

UNTAPPED OPPORTUNITIES FOR CLIMATE ACTION

An assessment of food systems in
Nationally Determined Contributions



COUNTRY ASSESSMENT

COLOMBIA



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PREFACE

Integrating food systems transformation into the Nationally Determined Contributions (NDCs) – the national climate actions at the heart of the Paris Agreement, is critical to delivering on interconnected ecological, biodiversity, health, economic, social, and cultural goals. Taking a food systems approach builds climate resilience and results in a diversity of context-specific solutions for food production, distribution, consumption, and waste. Yet, food systems are rarely prioritized in climate policy.

This country assessment is part of a suite of publications that are designed to centre food systems transformation in future climate policy:

1. **Untapped Opportunities for Climate Action: An Assessment of Food Systems in Nationally Determined Contributions**: A summary report providing a synthesis of the 14 country assessments with recommendations and priority actions for policymakers and climate policy advisors
2. **A Practical Guide to Assessing Food Systems in Nationally Determined Contributions (NDCs)**: A guide with a framework designed to enable users to take a food systems approach to developing future NDCs and implementing climate policies.
3. A set of **14 country assessments** examining the latest NDCs of 14 countries from around the world, outlining areas of improvement and opportunity.

Users are also encouraged to read **Confronting the Climate Crisis with Food Systems Transformation: Stories of Action from 14 Countries**, which provides a catalogue of global case studies that complement the suite of materials for policymakers, advisors, and advocates of climate action.

OVERVIEW OF COLOMBIA'S FOOD SYSTEMS

Food is an important pillar of Colombia's economy. In 2018, agriculture accounted for 6.3% of Colombia's GDP, 16.4% of employment in the country,¹ and 19% of exports.² While much of the food produced in Colombia is consumed domestically, the country is both an importer and exporter of food. In 2015, agricultural exports exceeded 23,591 billion Colombian pesos (COP) (6 billion USD),* with coffee, flowers, and plantain contributing the most to exports.³ In the same year, Colombia imported more than 15,727 billion COP (4 billion USD) in food products, most notably corn, wheat, soy oil, and soybeans.⁴

Many of the 10 million Colombians living in rural areas depend on food production as their primary source of income, with agriculture comprising 60% of employment in rural areas in 2020.⁵ Agriculture is mostly performed by smallholder farmers⁶ despite the fact that as little as 1% of landowners own as much as 81% of land.⁷ Moreover, more than half of rural inhabitants live in poverty,⁸ with rural women having the lowest incomes in the country⁹ and facing considerable barriers in accessing agricultural inputs, training, and credit.¹⁰

Colombia faces the double burden of malnutrition. On the one hand, food insecurity affects over half of Colombian households, and more than 10% of children under the age of 5 suffer from undernourishment. On the other, roughly a third of adults are overweight, with another 20% classed as obese.¹¹ These high rates of malnutrition and obesity are estimated to cost the Colombian economy at least 5,897 billion COP (1.5 billion USD) annually in lost activity.¹²

The aftermath of Colombia's half-century armed conflict continues to impact food systems despite the signing of the Peace Agreement in 2016. While the Peace Agreement has made strides toward addressing rural inequality — for example, through a land access subsidy that provides rural communities with property rights over productive land¹³ — violence, informality, and land-grabbing continue to limit sustainable rural development in many areas of the country.

Moreover, productivity is low in post-conflict areas. In fact, the labour productivity** of farmers is less than a third of the average labour productivity in Colombia.¹⁴ As a result, over recent years, much attention has been paid to the potential of agriculture as a tool to revive areas affected by the conflict.¹⁵ However, inefficiencies also impact food production in areas not affected by the conflict. For instance, the government reported in 2016 that as much as a third of food produced is either lost or wasted.¹⁶

Colombia's food system is a key driver of environmental degradation. Deforestation driven largely by land-grabbing for cattle ranch expansions and illicit crop production accounts for approximately 31% of Colombia's greenhouse gas (GHG) emissions.^{17, 18} Notably, deforestation increased rapidly after the signing of the Peace Agreement, as areas previously occupied by paramilitary forces opened up for development.¹⁹ Deforestation further leads to biodiversity loss, with 40% of species projected to have lost more than half of their habitats by 2040.²⁰ Agriculture is also a direct source of GHG emissions, with livestock farming accounting for 9% of

* Conversions based on February 2, 2022, exchange rates.

