

Policy Brief No.94

Mapping the Path to Sustainability through Coherence Analysis of Colombia's Land, Food, and Water Policies

KEY MESSAGES



Colombian policies relating to food, land, and water are characterized by horizontal coherence, particularly evident in the water and food sectors.



Policy coherence at the formulation level across food, land, and water domains is evident, notably addressing the following Sustainable Development Goals: SDG 1, SDG 2, SDG 3, SDG 8, and SDG 15.



Coherence at the formulation level does not necessarily translate to coherence at the impact level.



Climate adaptation and mitigation action has the least coherent impact, with only one policy in the water and land domains implementing activities to address this issue.



CGIAR's impact areas strategically align with Colombian policies across food, land, and water domains, aiming to tackle multidimensional challenges comprehensively.



Colombian coffee farmer (© CIAT/N. Palmer)

Introduction

Food, land, and water systems are intrinsically interconnected, serving as the cornerstone of societal sustainability. In a bid to foster policy coherence within national landscapes addressing these vital domains, CGIAR introduced the National Policies and Strategies (NPS) for the Transformation of Food, Land, and Water Systems Initiative (CGIAR, 2021). This initiative prioritizes efforts in six pilot countries: Kenya, India, Laos, Nigeria, Egypt, and Colombia. Indeed, water and land resources are pivotal inputs to food production and agricultural development (Li, 2021). The undeniable effects of agricultural production on land and water systems underscore these interlinkages (Ringler, 2013), emphasizing the imperative for enhanced cross-sectoral policy coherence (Cejudo and Michel, 2016).

Policy coherence is defined as “an achievement of synergy or positive connections” (Rogge, 2016). The Organization for Economic Cooperation and Development (OECD) has

determined policy coherence as “the systematic promotion of mutually reinforcing policy actions across government departments and agencies causing synergies to be created to achieve agreed objectives” (Danish Institute for Human Rights, 2017). Meanwhile, the international community has recognized it as one of the foundations of development progress and equity in the Sustainable Development Goals (Brugere, 2021).

This Policy Brief highlights the main findings and policy recommendations emerging from an analysis of Colombia’s policies in the land, food, and water policy landscapes as reported in Buritica Casanova et al. (2023). We aim to understand the level of alignment of a set of selected policies with the Sustainable Development Goals, and with the five CGIAR impact areas (Nowak, 2022): No poverty (SDG 1), Zero hunger (SDG 2), Good health and well-being (SDG 3), Gender equality (SDG 5), Climate action (SDG 13), and Life on land (SDG 15). Hereafter, we briefly describe the analytical framework applied to this study and present the key results. Finally, we provide policy recommendations.



Bean cultivation in Calima El Darién, Valle del Cauca, Colombia (© CIAT/N. Palmer)



Marketplace in Cali, Colombia (©CIAT/J. Marin)

Colombia's land, food, and water policy landscape

The need for enhanced cross-sectoral policy coherence becomes increasingly evident as Colombia approaches the spotlight with heightened international attention on global challenges such as climate change, sustainable development, deforestation, and social inclusion. Colombia's policy landscape has undergone a transformative shift in recent years. This shift is partially linked to key milestones such as the peace agreement in 2016 and the election of the nation's first left-leaning president in 2022 (Rubaii, 2020). The temporal relation of these events has opened a window of opportunity for the exploration of national policy coherence, particularly in critical areas such as food, land, and water. Efforts to enhance coherence within the Colombian context would create timely opportunities to contribute to international initiatives in these areas, shedding light on the coherence and efficacy of policies in addressing concerns of paramount importance in global discourses on sustainable development and climate change.

Coherence of Colombia's land, food, and water policies

Buritica Casanova et al. (2023) focused on the concept of horizontal policy coherence to understand the relationships within and among water, land, and food policies and sectors, as well as their alignment with the Sustainable Development Goals. The horizontal policy coherence framework was used to capture the intricate relationships within and across policies in diverse policy domains (Cejudo and Michel, 2016) and to further understand "the synergic and systematic support towards the achievement of common objectives within and across individual policies" (den Hertog, 2013). Analysis has revealed differences in horizontal coherence across policies in the food, water, and land domains and SDGs linked with CGIAR's action areas at both the formulation and impact levels. Table 1 presents a brief description of each of the CGIAR action areas and their connection to the SDGs.

Table 1. SDG categories based on CGIAR areas of impact used for horizontal policy coherence analysis.

