

HOW CAN WE SUPPORT THE DESIGN OF LIVESTOCK NAMAs ?

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CLIMATE CHANGE MATTERS TO LIVESTOCK



CLIMATE CHANGE MATTERS TO LIVESTOCK

- 1.7 billion people depend on livestock for a living, among which 1 billion poor
- A large proportion of poor livestock keepers are highly exposed to climate change
- Mitigation efforts often have productivity co-benefits
- Livestock can benefit from carbon offsets

LIVESTOCK MATTERS TO CLIMATE CHANGE



LIVESTOCK MATTERS TO CLIMATE CHANGE

- 14.5% of all human induced emissions
- +70% demand of livestock products by 2050
- Growing sector with already 40% of agricultural GDP
- 30% mitigation potential through the application of already existing better practices, without changing production systems
- Carbon sequestration potential

FAO'S WORK ON GHG EMISSIONS IN THE LIVESTOCK SECTOR TO IDENTIFY LOW EMISSION PATHWAYS

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Produce disaggregated assessments of emissions and mitigation potential



Carry out economic analyses of mitigation costs and benefits



Engage in multi-stakeholder initiatives on methods and practice change

GHG MITIGATION OPTIONS

- Decrease production
 - Food security?
- Decrease emissions /kg
 - Production growth?
- Store carbon in agricultural systems (biomass and soil) to offset emissions