** Labour productivity is the amount of goods and services that a worker produces in a given amount of time.

Colombia's total emissions and managed soils accounting for another 8%.²¹ In addition, agricultural practices result in contaminated waterways, affecting both human and ecological health.²²

Over the coming decades, Colombia's food system must address the many challenges it faces. Food security will likely be put under further pressure due to projected climate change and increased climatic variability.²³ It is therefore essential for Colombia to transform its food system into one that is capable of safeguarding food security, promoting healthy diets, supporting environmental sustainability, and providing prosperity for all.

NDC STATUS

Colombia submitted its updated Nationally Determined Contribution (NDC) to the UNFCCC in December 2020. The NDC covers the country's efforts to mitigate GHG emissions, as well as its Adaptation Communication and its means of implementation and support.

Colombia's updated NDC represents an increase in ambition over its previous one. In its updated NDC, Colombia commits to an unconditional reduction in GHG emissions of 51% by 2030, compared to the unconditional 20% target previously committed to. The updated unconditional mitigation target will be delivered through 32 mitigation measures put forward by national ministries. The NDC also contains an additional 89 mitigation measures put forward by cities and department governments, and 24 measures put forward by private sector companies, which have not yet been quantified into the numerical target.

The following assessment was conducted between March and September 2021, and is largely based on Colombia's updated NDC as well as interviews with 14 key stakeholders.

KEY FINDINGS

NDC DEVELOPMENT PROCESS

TABLE 1: NDC DEVELOPMENT: KEY FINDINGS AT A GLANCE

Key findings

- The revision and update process of Colombia's Nationally Determined Contribution (NDC) was participatory and involved an extensive process of consultation, sensitization, and dialogue, which is described transparently in the NDC.
- Colombia has a mechanism in place to coordinate the NDC update process across ministries. It is institutionalized within the country's climate change framework and led by ministries.
- The mitigation potential of Colombia's sectoral measures – which includes assessing some food systems elements – was calculated using assessment models developed through the Low Emissions Analysis Platform, an integrated, scenario-based modelling tool.
- Efforts were taken to promote synergies between the NDC update and some policy development processes.

Areas for improvement

- Clarify whether the update process includes food systems experts.
- Ensure that stakeholder consultations take place during planning and formulation of policies, rather than later in the policy cycle when key objectives and measures have already been developed.
- Ensure that additional to national data, studies that shed light on the sub-national and local context of food systems across the country inform the NDC.

The revision and update process of Colombia's NDC was participatory and involved an extensive process of consultation, sensitization, and dialogue, which is described transparently in the NDC.

It counted on the participation of 62 stakeholders from various fields — including the public sector, the private sector, academia, civil society, and Indigenous Peoples and local communities (IPLCs). Interviews with representatives of Indigenous Peoples indicate, however, that these groups could have been consulted more extensively as part of the NDC development process.²⁴ Yet interviews also reveal that, had it not been for the time pressure applied to the development process and the restrictions imposed by the government to limit the spread of COVID-19, more stakeholders would have likely been consulted.²⁵ Nonetheless, efforts were taken to build the technical capacities of various stakeholders, and inputs were sought through a range of consultative formats:

- a public consultation sought feedback on the NDC targets and measures, and informed the first chapter on transversal and integrated elements;²⁶
- a survey collected technical inputs from specialized audiences;
- a participation and communications strategy aimed to increase public awareness of climate change;
- 10 dialogues between grassroots communities and governmental institutions sought to ensure a balanced participation of the territories, and also informed the chapter on transversal elements; and
- private sector stakeholders were consulted on their existing targets,²⁷ which resulted in a total of 24 private sector measures included in the NDC.

