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Assessing the Impact of the Monitoring, Follow-Up, and Control Strategy on Territorial Inequalities in Colombia

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Abstract

This article analyzes the Monitoring, Tracking, and Control Strategy (EMSC) of Colombia's General System of Participations (SGP) as an instrument for reducing territorial gaps in key sectors such as education, health, and drinking water and basic sanitation. In the context of the EMSC, territorial gaps are understood as social and institutional disparities between different territories. In the first case, it is associated with access to and quality of essential public services; in the second, it reflects weaknesses in the capacity of subnational governments to efficiently manage resources, which directly impacts the provision of these services.

By applying synthetic control models, it was found that 22.5% of the territorial entities intervened with preventive and/or corrective measures between 2008 and 2023 presented positive effects on key sector variables, compared to their respective counterfactuals. In education, an effect of 4.7 percentage points (pp) was estimated on the Net Coverage Rate. In health, an improvement of 1.7 pp was identified in the Adolescent Pregnancy Rate and 0.2 pp in the Perinatal Mortality Rate. In drinking water and basic sanitation, the incidence of acute diarrheal diseases decreased on average by 27.1 cases per 1,000 inhabitants in capital cities and by 8.2 cases in non-capital municipalities. These findings demonstrate that, under certain conditions, the EMSC can significantly contribute to closing territorial gaps.

The results of this evaluation are particularly relevant in the context of the recent constitutional reform of the SGP, which contemplates a progressive increase in transfers to Subnational Governments to reach 39.5% of the Central Government's Current Revenue. This change, linked to the development of the Organic Law on Competencies, presents a strategic opportunity to strengthen the EMSC as a tool for technical control and accountability, and to expand its contribution to closing social and territorial gaps.

Key words: closing gaps, territorial inequalities, intergovernmental fiscal transfers, monitoring and evaluation of public spending, decentralization.

JEL codes: D63, H77, H72, H70.

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Résumé

Cet article analyse la Stratégie de Suivi, de Traçabilité et de Contrôle (EMSC) du Système Général de Participations (SGP) de la Colombie, en tant qu'instrument de réduction des écarts territoriaux dans des secteurs clés tels que l'éducation, la santé, ainsi que l'eau potable et l'assainissement de base. Dans le cadre de l'EMSC, les écarts territoriaux sont compris comme des disparités sociales et institutionnelles entre différents territoires. Dans le premier cas, ils sont associés à l'accès et à la qualité des services publics essentiels ; dans le second, ils reflètent les faiblesses de la capacité des gouvernements infranationaux à gérer efficacement les ressources, ce qui a un impact direct sur la prestation de ces services.

En appliquant des modèles de contrôle synthétique, il a été constaté que 22,5 % des entités territoriales ayant fait l'objet de mesures préventives et/ou correctives entre 2008 et 2023 ont présenté des effets positifs sur des variables sectorielles clés, comparativement à leurs contrefactuels respectifs. Dans le secteur de l'éducation, un effet de 4,7 points de pourcentage (pp) a été estimé sur le Taux Net de Couverture. Dans le secteur de la santé, une amélioration de 1,7 pp a été identifiée pour le Taux de Grossesse Adolescente et de 0,2 pp pour le Taux de Mortalité Périnatale. En matière d'eau potable et d'assainissement de base, l'incidence des maladies diarrhéiques aiguës a diminué en moyenne de 27,1 cas pour 1 000 habitants dans les capitales départementales et de 8,2 cas dans les municipalités non capitales. Ces résultats démontrent que, sous certaines conditions, l'EMSC peut contribuer de manière significative à la réduction des écarts territoriaux.

Les résultats de cette évaluation revêtent une importance particulière dans le contexte de la récente réforme constitutionnelle du SGP, qui prévoit une augmentation progressive des transferts aux gouvernements infranationaux afin d'atteindre 39,5 % des recettes courantes du gouvernement central. Ce changement, associé à l'élaboration de la Loi organique sur les compétences, représente une opportunité stratégique pour renforcer l'EMSC en tant qu'outil de contrôle technique et de redevabilité, et pour élargir sa contribution à la réduction des inégalités sociales et territoriales.

Mots clés: réduction des écarts, inégalités territoriales, transferts fiscaux intergouvernementaux, suivi et évaluation des dépenses publiques, décentralisation.

