



Impact of Livestock Production on Climate Change and Pandemics



Dr. Patrick Muinde – Research Manager
@MoveTheWorldAF
PatrickMuinde@worldanimalprotection.org

Our work



Strategy
2021-2030

1. Transform global
food systems

2. End commercial
wildlife exploitation





Introduction

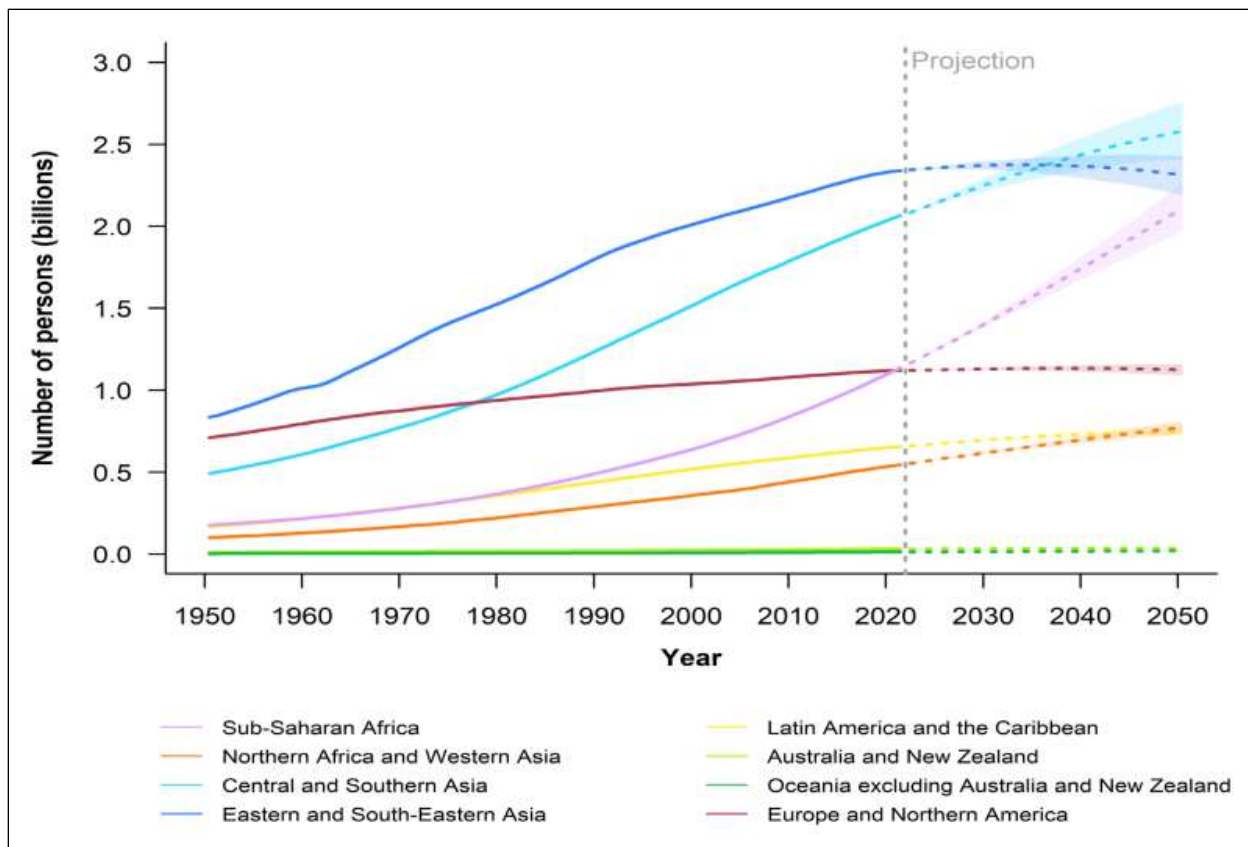
Livestock production plays a very important role

- Livelihood (sale of live animals and products, employment)
- Nutrient/food security (these are proteins = contain essential amino acids for our diets)
- Social uses (dowry payment, identity).

Ruminant production – dominant, with monogastric growing

- High potential areas – smallholder mixed crop-livestock farming.

↑ Human population = ↑ ASFs demand



Source: World Population prospects 2022.

