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Financial aspects of National Appropriate Mitigation actions (NAMAs) for livestock systems in the Latin America and Caribbean region

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Introduction

Livestock farming plays an important role in global climate change, representing 14.5 % of anthropogenic greenhouse gas (GHG) emissions. With 1.9 $GtCO_2e$ emitted annually, the Latin American and Caribbean region (LAC) presents the highest level of emissions from the livestock sector worldwide. Most of these emissions come from the cattle and dairy industry, due to land-use change, associated with deforestation and grasslands expansion (Gerber et al. 2013).

This situation is exacerbated by the rise in the world's population and the consumption patterns of meat and milk, which are expected to increase progressively over the next few decades. According to Alexandratos & Bruinsma (2012), in 2050 milk and meat demands will grow by 73 % and 58 %, respectively, compared to 2010 levels. At the same time, the livestock sector faces challenges posed by climate change, including rising temperatures, increase in drought frequency and severity, tropical storms, and other extreme events.

The global initiatives that aimed at reducing emissions in this sector include the Nationally Appropriate Mitigation Actions (NAMA). Livestock NAMAs are voluntary production development strategies, adopted by the sector (cattle, mainly), focused on reducing emissions. These are based on transformational and progressive changes, achieved by promoting the implementation of appropriate measures, supporting and training relevant stakeholders to facilitate their adoption.

This document summarizes the results of the analysis on the financing issues related to business models proposed by existing NAMAs or emission reduction initiatives in nine LAC countries (Mexico, the Dominican Republic, Guatemala, Honduras, Costa Rica, Colombia, Argentina, Uruguay and Paraguay), developed between November 2018 and February 2019 by reviewing and analyzing secondary information and consulting (remotely) with key informants from each country evaluated. Financial and non-financial barriers were evaluated, along with financial instruments proposed by livestock NAMAs. As a result, the implementation of a financing mechanism in countries developing NAMAs or livestock programs is recommended, as well as a few general recommendations to guide the financial aspects of these initiatives, in order to increase their long-term sustainability.

This Policy Brief is based on a research conducted by The Tropical Agricultural Research and Higher Education Center (CATIE, by its acronym in Spanish). The content is based on the internal report Analysis of financial aspects of National Appropriate Mitigation Actions (NAMAs) for livestock systems in Latin America and the Caribbean region.

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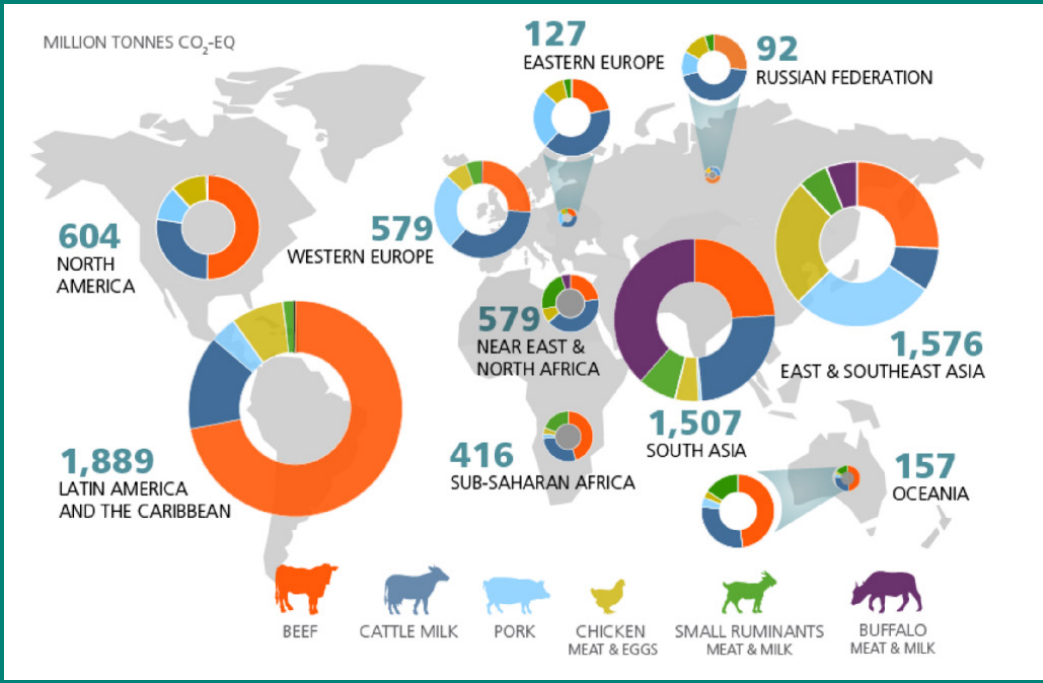

