

A systemic analysis of the role that climate, natural resource and food systems play in conflict and peace is key to design and implement interventions addressing and preventing conflict. This document is one part of the 6- policy note outputs from the CGIAR Climate Security Webinar Series. These notes summarize the key messages made during the webinar panel discussion. Recordings of the webinar sessions can be found [here](#).

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Panellists and short summary

Our distinguished panel to join this discussion included:

- **Juan Lucas Restrepo**, Director General, Alliance of Bioversity International and the International Centre for Tropical Agriculture (CIAT)
- **Frank Pearl Gonzales**, Former Colombia Minister of Environment, Peace commissioner, and Lead Negotiator for Colombia's Peace agreement
- **Dr. Angelika Rettberg**, Professor - Political Science Department, Universidad de los Andes, Colombia
- **Dr. Luis Fernando Suárez Vélez**, Governor (e), Department of Antioquia, Colombia

In this webinar, we examined Colombia as a case study to see how sustainable resource management and climate-smart agricultural development can contribute to peace in Colombia. We examined both short-term solutions to address current environmental issues, and long-term strategies to ensure sustainable development. Recognising the complexity in delivering these solutions, we invited guest speakers from a wide range of expertise in conflict, agricultural development and public administration who can share their perspectives, vision, and strategies. As a microcosm of larger processes, Colombia not only illustrates big challenges, but charts as well an optimistic path for the future.

Colombia: A Long History of Conflict

Conflict in Colombia is as old as the country itself. From the arrival of the conquistadores, through to the “independence” wars and localised civil wars of the 19th century, all the way to the broader political violence of the 20th century, the endemic presence of violence has sadly been a matter of degree and location. The origins of the most recent phase of political conflict in Colombia are rooted in a complex web of causes, historical grievances, faulty and irregular governance, land tenure, inequality, and socio-economic marginalisation, among many others. With a complex topography, covered by high mountain ranges and vast jungles, secluded rural regions have historically remained distant from the reaches of the state’s control. In these regions, smallholders have chronically experienced low levels of economic development, poor infrastructure, neglect, and marginalisation. Capitalising on this void of governance, guerrillas such as FARC and non-state armed actors sought to fill it with different mixtures of alternative ideological models or organised crime structures.

The 2016 peace agreement between FARC and the Colombian government, although representing a milestone, demonstrated by its very nature, the root causes of the conflict are yet to be resolved. The agreement proposed a transformation of economic and social systems to address key issues on land tenure, national reconciliation, and economic inclusion. Dr. Rettberg noted the incorporation of numerous mechanisms targeting over 9 million affected people, most notably a comprehensive agricultural development policy. Yet many tangible challenges remain. Some of Colombia’s economic, social and governance indicators in certain parts of the country are akin to a emerging middle-income country status, yet these co-exist with levels of poverty and malnutrition on par with standards in some of the least developed regions in the world. As of right now, 28% of Colombians live under the national poverty line¹. Furthermore, the country has one of the world’s high rates of inequality overall and in land ownership, with some 77% of land in the hands of 13% of landowners². This dynamic emerges as both a result and a cause of the conflict, driven by high unemployment in rural areas and forced displacement by armed groups. Particularly vulnerable in this regard are rural populations faced with food insecurity, driven by a lack of sufficient income-generating activities, diminished institutions after decades of war, as well as adverse climate conditions. The destruction of illegal crop fields

¹ The World Bank, 2020. World Development Indicators.

² Departamento Administrativo Nacional de Estadística. 2015. Censo Nacional Agropecuario. Bogotá.

by the Colombian army has further caused unemployment and limited livelihood alternatives for people, which has in the past incentivised communities to become further involved in illegal activities.

One of the most important aspects of the peace agreement that addresses this inequality, unemployment, and food insecurity is the development of rural land reform policies, which aim to encourage displaced people to return to their homes and to boost local economies in underdeveloped rural areas. However, the Colombian government is likely aware that land reform can rapidly propel the expansion of extractive industries and agricultural production in areas previously inaccessible due to the armed conflict, including protected and highly biodiverse forests. As such, a fine balance must be found between economic incentives and environmental priorities.

