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Governance of National Appropriate Mitigation Actions (NAMAs) for livestock systems in Latin America and the Caribbean

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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 GtCO₂e 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 grassland expansion (Gerber *et al.* 2013).

This situation is exacerbated by the rise in the world's population and 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 governance analysis of bovine livestock NAMAs, or low-emission cattle farming initiatives, that are either underway or in formulation in LAC. It focuses on the legal and institutional frameworks and the key aspects related to stakeholder framework structure and design, associated with an effective and sustainable governance model.

This investigation establishes a comparative analysis of the legal, regulatory and institutional frameworks on which livestock NAMAs are embedded; this, from nine LAC countries (Mexico, the Dominican Republic, Guatemala, Honduras, Costa Rica, Colombia, Argentina, Uruguay and Paraguay). To conduct the analysis of the governance frameworks proposed in the NAMAs livestock initiatives and/or low-emission livestock strategies, secondary information was reviewed and interviews to key informants in each country were performed. The assessment of the structure and roles of institutional stakeholders that constitute NAMAs governance, and that of the strengths and weaknesses of proposed governance schemes, was conducted based on the forest governance evaluation framework adapted from FAO (FAO, 2011). Consequently, a series of recommendations were made to guide the design and structure of livestock NAMAs institutional and stakeholder frameworks, where compliance can be associated with effective and sustainable governance models.

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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 *Governance analysis of National Appropriate Mitigation Actions (NAMAs) for livestock systems in Latin America and the Caribbean region*.

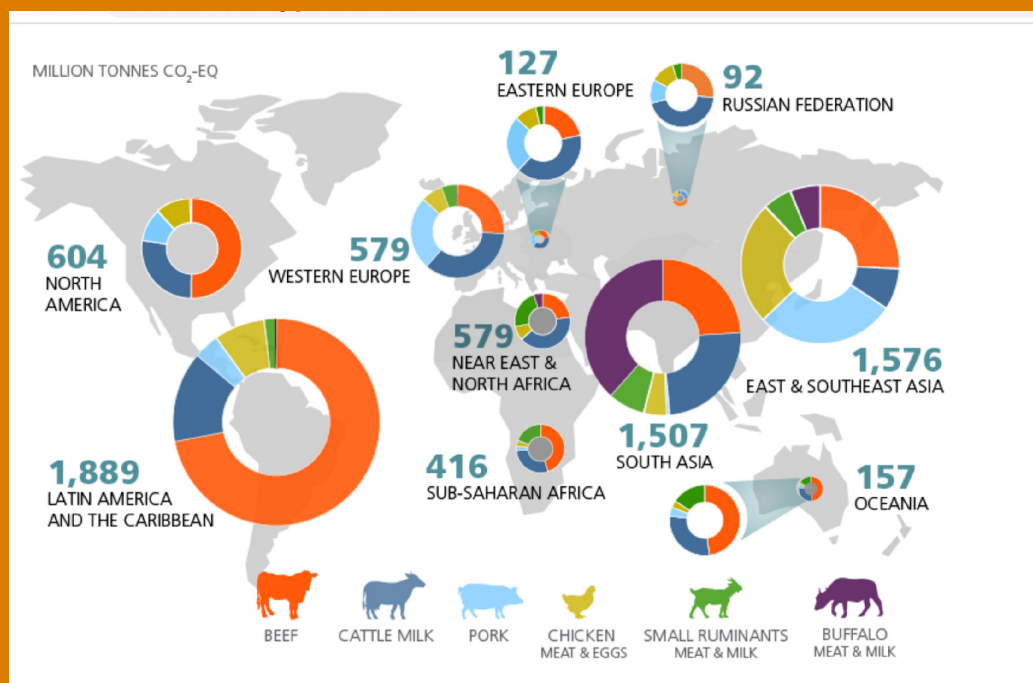


Figure 1. Livestock regional total emissions and their profile by commodity (results do not include emissions allocated to non-edible products and other services). Source: Global Livestock Environmental Assessment Model (GLEAM), FAO (2018).

Context and Challenges

Countries have made progress in the creation of policy instruments and regulatory frameworks to comply with their climate-related international commitments (e.g. UNFCCC, the Kyoto Protocol and the Paris Agreement), and in the integration of said policy instruments (strategies, action plans, programs and other planning and public management instruments) into the national and sectoral development policies.

The subscription to the Paris Agreement, and the formulation of the Nationally Determined Contributions (NDC) in 2015, led to the revision of the political-institutional frameworks, in order to take into account goals stated in those documents, as well as mitigation and adaptation measures in national public policy instruments. In some cases, this has favored the promotion of NAMAs (and other mitigation mechanisms such as MDL or REDD+), as promissory GHG emission-reducing mechanisms to fulfill their commitments.