Urbanization, increased income

Milk consumption is expected to triple in sub-Saharan African region by 2050

Consumption of poultry and pork products is projected to more than double

Africa per capita meat consumption current 14 kg to 26kg by 2050

What is an industrial livestock farm?



Commonly referred to as factory farming

High-intensive methods are incorporated

A quick way to produce maximally, within the shortest time possible

High dependence on inputs – feeds = fertilizer, pesticides

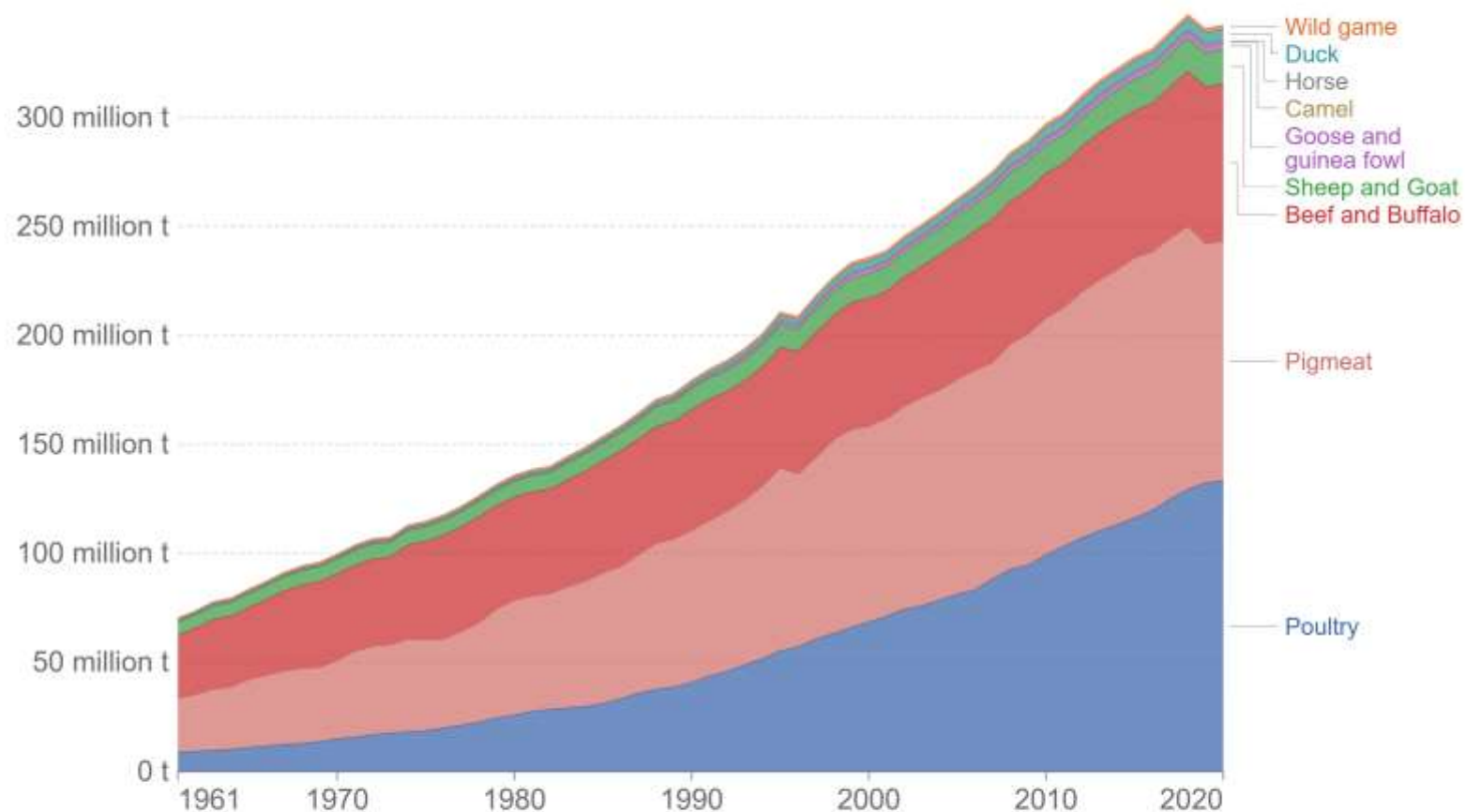
Of the 80 billion animals raised, most (75%) are in such systems



↑ Meat production globally

Meat production by livestock type, World, 1961 to 2020

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in Data



Source: UN Food and Agricultural Organization (FAO)

OurWorldInData.org/meat-production • CC BY

Note: Total meat production includes both commercial and farm slaughter. Data are given in terms of dressed carcass weight, excluding offal and slaughter fats.