Colombia has a mechanism in place to coordinate the NDC update process across ministries. It is institutionalized within the country's climate change framework and led by ministries. The latest NDC update process was carried out within the framework of the National Climate Change System (SISCLIMA), with the Intersectoral Commission on Climate Change (CICC) as its leading body. The CICC has a technical secretariat hosted by the National Planning Department, with the presidency held by the Ministry of Environment and Sustainable Development and several other ministries and departments as members. By developing the NDC within the context of SISCLIMA, Colombia sought to institutionalize the revision process and enable continuity and consistent follow-up. Moreover, the development of concrete measures and targets was led by technical teams from the country's respective ministries.

The mitigation potential of Colombia's sectoral measures was calculated using assessment models developed through the Low Emissions Analysis Platform, an integrated, scenario-based modelling tool.²⁸ The updated mitigation scenario was developed by a technical research team from the Flemish Institute for Technological Research, the University of the Andes, the International Center for Tropical Agriculture, Wageningen University, the Stockholm Environment Institute, and Energy Super Modelers and International Analysts. While some food systems elements such as agricultural production and refrigeration were included in the reference and mitigation scenarios, others such as food loss and waste, as well as food transport, were not due to a lack of data.²⁹

Efforts were taken to promote synergies between the NDC update and other policy development processes. Colombia's adaptation priorities, for instance, are aligned with the country's climate change risk and vulnerability. Specifically, Colombia seeks to address climate change, food security, and poverty eradication in a streamlined manner. In this context, the Department for Social Prosperity has committed that, by 2030, 50% of its programs will manage risks around mitigating and adapting to climate change. In addition, all measures in the Colombian NDC are linked to the relevant Sustainable Development Goals to identify co-benefits that go beyond GHG emission reductions. While not mentioned in the NDC, interviews also indicate that the recent organization of Food System Dialogues under the auspices of the United Nations Food System Summit have served to elevate the position of food systems and promoted synergies in Colombia's policy-making context.³⁰ Notwithstanding, interviews reveal that policy development within the Colombian government often takes place in silos.³¹ Notably, of the 32 measures included in the NDC that were put forward by sectoral ministries, only one such measure (reducing deforestation) will be implemented in an intersectoral and collaborative manner.

AREAS FOR IMPROVEMENT

Clarify whether the update process included food systems experts. Including the perspective of experts that apply a food systems perspective can make it easier to identify gaps, overlaps, and incoherencies in current policies, as well as promote complementarity by filling any gaps and addressing perverse incentives.³² In this context, more meaningful engagement with Colombia's Indigenous Peoples, who have long recognized the interconnectedness between food, human health, and environmental well-being, is central for ensuring that food systems measures are suited to sociocultural contexts.³³

Ensure that stakeholder consultations take place during planning and formulation of policies, rather than later in the policy cycle when key objectives and measures have already been developed. Engaging stakeholders earlier in the process, as well as facilitating discussions among relevant stakeholders — are key for a truly participative policy development process. In addition, it is key that consultative processes seek to engage with other ministries that may have conflicting or competing interests with respect to climate change mitigation and adaptation. These measures can propel the development of synergetic and intersectoral targets and measures.

Ensure that in addition to national data, studies that shed light on the local context of food systems across the country inform the NDC, in line with the NDC's goal to promote diversified food production adapted to different microclimates and sociocultural contexts. Interviews indicate a need to better understand various aspects of Colombia's food systems at the local level, including dietary preferences, demand for Indigenous commodities, interlinkages between the production of different commodities, and migration trends.³⁴ Two studies have achieved this: 1) the "Roadmap for a New Food and Land-Use Economy" produced by Colombia's Food and Land Use (FOLU) Coalition,³⁵ which takes a food systems approach and answers some of the above issues;³⁶ and 2) a recent study that provides a comprehensive profile of the food system of the city of Cali, which takes into account issues such as food loss and waste, as well as health, economic, and supply chain aspects that impact the food system of the city.³⁷ Adopting such a food systems perspective, or taking stock of studies that do, enables policymakers to better understand the drivers of local challenges and ensures that efforts to address these challenges are intersectoral and complementary.³⁸