CGIAR action areas	Description and link with SDGs
Poverty reduction, livelihoods, and employment	Creating alternatives that improve the livelihood, employment, and income of small-scale producers and other vulnerable people in agrifood value chains. Mainly related to SDG 1 (No poverty), SDG 10 (Reduced inequalities), and SDG 8 (Decent work and economic growth), seeking to reduce poverty through sustainable agricultural development and job creation in rural communities.
Nutrition, health, and food security	Seeking to make food, land, and water systems more productive, resilient, and able to meet growing demand. This is directly related to SDG 2 (Zero hunger), which aims to eliminate hunger and achieve food security. It also impacts SDG 3 (Good health and well-being) by improving nutrition and health through balanced and safe diets.
Gender equality, youth, and social inclusion	Reducing gender gaps and improving opportunities for youth in agrifood systems. This relates to SDG 5 (Gender equality) and SDG 10 (Reduced inequalities), promoting gender equality in agriculture and food security. It can also be related to SDG 1 (No poverty) and SDG 8 (Decent work and economic growth) as it addresses social inclusion and employment issues.
Climate adaptation and mitigation	Recognizing the challenges and risks climate change poses to food production, livelihoods, and nutrition. Mainly linked to SDG 13 (Climate action). Adaptation and mitigation of climate change are crucial to addressing the rise in global temperatures and their effects on agriculture, food security, and biodiversity, contributing to the achievement of other SDGs such as SDG 2 (Zero hunger) and SDG 15 (Life on land).
Environmental health and biodiversity	Addressing environmental health and biodiversity challenges through wise water use in food production. This area is related to SDG 15 (Life on land), as it focuses on biodiversity conservation and sustainable management of natural resources. In addition, it indirectly impacts human health, which can be related to SDG 3 (Good health and well-being).

Figure 1 examines the level of coherence between individual policies and the SDGs and CGIAR impact areas during both formulation and impact phases with a Sankey diagram. As Figure 1 shows, during the formulation phase, policies analyzed in the water domain exhibit greater coherence with the Sustainable Development Goal categories than those in the land and food domains. In Colombia, water policies prioritize long-term water supply and public drinking water services, closely aligning with SDG objectives. Food policies¹ are centered on nutrition, poverty reduction, and agricultural productivity, while land policies address environmental health, biodiversity, and social inclusion, focusing on community development. Poverty reduction, livelihoods, and employment emerge as the most frequently mentioned SDG categories across the six policies assessed in the water, food, and land domains.

Figure 1 further demonstrates that coherence during the formulation phase does not necessarily translate to coherence during the impact phase. Despite the National Policy for the Integral Management of Water Resources addressing all SDG categories, no coherence was observed regarding gender during the impact phase. Conversely, specific policies lacking explicit SDG objectives in formulation exhibited impact coherence. For example, although the National Policy on Irrigation and Drainage Land Management did not explicitly mention gender in its objectives, it implemented gender-related activities. Poverty emerges as the SDG with the highest positive impact coherence across policies. In contrast, the Climate adaptation and mitigation action SDG exhibits the least impact coherence, with only one policy in each water and land domain implementing activities to address this concern.

¹ This is partly attributable to the selection process, which, as previously explained, selected only five policies from the entire spectrum of food sector policies.