Africa - 30% of Agricultural GDP

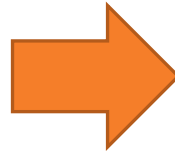
- 2.1 billion chickens (7%)
- 490 million goats (35%)
- 420 million sheep (38%)
- 371 million cattle (15%)
- 44 million pigs (4%)
- Dominated by small and medium scale – produce 60%
- Mainly mixed crop- livestock systems



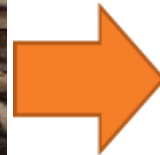
Integrated production systems



Is shift happening?



Is shift happening?



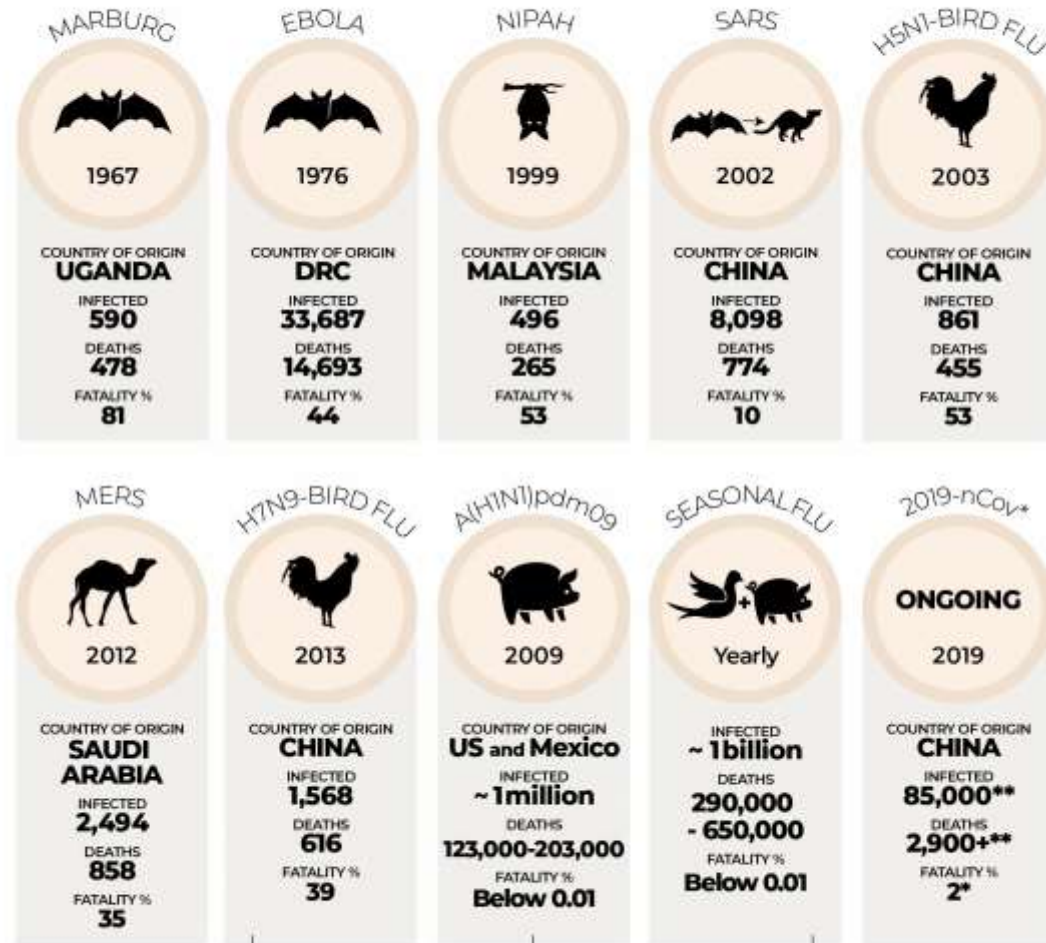
What is hidden impact in this shift?

