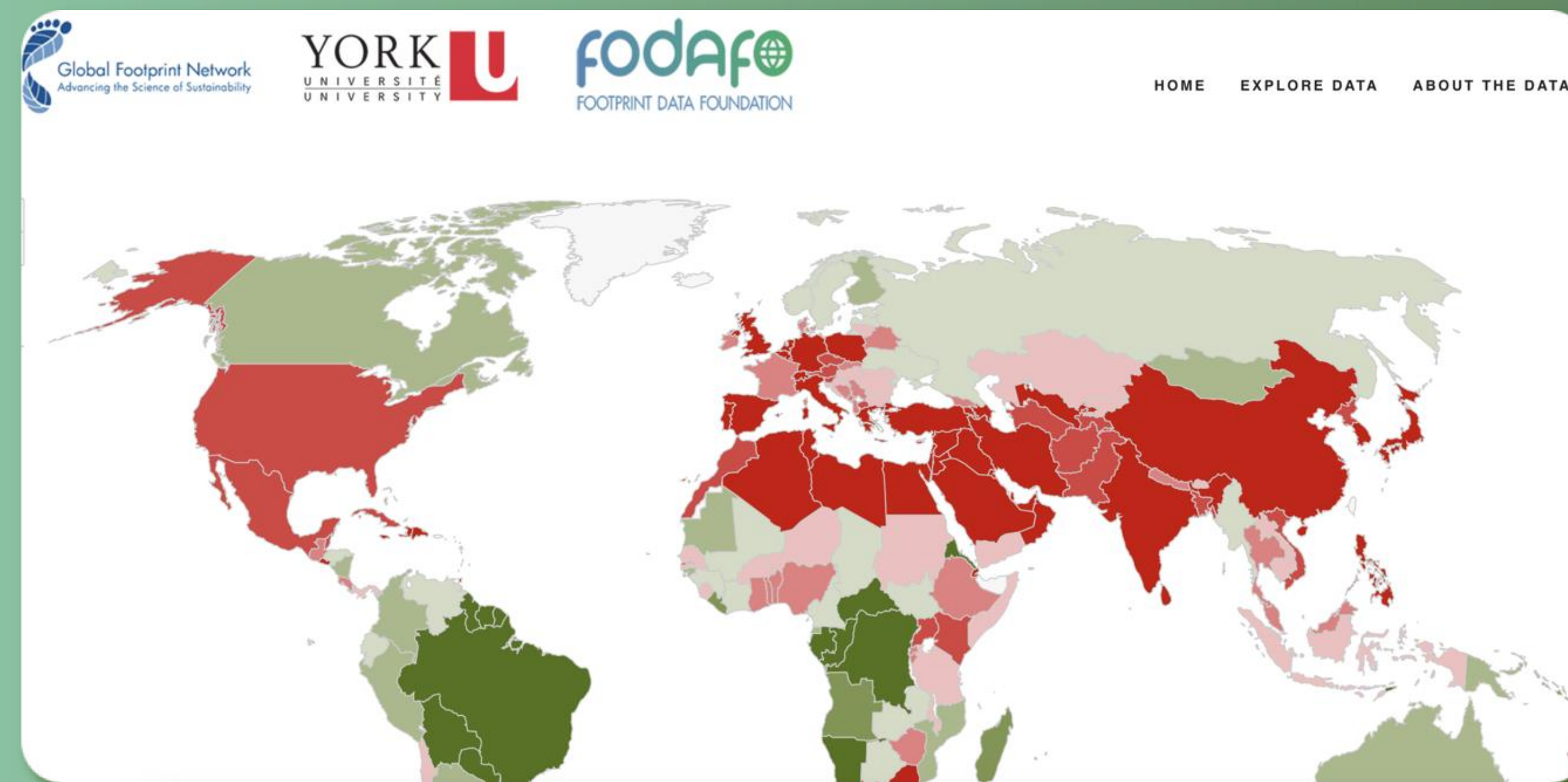
- Minder gezondheidsschade door welvaartsziekten
- Minder klimaatschade
- Meer voedselveiligheid voor 10 miljard mensen

Let's Start Now!

BRONNEN EAT LANCET



Harvard University



<https://www.footprintcalculator.org/home/en>