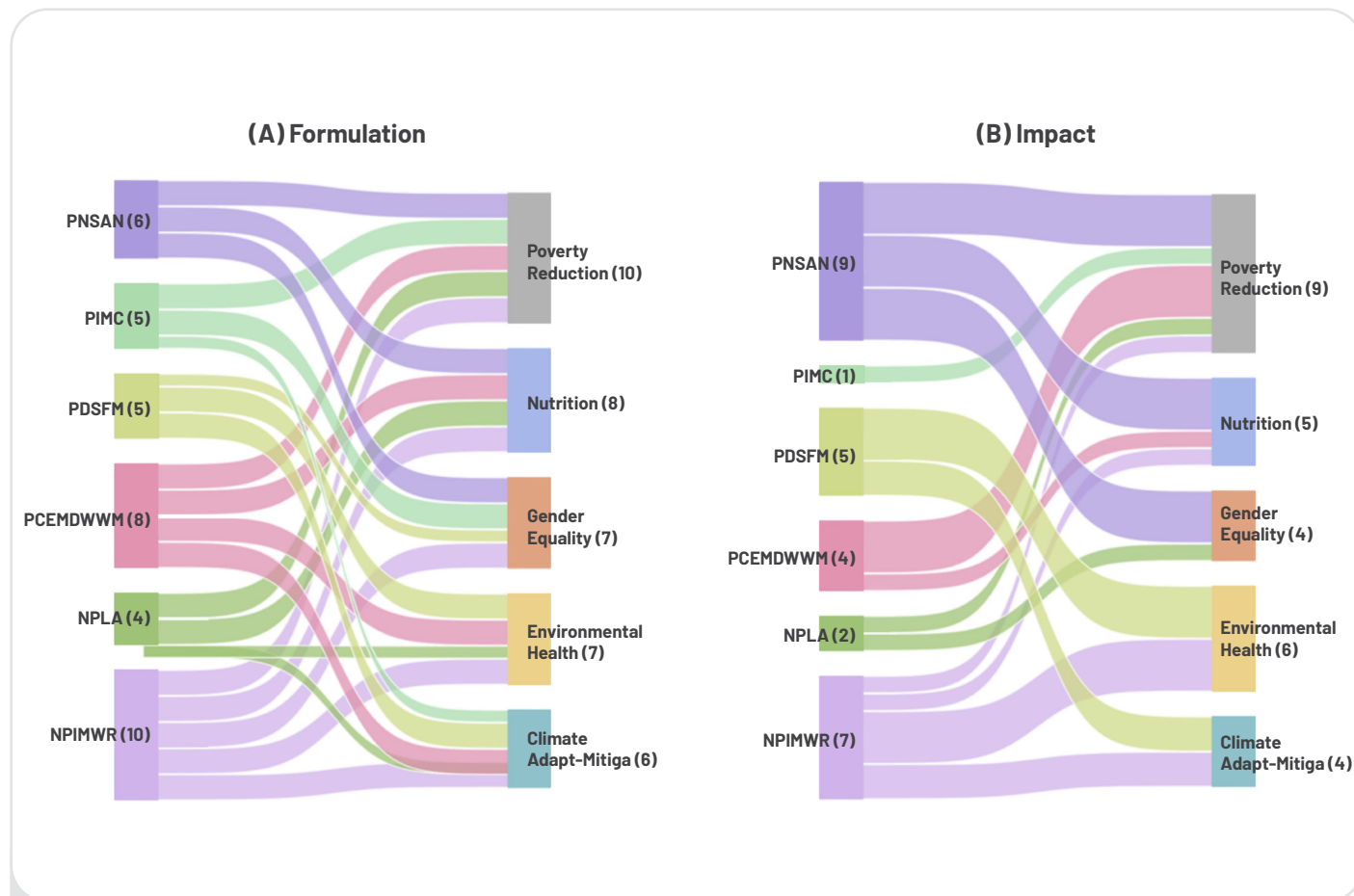


Figure 1

Horizontal coherence in formulation and impact scores across policies and each SDG category, ranging from -1 to 2 in formulation and from -3 to 3 in impact, with the total score indicated in parentheses. This includes **food policies** such as the National Policy on Food and Nutritional Security (**PNSAN**) and the National Policy on Irrigation and Drainage Land Management² (**NPLA**); **land policies** such as the Policy for Implementing the Multi-purpose Cadastre (**PIMC**) and the Policy for the Control of Deforestation and Sustainable Forest Management (**PDSFM**); and **water policies** such as the Policy for Circular Economy in the Management of Drinking Water and Wastewater Management Services (**PCMDWWM**) and the National Policy for the Integral Management of Water Resources (**NPIMWR**).

These results indicate that the selected policies associated with the land, water, and food domains in Colombia aim to address five out of the 17 SDGs: Ending poverty (SDG 1), Zero hunger (SDG 2), Health and well-being (SDG 3), Decent work and economic growth (SDG 8), and Life on land (SDG 15). However, more support is needed to implement all the objectives envisioned in the formulation of these policies, as evidenced by the reduction in coherence between the SDGs and policies in the impact phase. This underscores the significance of reinforcing and promoting coherent policies within Colombia's water, land, and food sectors to effectively contribute to attaining all the Sustainable Development Goals.

Despite the horizontal coherence in formulation and impact alignment between key SDGs and water, land, and food sector policies in Colombia, particularly during the formulation phase, this alignment does not result in the country effectively working toward meeting the SDGs to the degree envisioned in policy formulation. This discrepancy results from a gap between the stated objectives and the strategic lines of policies, indicating room for improvement in ensuring that policy implementation effectively achieves its intended objectives within the population. Therefore, it is crucial to conduct further research to fully understand the intricacies and identify the bottlenecks that hinder the successful implementation of these policies.

² In Spanish, this policy is called "Política Nacional de Adecuación de Tierras."

