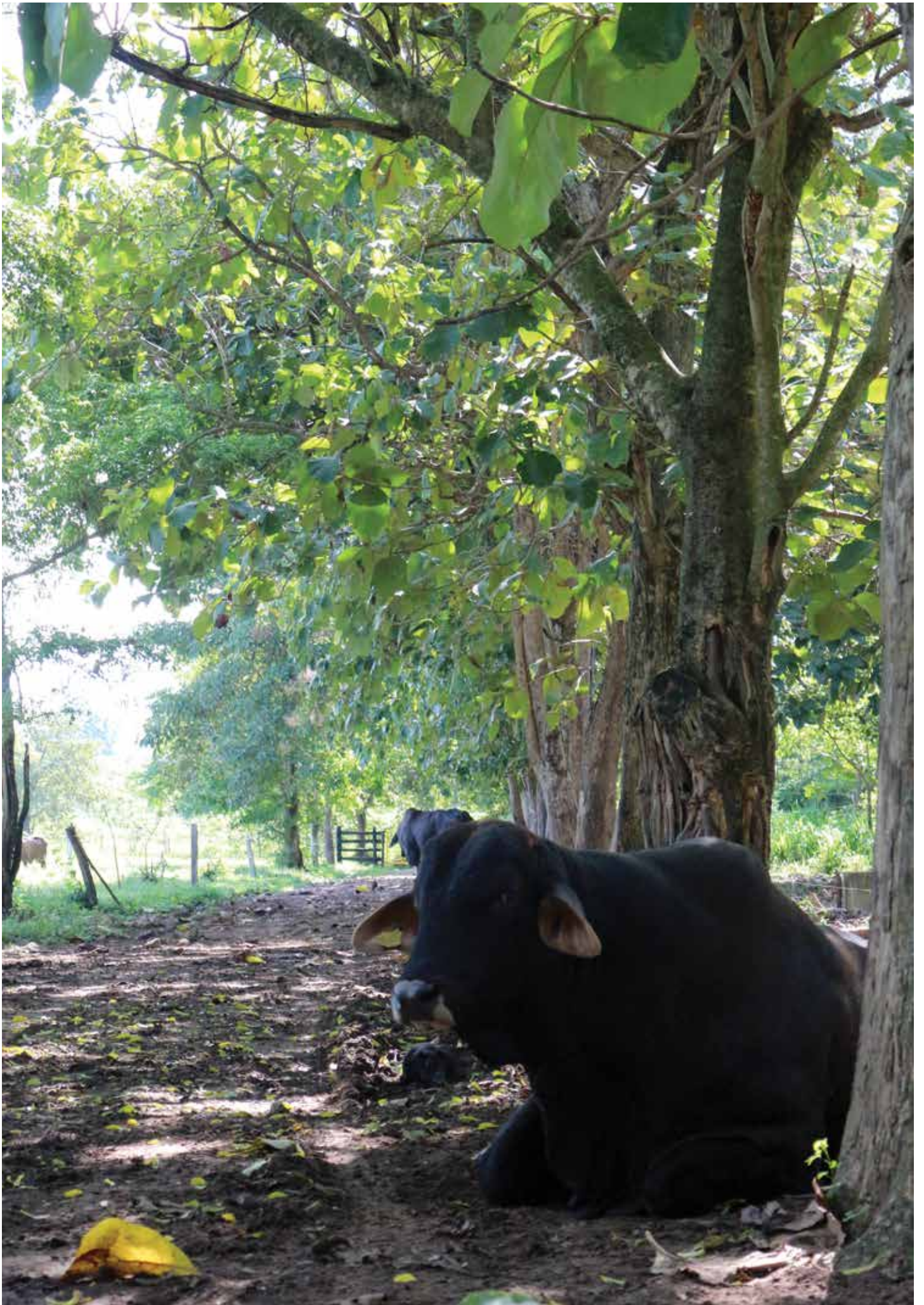


Challenges in reducing livestock farming-related deforestation in Colombia – Recommendations for Colombia’s new government and the 2018 – 2022 National Development Plan





Executive Summary

Forests are essential carbon sinks. As such, reducing deforestation is essential to achieve Colombia's Nationally Determined Contributions (NDC) for the Paris Agreement¹, and fundamental for the food security and livelihoods of local communities.