Climate Change

As Colombia formulates its policies relating to economic development and rural reform, the desire to achieve short-term objectives is increasingly confronted with a rapidly evolving climate system. To ensure the resilience of the livelihoods and employment of the most vulnerable, long-term perspectives must be integrated. Mr. Restrepo noted that Colombia is one of the most vulnerable countries in the world in terms of its susceptibility to climate variability and change. With 14% of GDP deriving from the agricultural sector, and 21% of the population reliant on the sector for employment, the impact of climate change is likely to be widespread³. Analysis conducted by CGIAR shows how by 2050, climate change in Colombia will likely impact some 3.5 million people. It is expected that if no adaptation measures are taken, 80% of crops in roughly 60% of current cultivation areas will be affected, with particularly severe impacts in high value perennial and exportable crops⁴. Suitability modelling specifically suggests that the average suitable areas for banana, potato, and wheat cultivation may substantially decrease by as much as 55.1%, 20.8%, and 21.3% respectively⁵. Areas suitable

³ Ramirez-Villegas, J., Salazar, M., Jarvis, A. and Navarro-Racines, C.E., 2012. A way forward on adaptation to climate change in Colombian agriculture: perspectives towards 2050. *Climatic Change*, 115(3-4), pp.611-628.

⁴ Ibid.

⁵ Prager, S. Rios, A. Schiek, B. Almeida, J. and Gonzalez, C. 2020. Vulnerability to climate change and economic impacts in the agriculture sector in Latin America and the Caribbean. Inter-American Development Bank

for Arabica and Robusta coffee cultivation are similarly projected to decline by 12.6% and 21.8%, respectively⁶. These impacts on crops directly translate into the loss of employment opportunities and income-generating activities for farmers across Colombia, key drivers of conflict the 2016 peace agreement attempts to address.

Ways Forward

As noted by Dr. Rettberg, Colombia has come a long way with the achievement of the peace-agreement. As institutions and mechanisms are currently set-up to lay the foundations for a renewed Colombia, this is the opportune time to extend the country's vision towards long-term future prospective.

“ In as much as the country is able to address many of these factors, not alone, but also as a part of an international system [...], it is likely that with time, we will proceed to become a peaceful society. In the meantime, we still have to work really hard, it is a challenge that most Colombians need to face [...], depending on our willingness, capability and creativity to develop the mechanisms to overcome all of these challenges. ”



Dr. Angelika Rettberg
Universidad de los Andes, Colombia

Mr. Pearl stresses the need to dissect this thinking by deploying a three-dimensional lens capable of understanding the issues in the political dimension, the technical dimension, and the human dimension. In the political dimension, there emerge challenges between central and regional coordination, where the central government has limited control over the activities of regional departments. Once state institutions have been strengthened at the required levels and have achieved adequate coordination and complementarity, this should streamline a strong

⁶ Ibid.

consensus for the leveraging of technical capacities to address the discussed challenges. The technical dimension, then, highlights the need for roadmaps that set out an adequate foundational legal structure capable of balancing environmental protection with economic incentives for development. Finally, in the human dimension, Mr. Pearl emphasises how the legacy of prolonged conflict and a sense of systemic marginalisation by many communities has contributed to a lack of social cohesion within and amongst communities and individuals, resulting in a confrontational and distrustful atmosphere. Shifting these sentiments and views to allow for the legitimisation of those who think differently will be crucial in creating a consensus amongst the population to work on the drivers for change.



“ **The problem is not political. The problem is not technical. We need to be more conscious and humanise the relation amongst ourselves, to be able to recognise those who think differently and to be able to tackle together the issues that our society face** ”

Frank Pearl Gonzales, Former Colombia Minister of Environment, Peace commissioner, and Lead Negotiator for Colombia's Peace agreement

In addition to this high-level recognition by Mr. Pearl, our guest speakers highlighted three emerging pathways for Colombia:

- 1. Design holistic development interventions that address the root causes of insecurity in Colombia**

In developing a roadmap for peace and prosperity, Colombia will have to carefully balance its socio-economic and environmental priorities. Within its rural reform and development policies, there is much room for innovative mechanisms to address poverty and food insecurity. However, the challenges identified throughout this discussion also crucially represent entry points for delivering comprehensive, holistic interventions that incorporate climate change and peace-building considerations to build sustainable, resilient livelihoods in the medium- and long-term. Once institutions at central, regional and local levels in Colombia have been fully aligned, as noted by

Frank Pearl, there will be increased opportunity for the development of economic incentives and infrastructural development to address poverty, through the support of local production, food storage, supply chains, or payment for environmental services.

Case study: Achievements of the Antioquia region, Colombia

A great example of the alignment of peacebuilding, development, and environmental objectives can be found in the innovative solutions and coordination mechanisms developed by regional administrations such as Antioquia's Departmental Administration. The region of Antioquia has been heavily impacted by Colombia's violent past, with the area experiencing violence from both criminal and political armed groups. While the situation since the 2016 FARC peace agreement has improved, there is now a rising presence of armed groups in certain areas, and a new landscape has emerged in which illegal mineral extraction has become a key form of rent for such groups.