CONTENT OF THE NDC

TABLE 2: NDC CONTENT: KEY FINDINGS AT A GLANCE

Key findings

- Colombia has developed an accounting system for GHG emissions reduction and removal in the context of its NDC, which considers agriculture and land use.
- The Colombian NDC includes measures to:
 - promote agroecology and regenerative approaches;
 - strengthen capacities related to agroecology and regenerative agriculture; and
 - protect, conserve, and recover natural resources and ecosystems as well as measures to strengthen its protected areas.
- The NDC acknowledges the importance of engaging with smallholders and local communities.
- While the NDC does not include targets nor measures on food waste and loss, Colombia has an ambitious new law in place for addressing both issues.
- The NDC includes measures to promote diversified food production adapted to different microclimates and sociocultural contexts.
- The NDC recognizes the central role of vulnerable groups in implementing its measures and achieving its targets.

Areas for improvement

- Clarify whether and, if so, how exactly food systems emissions are accounted for within Colombia's National Accounting System, and include guidance on accounting in the NDC.
- Recognize the fundamental role food systems can play in the Colombian peace process, especially with regard to rural development and job creation.
- Include measures to:
 - promote the creation of green jobs in food systems;
 - promote access to nutritious and sustainable diets, adapted to local contexts;
 - strengthen Colombia's Indigenous food systems;
 - promote sustainable aquatic proteins; and
 - improve the connection between consumers and producers by clarifying, at point of purchase, the environmental impacts of the manner in which the food was produced.
- Align the NDC with the recently passed Colombian law on food waste and loss.
- Include commitments made in the context of the Global Methane Pledge, Glasgow Leaders' Declaration on Forests and Land Use, and the Policy Action Agenda for Transition to Sustainable Food & Agriculture.
- Break from harmful subsidies and perverse incentives and redirect public finance toward sustainable food systems.

KEY FINDINGS

Colombia has developed an accounting system for GHG emissions reduction and removal in the context of its NDC, which considers agriculture and land use. The accounting system consists of processes, technologies, protocols, and rules that determine how the emissions, emissions reductions, and emissions removals should be accounted for. While some food systems elements are included, such as agriculture and land use, it is unclear whether and, if so, how other food system elements are accounted for.

The NDC includes measures to promote agroecology and regenerative approaches. More concretely, the NDC includes measures to reduce the GHG emissions from the lifecycles of cocoa, coffee, and unrefined sugar. In addition, it promotes the adoption of technologies for rice production and the implementation of abatement technologies for fertilizer production. The NDC also includes a measure to reduce GHG emissions from livestock through sustainable management, silvo-pastoralism, restoration of degraded grazing areas, and energy generation from waste, among others. Notwithstanding, the NDC does not include measures to promote local traditional food production practices, nor does it include any measures to promote sustainable aquatic protein.

Strengthening capacities related to agroecology and regenerative agriculture is also included in the NDC. For example, there is a measure to engage three regions with high agricultural potential in regional agroclimatic technical tables. These agroclimatic technical tables aim to inform local actors, especially smallholders, on the expected climatic changes in their region, how these are likely to influence agricultural production, and how this can be mitigated. In addition, the NDC includes measures to strengthen local agricultural capacities through trainings and workshops that cover agroclimatic literacy, the interpretation and proper use of information, and concepts related to probability, uncertainty, and climate variability.

The NDC includes measures to protect, conserve, and recover natural resources and ecosystems as well as measures to strengthen its protected areas. Specifically, the NDC includes an adaptation measure to restore, rehabilitate, or recover 18,000 hectares of degraded land in protected areas. In addition, the NDC includes adaptation measures to conserve paramos, watersheds, mangroves, and seagrass fields. Finally, the NDC includes a mitigation measure to promote sustainable livestock, which includes promoting the conservation and restoration of natural ecosystems that have been used as pasture for cattle.