Figure 1. Livestock regional total emissions and their profile by commodity (results do not include emissions allocated to non-edible products and other services). Source: Global Livestock Environmental Assessment Model (GLEAM), FAO (2018).

Context and Challenges

The analysis of financing schemes proposed by NAMAs from different LAC countries revealed a series of economic and financial barriers, which may be addressed through financial mechanisms. Among the main barriers (present in most of the countries studied) are: a) limited access to capital for sustainable and low carbon practices; b) lack of specific financial products for livestock activities; and c) limited access to credit lines. Less frequent barriers include the high risk perceived by financial institutions, the need for guarantees to access loans, the high cost of inputs and public services, the high loan interest rates, and the low financial sustainability of livestock producer organizations.

Table 1. Main economic and financial barriers faced by Guatemala (GT), Costa Rica (CR), Colombia (CO), the Dominican Republic (DR), Mexico (MX), Uruguay (UY) and Honduras (HN) mentioned by the NAMA's representatives of each country.

Barriers	GT	CR	CO	DR	MX	UY	HN
Limited access to capital for low carbon practices	■	■		■		■	
Lack of specific financial products for livestock activities	■	■	■				■
Limited access to credit lines	■	■		■			■
Low demand/supply of livestock financing							■
High risk perceived by financial institutions						■	■
Guarantees needed to access loans		■					
Excessive bureaucratic procedures/requirements to access loans							■
High cost of inputs and public services		■					
Low financial sustainability of livestock producer organizations	■						
High loan interest rates							■

It is important to make a correct and precise assessment of the most influential barriers in the livestock value chain for each country, in order to design the appropriate mechanisms to overcome them and ensure optimal livestock NAMA development.

The financing mechanisms (some already in operation) proposed by livestock NAMAs are constituted of a combination of different instruments. The two most commonly considered mechanisms are: a) credit lines with a preferential interest rate, and b) credit guarantees. Some countries include other mechanisms, such as insurance, subsidies (incentive payments for adopting silvopastoral practices or certain technologies, and/or ecosystem conservation), and compensations for reducing GHG emissions.

Table 2. Combination of financial instruments proposed by the livestock NAMAs of Guatemala, Costa Rica, Colombia, the Dominican Republic, Mexico, and Honduras.

FINANCIAL MECHANISM	
Combination of Financial Instruments	Country
1) Credit lines + Credit guarantee + Incentive payment	Guatemala Dominican Republic
2) Credit lines + Credit guarantee + Insurance	Honduras
3) Credit lines + Credit guarantee + Incentive payment + Compensations for reducing GHG emissions	Costa Rica
4) Subsidies	Colombia
5) Compensations for reducing GHG emissions (carbon tax)	México

In addition, some non-financial instruments, that should be part of the available alternatives to overcome financial and non-financial barriers, were also identified. Among these instruments are:

- Capacity-building and awareness programs for the supply chain.
- Project monitoring, evaluation and verification programs.
- Product certification.
- Provision of plant materials at a low cost.
- Standardization and simplification of contracts and procedures.
- Identification and prioritization of viable farm practices.
- A governance scheme integrating key stakeholders (public, private, livestock, producer organizations, and financial institutions, among others).
- A knowledge management program, and the implementation of the Monitoring, Reporting and Verification (MRV) system.

Most of the non-financial instruments analyzed may be used in livestock NAMAs as a technical assistance package, which would increase the chances of success of financial instruments, by seeking to permeate skills and knowledge into all elements of the livestock sector value chain. Financial and technical aspects of the programs must be jointly planned, coordinated and implemented together so that they may complement each other.