The department has sought to address such issues head on. Special attention has been given to the Bajo Cauca sub-region, where effects have been felt particularly heavily, by introducing a targeted social investment programme to directly counter the criminal structures active in the area. Additionally, Antioquia's Departmental Administration declared in February an environmental emergency, particularly driven by deforestation, forest fires, soil degradation, water supply, pollution, and a subsequent lack of biodiversity. The emergency has allowed it to refocus its bureaucratic, regulatory, and financial might on addressing the consequences of some of the most acute environmental damage, with a particular focus on countering deforestation and improving the region's food sovereignty.

By thinking ahead and focusing on tackling the conflicts of the near future, the department has launched a bottom up, coordinated, multidisciplinary and partner-based strategy to address the spiralling set of problems emerging in the region of Bajo Cauca, an acute microcosm of the conflict, environmental damage, and climate change issues mentioned here. The partner-focused approach aims to link public and private sector entities as well as establish cooperation across local, national, and international scales.



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The Governorate of Antioquia is the first territorial entity in Colombia to declare the State of Climate Emergency. This declaration is a voluntary political and social responsibility to the population and future generations, to define structural changes in the medium and long term in the environmental, social, economic and institutional spheres. In order to meet this challenge, the participation of private and community public actors is essential for a united and formal commitment to carry out transformation actions

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**Dr. Luis Fernando Suárez Vélez, Governor,
Department of Antioquia, Colombia**

2. Recognise the key role played by climate and food systems science in informing policy decisions

Resource management, biodiversity, and livelihoods, as well as social, institutional, and economic prosperity, are intrinsically dependent on the best possible incorporation of climate adaptation and mitigation strategies for long-term planning. These need to be understood not only as technical environmental measures but as intrinsic pillars of a peace effort, highlighting the direct relationship between livelihood security, environment, and peace. At the moment, scientific capacity to conduct research on the vulnerability of communities across the country to climate change and food insecurity, or to monitor land-use change dynamics using big data and advanced technology, needs to be strengthened. This information will play a crucial role in development planning for the country and in ensuring accurate targeting of beneficiaries and effective reduction of economic inequalities.

3. The need for partnerships for effective delivery of results

As stated by Mr. Restrepo, science does not resolve anything if it is not effectively incorporated within policy making processes. Here, effective collaboration among international and national organisations will play an important role in strengthening the technical capacity of institutions.



“ Science is essential, but science per se does not resolve anything if its it not well-integrated into policy making, into the right way of doing politics and of course, embedded in institutional strengthening. ”

Juan Lucas Restrepo, Alliance of Biodiversity International and the International Centre for Tropical Agriculture (CIAT)

What can CGIAR offer?

Representing CGIAR, the Alliance of Biodiversity International and the International Centre for Tropical Agriculture (CIAT) have both had a longstanding institutional presence in Colombia. Over the past decades, our organisation has contributed many research studies to contribute to building a food-secure future, reduce rural poverty, and promote sustainable management of natural resources in Colombia. CGIAR’s programming in Colombia reflects in this regard the holistic and integrated approach required to effectively tackle the interface of food security, economic development, and peace in the Colombian context. CGIAR recognises that the scaling of climate-smart agricultural (CSA) technologies, practices, and innovations must emerge from both bottom-up and top-down initiatives, and must integrate economic, political and social dimensions in recognition of the integrated relationship between climate change and variability, the sustainability of rural livelihoods, and the potential for violent conflict. As such, CGIAR has been active in tackling issues at multiple levels, including:

Climate Adaptation, Resilience, and Livelihoods

CGIAR's research and programming both directly and indirectly impacts the resilience of communities to climate change and variability. Our most outstanding work with the Colombian government is represented through our Aclímate Colombia project, which has established a technical and scientific cooperation with the Ministry of Agriculture and Rural Development (MADR), to improve the competitiveness of the agricultural sector, through the application of policy instruments, strengthening the investment of resources in research, technological development and innovation. CGIAR's '[Delivering Drought- and Low-P Resistant Common Beans, Cowpeas, and Soybeans](#)' project, for instance, has worked to develop new crossings of bean lines to improve their resistance to drought and heat, making them a more environmentally and economically sustainable crop to use. Aside from the directly scientific tracts of research, CGIAR also works at the community level to strengthen the adaptive capacities of producers. The '[Innovation Platform for Improving Farmer's Adoption of Climate-smart Agriculture Technologies](#)' aimed to develop an innovation platform at the local level, able to provide solutions for mainstreaming climate-smart agriculture options. CGIAR has also deployed a 'Climate-Smart Village' approach in Cauca, Colombia, which facilitates a broad, community-wide effort to improve adaptive capacity and resilience by producing land adaptation plans and supporting the adoption of climate-smart technologies, amongst other activities.