In the absence of general NAMA preparation guidelines, each country and sector have organized and structured them differently. Even though the majority of livestock NAMAs in LAC are being promoted and led by the public sector, private sector participation varies from one

scheme to another and, in cases such as Colombia, the private sector is the one leading the process. Livestock NAMAs require coordination of the designated national entity (usually the Ministry of Environment) and the governing body of the agricultural sector to handle climate issues and international commitments. Progress in the consolidation of livestock NAMAs is usually delayed for political reasons, including changes in public officials in charge, and differences in the priorities of both the livestock sector and the environmental agenda. The lack of coordination was identified as common weakness in some of the countries participating in the study (Mexico, Dominican Republic, Honduras, and Paraguay).

With the exception of Costa Rica and Colombia, livestock NAMA proposals show little progress in developing governance structures for their implementation—the initial mapping of key institutional stakeholders has been carried out, but there is scarce stakeholder involvement and poor definition of roles and responsibilities. There are several reasons for the lag in consolidating the governance component, compared to other components of a more technical nature (e.g. metric of GHG emissions). Some countries (Paraguay, Dominican Republic and Guatemala) expect to

address the development of governance schemes in later stages of NAMA preparation, focusing on technical aspects during the early stages instead. In other cases (Colombia and Honduras), NAMA proposals have been derived from upscaling sustainable/low-emission livestock projects, which have meant an evolution from a project governance to an expanded governance. Costa Rica, with the most advanced livestock NAMA in the region, considered a governance scheme since the initial design phase, and has been maintained throughout its development and pilot implementation phase. The initial definition of a clear governance scheme promotes participation and inclusion, ensures a healthy organizational level and an active participation of the private sector, together with the public sector.

Most of the analyzed NAMA schemes do not explicitly contemplate the indirect impact of livestock in the GHG emissions resulting from deforestation and degradation processes. Its potential as a carbon sink, through the incorporation of agroforestry and silvopastoral practices is not contemplated either. In general, regulatory frameworks separately contemplate the livestock sector and the LULUCF⁴ sector goals. However, since the commitments agreed upon at COP 21, a more specific definition of national contributions in forthcoming NDCs is being sought; therefore, countries are making progress in separately detailing AFOLU⁵ measurements from the agricultural, livestock, forestry, and land use subsectors. This is with the intention of estimating, in greater detail, the contributions from these subsectors, in order to promote more targeted and effective measures to reverse these processes and contribute to the NDCs. A bridge-building strategy between the NAMAs of AFOLU's sectors would favor the achievement of this goal.

Policy Recommendations

As a result of the analysis of livestock NAMA initiatives, that are in the process of design or implementation in LAC, the following policy guidelines are proposed to contribute to the arrangement of better NAMA governance schemes:

Alignment with policy instruments and integration within national mitigation targets

Livestock NAMAs must ensure the alignment and synergy between the environmental public policy and the climate change instruments on two levels: (i) the upper level, which can influence broader development strategies (national and sectoral) and long-term plans, and (ii) the planning and management instruments at the sectoral level, such as sectoral mitigation strategies (agriculture, and even the livestock subsector).

For example, establishing NAMAs as one of the instruments available to fulfill the NDC commitments will enable their integration into the institutional mechanisms created following the Paris Agreement; which promotes, among other things, inter-institutional coordination at a national level and even at different scales of territorial governance (national, regional, local).

Representativity and consideration of the governance scheme during the initial phases

NAMAs require a governance with a clearly defined institutional arrangement, that works under a planning framework, and that links the roles and responsibilities of stakeholders from diverse areas (political, managerial, technical, and knowledge monitoring and management systems), who interact in spaces for dialogue and agreement to define the NAMA's route and priorities for action.

Given that livestock NAMA success depends largely on the participation, representation and empowerment of livestock sector stakeholders, it is recommended to take into consideration the governance structure design since the initial phase of the NAMA, and ensure its consolidation during the implementation phase.

Defining stakeholders' roles and their mechanisms for socialization and decision making since the conceptualization of the NAMA, will favor sector representation at all levels; it will also support the empowerment of the initiative by its promoters and beneficiaries. Additionally, it will allow the creation of defining guidelines for the stakeholders' subsequent incorporation, reducing access barriers, as well as the establishment of channels and spaces for dialogue.

