Why our global food system needs to change

Impact on health

Overweight & obesity
Adults **39%**
Children **18%**

1 in 10 globally go **hungry**

Our current **eating habits** responsible for **22%** (**11 million**) **deaths**

32% all **deaths** caused by **CVD**
523 million living with **CVD**
438 million living with **T2D**

2 billion micronutrient deficient
Fruit & veg intakes: **267g/d**
VS WHO recommended 400g/d
Fibre intakes <20g pppd
30% consume **saturated fat in excess**

Impact on environment

Our food system is responsible for **34% GHG emissions**

Agriculture =
Single biggest driver of **biodiversity loss**
Livestock outweigh wild animals by **15 to 1**

70% of **fresh water** is used for agriculture
15 tonnes water to produce **1kg beef**

Over **50%** of **habitable land** used for agriculture

Excessive fertiliser use
Disrupts natural nitrogen & phosphorus flows
Releases **nitrous oxide GHG** into the atmosphere
Cause **eutrophication** of **78%** of **oceans** → dead zones

32% of **ocean acidification** resulting in loss of coral reefs

Food waste = **7% food system GHG** emissions
Each year = **1.3 billion** tonnes
One third food produced

alpro foundation
knowledge in plant-based nutrition

Why our food system needs to change

HEALTH

The global obesity epidemic[1]

- 39% adults are overweight – 13% of which are obese
- 18% of children are overweight – of which 6-8% are obese

In Europe

- 53% of adults are overweight or obese[2]
- 14% boys and 10% girls aged 7-8 are overweight or obese[3]

Globally, our current eating habits are responsible for[6]

- 11 million adult deaths = ~22% of total deaths
- 255 million life years lost due to ill-health, disability or premature death (DALYs)
- **In Europe:** 45-59% of DALYs due to heart disease, stroke, diabetes and colorectal cancer[7]

Non-communicable diseases[10]

- Cardiovascular disease (CVD) is the biggest killer globally - 32% of all deaths
  - In Europe, 37% of all deaths are due to CVD
- 523 million (7%) people globally living with CVD
  - In Europe, 60 million (12%)
- 438 million (6%) people globally living with type II diabetes
  - In Europe: 10.6% (52 million) adults aged over 25

Nutrient imbalance

- 2 billion individuals globally with micronutrient deficiencies[12]
- Global average intakes of fruit and vegetables does not meet recommended intakes[6]
  - Average global intake @ 267g pppd vs WHO recommendations of 400g pppd
  - 86% European population consume <5 portions daily[13]
  - 34% of Europeans do not consume fruit and vegetables on a daily basis[13]
- ~90% global population exceeding WHO salt intake recommendations[14,15]
- >30% of the global population and the majority of Europeans consume saturated fat in excess to recommendations (>10% total energy)[16,17]
- Average global fibre intakes <20g per day[18,19]
  - Whole grain intakes below optimal for health[6]

Global hunger and food insecurity[21]

- 1 in 10 people globally go hungry
- 1 in 3 do not have adequate food

ENVIRONMENT

Climate change

- Food system is responsible for 34% of global greenhouse gas emissions[4]
  - 57% attributable to livestock and animal food production vs 29% for plant food production. Much of this is due methane production, fertilizer use and land use change[5]

Land use change

- Over 50% of habitable land globally is used for agriculture[8]
- Agriculture is the single biggest driver of deforestation (90%)[9]
- Conversion of natural land and forest to pasture and crop land destroys natural carbon sinks and contributes to loss of biodiversity

Fresh water use[11]

- 70% of fresh water withdrawals are used for agriculture
- It takes 15 tonnes of water to produce 1kg of beef

Nitrogen & phosphorus flows[20]

- Fertiliser use has increased 9-fold since 1960s to keep up with our high demand for high volume foods
- Biggest culprit is our current and growing meat consumption which requires a high volume of fodder which in turn requires larger crop yields achieved only through higher fertilizer use
- Excessive fertiliser use disrupts natural N and P flows
- Excess nitrogen use increases nitrous oxide – one of the most potent GHGs in the atmosphere
- Fertiliser run offs pollute water ways and are the main drivers of eutrophication (pollution of our waterways and oceans)
- If we used agriculture land to grow more legumes we would not need to use as much fertilizer. Legumes help transfer atmospheric nitrogen into the ground to act as fertilizer (Nitrogen fixing)

Ocean acidification & eutrophication[22]

- 32% of ocean acidification is due to carbon dioxide (GHG) absorption from the atmosphere – resulting in loss of coral reefs and inability for some marine life to form outer shells and skeletons
- 78% of eutrophication of oceans and lakes forming dead zones are due to N and P fertilizer and animal waste run offs

Biodiversity loss[23,24]

- Agriculture is the single biggest driver of biodiversity loss
  - Global rate of species extinction is at least tens if not hundreds of times higher than the average rate over the past 10 million years
- Natural habitats lost as land converted to grazing or crop land, oceans are over-fished, and soil and waterways are polluted
- Livestock now outweigh wild animals by 15 to 1
- 30% of fisheries are over-fished[20]

Food waste[25,26]

- Contributes 6-7% of global food system GHG emissions
- 1.3 billion tonnes food wasted each year – from farm to fork
- Represents one third of food produced
  - Wasting land use and loss of carbon sink, excess N & P fertilizer use polluting oceans and soil and wasteful use of scarce water supplies
- Decomposing organic matter releases methane, a highly potent GHG

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