Meat & Health
Health impacts described refer to the situation today: not to possible alternative production & consumption scenarios.

These slides explore the main connections between meat production & consumption in Europe and public health.

Slides are an invitation for further debate, research & informed action.

They are based on a paper that aims at a balanced & evidence-informed treatment of the topic.

However: it’s not an academic literature review and not exhaustive. Slides explore connections, providing no recommendations.
Nutrition
Zoonotic diseases (food borne and non-food borne)
Antimicrobial resistance
Air quality
Climate change
Nature & biodiversity
Occupational factors
Socio-economic factors
Positive impacts
Non-communicable diseases (NCDs)
Communicable diseases
Injuries
75% of new or emerging infectious diseases (zoonotic origin)

Zoonotic Diseases

Infectious disease transferred from non-human animals to humans

Agricultural drivers (e.g., biodiversity loss) have been associated with over 50% of zoonotic infectious diseases in humans globally since 1940.

High-density animal farming systems can act as "laboratories" for new zoonotic diseases & increase the risk of severe contamination events

Animal food: responsible for most 'food safety' outbreaks in Europe.

Food borne (e.g., Campylobacter, Salmonella, E. coli)

Non food-borne (e.g., SARS, Swine flu, Avian influenza, Q-fever)
**Problem:**

**Causes:**
- Human medicine: Likely cause #1
- Antibiotics overuse in high-density animal farming systems
- Resistance between animals & humans: Transmitted by (1) direct contact, (2) food chain, (3) environment

**AMR**

- Antimicrobial resistance threatens the effective treatment of infections & endangers critical healthcare interventions—from surgeries to chemotherapy.
- Bacteria resistant to antibiotics kill at least 33,000 people in Europe each year.
- Left unaddressed, 10 million people may die of AMR globally by 2050.

**Solutions:**

- Limiting antibiotics use probably the most long-term way to reduce resistance
- Production systems based on animal welfare are promising solutions
AIR POLLUTION IS EUROPE’S #1 HEALTH RISK

PARTICULATE MATTER POLLUTION STANDS OUT

AMMONIA (NH₃) CONTRIBUTES TO PM₂.₅ FORMATION

ESTIMATES VARY...

BUT SOME FIND NH₃ TO BE THE LARGEST RELATIVE CONTRIBUTOR TO PM₂.₅ FORMATION IN EUROPE.

OVER 90% OF NH₃ IN EUROPE IS EMITTED BY AGRICULTURE

ANIMAL FARMING

FERTILISER USE

NEARLY 380,000 PREMATURE DEATHS IN EUROPE IN 2018
CLIMATE CHANGE

Future?

Impacts may be incomparably greater, deeply affecting natural conditions & social dynamics.

Meat & other animal foods: 14.5% of all emissions.

Global food systems: 21.37% of total greenhouse emissions.

Already impacting Europe & contributing to its burden of disease...
- Heat related deaths
- Floods
- Infectious illnesses
- Mental ill-health
- Health inequalities

Contribution of animal sourced foods to European total emissions appears equivalent to global emissions.
Biodiversity Loss

Today: A staggering loss of biodiversity & ecosystem services decline globally & in Europe. Do we have adequate metrics to capture the full health impacts?

Primary driver of biodiversity loss & ecosystem services decline: Agriculture

Main contributor to biodiversity loss in Europe: Animal production

Import of deforestation through e.g., animal feed.

Agrochemicals use (feed production)

Pollinator decline

Soil degradation

Especially through:
- Land use
- Land use change
- Pollution

New medicinal products

Mental health

Non-communicable diseases/infectious diseases

Permanent grasslands with grazing ruminants can have positive biodiversity effects

Planetary health: Human health & human civilization depend on flourishing natural systems

Climate regulation

Water quality & availability

Food security
Growing up on a farm is associated with lower asthma & allergies.

Work in food & agriculture can be...

- Highly satisfying
- Part of a cherished socio-cultural identity & 'way of life'
- An occupational profession
- A risky profession
- Exposure to agrochemicals
- Musculoskeletal disorders
- Respiratory disease
- Risk of AMR
- Mental ill-health
- Precarious conditions for food workers (e.g. in slaughterhouses, migrant labour...)
SOCIO-ECONOMIC FACTORS

Citizen-consumers

HIGH QUALITY (& COST)

- Differences in socio-economic status: differences in consumption patterns of animal sourced foods
- Gender
- Social protection
- Education
- Employment
- Income

PEOPLE EXPOSED TO SOCIO-ECONOMIC VULNERABILITIES:

- Disproportionately burdened by ill-health - including diet-related

WEALTH-OF

SOCIO-ECONOMIC CONDITIONS

MEAT CONSUMPTION OFTEN INTERLINKED WITH SOCIO-CULTURAL IDENTITIES

STRAIGHTLY INFLUENCE HEALTH

POVERTY

EU 20% of people at risk of poverty & social exclusion

11% unable to afford a nutritious meal every 2nd day!

LOW QUALITY (& COST)
Socio-economic influences (Producers)

- Contributing to health & well-being
- Social status
- Income
- Employment

Providing:

- Meat products feature high among the top value foods in the food economy
- Animal production represents a major part of the food economy

Long-term squeeze on profits

Low wages & unattractive conditions in meat processing

But not all is well in the farm economy: no fair standard of living for all

New entry rates are low

Employment & farm numbers declining

Large disparities in incomes
Creating co-benefits transition pathways

Need to formulate an answer to all food-health dimensions, without shortcuts!

Involving many groups & issues takes time & is more difficult but promising for robust, long-term change.

Transition towards healthy food systems ⇒ explore pathways that maximise sustainability co-benefits

But!

Need to recognize & deal with trade-offs: not every co-benefit can always be maximised, and not everyone can always win.
These slides are based on the paper: “Meat Production & Consumption (in Europe) and Public Health. An exploration.” (2021)

Prepared as input to the “Healthy Food Healthy Planet” initiative.
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*Responsibility for content is only with the author.*

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