

# Are livestock always bad for the planet?

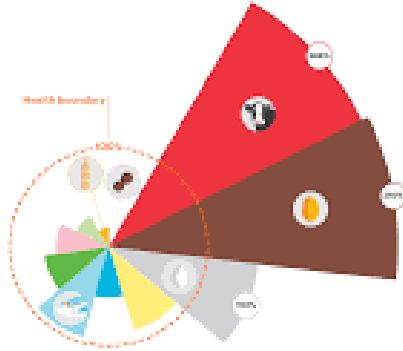
Ian Scoones

PASTRES Programme, IDS, Sussex



# Current Diets vs Planetary Health Diet

Global



**LIVESTOCK**  
CONTRIBUTES AS MUCH TO  
**CLIMATE CHANGE** **14%**  
AS ALL CARS, TRUCKS,  
PLANES, TRAINS AND SHIPS  
**ON EARTH COMBINED**  
**GREENPEACE**



**The machines can currently print up to 6kg of meat an hour...**  
WORLD ECONOMIC FORUM



IF WE DON'T DO SOMETHING,  
**52% OF CLIMATE EMISSIONS**  
WILL BE FROM **AGRICULTURE** BY 2050  
AND **70% OF THAT WILL BE**  
FROM **LIVESTOCK**  
**GREENPEACE**

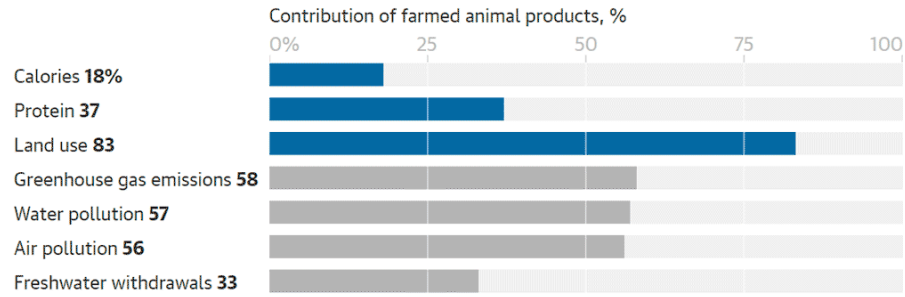
**The Guardian** Culture  
Environment Climate change Wildlife Energy Pollution  
**Farming** Avoiding meat and dairy is 'six biggest way' to reduce your in Earth  
Biggest analysis to date reveals huge footprint of livestock provides just 18% of calories but takes up 83% of farmland

**BEYOND MEAT (BYND)**  
208.89 +50.16 [+31.60%] EXT HOURS  
1-YR [74.82%]  
208.89

**CNBC MARKET FLASH** **BEYOND MEAT SHARES JUMP FORMING JV WITH PEPSICO**

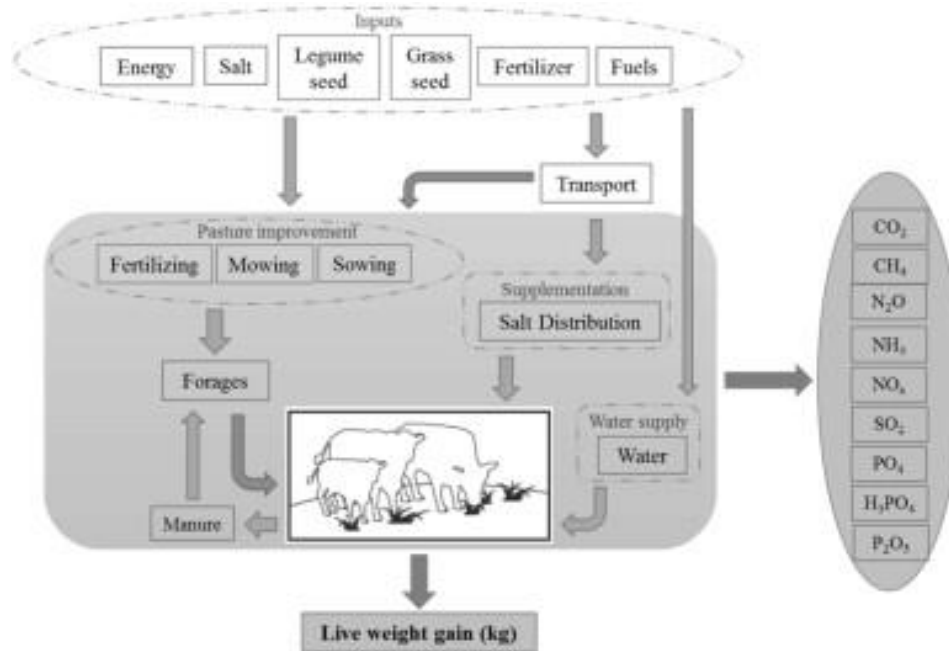
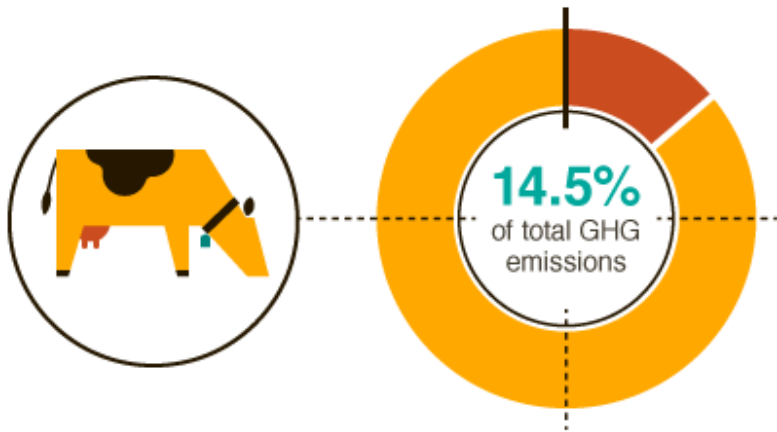