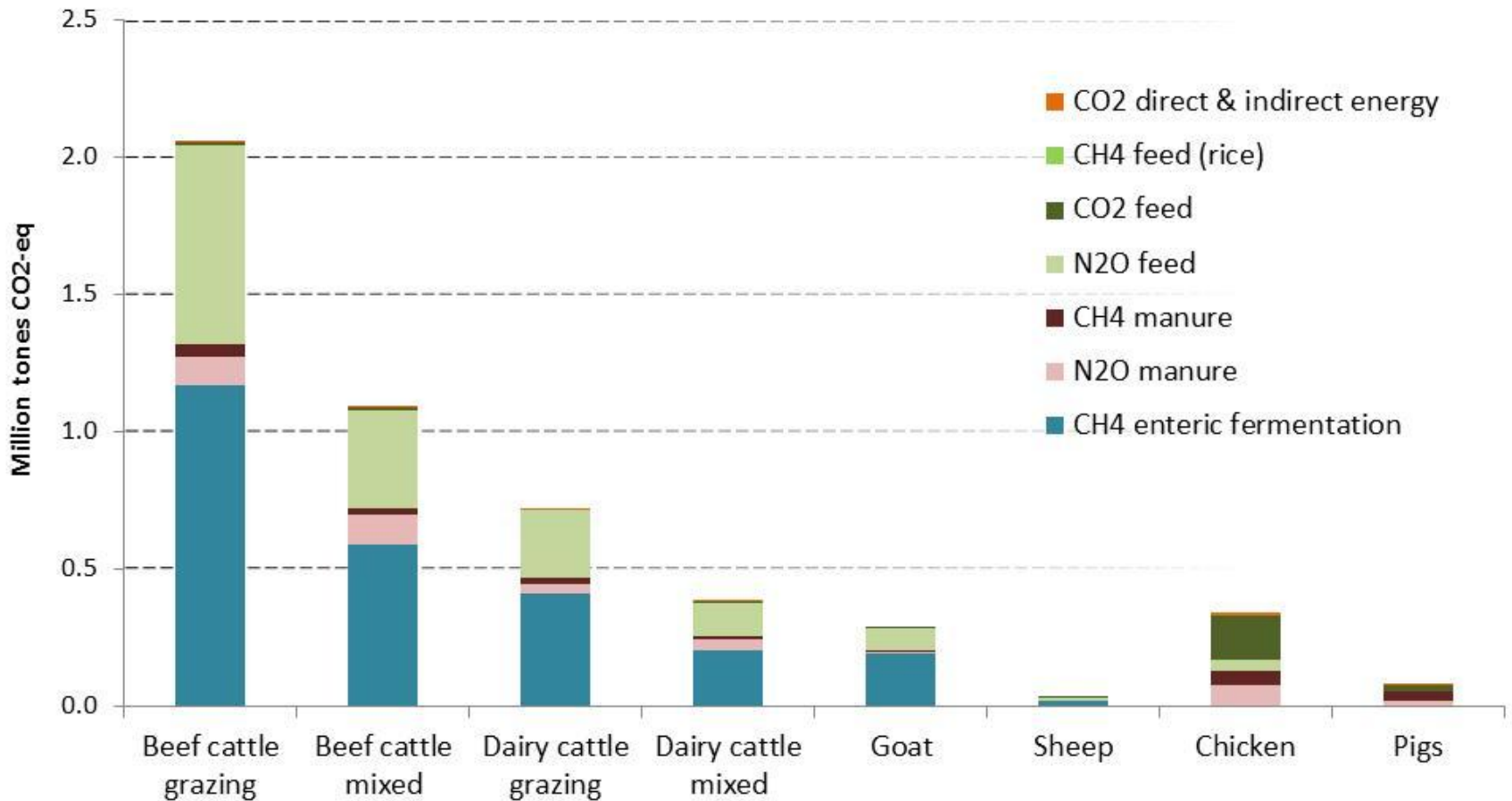
MITIGATION IN LIVESTOCK - ZAMBIA



*Contribution to the EPIC programme for Climate Smart
Agriculture investment proposals*

EMISSION PROFILE

GHG emissions from the livestock sector in Zambia in 2005



Source: GLEAM

MITIGATION PACKAGES VALIDATED DURING CONSULTATION AND MODELED IN GLEAM



1. Improve feeding practices and grassland management: CR processing + legumes in pastures + improved grazing management (under and over)



2. Improve health & reproduction management (fertility and mortality rates)



3. Improve manure management: recovery of nutrients and energy through anaerobic digestion (biogas)

CONCLUSIONS

- Potential for both livestock production growth (17 to 28%) and CC mitigation (32 to 38%) through feasible improvements of practices
- Manure: limited mitigation potential but significant generation of renewable energy. Low initial investments.
- Feed digestibility : high mitigation potential and important productivity gains. Collection and processing of crop residues already available rather than increased access to crop fields
- Mitigation and productivity gains potential through carbon storing and higher grasslands productivity. Increasing animal mobility and adjustments to grazing and pasture resting periods (challenged by access to land and tenure systems).

CLIMATE SMART LIVESTOCK IN ECUADOR



Ministerio de
Agricultura, Ganadería,
Acuicultura y Pesca



Ministerio
del Ambiente



P. Gerber, 2014

OBJECTIVES

Improve natural resource use efficiency and carbon sequestration

- Capacity development for adopting better practices to reverse land degradation and reduce desertification risks
- Increase access to markets and diversification in production
- 280 small livestock keepers and 35 000 ha of pastures



EXPECTED RESULTS

- GHG emission intensities decrease by 30% per kg of milk and by 50% per kg of meat
- Sequestration of 4 to 5 tonnes of CO₂ per ha
- Develop financial support to investment for 350 producers
- Institutional capacity development (ministries and extension services) to support implementation of better practices but also for the development of livestock NAMAs