It is estimated that between 1990 and 2016, more than six million hectares of forest were cleared in Colombia. In 2017, deforestation increased by 23% compared to 2016: 219,973 hectares of forest were lost. The main drivers of this rise were extensive livestock farming and expanding pastures, responsible for 70% of the country's total deforestation.

Recognising this problem, a number of policies were designed and put in place in recent years to reduce deforestation levels in Colombia. This includes the Comprehensive Strategy on Controlling Deforestation and Forest Management, which forms the basis of the action plan of the Comprehensive Policy on Combating Deforestation of the 2014 – 2018 National Development Plan (NDP). Other initiatives related to reducing deforestation associated with livestock farming, such as the Colombian Sustainable Livestock Farming Project and the Sustainable Livestock Farming Board, were also enacted.

Despite progress in monitoring livestock farming across the country, 34.4 million hectares of land are currently being used for this activity, even though just 15 million hectares are suitable for this activity. In this context, and given the existing political structures, the new Colombian government is facing a variety of obstacles in the fight against deforestation, including, among others, the difficulties of implementing sustainable livestock farming practices.

This document provides recommendations and ideas for the 2018 – 2022 National Development Plan, to address challenges identified in the meat and dairy/ agricultural supply chains. These recommendations are framed against the three pillars of the NDP (equity, entrepreneurship and legality). Focusing on three of its strategic areas of focus: science and technology, rural development and legality. The recommendations include:

- 1 Strategic line – Science and Technology:** Promoting integrated technological tools to monitor and report information, efficiently making use of natural resources and mitigating greenhouse gas emissions (GHG), whilst improving local socio-ecosystem conditions.
- 2 Strategic line – Rural Development:** Strengthening alternative livestock farming systems to create resilient rural areas that guarantee the provision of ecosystem services adapted for climate change.
- 3 Strategic line – Legality :** Aligning and coordinating efforts at ministerial level, integrating programs and initiatives with community participation in order to avoid the duplication of work and the fragmentation of resources destined to strengthen livestock farming and sustainable rural areas.

National context: deforestation drivers and reduction measures

By signing the Paris Agreement and through its nationally determined contributions, Colombia has committed to reduce its emissions by 20% by 2030, and a further 30% dependent on international support². It is estimated that more than a million people in Colombia rely on forests resources for their survival³.

70% of deforestation is caused by just six socio-economic drivers: (1) Land-grabbing or illegal usurpation of fallows, (2) the roll-out out transport infrastructure, (3) extensive livestock farming, (4) illicit crop production, (5) timber extraction and (6) mineral mining⁴. There is a close relationship between land grabbing and extensive livestock farming, as deforestation is associated with both practices. Once this kind of economic activity is established, there are incentives for further expansion, including easy access to credit, which is not dependent on sustainability or environmental criteria⁵.

Furthermore, the post-conflict environment has fostered development in regions previously controlled by illegal armed groups. This has contributed to the rise of deforestation rates, and activities such as agriculture and livestock farming. These practices further enhance the six drivers of deforestation mentioned above⁶.

In 2017, Colombia introduced its Comprehensive Strategy on Controlling Deforestation and Forest Management in a bid to address the issue of deforestation. The strategy operates within the framework of the 2014 – 2018 NDP and sets out specific actions to reduce deforestation, degradation of forests and associated greenhouse gas emissions.

Other strategies that have been developed include the Visión Amazonia, a program by the Colombian Government that focusses on reducing deforestation in the Colombian Amazon to net zero by 2020. One of the main activities of this program is the establishment of sectoral agreements for the supply chains of ten agricultural commodities, including beef and dairy⁷. Within the framework of climate change adaptation and mitigation in the livestock farming sector, a Nationally Appropriate Mitigation Action – NAMA Cattle Farming – is currently being developed. It aims to increase carbon sinks in pasture agro-ecosystems by means of introducing environmental and production management measures at a regional level. The NAMA will also promote the conservation and restructuring of natural ecosystems, while incentivizing sustainable landscapes⁸.

2 2015, Colombian Government, Nationally determined and planned contributions. http://www.minambiente.gov.co/images/cambioclimatico/pdf/colombia_hacia_la_COP21/INDC_espanol.pdf.

3 2018, Revista Semana, <https://www.semana.com/nacion/articulo/un-millon-de-personas-viven-del-bosque-nativo-en-colombia/564850>.