The NDC acknowledges the importance of engaging with smallholders and local communities. Colombia's NDC recognizes the central role of Indigenous and Afro-Colombian communities in preserving Colombia's forests. The involvement of rural communities is seen as essential for transforming agricultural practices, avoiding the expansion of the agricultural frontier, and safeguarding the country's food security. In this spirit, efforts to strengthen the tools and local information systems of Indigenous, rural, and Afro-descendant communities are included as technical capacity-building needs. In addition, local and traditional knowledge is incorporated into Colombia's adaptation measures. Specifically, the country is seeking support on research into local and traditional knowledge related to mangroves, as well as on efforts to protect Colombia's cultural heritage. Notwithstanding, the NDC does not include any concrete measures for engaging directly and meaningfully with Indigenous Peoples, smallholders, and local communities.³⁹ In fact, interviews with representatives of Indigenous Peoples indicate that there is much scope to include mitigation and

adaptation measures that leverage the role of Indigenous Peoples as stewards of integrated ecological and food systems in Colombia.⁴⁰

It is unclear whether the NDC includes measures to promote the creation of green food systems jobs. The NDC refers to the strategy for the “just transition of the workforce toward a resilient and low-carbon economy.” The strategy will be developed by 2023, under the leadership of the Ministry of Labour and with the participation of the country’s economic sectors and their workforce. It will seek to improve the quality of life and the socio-economic inclusion of the population, and it will include monitoring indicators for this purpose. As the strategy is yet to be published, it is unclear whether (and, if so, how) food system jobs will be considered.

While the NDC does not include targets nor measures on food waste and loss, Colombia has an ambitious new law in place for addressing both issues. Food loss and waste were not included in the model reference scenario because of a lack of available empirical data.⁴¹ As a result, the NDC does not include any targets nor measures on food loss and waste. However, the Colombian Government approved a law in 2019 that aims to reduce food loss and waste across every step of the supply chain.⁴²

The NDC includes measures to promote diversified food production adapted to different microclimates and sociocultural contexts. These include the above mentioned national food production measures, which were set by the Ministry of Agriculture and Rural Development. In addition, the NDC includes territorial measures covering food production that are put forward by respective departmental and city governments and are suited to local realities.

The NDC recognizes the central role of vulnerable groups, such as displaced communities or those living under the poverty line, to implement its measures and achieve its targets. It also recognizes the central role of women in aspects such as agricultural production, food security, and community resilience. A number of mitigation and adaptation measures include gender equality co-benefits or have safeguards in place to ensure the participation of women in leadership positions.

AREAS FOR IMPROVEMENT

Clarify whether and, if so, how exactly food systems emissions were accounted for within Colombia's National Accounting System and include guidance on accounting in the NDC.

Crucially, the accounting approach should be able to adequately mitigate risk, increase accountability, and provide transparent, consistent guidance on integrated food systems assessment. In addition, the mitigation models should account for the food systems elements not already accounted for, such as food loss and waste, once quantitative data for their mitigation potential is available. In addition, accounting guidance that targets farmers, corporations, the finance and investment community, consumers, and other relevant food systems stakeholders should be included. This can enable these actors to better account for the externalities of their practices.

Recognize the fundamental role food systems can play in the peacebuilding process of Colombia.

Transforming food systems in Colombia can promote social stability and rural development, creating viable economic alternatives for individuals previously entangled in the conflict. This requires including measures in the NDC to meaningfully engage smallholders and local communities in agroecology and regenerative agriculture, emphasizing those most affected by the conflict.⁴³ Smallholders and local communities are the backbone of Colombia's food system, and their meaningful engagement is crucial for transforming the country's food system.

Include measures that promote the creation of green jobs in the food system. Strengthening agricultural livelihoods is a key aspect of rural development, which is particularly important for those areas most impacted by the conflict.⁴⁴ Rural development can only be fostered sustainably if rural livelihoods are made more attractive and can function as a viable lifeline to marginalized communities.⁴⁵ Colombia is already pursuing this vis-à-vis one of the most important pillars of the Peace Agreement: comprehensive rural reform. This can be pushed further, for example, by including food systems jobs in the country's strategy for the "just transition of the workforce toward a resilient and low-carbon economy."

