Mainstreaming ag GHG reductions measures into large scale agricultural investments; lessons from Ethiopia and Bangladesh

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Three entry points for **GHG emission reduction in the livestock sector**

- Increased **efficiency** and decreased GHG emission intensity through improved livestock management practices (e.g. feed management, genetics and animal health improvements, animal health, offtake and fattening strategies);
- increased **soil carbon sequestration** through improved grazing management practices (e.g. adaptative grazing; restoration of degraded lands); and
- adoption of **energy-efficient equipment** (e.g. cooling) and production of **renewable energy** (e.g. solar and wind) to reduce and displace fossil fuel energy consumption.

*The principles are known but putting livestock on a resilient and low carbon path requires knowledge, investments, adequate institutional and policy environment.*
Aiming for continuity and value creation in project mitigation efforts, through partnerships
Relationship between milk production and emission intensity of milk
(each dot = 1 district)

- CCAC-funds for enhancing mitigation outcomes (150k)
- FAO collaboration on the baseline analysis and modeling intervention options (GLEAM)
- Specific attention to GHG through multi-stakeholder workshop in Bangladesh
GHG emission reduction pathways:
- Efficiency improvement in animal production
- Waste management
- Renewable energy sources and energy efficiency

M&E indicators include:
- Reduced GHGs per unit of milk/beef in project areas (40%)
- Renewable energy production systems established

Climate co-benefits: 60%
Estimated emission reduction achieved through the project: 2.5 to 5.5 MtCO$_2$-eq over 5 years

- 12 Mt CO$_2$-eq per year compared to BAU in 2030 unconditional target in NDC
- Strong replication potential: LDDP addresses about 15% of the national cattle herd

How can the World Bank help?

- Pilot mitigation asset development
- Initiate conceptual design of country funds and warehouse
- Develop financial products for specific transactions
**Climate mitigation and adaptation mainstreamed throughout the design**

**Activities**
- Capacity development on CSA
- Support to development of Good animal husbandry practices
- Development of tier 2 efs for cattle and small ruminants

**Indicator**
- Farmers have accessed livestock services, CSA technologies and practices (1 mln)
- Reduction in GHG emission per unit of product (30%)

**Climate change co-benefits:** 64% (half from mitigation)
Emission intensity-based accounting for the livestock sector

**Eligibility criteria to apply the emission intensity approach**

(i) GHG emissions from livestock form a significant source of baseline GHG emissions in a program jurisdiction.

(ii) Livestock population show a growing trend during the baseline period.

(iii) ER programs shall implement interventions to reduce emissions from livestock sub-categories in their jurisdictions as part of program implementation.

(iv) ER program shall meet data quality requirements to set a cap on absolute GHG emissions from livestock sub-categories during program implementation.

**Setting of a cap**: The cap equals the historical growth trend in GHG emissions from livestock sub-categories projected for an ERPA phase and will be revised for each ERPA phase.
Obstacles and opportunities to livestock sector access to climate finance

- High transaction costs and lack of economies of scale
- Ill-adapted investment channels
- Lack of interest in the sector and absence of dedicated climate finance instrument
- Insufficient capacity to assess the financial and technical needs
- Lack of cost efficient MRV systems
Obstacles and opportunities to livestock sector access to climate finance

https://openknowledge.worldbank.org/handle/10986/35495
LESSONS LEARNED IN MAINSTREAMING MITIGATION IN THE LIVESTOCK PORTFOLIO

• Help Client turn existing high-level commitments to sustainability and climate change mitigation and adaptation into practical action. Build confidence, analyze and propose options, provide technical assistance.

• Align interventions. Build synergies between the various triggers of change: incentives, extension, conditionality of public support, access to land.

• Importance of the monitoring and measurement of the results. Build evidence for extension and advisory services, adjustment of public expenditure, impact finance.

• Take advantage of the diversity of species, breeds, feed sources and management practices. Livestock production is demanding on natural resources. Build on comparative advantages of production systems and complementarities with other sectors (e.g. crop, food processing, forestry, conservation).
Additional slides
Ethiopia: Livestock and Fisheries Sector Development Project

Analysis

Investment

Climate Finance

Previous accounting rules
Livestock increase in absolute emissions exceed ER from other AFOLU sectors (despite reduction in EI from project)

Emission intensity-based accounting
Livestock and other sector contribute to ER at landscape level

AFOLU emissions (million t CO2-eq.)

-100
-50
0
50
100

LULUCF ERPD ERs
Cattle project scenario
Landscape level emissions