4 2017, IDEAM. Institute of Hydrology, Meteorology and Environmental Studies. Monitoring the Results of Deforestation 2017. PowerPoint presentation.

5 2005, Murgueitio, E & Chará, J. The role of silvopastoral systems in the rehabilitation of Andean stream habitats. Livestock Research for Rural Development. 17(2).

6 2018, MADS. Ministry of Environment and Sustainable Development. Achievements and recommendations in the environmental sector, 2010 – 2018 management report. Ministry of Environment and Sustainable Development.

7 2016, MADS. Visión Amazonia. <http://visionamazonia.minambiente.gov.co/que-es-vision-amazonia/>.

8 2015, List of NAMAs in progress. <http://www.minambiente.gov.co/index.php/estrategia-colombiana-de-desarrollo-bajo-en-carbono/acciones-nacionalmente-apropiadas-namas#namas>.

Progress in the 2014 – 2018 National Development Plan with regards to reducing deforestation and improving sustainable livestock farming

The National Development Plan (NDP) outlines medium- and long-term guidelines for strategies, policies and goals on an economic (investment and budgets), social and environmental level for the National Government. It is coordinated amongst ministries, administrative departments and regional authorities⁹.

The 2014 – 2018 NDP set out initiatives and strategic programs designed to control deforestation in Colombia. It also envisioned the concept of 'green growth' as a driver of social and economic development, established forest restoration agreements with the farmers' unions as part of their economic activities, and created the National Sustainable Livestock Reconversion Program to overcome land-use conflicts caused by extensive livestock farming¹⁰.

Livestock farming presents an opportunity to transform conventional production systems into sustainable farming systems which are climate resilient, positively impact the quality of life in rural communities and support biodiversity conservation. By the same token, there have been significant advances of initiatives being led with farmers' unions, and with support from the Colombian Federation of Livestock Farmers (FEDEGAN), such as support for the 'Sustainable Colombian Livestock Farming' Project, and the creation of the Colombian Sustainable Livestock Working Group¹¹.

The Sustainable Colombian Livestock Farming Project aims to improve livestock farming production methods by developing silvopastoral systems, conserving native forests on farms and implementing sustainable production practices. Meanwhile, the Colombian Sustainable Livestock Working Group involves the participation of a number of organisations from the public and private sectors. Guided by a voluntary agreement these actors contribute towards developing public policy, including instruments that focus on converting traditional practices into sustainable livestock farming.

9 2018, DNP. National Planning Department. What is the National Development Plan? Last accessed on 22 October at: <https://www.dnp.gov.co/Plan-Nacional-de-Desarrollo/Paginas/Qu-es-el-PND.aspx>.

10 2015, DPN. 2014 – 2018 National Development Plan. Volume 2.

11 2018. Management Report from the Ministry of Agriculture and Rural Development for 2017.

Recommendations for the 2018 – 2022 National Development Plan to strengthen zero-deforestation in dairy and meat livestock farming.

The 2018 – 2022 NDP is being built around three integrated pillars and its areas of focus (figure 1). Among these areas of focus CDP and FNC have stressed three that could have a major impact on the country’s ability to tackle livestock farming-related deforestation. These are: (1) science and technology, (2) rural development and (3) legality. Here, we will present challenges, examples and recommendations to guide livestock farming supply chains towards zero deforestation as well as the incorporation of the private sector in the development of sustainable livestock farming in Colombia.