Policy recommendations

Based on the findings outlined in the policy coherence analysis of water, land, and food policies with the SDGs and the observed disparities between policy formulation and impact, the following policy recommendations are proposed:

- **Holistic climate action integration:** Acknowledging the limited coherence in addressing the Climate action SDG (SDG 13), it is recommended **to incorporate low-emissions climate-resilient objectives into policies across the food, land, and water domains**. This includes explicitly outlining activities aimed at climate adaptation and mitigation to contribute to Colombia's climate goals and foster environmental sustainability. Incorporating specific objectives would aid in facilitating efficient implementation.
- **Enhanced integration of gender considerations and social inclusion:** Recognizing the lack of coherence in addressing gender issues at the impact level, it is recommended to **integrate explicit gender considerations into policy objectives and activities**. This ensures that the positive impacts of policies extend equally to all segments of the population, thus promoting gender equality in the water, land, and food sectors.
- **Strengthening implementation mechanisms:** Recognizing the gap between policy formulation and tangible impacts during implementation, it is crucial to enhance the mechanisms that facilitate policy execution. This involves aligning policy objectives with actionable and measurable strategies, thus ensuring that the intended impacts are effectively translated into positive outcomes for the population. In addition, providing implementation support is essential. This includes **determining clear and realistic budgets, allowing sufficient time for execution, and empowering sub-national government bodies to implement the policies effectively**. Further research should be conducted to identify and address the barriers to successful policy implementation.
- **Comprehensive monitoring and evaluation:** A robust monitoring and evaluation system should be established to bridge the gap between formulation and impact. **Regular assessments should be conducted to track the**



Fruit sales in the Orinoquía region, Colombia (©CIAT/J. Marín)

progress of policy implementation, identify bottlenecks, and make necessary adjustments to enhance the effectiveness of policies in achieving their intended objectives.

- **Promoting cross-domain synergies:** Given the coherence observed between land, water, and food policies and various SDGs, it is recommended to **promote cross-domain synergies actively**, in both policy formulation and implementation. Collaboration and coordination between policy domains can amplify positive impacts, especially in areas where multiple action areas intersect, such as poverty reduction, environmental health, and biodiversity.
- **Targeted research for policy enhancement:** Further **research is recommended to identify specific challenges and bottlenecks in policy implementation**. This targeted research can provide insights into the intricacies of the policy landscape, thus enabling policymakers to address the root causes of disparities between formulation and impact.

Methods

One hundred twenty-two policies related to Colombia's food, land, and water domains were identified and mapped: 54 out of the 122 were classified as food policies, 38 as land policies, and 30 as water policies. Subsequently, two policies per each of the three policy domains or landscapes were selected based on predefined criteria such as the territorial scope of the policy (national scope), the policy validity, and the state of implementation at the time of the analysis. Table 2 presents the chosen policies within each domain.

Table 2. Policy documents considered by policy domains for coherence analysis.

Policy domain	Policy	Objective
Food	National Policy on Irrigation and Drainage Land Management (2018)	The objective is to establish a strategic framework to guide the development of land adaptation as a tool for agricultural productivity and competitiveness. The policy focuses on forecasting the development of differential actions to improve productivity, competitiveness, and sustainability indicators of existing districts, considered first-generation. Likewise, it seeks to promote competitive and sustainable productive projects with a territorial focus, acknowledging their contribution to agricultural risk management in the face of variability and climate change.
	National Policy on Food and Nutritional Security (2008)	This policy aims to ensure that the Colombian population has permanent and timely access to sufficient quantity, variety, quality, and safety. This policy results from a participatory process involving national, departmental, and municipal entities, civil society organizations, international bodies, universities, and associations, establishing itself as a state policy. This policy is framed within the National Development Plan.
Land	Policy for the Implementation of the Multi-purpose Cadastre (2019)	This policy aims to establish the strategy for implementing the multi-purpose cadastre public policy, ensuring the existence of a comprehensive, up-to-date, reliable cadastre with a multi-purpose approach. This cadastre will be consistent with the real estate property registration system, digital, and interoperable with other information systems by 2025.
	Policy for the Control of Deforestation and Sustainable Forest Management (2020)	This policy aims to provide policy guidelines to combat deforestation and promote sustainable forest management. Analyzing the causes influencing land use change processes and natural forest loss identifies actions the national government must undertake in coordination with sectors, communities, and other stakeholders. This approach, recognizing the particularities and needs of territories, seeks to address this concern while promoting forest conservation and sustainable management.
Water	Policy for Circular Economy in the Management of Drinking Water and Wastewater Management Services (2020)	This aims to enhance institutional capacities and governance, implement a circular economy model, and develop information management mechanisms for drinking water and wastewater management services. This is to ensure the long-term availability of water and the provision of these services under conditions of quality and continuity.
	National Policy for the Integral Management of Water Resources (2010)	This policy aims to guide the planning, administration, monitoring, and surveillance of water resources nationally under a comprehensive management criterion.

We assessed horizontal coherence at the formulation level by explicitly incorporating CGIAR impact areas into the policy objectives. At the impact level, we evaluated horizontal coherence by comparing the strategic lines of each sector's policy with the CGIAR impact areas. Finally, we calculated horizontal coherence at both the formulation and impact levels using a scoring system ranging from -3 to 3. This scoring system classifies the coherence between policies as positive (scores above 1), neutral (0), or negative (less than 0).

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