**More than 80% of farmland is used for livestock but it produces just 18% of food calories and 37% of protein**

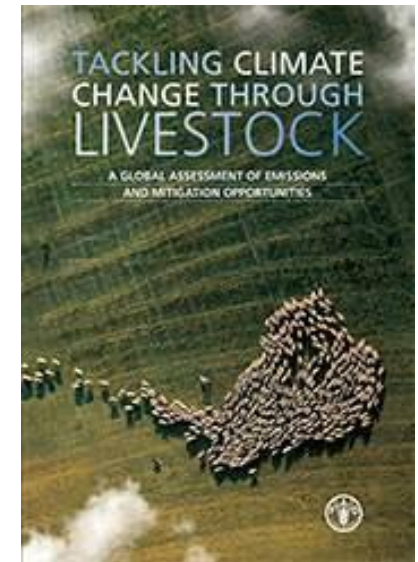


Guardian Graphic | Source: Poore and Nemecek, Science

Livestock contributes **7,100 MtCO<sub>2</sub>e/year** or **14.5%** of total global GHG emissions.



**livestock's long shadow**  
environmental issues and options









# TEN GAPS AND ASSUMPTIONS IN MAINSTREAM ASSESSMENTS



## Data

- Biases in the data
- Default emissions factors
- Greenhouse gas measures

## Systems

- Conceptualising 'efficiency'
- Livestock and the carbon cycle
- Spatial and temporal dynamics
- Ecosystem services