Policy Recommendations

As a result of the analysis of the main financial and non-financial barriers, and of the financial instruments that could be used to address them, the use of a financial mechanism for its implementation, in countries developing livestock NAMAs or low-emissions programs, is recommended.

Financial Mechanism

The following instruments should be included in the Financial Mechanism. In the first place, there should be lines with concessional interest rates from a blending of resources (donation funds or green fund loans) to achieve lower rates, with terms adjusted by activity type. These should include accompanying the loan with technical assistance (aimed at financial institutions and credit recipients) and a monitoring program to follow up on funded projects.

Also, credit guarantees that explore alternative collateral means should be included. It is essential to carry out an extensive consultation with financial institutions to examine these alternatives. Finally, the last instrument that should be considered is the idea of implementing incentive payments for the implementation of silvopastoral practices. During the initial phase, public or donated funds may be used, complemented or replaced in the long term, by specific taxes, such as taxes for greenhouse gas (GHG) producers or emitters.

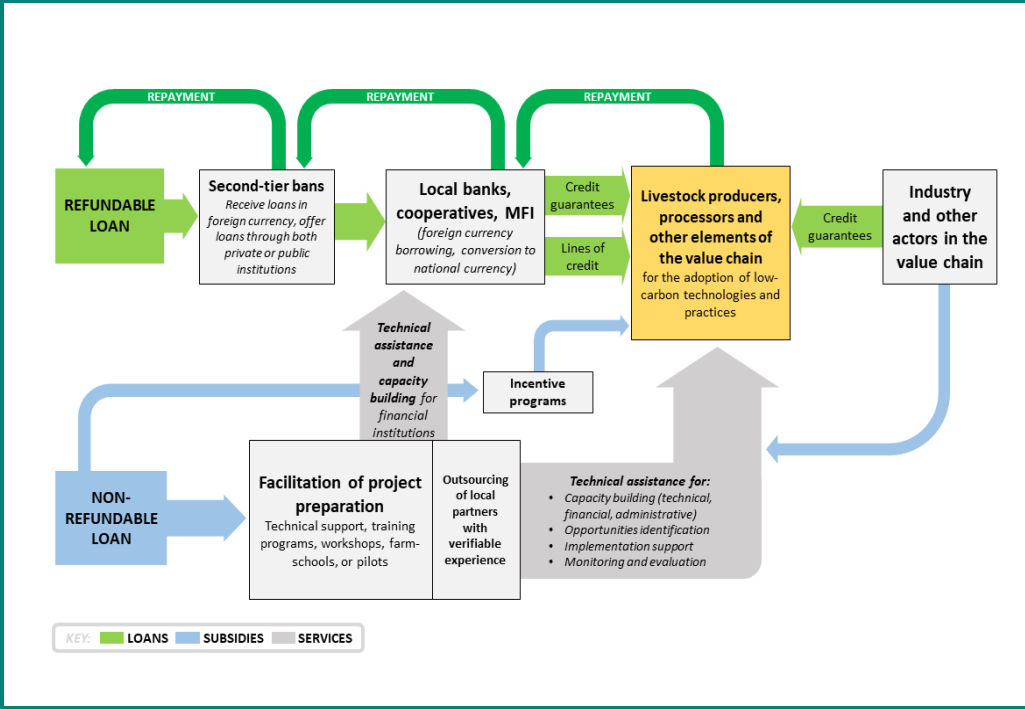

Figure 2. Proposed financial scheme for livestock NAMAs in Latin America and the Caribbean region.

This financial mechanism should increase the long-term confidence in both, end users and the banks, in the application of commercial debt, to implement sustainable interventions in the livestock value chain. Once this has been achieved and the program is consolidated, the mechanism can be financed with resources from the private sector. It is important to complement this mechanism with a series of non-financial instruments to increase the chances of their success, focusing on building inclusive governance and offering technical assistance.

