



# Are livestock always bad for the planet?

Why debates about climate change and food must differentiate between livestock systems



**Urgent climate challenges have triggered calls for radical, widespread changes in what we eat, including a shift to plant-based diets. However, based on patchy evidence, high-profile debates are ignoring the differences between intensive farming and extensive livestock systems.**

There are justified demands to halt deforestation for pasture in areas such as the Amazon, and to reduce the emissions from industrialised farming. But relatively low-impact, extensive livestock production is being lumped in with industrial production in the conversation about climate change and the future of food.

Adopting recommendations to cut back on livestock production and abandon meat and milk-based diets globally could do great damage to livelihoods, landscapes and the life chances of poor and vulnerable people. In fact, those producing food from animals in variable, unpredictable environments can play an important role in combatting climate change.

## PROBLEMS WITH THE EVIDENCE

Flaws in global assessments based on simple life-cycle assessments and poor understanding of pastoral practices have led to major gaps in the evidence on livestock and the climate, and problems with the conclusions drawn from it.

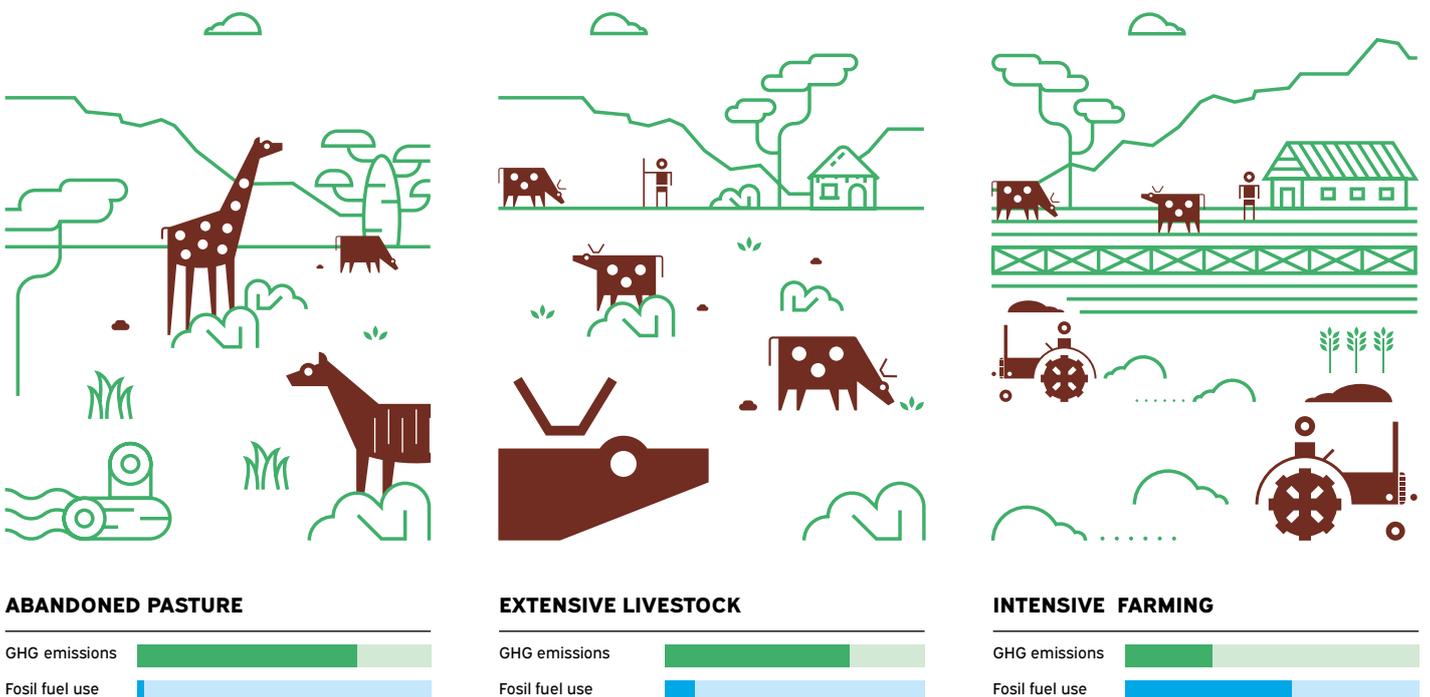
For example, data from industrial systems in high-income countries is used to make assumptions about animals in other areas, where patterns of emissions are very different. The impact of different greenhouse gases, with long and short life-times in the atmosphere, is also assessed in controversial ways.

And, when thinking about baselines and alternatives, estimates often assume that when livestock are removed, the replacement will be a 'wild' ecosystem with limited greenhouse gas emissions. Yet some alternatives may actually lead to more social and ecological problems through processes of enclosure.



## Comparing GHG emissions and fossil fuel use between extensive livestock production, abandoning livestock and industrial agriculture

Source: Manzano and White 2019



## Diverse livestock and livelihood systems

Extensive livestock production is practised by many millions of people worldwide. Livestock have multiple functions and make use of land that otherwise could not be used for food production.

Rangelands make up more than half the world's land surface. In these areas, pastoral systems are especially important and exist in nearly every country of the world, from the drylands of sub-Saharan Africa to the Arctic Circle.

In these areas, people's livelihoods depend on livestock production in highly variable environments where alternatives do not exist. Yet extensive systems, including pastoralism, are repeatedly ignored in global debates about climate change and the future of food.

## How might diets change?

The most climate-damaging diets are concentrated among a 'consumption elite', often rich people in rich countries. Intensively produced meat and milk in industrial systems is a major contributor to greenhouse gas emissions, along with other forms of pollution.