- Harbor the necessary factors to produce future pandemics, zoonosis
- Contribute to antibiotic resistance
- Causes more pressure on nature; contribute to climate change crisis
- Animal suffering = clogs of machines



GLOBAL OUTBREAKS

Worst epidemics in recent history



*Origins yet to be determined

**These figures are as of March 1, 2020

Source: WHO | Last updated: 9:30 GMT, March 1, 2020



A risk factor of pandemics and zoonosis

- Avian Influenza and Swine flu are typically associated with factory farming
- COVID is a trend of emerging zoonosis
- Drivers of this trend are climate change and increased demand for meat

Contribute to AMR

Livestock: In 2010, antibiotic use in livestock was estimated at 63,151 tons. Projected global rise by 67% by 2030

Humans: Consumption in humans increased by 65% between 2000 and 2015 (6% in high income countries and **114% in LMICs**)



Source: Center for Disease Dynamics, Economics & Policy



How will post-antibiotic era look?

When & where common infections and minor injuries can kill?

This is real possibility for the 21st century



Climate change

It is long term shift in weather patterns (temp. and rainfall)

- Associated with increase in human-related greenhouse gas emissions in the atmosphere
- More frequent, more intense extreme weather events happening globally

Climate crisis of our time



What are the environmental impacts of food and agriculture?

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Greenhouse Gases
26% of global
greenhouse gas emissions



Land Use
50% of global habitable
(ice and desert-free) land



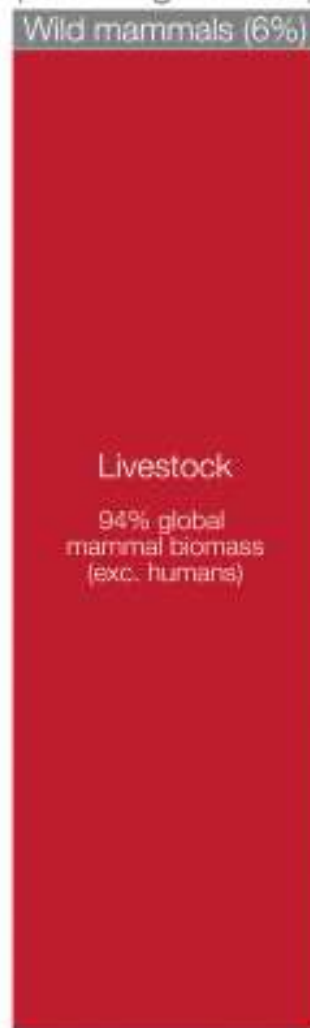
Freshwater Use
70% of global
freshwater withdrawals