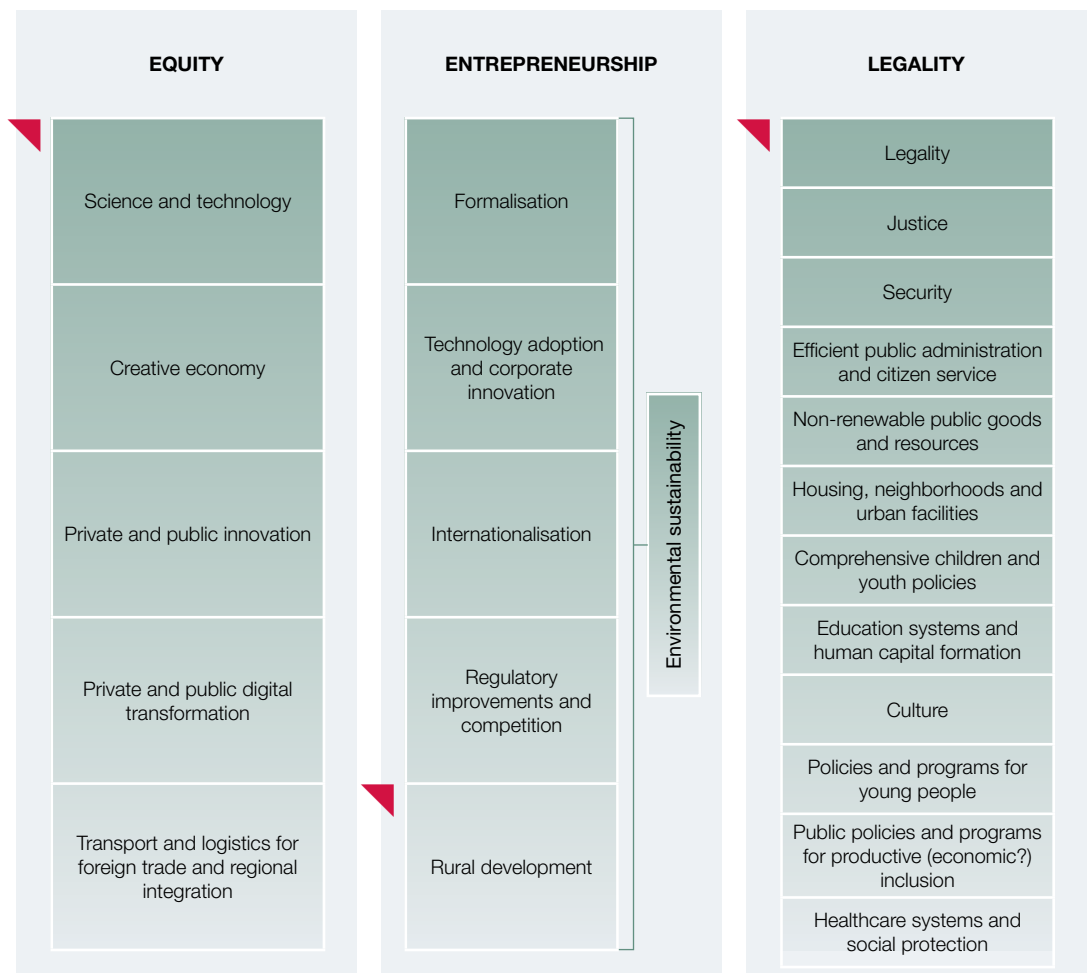


Figure 1. The strategic lines of the 2018 – 2022 NDP impacting on the development of sustainable livestock farming (source: own compilation)

Corporate Innovation

By joining the Tropical Forest Alliance (TFA) 2020 the Colombian government signalled its support for corporate innovation in tackling deforestation. Under its guise, Colombia seeks to encourage companies in the palm oil, beef, dairy, paper and timber industries to reduce deforestation in their supply chains. To date, 34 members¹² have signed two voluntary agreements for zero-deforestation supply chains, the Cocoa Agreement and the Palm Oil Agreement. Both are currently being consolidated and implemented. In addition, agreements on dairy and beef are being formulated with the involvement of a variety of stakeholders.

Owing to the challenges inherent in involving companies in these agreements, and the need to begin transforming supply chains of livestock products, the following recommendations are made for inclusion of the private sector in the 2018 – 2022 NDP:

- ▼ Promote and encourage the active participation of companies by communicating and externalizing the potential socio-economic and environmental benefits of joining zero-deforestation agreements.
- ▼ Strengthen the joint initiatives between unions, public and private sectors, such as Colombia's TFA 2020 and the Sustainable Livestock Farming Working Groups to ensure that zero-deforestation agreements are implemented and monitored at a national level.
- ▼ Promote the full mapping of corporate supply chains in order to reduce the social and environmental impacts of the livestock farming supply chain. Voluntary data disclosure via tools such as the CDP forests questionnaire can help carry out this type of mapping.