Include measures to promote access to nutritious and sustainable diets, adapted to local contexts.

Controlling food advertising (especially to children) and promoting healthy and sustainable diets as part of school feeding programs both hold great potential to inspire a generational dietary shift. Colombia has a School Feeding Program in place that covers the entire country, whose main purpose is providing students with macro- and micronutrients and reducing student dropout rates. The School Feeding Program can further foster a food system transition by providing children with delicious, sustainable, and healthy foods. In addition, adopting a gastronomic approach can address challenges around food waste and loss.⁴⁶ It is key here not to merely copy guidance from Global North countries, but to ensure that dietary guidance is appropriate to the local contexts.⁴⁷ Moreover, including the environmental impacts of diets into dietary guidelines could also be helpful.⁴⁸

Include measures to strengthen Colombia's Indigenous food systems. The majority of Indigenous Peoples in Colombia maintain very important relationships with their ancestral lands.⁴⁹ Food is a central aspect of these relationships that is expressed through ancestral practices such as hunting, fishing, and Indigenous agriculture, as well as traditional food storage, preparation, and disposal practices.⁵⁰ In fact, regenerative approaches and agroecology are strongly rooted in Indigenous agricultural practices.⁵¹ Yet, more

often than appropriate, Colombia's Indigenous food systems are threatened by public and private financial interests who see food as a business opportunity rather than an opportunity to safeguard the human right to adequate nutrition.⁵² In addition, climate change is expected to put further pressures on Indigenous food and nutritional security in the country.⁵³ In this context, the NDC may offer valuable opportunities to strengthen Colombia's Indigenous food systems in the wake of increasing socio-economic pressures and a changing climate, for instance by protecting and ensuring the availability of Indigenous seeds.⁵⁴ An Indigenous seed bank, for example — which has proven incredibly beneficial in Guatemala⁵⁵ — can be included as measures in subsequent revisions of Colombia's NDC.

Include measures to promote sustainable aquatic proteins. Colombia has significant potential to profit — socially, economically, and environmentally — from the sustainable management and use of coastal marine resources. Notably, algae and mollusks have great potential as a sustainable source of aquatic protein in the country.⁵⁶

Align the NDC with the recently passed law on food loss and waste. The 2019 law holds potential to reduce food loss and waste across every step of the supply chain. Some of its targets and measures should be aligned with future NDC updates. For instance, the law aims to train and mobilize producers, processors, distributors, and consumers in waste management, as well as recover and redistribute safe surpluses of food for consumption, biomass, and animal feed.

Integrate the commitments made in the context of the Global Methane Pledge, Glasgow Leaders' Declaration on Forests and Land Use, and the Policy Action Agenda for Transition to Sustainable Food & Agriculture. Colombia endorsed several pledges and initiatives announced during COP26 in Glasgow (but outside the official UNFCCC regime). These pledges, if fully and adequately implemented, have the potential to accelerate Colombia's shift toward sustainable food systems, in particular through measures that promote sustainable trade, as well as through repurposing public policies to support regenerative agriculture practices while improving overall food systems resilience. But to ensure progress, transparency, and accountability, it is crucial that these international commitments and respective actions be fully integrated and anchored into Colombia's NDC.

Improve the connection between consumers and producers by clarifying, at point of purchase, the environmental impacts of the manner in which the food was produced.⁵⁷ Strides are being made to develop consumer-facing tools to track and tackle deforestation, such as certification for deforestation-free palm oil.⁵⁸ As palm oil is not a significant driver of deforestation in Colombia, similar efforts should be extended to value chains that have a clearer link to deforestation.⁵⁹

Break from harmful subsidies and perverse incentives, and redirect public finance toward sustainable food systems. Interviews reveal that Colombia's policies and subsidies often offer perverse incentives, especially when policies and subsidies promote economic development above environmental sustainability.⁶⁰ Colombia should break from these harmful subsidies and redirect some of this finance toward ecologically beneficial forms of farming, better and healthier food, and resilient livelihoods and communities. The assessment that Colombia is undertaking of its NDC implementation costs and impacts can be instrumental for developing measures that both break from harmful subsidies and redirect public finance.