However, animal-source foods are important for nutrition in vulnerable populations, especially in the first months of life, reducing stunting and wasting and improving cognitive health through providing high-density protein and particular nutrients.

## Crowding out pastoralists

There have been calls to protect 30% of land areas for biodiversity, create a global biodiversity 'safety net' or commit to a 'Half-Earth' conservation approach. But these forms of exclusion can undermine sustainable, extensive land uses.

In some areas, climate mitigation interventions are reallocating land to conservation uses or tree planting on the basis that this is good for the climate, while excluding livestock-keepers from landscapes that have long been managed through low-impact, sometimes mobile systems.

## Livestock, carbon and climate change

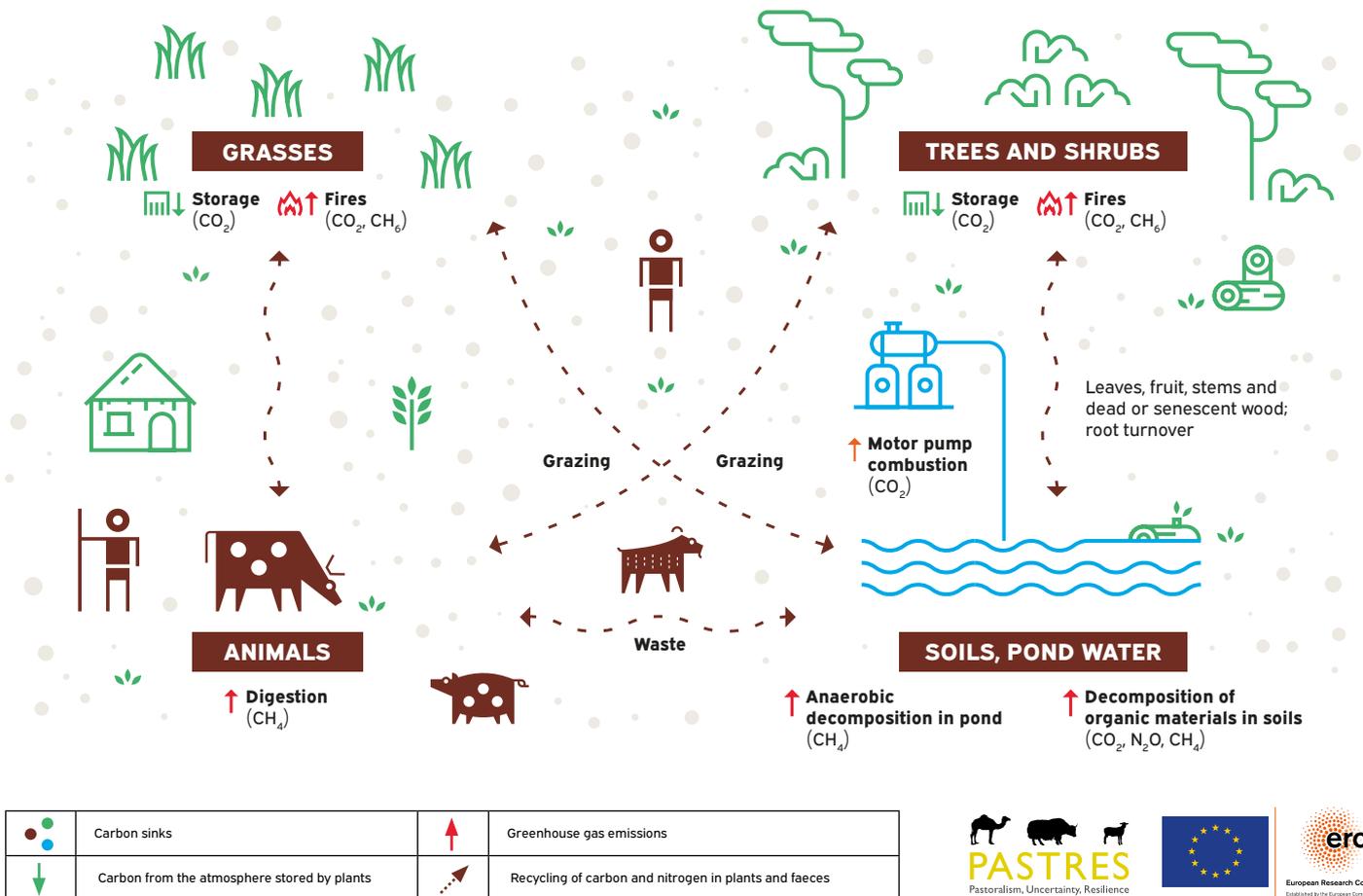
A wider systems view of the impacts of livestock on the climate and broader environment is urgently needed. This must differentiate between different production systems and not focus just on the products. Unless this happens, the danger is that inappropriate measures will be applied and policy distortions will arise.

Focusing on extensive livestock systems, there are many opportunities – for both people and the planet. Although all livestock emit greenhouse gases, some practices in extensive systems can help with carbon sequestration. Such systems can also offer a variety of benefits to biodiversity and landscapes, as well as for livelihoods and cultural values.

Livestock-keepers – often on the front-line of climate change, providing food in harsh and variable environments – have largely been left out of the global conversations about food and the climate. But local knowledge and practices of careful breeding and herding can offer many opportunities for climate mitigation, while providing sustainable sources of high-quality food.

## A simplified systems diagram of GHG emissions and carbon storage in a pastoral ecosystem in Senegal

Source: Assouma et al. 2019



## Find out more

This briefing is a summary of key points in the report, *Are livestock always bad for the planet? Rethinking the protein transition and climate change debate*. The report is produced by the PASTRES research programme, together with a number of partners.

To download the full report and for details of partners, a list of references and information sheets, visit [www.pastres.org/livestock-report](http://www.pastres.org/livestock-report)

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