1. Introduction

This document aims to assess, through the synthetic control method, the effects of adopting preventive and corrective measures within the framework of the Monitoring, tracking, and Control Strategy (EMSC) of the General Participation System (SGP), using an approach focused on gaps reduction in allocations for education, health, and drinking water and basic sanitation. These correspond to earmarked transfers whose purpose is to guarantee the financing of national sectoral policies in the territories. Evaluating the EMSC makes it possible to gain greater clarity on the alignment between national priorities and subnational management, as well as to measure the effect of interventions in terms of closing sectoral gaps in access to and quality of essential public services.

This issue is particularly significant given that territorial inequalities constitute one of the principal challenges to social cohesion and balanced development in many countries. Significant differences in access to essential public services, such as education, health, and drinking water and basic sanitation, affect people's opportunities for well-being (Sen, 1994). In this context, intergovernmental transfer systems play a crucial role as instruments for redistributing resources from higher levels of government to regional and local levels, seeking to offset regional disparities and strengthen the financial capacities of subnational governments. Their design, allocation criteria, and proper management are fundamental to advancing gap reduction and promoting effective convergence across territories.

In Colombia, the main mechanism of intergovernmental transfers is the General Participation System (SGP), which has been in operation since 2002 to finance the responsibilities assigned to subnational governments in the sectors of education, health, drinking water and basic sanitation, general purpose, and special allocations[1].

As the SGP consolidated itself as the main source of financing for social investment, the need also arose to ensure a more efficient and transparent use of these resources. To address this challenge, a reform was introduced through Law 1176 of 2007, which modified the allocation criteria and established the obligation for the National Government to define a comprehensive monitoring and control strategy. Thus, Legislative Act 04 of 2007 (Constitutional Amendment) gave rise to Decree Law 028 of 2008, which formalized the EMSC. This Strategy is part of a regulatory process aimed at balancing local autonomy with fiscal responsibility, ensuring that SGP resources are used efficiently in the provision of essential services.

Furthermore, specific roles were assigned to different actors: the sectoral ministries and the National Planning Department are responsible for monitoring, while the Ministry of Finance and Public Credit leads the tracking and control actions[2].

[1] Law 715 of 2001

[2] According to Article 3 of Decree Law 028 of 2008, monitoring consists of the systematic collection,

After fifteen years of implementation, it has become necessary to have inputs that make it possible to identify the effectiveness of the Strategy in closing territorial gaps and the potential opportunities for improvement in this area. The evaluation of the Strategy takes on particular importance in light of the constitutional reform of the SGP established by Legislative Act 03 of 2024, which provides for a substantial increase in the System's resources — from approximately 28% to 39.5% of the nation's current revenues — over a twelve-year transition period, starting from the year following the enactment of an Organic Law on Competencies.

This change would represent a significant step forward in the decentralization process in the country, raising the transfer system from 5.1% of GDP in 2023 — an intermediate level compared to OECD countries — to 6.8% of GDP in 2035, according to conservative projections and holding all other factors constant. With this, Colombia would rank among the top 10 OECD countries with the highest level of transfers.

This article is structured into five sections. The first corresponds to this introduction. The second presents the context and state of the art, including a conceptual review of transfer systems and control mechanisms, an analysis of international experiences in monitoring and evaluating spending financed through intergovernmental transfers, and a detailed description of the EMSC. The third section describes the methodology, particularly the synthetic control approach and the selection of variables. The fourth section presents the results. Finally, the fifth section sets out the main conclusions and recommendations derived from the study.

2. Context and state of the art

2.1. Fiscal Decentralization, Transfer Systems, and Control Mechanisms

Intergovernmental transfers are fundamental for the redistribution of financial resources from higher levels of government to regional and local levels, enabling them to have predictable revenue streams to finance the responsibilities under their jurisdiction, which generally relate to the provision of public services. Transfers are essential in both federal and unitary countries to correct fiscal imbalances and to promote equity and efficiency in the distribution of public resources (Bird, 2008).

consolidation, analysis, and verification of information for the calculation of specific and strategic indicators for each sector. These indicators make it possible to identify actions or omissions by territorial entities that could jeopardize the proper use of SGP resources. Follow-up entails the evaluation and analysis of the administrative, institutional, fiscal, budgetary, contractual, and sectoral processes of the territorial entities, which allow for the identification and qualification of risk events that affect or may affect the execution of resources, as well as the achievement of targets related to continuity, coverage, and quality in service delivery. Control, in turn, consists of the adoption of preventive measures and the effective determination of the corrective actions necessary in relation to the territorial entities.