¹² Including companies from supply chains, financing bodies, consultancy firms, NGOs, embassies and governmental bodies: (1) Alquería, (2) British Embassy, (3) Climate Focus, (4) BIOD, (5) Norwegian Embassy, (6) Fondo Acción, (7) Cargill, (8) Netherlands Embassy, (9) FSC Forest Stewardship Council, (10) Ciprogres Greenlife, (11) Ministry of Environment and Sustainable Development, (12) Fundación Natura, (13) Grupo Éxito, (14) GGGI Global Green Growth Institute, (15) OILSUM Group, (16) IDH, (17) The Sustainable Trade Initiative, (18) Poligrow, (19) NWF National Wildlife Federation, (20) Extractora Cimarrón, (21) Proforest, (22) PriceWaterHouse Coopers, (23) Fundación Proyección Ecosocial, (24) UNILEVER, (25) RainForest Alliance Certified, (26) Yara, (27) Solidaridad Colombia, (28) South Pole Group, (29) The Nature Conservancy Colombia, (30) WCS, (31) WRI World Resources Institute, (32) WWF, (33) FOLU and (34) Prestige Colombia.

Given the livestock sector's poor capacity to generate information on farming, it is necessary to strengthen the tools (e.g. SIGMA and SINIGAN¹³) and methodologies that would allow for the tracing of supply chains and facilitate and simplify reporting and monitoring. Such a lack of available information is a challenge for the continued efforts of initiatives such as the Nationally Appropriate Mitigation Action (NAMA) for Cattle Farming. Efficient information management would help scale up actions for climate mitigation and adaptation, the conservation of ecosystems and the enhancement of biodiversity.

One useful example of this is the transformation of 200 hectares of land in the region of Aguachica, Cesar, used for cattle livestock farming. Since 2000, actions tailored to the area's climate have been implemented with the help of information systems. This includes the implementation of silvopastoral systems to improve soil conditions, better animal welfare and the creation of forest reserves for the protection of water resources. These measures have seen increased productivity, and better conservation of natural resources. They have doubled productivity per hectare and reduced the mortality rate in calves by 50%¹⁴. Furthermore, adopting technological tools, such as livestock farming software and using information and communications technology, can strengthen the management, oversight, reporting and monitoring of information. This in turn can facilitate decision-making.

The recommendations for the science and technology strategic line focusing on sustainable livestock farming are:

- Strengthen technical capacities to deploy technology tools (SIGMA, SINIGAN and others) within a framework of information sharing, monitoring and oversight to ensure the traceability of each product. These tools should be aligned with the Monitoring, Reporting and Verification System (MRV), launched in 2017 by the Ministry of Environment and Sustainable Development, the Sustainable Colombian Livestock Farming Project and the Sustainable Livestock Farming Working Group

- Improve data and update mappings in areas affected by livestock farming-related deforestation in order to achieve greater overall control, oversight and monitoring over deforestation.
- Establish a research program within the Administrative Department of Science, Technology and Innovation – Colciencias¹⁵), focused on researching for innovation in the post-production, storage and packaging of products, the creation of new products and marketing of sustainable products that promote ecosystem conservation and biodiversity.
- Ensure the provision of resources required to implement low-carbon development programs, such as NAMA Cattle Farming. This will help estimate their overall contribution to reducing greenhouse gas emissions in line with fulfilling the goals of the Paris Agreement.

¹³ Information System to Guide Animal Mobilisation (SIGMA). National System of Identification and Information on Cattle Livestock Farming (SINIGAN).

¹⁴ 2017. Buenahora Loza, Rafael. Maximum quality, environmentally-sustainable and profitable livestock farming. Angus and Brangus – The best meat, the best business. Edition 14. pp 20 – 23.

Rural development

The NDP should ensure rural development activities have access to the financial mechanisms to scale and replicate sustainable production initiatives that can promote zero-deforestation products and reduce greenhouse gas emissions.

In the Caqueta Region, farmers have signed a voluntary agreement on zero deforestation that, since 2013, is transforming business practices in livestock farming in the region. For example, the 'Queso del Caquetá' (Cheese from Caqueta) project is becoming a prime example of moving from conventional production to sustainable and cooperative methods. Approximately 13 farms are currently introducing transformative processes to move towards sustainable dairy livestock farming. Where sustainable practices have been identified they have added up to 5,800 hectares of protected forests. The methods used by the projects include:

- ▼ The creation of public nature reserves (areas of forest within farms);
- ▼ The development of silvopastoral systems that provide shade and mitigate the effects of climate conditions, such as high temperatures and high humidity;
- ▼ The division of extensive areas of land with hedges in order to intensify livestock farming activity;
- ▼ The modernisation of milking systems and dairy processing, in order to strengthen value chains and the creation of a brand for the regions' cheese, and;
- ▼ Strengthening of community participation and the generation of technical capacity at the local level.