Livestock NAMAs should make the most of existing spaces for dialogue at the national (e.g. livestock tables, platforms) and international levels (e.g. COPs, SICA), in order to share experiences and knowledge among stakeholders and countries with livestock NAMAs. Likewise, it is important to establish multi-stakeholder dialogue spaces at a national level, particularly with sectors whose synergies can be created (agriculture, forestry, energy). In the same line, interaction with key actors from other related sectors (such as forestry and agriculture) within NAMA dialogue spaces, in order to function as bridge-stakeholders, will facilitate the identification of the more efficient and better-directed actions that contribute to common objectives.

Organization and strengthened capacities

An organized and widely represented, private livestock sector (in cases such as Costa Rica and Colombia) plays a key liaison role with potential beneficiaries (producers).

⁴ Land use, land-use change, and forestry (LULUCF): A greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities (UNFCCC). <https://unfccc.int/process-and-meetings/the-convention/glossary-of-climate-change-acronyms-and-terms>

⁵ Agriculture, Forestry and Other Land Use (AFOLU): emissions and removals of greenhouse gases (resulting from direct human-induced land use, land-use change, and forestry activities), which may include or exclude agricultural emissions (World Bank) https://climateknowledgeportal.worldbank.org/themes/custom/wb_cckp/resources/data/CCKP_Glossary_Oct_2018.pdf

Conclusions

The analysis of governance of the Livestock NAMAs (Nationally Appropriate Mitigation Actions) of nine countries in Latin America and the Caribbean brings the following guidelines for a sustainable livestock NAMA governance scheme:

- NAMAs require a governance that clearly defines institutional arrangements; including roles, hierarchies, procedures and pathways, under a planning framework, linking the roles and responsibilities of stakeholders at all levels (political, managerial, and technical, as well as monitoring and knowledge management systems).
- Livestock NAMAs should be linked to and aligned with policy instruments at the national and sectoral levels; therefore, fostering continuity and facilitating inter-institutional coordination. To this end, their connection to the NDCs is essential.
- A broad and representative range of stakeholders should be included to help identify key barriers, common interests, synergies, and pathways to achieve the stated goals. The engagement, strengthening and formalizing of the private livestock sector is key.
- NAMAs require knowledge management that fosters horizontal and participatory learning, linked to NAMAs adaptive monitoring mechanism. Information must be transformed into knowledge and made transferable in the form of concrete messages to the various stakeholders involved.
- Spaces for dialogue and the encouragement of active stakeholder participation should be established. These spaces, at the national (livestock tables, platforms) and international levels (example), should be used to exchange knowledge and experiences between stakeholders and countries with livestock NAMAs. Also, bridge-building with related sectors (forestry, agriculture, energy, water) must be promoted.
- Participation from potential financial stakeholders (banks, insurers, international cooperation) should be promoted since the initial stages, the same with the adaptation of multiple financial mechanisms to the conditions required by livestock NAMA participants; this, in order to help overcome potential entry barriers.

Likewise, initiatives promoted by the private sector are more likely to continue over time, as they are not subject to changes in political priorities. In countries with poorly organized sectors and weak organizations, NAMA-derived initiatives may be limited in scope. Previous work in the formalization and strengthening of the sector would be required to consolidate livestock NAMAs.

NAMAs should consider a permanent strengthening of institutional capacities and must focus on training and extension services (public or private), as well as on targeting organized producer groups (federations, chambers, cooperatives, and others). These stakeholders play a key role in NAMAs acting as a bridge between generators of information and technology (the academy, research centers), and the producers that implement the actions in the field (the key role of extension services is clear in the cases of NAMA Livestock from Costa Rica and Colombia).

Knowledge management

It is recommended to design a knowledge management (KM) mechanism to promote the flow of information in all directions and to transform it into knowledge through different processes (systematization of lessons learned, translation of scientific information into specific technical messages, etc.). In this way, horizontal and participatory learning could be encouraged, and linked to the NAMA monitoring mechanism. The KM mechanism must consider NAMA goals, audiences, as well as the specific needs of different stakeholder groups (the academy, technicians, producers).

Farmer Field Schools (FFSs), among other participatory learning mechanisms, stand out for its efficiency in transferring knowledge for the implementation of practices and technologies. The KM mechanism must provide spaces for dialogue and knowledge exchange (e.g. communities of practice) with certain regularity, both internally and with other NAMAs.

Financial mechanisms

The identification and creation of diverse and complementary financial mechanisms for NAMAs that cover the wide range of farming conditions, will favor the participation of livestock producers. These mechanisms must adapt to limiting conditions such as the informality of the activity, the ambiguity of tenure schemes, the lack of association and the weak organization, in order to not exclude potential beneficiaries and, instead, foster their integration.

Participation from potential financial stakeholders (banks, insurers, international cooperation) since the initial design phase is recommended to adapt available financial mechanisms (credit lines, tailored insurance) to the NAMA implementation terms and conditions.

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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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