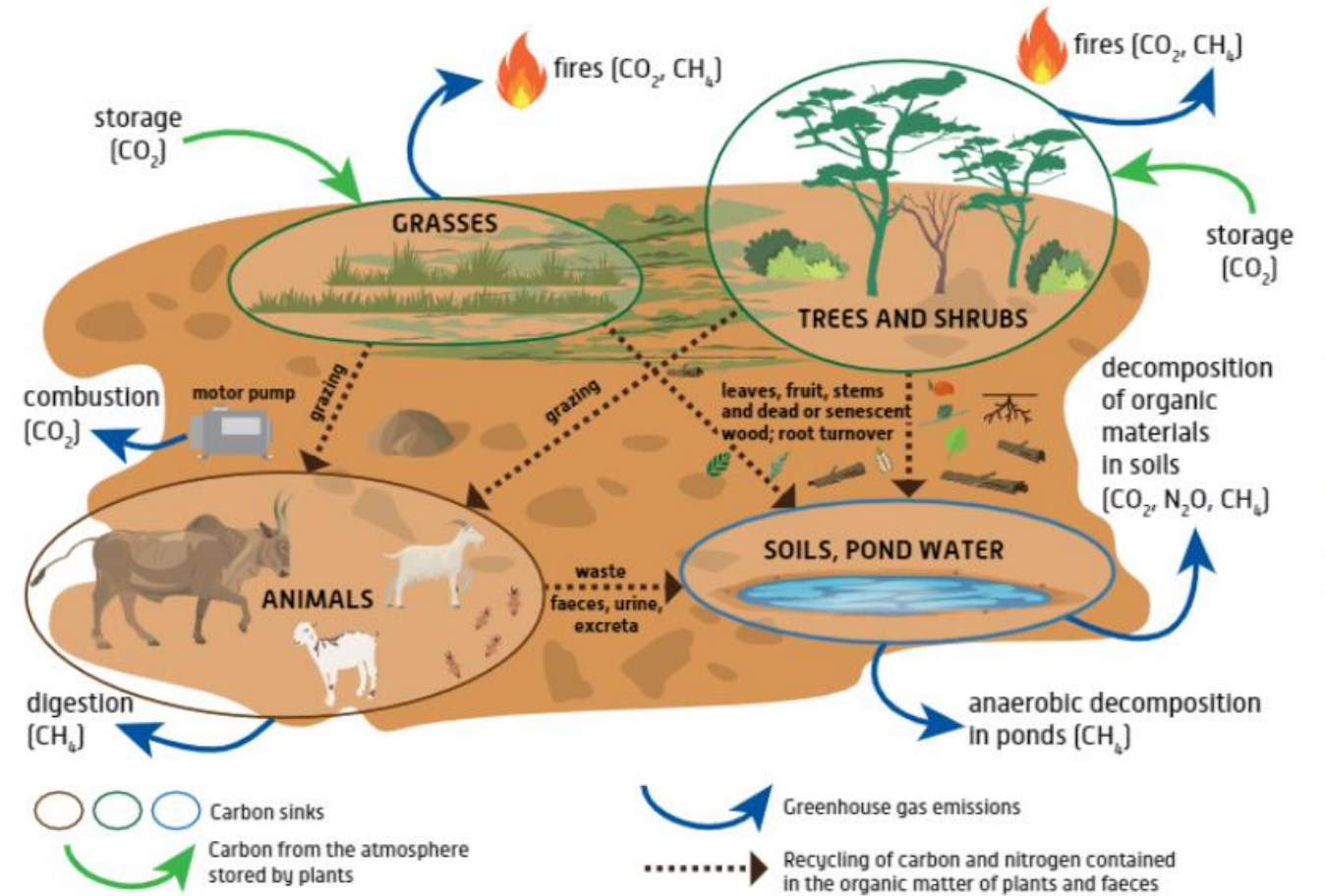
## Baselines and alternatives

- Alternative land uses
- Niche replacement
- Consumer choice and dietary patterns





Simplified model of greenhouse gas emissions and carbon storage in a Sahelian pastoral landscape: the carbon balance ecosystem approach is based on this model.



November 2019

52 perspective the CIRAD policy brief



Through Perspective, CIRAD provides an opportunity to explore new avenues for discussion and action based on research, without presenting an institutional position.

## Pastoral landscapes in the Sahel: a carbon balance with unexpected potential for climate change mitigation

Mohamed Habibou Assouma - Philippe Lecomte - Christian Corniaux - Pierre Hiernaux - Alexandre Ickowicz - Jonathan Vayssières

In the Sahel, pastoralism capitalises on an extreme environment. Although it is accused of emitting excessive amounts of greenhouse gases per kilogram of milk or meat produced, a research study conducted in Senegal shows that pastoral landscapes can actually have a neutral carbon balance: emissions from animals are offset by carbon sequestration in soils and plants. These findings were obtained using an original evaluation method, known as ecosystem assessment, which integrates the use of the pastoral

landscape as a whole, according to the seasons and the areas grazed by herds. These findings indicate that current standards for calculating feeding behaviour and methane emissions from ruminant digestion need to be revised downwards. Other implications are possible, such as improving the carbon balance through specific local practices and promoting these areas on the carbon market. Preserving this livestock system is also one way of fostering development and ensuring greater security in these regions.





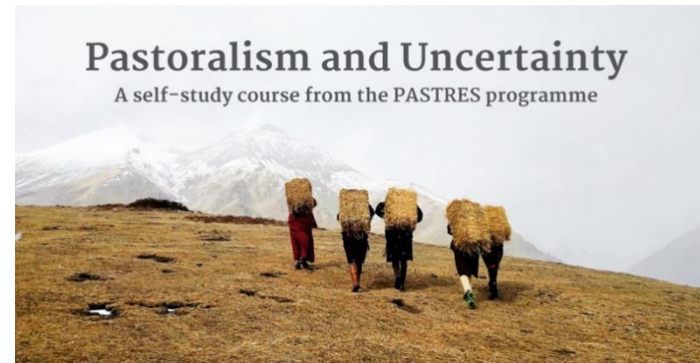


## Putting pastoralists at the centre

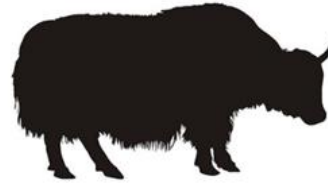
1. Focus on the production process (industrial vs. extensive pastoral production) not the product (meat and milk).
2. Improve data/challenge assumptions in global assessments.  
Adopt an integrated systems approach.
3. Avoid quick-fix solutions (cultured meat, 'rewilding') and simplistic diet change recommendations.
4. Bring pastoralists into global conversations on climate change mitigation/adaptation and the future of food systems.











# PASTRES

Pastoralism, Uncertainty, Resilience

[www.pastres.org](http://www.pastres.org)

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