Photography: Janeth Bougard

The recommendations for the rural development strategic line focusing on sustainable livestock farming are:

- ▼ Implement sustainable livestock farming production programs and replicate the experiences of Caquetá, focusing on: (1) the creation of public nature reserves to generate resilient rural areas and restore ecosystems to encourage biological connectivity and increase local biodiversity; (2) incentivize silvopastoral systems and other sustainable livestock farming schemes, such as the 'Sustainable Colombian Livestock Farming' project. On top of this and the government should implement plans for livestock farming within the Fundación Natura's 'Zero Net Deforestation Areas' project. This project supports communities that rely on agriculture and forests in the Amazonian region to counteract deforestation and forest degradation¹⁶.
- ▼ Combine efforts on livestock farming with water management, and land and biodiversity conservation, contributing for a more integrated approach of ecosystem services.
- ▼ Facilitate access to finance for producers that take socio-environmental criteria into account in their production model. Financial resources, including resources from the cooperation plan from the Norwegian and Colombian governments, could be directed to Payment for Environmental Services programs for sustainable cattle ranching practices.
- ▼ Establish and maintain strategies to access national and international markets through events organised by Procolombia¹⁷, the Ministry of Trade, Industry and Tourism and the Ministry of Environment and Sustainable Development. This includes adding value to products from niche markets that recognise good production practices by means of labelling programs and voluntary certification. Furthermore, the expansion of beef exports to new markets such as China¹⁸ calls for a strengthening of sustainable livestock farming processes to avoid expansion onto new pastures.



Photography: Janeth Bougard

¹⁶ 2018, Rainforest Alliance. Zero net deforestation areas. Accessed from: <https://www.rainforest-alliance.org/lang/es/work/climate/projects/nzdz>.

¹⁷ Procolombia is the body responsible for promoting international tourism, foreign investment and non-traditional exports in Colombia.

¹⁸ 2018, MADR. Ministry of Agriculture and Rural Development. Colombia's beef exports have the potential to move into the Chinese market which imports US\$2,516 million per year. Last accessed on 23 October at: [https://www.minagricultura.gov.co/noticias/Paginas/Colombia-tiene-el-potencial-de-entrar-con-carne-bovina-a-China,-un-mercado-que-importa-US\\$2-516-millones-al-año.aspx](https://www.minagricultura.gov.co/noticias/Paginas/Colombia-tiene-el-potencial-de-entrar-con-carne-bovina-a-China,-un-mercado-que-importa-US$2-516-millones-al-año.aspx).

Colombia's regions currently have weak institutional coordination. Different governmental bodies are responsible for the control and monitoring of forest related activities, and these are not always aligned. Therefore, it is necessary to have greater clarity and coordination of different governmental bodies, ministries, regionally autonomous corporations and municipalities, as well as agencies of control and monitoring of forest related activities. This lack of coordination means that, despite having the regulations and tools needed to fight deforestation, there is a deficit in their effective implementation.

Efforts have been made by the National Government to strengthen forestry and regional governance through the Visión Amazonia program, a strategy to reach the goal of zero net deforestation by 2020 in the Colombian Amazon. The program works on a number of fronts, from forest resource planning and forestry plans to integrating local communities (rural and indigenous populations).

The recommendations for this strategic line are:

- ▼ Align and coordinate efforts at ministerial level, involving different programs and community participation initiatives, in order to avoid duplicating work and fragmenting resources destined to strengthen sustainable livestock farming.
 - ▼ Establish an effective system for monitoring resource management aimed at complying with the zero deforestation agreements (palm oil, dairy and beef). This improvement in the management and distribution of resources will strengthen the quality of regional policies.
 - ▼ Strengthen territorial and jurisdictional socio-ecosystem approaches, adjusted to the particular characteristics of each region, programs alongside the continuation of comprehensive strategies such as Visión Amazonia program.
- ▼ Work with the cattle sector to create a plan to free up land that is currently being used for cattle ranching, but is inadequate for this economic activity. This area can instead be used by farmers to promote agricultural, conservation or ecologically-restorative projects
 - ▼ Agree the mechanisms to ensure strict compliance with Decree 261 of 2018¹⁹ on delimiting agricultural borders, as defined by the National Government, with the livestock farming industry.

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