IMPLEMENTATION OF THE NDC

TABLE 3: NDC IMPLEMENTATION: KEY FINDINGS AT A GLANCE

Key findings

- A coherent approach is taken for implementing and monitoring the NDC.
- Colombia will develop a follow-up plan assessing the progress in implementing the goals and milestones set in the NDC.
- Colombia is currently in the process of quantifying the implementation costs associated with its NDC, which will inform the allocation of government resources for the implementation of its measures, including those that consider food systems.
- The NDC includes a number of conditional measures for which the government is seeking external support and for which it has identified financial vehicles.
- The NDC highlights that local institutions and communities will play an important role in its implementation.
- The NDC promotes women's role in the implementation of agroecology and regenerative approaches.

Areas for improvement

- Improve coordination across government during NDC implementation.
- Ensure a transparent and collaborative assessment of progress toward NDC goals and objectives.
- Ensure that the monitoring process is based on sound methodologies and data involving public research.
- Provide finance for the implementation of the NDC and for improving institutional capacities to transform food systems.
- Develop policies and measures to generate opportunities for private, philanthropic, and multilateral investment in sustainable food systems.

A coherent approach is taken for implementing and monitoring the NDC. The NDC considers several elements necessary for implementation and monitoring. First, the implementation process will involve consolidating information systems and databases, as well as keeping a record of the research, technological development, and innovation required for implementing measures. Second, capacity-building, education, and awareness-raising are also envisioned as part of the process. Third, financing and economic instruments, as well as planning, are highlighted as key features of implementation. The National Information System of Climate is responsible for the monitoring, reporting, and verification of mitigation measures, and the monitoring and evaluation of adaptation measures, including those that address food system elements.

Colombia will develop a follow-up plan assessing the progress in implementing the goals and milestones set in the NDC. The follow-up plan will present the country's progress with regard to

implementing the measures and achieving the targets of the NDC. As the follow-up plan has not been published yet, it is unclear which indicators and data strategies will be used to monitor the NDC's performance and whether the process will be transparent and democratic.

Colombia is currently in the process of quantifying the implementation costs associated with its NDC, which will inform the allocation of government resources for the implementation of measures, including those that consider food systems. This assessment seeks to provide the government a better understanding of the socio-economic costs and impacts of the country's NDC. In addition, it seeks to enable gradual improvements in the country's approach toward fair and inclusive decarbonization. As part of the quantification of implementation costs, the country is considering the financial structuring required at the national, international, public, and private levels. This will inform the allocation of government resources for the implementation of the NDC, including those measures that contain food systems elements.

The NDC includes a number of conditional measures for which it is seeking external support and for which it has identified financial vehicles. For each of Colombia's conditional measures, possible financial vehicles have been identified, including donations, concessional and non-concessional loans, capital, and guarantees.

While the NDC promotes a large role for women in the implementation of agroecology and regenerative approaches, it is unclear whether smallholder farmers and IPLCs will also be awarded such a role. The NDC highlights that Colombia is committed to mainstreaming a gender approach in its implementation process. For example, a number of mitigation and adaptation measures mention gender equality co-benefits, as well as safeguards to ensure the participation of women, including in leadership positions.

AREAS FOR IMPROVEMENT

Improve coordination across government during implementation. While Colombia already has many good policies and institutional structures in place, coherence and coordination are often a challenge for implementation as ministries continue to work in silos.⁶¹ Coordination can also be improved within ministries, namely between the delegates that participate in the NDC process and the public officials within the ministry whose policy-making may be impacted by the targets and measures developed for the NDC. Furthermore, the collaboration with regional and local governments should also be fostered.

