



## Overweight & obesity

Adults **39%**  
Children **18%**



**1 in 10** globally  
go **hungry**



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



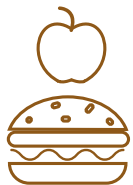
**70%** of **fresh water**  
is used for agriculture  
**15 tonnes water** to  
produce **1kg beef**



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**



**Agriculture =**  
**Single biggest driver**  
of **biodiversity loss**

Livestock outweigh  
wild animals by **15 to 1**



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

Why our  
global  
food system  
needs to  
change

Impact on health

Impact on environment

**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**

# Why our food system needs to change

## HEALTH

### The global obesity epidemic<sup>1</sup>

- 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<sup>2</sup>
- 14% boys and 10% girls aged 7-8 are overweight or obese<sup>3</sup>

### Globally, our current eating habits are responsible for<sup>6</sup>

- 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<sup>7</sup>

### Non-communicable diseases<sup>10</sup>

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

### Global hunger and food insecurity<sup>21</sup>

- 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<sup>4</sup>
  - 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<sup>5</sup>

### Land use change

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

### Fresh water use<sup>11</sup>

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

### Nitrogen & phosphorus flows<sup>20</sup>

- 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<sup>22</sup>

- 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<sup>23,24</sup>

- 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<sup>20</sup>

### Food waste<sup>25,26</sup>

- 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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