POTENTIAL OF CARBON CREDITING FOR RESTORING DEGRADED GRAZING SYSTEMS IN CHINA

*MONITORING AND CERTIFYING CARBON
SEQUESTRATION*

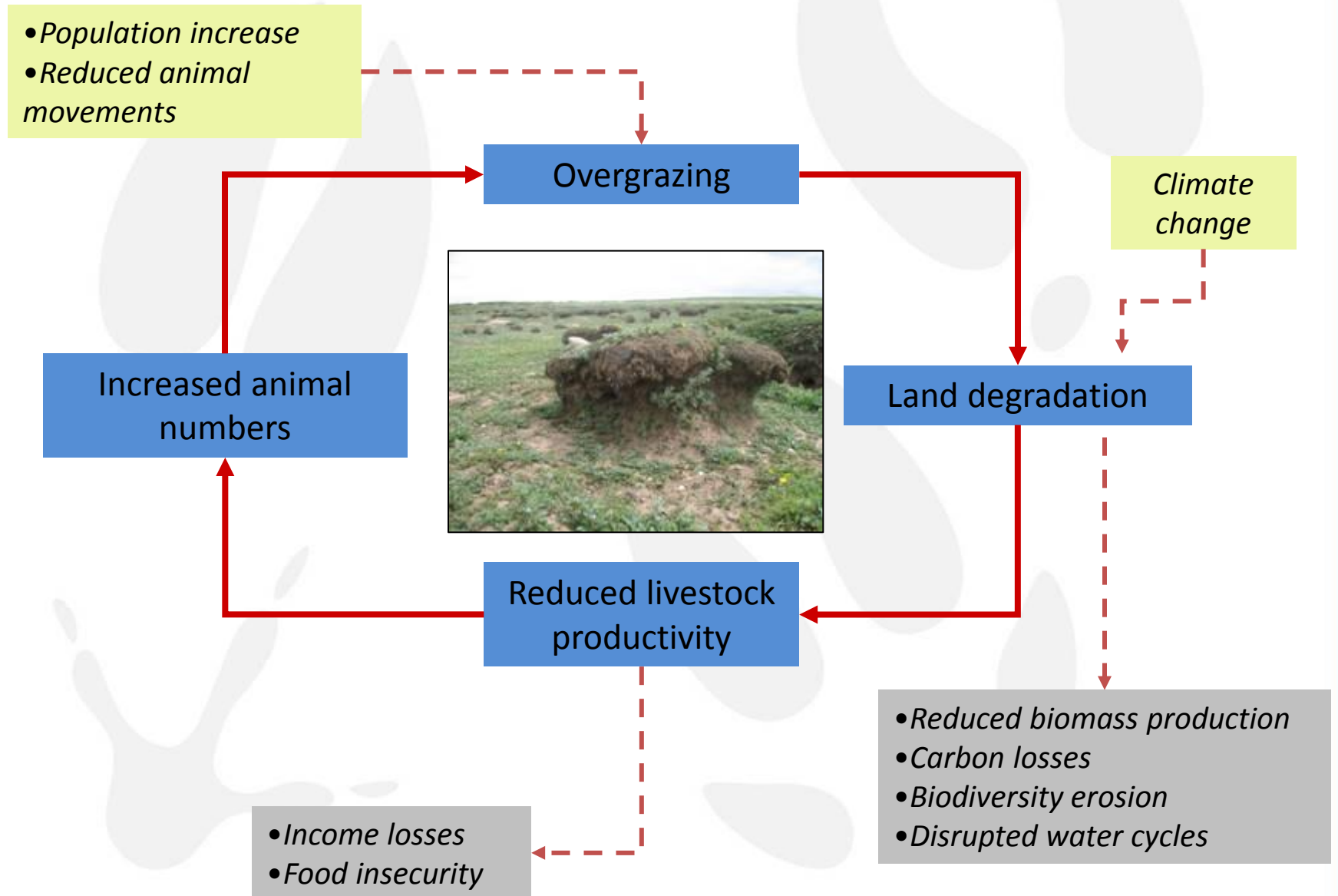


Pierre Gerber, Leslie Lipper and Ben Henderson (FAO),
with contribution from the Chinese Academy of Agricultural Science, the
Chinese Academy Science, the World Agro-forestry Centre and UNIQUE

RATIONALE

- Rangelands) **large technical potential for C sequestration**
- **Emissions offset** from animals and other sectors, i.e. generate C credits (now limited to voluntary schemes)
- Synergies
 - **Adaptation** (productivity, water management, diversification)
 - **Food security & rural development** (system productivity)
 - **Reduced methane emissions** (feed digestibility)
 - **Water and biodiversity** (organic matter, range conditions)
- Limitations
 - **Economic & institutional potential** lower than technical
 - **Saturation** - only finite amounts of C can be sequestered
 - **Permanence** – (as long as improved practices are continued)

THE ISSUE



PROJECT ACTIVITIES

Tailored measures to restore grasslands

e.g adjustment to timing of grazing, seasonal, cultivation of high yield grass and destock

Improve animal husbandry

- Feeding
- Housing

Livestock product market association



CONCLUSIONS

- In various systems and regions, NAMAs should reduce emissions from livestock but also reduce vulnerability to climate change and support the achievement of national development goals
- Mitigation potential in livestock is large and improved practices often lead to productivity gains
- Livestock system analysis and modeling can support the design of NAMAs and certified methodologies can contribute to measurement, reporting, and verification systems.



THANK YOU

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