

Climate, Biodiversity, and Land Solutions in Agrifood Systems: Colombia and Beyond



© FAO/Felipe Rodríguez | A silvopastoral system in the Amazon integrates trees and shrubs into livestock pastures. This increases carbon storage in trees and soil, reducing greenhouse gas emissions from livestock and fertilizer and boosting resilience to climate change.

Introduction

Two programs led by the Food and Agriculture Organization of the United Nations (FAO) in collaboration with the United Nations Development Programme (UNDP) and the local government are playing a pivotal role in climate resilience, biodiversity conservation and land management. As a result, the people of Colombia are seeing real, tangible, reformations in their Agrifood Systems.

As defined by the FAO, Agrifood Systems are “...all the interconnected

activities and actors involved in getting food from field to fork.”, meaning that it is used as an umbrella term whereby everything from “...agricultural production and processing to distribution, consumption, and waste management.” is encompassed **(1)**. These systems are then able to highlight the economic, social and environmental factors that are critical in guaranteeing that food arrives on plates, making agrifood systems incredibly important, especially in the context of climate change.

This article spotlights a three-part series on the FAO initiatives implemented in Colombia, and discusses how the country is benefiting from these initiatives. Additionally, it aims to evaluate the scalability of these solutions globally.

Agrifood Systems Solutions

Having already defined what Agrifood systems are, it should be noted that 94% of FAO countries have identified them as a top priority as part of the Nationally Determined Contributions (NDCs) plans **(2)**. Seeing as countries must submit their new NDCs in 2025, the enormous potential that agrifood systems bring to the table as climate solutions is increasingly being made aware .

Food security and biodiversity loss are the most frequently reported climate-related risks by all countries. In fact, they are accounted for in 88% of NDCs as they heavily compromise the advances countries have made in sustainable development **(3)**. The urgent threat this poses to countries has allowed for agrifood systems to be developed as innovative solutions that can not only mitigate climate related impacts, but can also act as critical mechanisms that are able to

tackle climate-related risks all while promoting sustainable practices.

Agrifood systems aim to transform already existing agriculture and food systems by involving a diverse range of players, especially those on the local level. This involvement of distinct, multi-sector stakeholders leads to the exchange of diverse knowledge and skill sets which in turn produces a major potential in agrifood solutions being able to improve food security.

Additionally, since several agrifood system solutions are born out of FAO initiatives, it is ensured that they align with multiple Sustainable Development Goals (SDGs), increasing the likelihood of countries being able to meet the sustainable development goals by 2030. Specifically, they align with SDG 2 - Zero Hunger, SDG 13 - Climate Action, and SDG 15 - Life on Land. In addition to this, and depending on what country the initiative takes place in, the FAO is also able to ensure that the initiatives operate within the requirements set by both the Paris Agreement and the Global Biodiversity Framework. Both of which are essential in the work to address global environmental challenges. The Paris Agreement

works by requiring participatory nations to meet concrete targets for reducing greenhouse gas emissions. On the other hand, the Global Biodiversity Framework protects and restores biodiversity by setting ambitious conservation targets. For example, ensuring that ecosystems are being sustainably used through the establishment of the target to protect 30% of the planet by 2030 **(4)**.

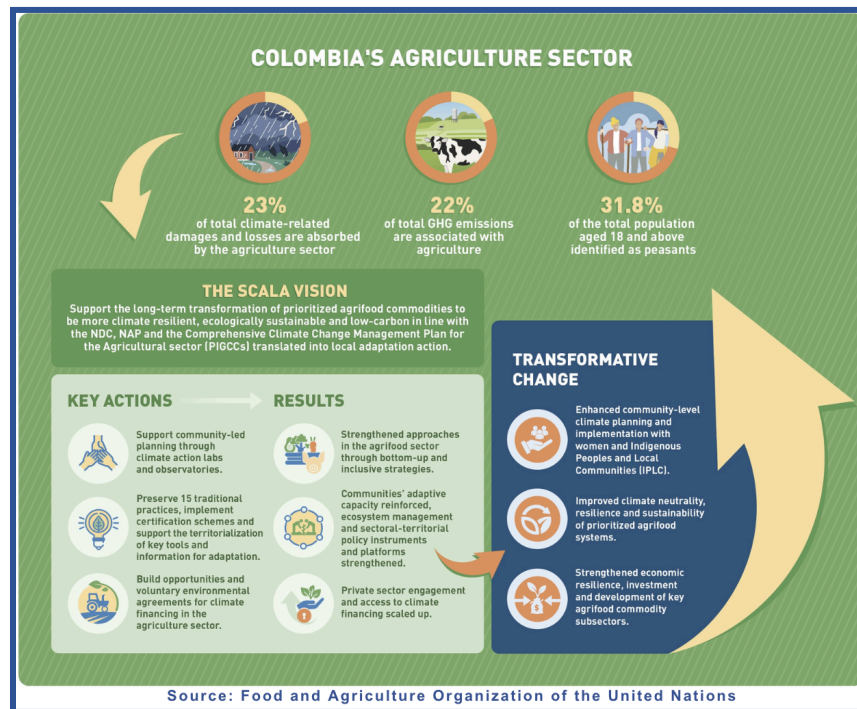
Colombia's Initiatives and Their Impact

The SCALA Program and Vision Amazonia, are two incredible programs that have been greatly benefiting Colombia. Both of which are spearheaded by the FAO, UNDP and the Colombian Government. However, before exploring the impact that these programs have had, there are some important facts that must first be considered.