Eutrophication
78% of global ocean
& freshwater pollution

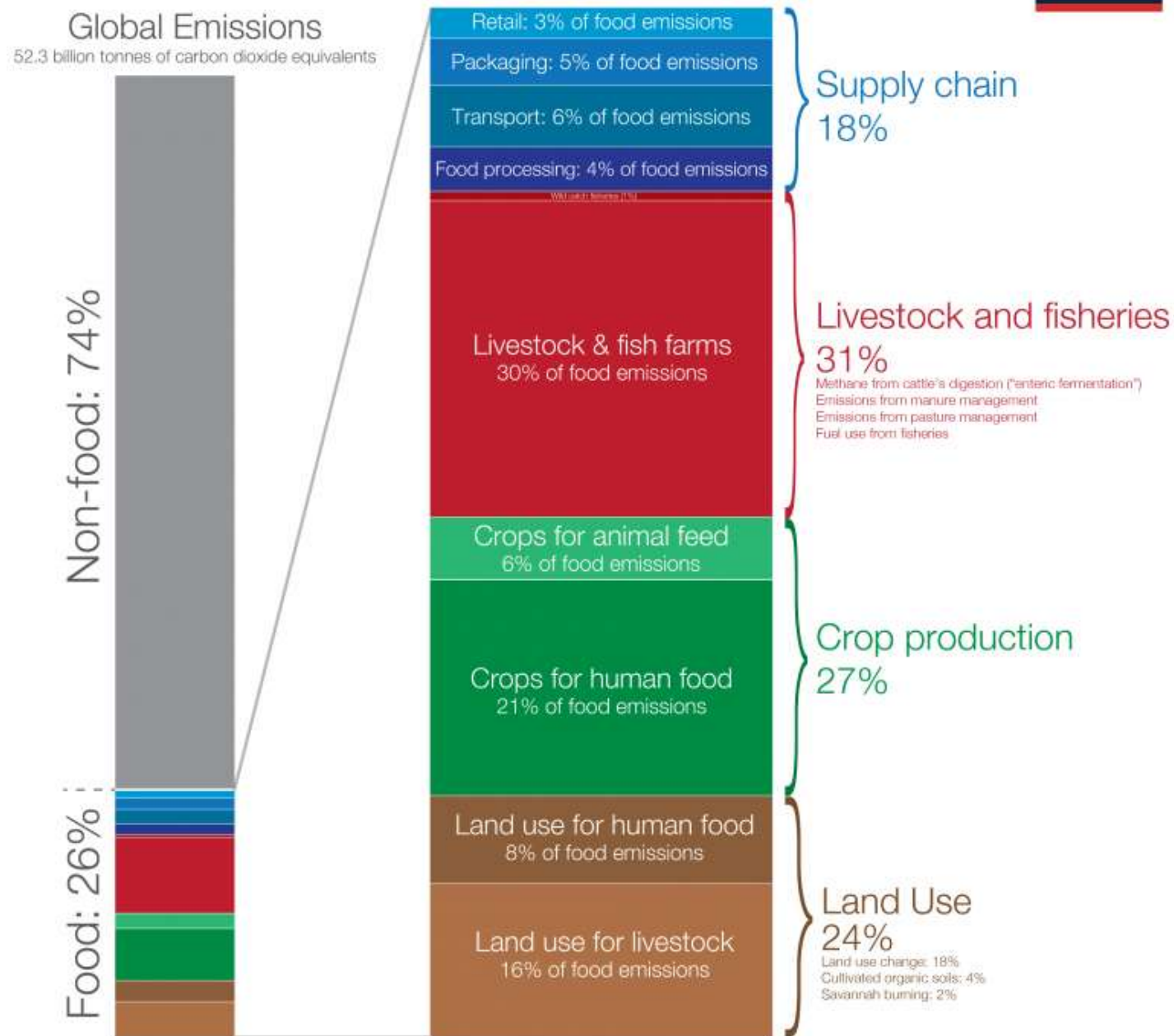


Biodiversity
94% mammal biomass
(excluding humans)



Global greenhouse gas emissions from food production

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Climate change

- GHG emissions from African systems are low compared to systems from the global North because of: Smaller animals, Low concentrate feeding and Low manure emissions
- Despite Africa being home for 15% of global cattle population (3% of milk production), accounts for 6% - ruminant emissions.