Criteria for an optimal design

The financial mechanism of livestock NAMAs must consider the following criteria for an optimal design:

- **Sustainability:** financial mechanisms whose return on investment is reinvested are preferable to those that only reduce project costs or interest rates.
- **Relevance and adequacy:** this ensures that the financial mechanism is adequate to address the relevant economic and financial barriers, and that the proposed business model is viable for farmers and other stakeholders.
- **Scale and permanence:** escalation should be possible, through the identification of long-term or permanent financing sources.
- **Financial Leverage:** the financial mechanism must be able to mobilize additional public and private funds for investment.
- **Acceptance by the private sector:** to present financial mechanisms and consultations with local and international financial institutions to guarantee support and receptivity.
- **Affordability:** to seek a certain degree of private capital leverage, as well as mobilizing private investments at the lowest possible cost.
- **Impact on mitigation:** efficiency and effectiveness of the financial mechanism to achieve GHG mitigation.
- **Feasibility and availability:** the financial mechanism should be operational during the first year.
- **Effective and Efficient use of resources:** to avoid involuntary market distortions and the displacement (crowding out) of private capital.
- **General Public Benefit:** the main objective of financing must be to benefit the general public and not for commercial purposes.

Improving the link between farmers and financial institutions

The following recommendations have been deducted from other sustainable programs and NAMA implementations. First, there is the need to stimulate and increase demand through awareness programs, identifying a pipeline of bankable projects, as well as support for the presentation of projects before financial institutions.

Furthermore, there is the necessity to adapt access methods to financial resources (such as banks, buyers, local cooperatives or micro financing institutions) to the specific conditions of the producers, exploring the service delivery channels with lower costs and that facilitate clients' access to financial services. This along with the implementation of measures to increase the confidence in financial institutions in the projects they will fund (pilot projects, project evaluation, monitoring and verification, and product certification).

Financial mechanism design

Consultations and workshops with all stakeholders in the value chain should be organized to ensure the correct identification of barriers facing the sector. It should be taken into consideration that financial solutions should not be used to address non-financial barriers, and that there is a need to promote a market for the self-sufficient private sector.

There should be a link between financial and technical support to demonstrate the benefits of sustainable livestock projects and to justify investing in them. Thus, more resources than usual should be dedicated to technical assistance. Always looking for ways to strengthen producer organizations to provide financial and non-financial services to small farmers.

Recommendations for financial Institutions

It is important to know the customers; this will help understand the particularities of small agricultural producers. Moreover, there is a need to create flexible financial products. Aspects such as land ownership, and terms of payment and disbursement must adapt to borrower profiles.

Additionally, analyzing domestic production unit cash flows is important to make payment terms compatible. Implementing diverse risk management strategies, integrating specialized credit agents into the agricultural sector, and linking savings accounts into financing, should also be considered.

Conclusions

Based on the analysis of the financial aspects (existing barriers and proposed financial instruments) of livestock NAMAs in the countries considered in this study, it is concluded that:

- It is necessary to implement a financial mechanism in countries that are developing NAMAs or low-emission livestock programs that include the following financial instruments:
    - ◊ Lines with concessional interest rates from a blending of resources (donation funds or green fund loans) to achieve lower rates, with terms adjusted to the type of activity, and accompanied by technical assistance (for both financial institutions and credit recipients) and a monitoring program to follow up on funded projects.
    - ◊ Credit guarantees that explore alternative collateral means. It is essential to carry out an extensive consultation with financial institutions to examine these alternatives.
    - ◊ Incentive payments for the implementation of silvopastoral practices. During the initial phase, public or donated funds may be used, complemented, or replaced in the long term by specific taxes, such as taxes for greenhouse gas (GHG) producers or emitters.

- With this mechanism in place, the long-term confidence in both, end users and banks, in the application of commercial debt may be increased to implement sustainable interventions in the livestock value chain. Once consolidated, the mechanism may be financed with resources from the private sector.

- It is important to complement this mechanism with a series of non-financial tools that increase the financial instrument success chances, emphasizing both integration of key stakeholders into a governance scheme, as well as the technical assistance support.

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The views expressed in this document cannot be taken to reflect the official opinions of these organisations.

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