CGIAR also supports livelihoods by working to connect and integrate food producers to value chains and markets, within Colombia as well as across Latin America and beyond. The '[Innovation for the Development of Low-Emission Livestock Value Chains in Latin America](#)' project, for example, recognises how CSA options can leverage broader economic development and inclusion. The project aims to work with livestock farmers to develop creative business models with low emissions, viable approaches to Monitoring and Evaluation (MRV), public-private partnerships and value-chain alliances, and the development of mechanisms that encourage the sustainable implementation of innovations. Work to integrate producers into value-chains also occurs at the institutional and policy levels (see below).

Institutional Environment and Policy

Effective scaling of CSA solutions, as mentioned previously, must be both a bottom-up and a top-down affair. As such, CGIAR has dedicated time and resources to working at the institutional and policy level too. The '[*Design Inclusive Climate Change Policies for Resilient Food Systems in Central America and the Caribbean*](#)' project is a great example of this. The project works together with countries and regional organisations to improve the decision-making process and the design and implementation of policies that support more resilient food systems. Based on a balance of existing policies and regulations, the project seeks to identify and understand the obstacles and success factors for their implementation, in order to inform the most appropriate policy combinations to address the complex and intersectoral agenda of climate change and security. Similarly, CGIAR works on creating an enabling institutional environment for sustainable rural livelihoods through, for instance, the '[*Public Policies on Linking Farmers to Markets in Colombia and Latin America: Making Farmers More Competitive*](#)' project. The project collaborates with the Colombian government in sharing results and recommendations regarding the development of supply chain organisations at the rural level to ensure that policy benefits the poor and has a greater impact on reducing poverty and hunger.

The alignment of peacebuilding, development and environmental objectives is very visible in a CGIAR project named '[*Implementation of Sustainable Land Use Systems for Forest Conservation, Climate Protection \(REDD+\) and peace-building in Colombia \(SLUS\)*](#)'. The project seeks to contribute to reduce CO₂ emissions, conserve forests, restore degraded landscapes, improve rural livelihoods, and support Colombia's peace process.

A final example can be found in the '[*Capacity-building in Central America to Strengthen Policies and Decision-making for Climate Change Adaptation and Mitigation*](#)' project. This project aims to build capacities among institutions and experts in Central America and Colombia so that they can facilitate innovations and help bring key investment opportunities, resulting in stronger policies, strategies and programs addressing climate change, centred on CSA practices for small producers in the region. This work directly targets the lack of institutional coordination and collaboration identified by Mr. Pearl during the discussions.

Social and Gender Equity

CGIAR is acutely aware of the importance of incorporating a gender dimension to its programming, it being a key pathway to contributing to equitable access to livelihood opportunities and decision-making forums. Whilst most CGIAR projects incorporate a gendered perspective and emphasis where possible, there are also a number of initiatives which specifically target gender equity, cognizant again of how CSA solutions and practices offer a leveraging point for equitable access and distribution of resources. The [*'Identifying Strategies for Gender-transformative Climate Information Services'*](#) project, for example, specifically researched how location-specific social norms impose gender-differentiated responsibilities and constrain women's choices, leading to differences in the types of information women need and the channels they can access. This type of research contributes to the setting up of gender-sensitive rural information and advisory services, which have the potential to protect and empower women if they recognize these differing needs, and design services and communication channels to overcome the obstacles women face.

Elsewhere in the Central American region, a project that is entirely transposable and scalable, the [*'Generating Evidence on Climate-Adapted Sustainable Agriculture with a Gender Perspective to Inform Policies in Central America'*](#) project seeks to support the scaling up of CSA with a gender perspective as a mechanism to increase resilience and improve the livelihoods of vulnerable households. A key purpose is to improve the capacities of both households and local organizations to plan, access, implement and monitor gender-sensitive CSA interventions in favour of improving livelihoods. and resilience to climate change. Furthermore, the evidence generated at the local level will inform dialogues at the national and regional levels, serving as input in the design and implementation of the CSA strategy for the SICA region that takes into account gender and inclusion aspects.