Brazil, Case example



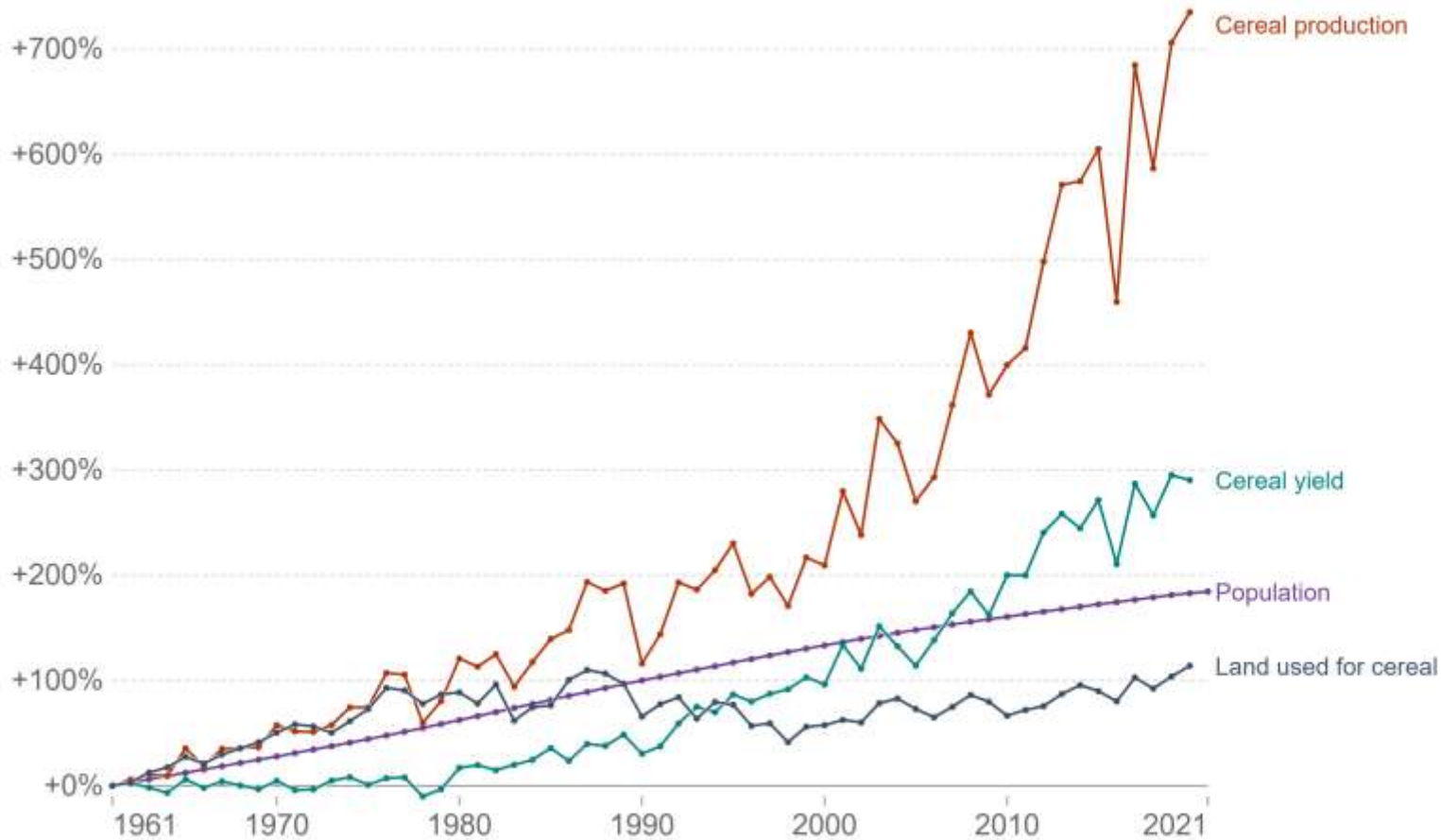
Brazil, Case example



Change in cereal production, yield and land use, Brazil, 1961 to 2021

Population and cereal production, yield and land use figures are indexed to the year 1961 (i.e. 1961 = 0).

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Source: Our World in Data based on World Bank, Food and Agriculture Organization of the United Nations
OurWorldInData.org/crop-yields • CC BY

Brazil's cereal production has increased by a remarkable 574% since 1961

This is through a combination of both yield improvements and land use expansion

Animal Suffering

Painful
mutilations



Restricted
movements



Overcrowding



Therefore, we are looking at;

- Climate change situation worsening because of:
 - More concentrate needed to feed animals
 - More land conversion to create space for cereals
 - More fertilizer and pesticides use causing environmental pollution
 - Public health concerns ; AMR, Pandemics
 - Suffering to billions of animals
-



We need food systems that embrace a humane and sustainable future

- Adopt policies that protect and restore our natural environment
- Foster more closed food systems – our inherent systems
- Build our systems on principles of nutrient circularity and agroecology, where animal sentience is at the center of production



Africa Protein Summit 2022



18th and 19th Oct 2022

To deliberate on how to scale up humane, sustainable, and resilient food systems that are safe for people, animals and the planet



Why the protein summits?

Africa, where the poorest of the poor live, and contributes the smallest share of global GHG emissions, is the most vulnerable and continue to be disproportionately affected by the climate change crisis.



Africa joint statement

The statement:

- It outlines how Africa is vulnerable to climate change effects, how important are the local traditional systems that are built on principles of nutrient circularity and agroecology
- It targets Africa member states and world leaders at COP 27 and parties at UNFCC



The Need to Transform Food System: A Joint Statement on the Nexus between Climate Change and Animal Agriculture



Thank you



Contact:

PatrickMuinde@worldanimalprotection.org