The government became increasingly aware of the need to not only update its climate plans and priorities, but to actually take action to address these issues because of the following statistics; as of 2019, the Colombian agriculture sector accounts for 71.3% of Colombia's domestic emissions, and employs

15.8% of Colombia's total population. Additionally, it is Latin America's third most populous country and preserves close to 10% of the planet's biodiversity **(5)**, highlighting the importance of Colombia's land. The country is also incredibly vulnerable to climate-induced weather events. These events can accelerate land degradation processes (such as soil aridity, erosion and desertification), threaten water quality and therefore reduce agricultural productivity. These factors raised several concerns and therefore worked to further incentivize the government to take action, and thus allowed for the SCALA Program and Vision Amazonia to be born.

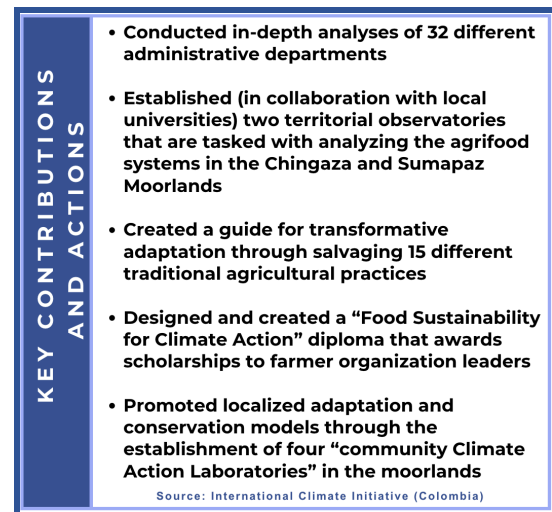
The FAO and UNDP's **SCALA program** (Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans) has specifically supported Colombia in enhancing its climate action capabilities in land use and agriculture, through addressing financial and governance barriers since 2021 **(6)**. A large portion of the 20-million-euro (funded by the International Climate Initiative and several other stakeholders) program's



success can be accredited to the centralization of the development of its different territorial capacities. It has tailored the program to each geographical area in order to prioritize the different agricultural value chains. This has ensured that the program is equipped with different and adequate capacities and adaptation tools. The figure at the top of this page clearly illustrates the key actions and results of the program.

There are a handful of notable milestones in advancing climate resilience and food sustainability that the SCALA program in Colombia has been able to achieve thus far. These achievements have been the solutions to the low involvement of the private sector, lack of capacities

and implementation, barriers that the program faced in the beginning. The figure below summarizes these accomplishments.



In order to properly combat the effects that climate change has had on Colombia things like deforestation must also be tackled. Thus, the “*Vision Amazonia*” program was created. The program’s efforts are

centered around restoring the Colombian Amazon biome and preventing major deforestation from continuing. In other words, the program promotes both conservation and sustainable land management in areas where deforestation is occurring at a rapid rate **(7)**.

Notably, Vision Amazonia has collaborated with local rural communities. This has allowed for the discovery of climate solutions that are not only equitable and effective **(8)**, but they are creating a deep level of awareness of the need for preservation across communities. Which in turn has also created a sense of responsibility among community members. The program is ensuring that everyone benefits from this program by ensuring that forest conservation practices are occurring and offering families associative programs where they are able to generate resources (they can produce for their own consumption and also conserve seeds and plants). This has allowed for the program to recover indigenous practices for conservation, improve quality of life, promote biodiversity conservation and has strengthened local institutions **(9)**.

Scalability of Agrifood Systems Solutions Globally

The factors that influence and make scalability possible include resilient funding mechanisms, local and international policy frameworks, and strong community involvement. Additionally, it must be taken into account that different countries and regions of the world have differing ecological, socio-economic, and cultural contexts. Therefore these differences must be both taken into account and addressed to ensure the success of a similar program in another country.

Fortunately, the SCALA program is already taking place in 12 different countries, proving how beneficial and successful agrifood systems are and can be to different countries, especially in the context of climate resilience. Seeing as Vision Amazonia began as a government initiative Colombia should be used as an example of how to successfully mobilize governments to want to invest in a climate resilient future. Globally, countries should aim to implement similar solutions. This includes having different climate initiatives focused on ensuring the success of combating different areas

of climate change to ensure that there is project diversification, which is an added layer of safety.

Conclusion

The grand transformative potential of well-designed agrifood systems and conservation programs in the field of combating climate change has been clearly demonstrated through Colombia's initiatives. Furthermore, it proves how successful partnerships between local governments and international organizations can be, highlighting the need to integrate local, national and international frameworks to ensure successful sustainable development.

Vision Amazonia and the SCALA Program (Colombia) have been able to address some of the most pressing issues related to climate change, ranging from agricultural emissions to deforestation. Most importantly, both programs have been able to empower local communities which has furthered the enhancement of biodiversity conservation and strengthened climate resilience. The lessons learned through Colombia's initiatives can be adopted and adapted as scalable solutions to ensure that every country's diverse

ecological and socio-economic challenges are met, fostering a global effort toward a climate-resilient future.

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Footnotes and References:

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