Ensure a transparent and collaborative assessment of progress toward NDC goals and objectives. Crucially, women, smallholders, and other traditionally marginalized groups should be engaged in formulating the policies that underline NDC implementation, especially in areas affected most by the conflict.

Ensure that the monitoring process involves public research. It is key to seek inputs and evidence from representatives of IPLCs, as well as farmers. In addition, it would be valuable to clarify how the interests of smallholder farmers and IPLCs more broadly — as well as the inputs and evidence they provided — will be streamlined into the implementation of agroecology and regenerative approaches.

Provide finance for implementing the NDC and improving institutional capacity to transform food systems.⁶² While Colombia has developed many strong policies, implementation is a key challenge, often due to a lack of funds and institutional capacities.⁶³ This is especially true for regional institutions and in areas previously affected by the conflict, where few institutions are present. It is thus crucial to increase the institutional presence in rural areas to ensure that rural development is supported locally by the government. In addition, finance should be used to facilitate coordination across government, as well as for building the capacities of technical extension services and farmers directly.

Develop policies and measures to further enable private, philanthropic, and multilateral investment in sustainable food systems. Such financial support should promote stronger rural livelihoods and communities producing better and healthier food under ecologically beneficial forms of farming. For private investment, this will often require a business case for sustainable food systems, which can be challenging to develop in the absence of robust data. Philanthropic and multilateral investments require a strong narrative and demonstrated political will to transform the country's food system. A recommendation is thus also to further the food system transformation narrative at the national level.

CASE STUDY SUMMARY

Food and Land Use (FOLU) Coalition, Colombia

Under the auspices of the Colombia Food and Land Use (FOLU) Coalition, a coalition for a New Economy for Food and Land Use came together to transform the food and land-use systems, within the Antioquia region of Colombia, into a powerful force that aims to drive sustainable development, contributing to the U.N. Sustainable Development Goals and Paris Climate Agreement. This unique coalition connects entrepreneurs, investors, government agencies, the scientific community, academics, farmers groups, local and Indigenous groups, civil society organizations, trade organizations, and multilateral organizations at local, national, and international levels through a participatory process of engagement and collaborative actions.

The development of a roadmap for Antioquia involved an initial diagnostic phase, with the participation of 220 actors and 80 public and private organizations, and involved an analysis of the state of the ecosystems, biodiversity, climate impacts, agricultural productivity, food markets, health and nutrition, and food loss and waste within the Antioquia region, alongside the identification of key challenges and opportunities for food and land-use system transformation. Based on the initial diagnostic phase, the roadmap stakeholders identified a vision, 4 strategic priorities, and over 100 actions that were needed over a 10-year timeframe. The vision states: “By 2030, Antioquia will transform the food and land-use systems into powerful development and equity engines, thus increasing regenerative agricultural productivity, preserving and restoring ecosystems, bringing producers and consumers together with innovative markets, and ensuring healthy and wholesome food to favour the well-being of its people.” The actions were grouped under these four priorities:

1. Productive and sustainable territories and aquatic systems;
2. Conscious and with purpose-driven markets and enterprises;
3. Healthy and nutritious diets with less food loss and waste; and
4. Innovation, science, technology, and education.

Fundamental to the success of the initiative was the involvement and collaboration between government ministries during both design and implementation of the regional roadmap, as demonstrated by the process of engagement involving regional health, environment, and agricultural ministries. Changing the narrative and mindsets of regional policymakers and key decision makers, across many ministries, was key to the success of bringing all actors together and convening this platform. For example, the project highlighted the concept of regeneration in terms of regenerative food and agricultural and land systems, and highlighted the importance of mainstreaming regeneration in all policies.

One of the key lessons highlighted by Claudia Martínez Zuleta, Director of E3 — Ecology, Economics and Ethics — was that “participatory governance processes need to be designed in such a way that they overcome structural inequities and any potential power imbalances. This builds trust, ensures resources are committed, and empowers local decision makers to ensure that plans are turned into concrete actions.”

Further information and access to the detailed case study can be found [here](#).

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