According to Musgrave (1959), these transfers help correct vertical and horizontal imbalances, allowing subnational governments to adequately finance their spending responsibilities. Likewise, Ter-Minassian (1997) highlights their crucial role in macroeconomic stabilization and the efficient allocation of resources.

In this way, intergovernmental fiscal transfers become an essential tool for financing subnational governments, particularly in developing and transition countries, where they can represent up to 60% of subnational expenditure (Boadway & Shah, 2006). Moreover, they create incentives and accountability mechanisms that influence fiscal management, the efficiency of public service delivery, and the equity of resource distribution. Additionally, they allow citizens to evaluate government performance, thereby strengthening fiscal responsibility and good governance.

The structure, design, and functioning of transfer systems vary according to the institutions and characteristics of each country. However, although fiscal decentralization brings public service provision and resources closer to subnational governments, within the context of fiscal federalism can also generate conflicts due to the inherent tension between local fiscal decisions and established objectives.

In general, the objectives of the central government are aimed at ensuring efficiency and equity across the territory, prioritizing national equity and economic security. Nonetheless, the fiscal decentralization of revenues and/or expenditures can affect the achievement of these objectives, as the autonomous decisions of local governments may have negative effects (among other aspects) on the mobility of productive factors and on economic concentration (Boadway & Shah, 2006), which, in turn, can deepen regional disparities.

Regardless of the level of decentralization, the criteria for allocating transfers across countries are relatively homogeneous, as they are mainly based on the fiscal capacity of subnational governments. In some cases, and under specific conditions, resources from the higher level of government may also be contingent upon the regions designing and implementing public programs aligned with national objectives.

Two key aspects must be considered in the design and implementation of a transfer system. On the one hand, responsibilities should not be delegated without corresponding funding, as this leads to inefficiencies in public policy and undermines the fiscal sustainability of subnational governments; in other words, expenditure decentralization must be accompanied by sufficient resources to finance the effective implementation of policies in the territories.

On the other hand, it is desirable for subnational entities to participate in the financing of public policies, especially decentralized programs. This helps mitigate undesired moral hazard effects — from the perspective of principal-agent theory — by incentivizing greater co-responsibility in resource management. In any case, this creates significant challenges for transfer control systems, given their limited capacity to evaluate the portion of spending financed with local resources.

In this context, it is possible to identify fundamental principles for the design and development of a transfer system that meets objectives of equity and efficiency (Boadway & Shah, 2006):

i. Define a closed financing framework that guarantees macroeconomic stability and imposes constraints both on the central government's budget and on the scope of redistribution.
ii. Avoid inefficient effects, such as penalizing low revenue collection efforts by local governments.
iii. Distribute revenues based on computable and credible quantitative standards, using relative positions among entities as a reference.
iv. Guarantee the independence of the system from political manipulation.
v. Design a scheme supported by a results-oriented budget. The design of monitoring and evaluation mechanisms must be adapted to the specific characteristics of each country. An evidence-based approach makes it possible to improve resource allocation and strengthen the fiscal autonomy of subnational governments. In this sense, the implementation of performance indicators and evaluation models can be key to measuring the impact of transfers and ensuring their alignment with national objectives.

The above criteria demonstrate that well-defined transfer systems must balance equity and efficiency in order to avoid fiscal distortions and foster territorial autonomy. The existence of appropriate monitoring and evaluation mechanisms helps counteract perverse incentives or situations that may compromise macroeconomic stability.

2.2. Experiences in the Monitoring and Evaluation of Expenditures Financed through Intergovernmental Transfers

Kaufman, Sanginés, and García (2015) analyzed the implementation and evolution of monitoring and evaluation (M&E) systems in Latin American countries during the period 2007–2013. Using a descriptive approach based on indicators of adoption and implementation of monitoring and control systems in 25 countries across the region, the authors identified a heterogeneous evolution, attributed to the difficulty of scaling up these systems and the need for a progressive maturation process.

The study identified several challenges in the implementation of these systems. Among these challenges are regulatory gaps concerning the definition of stages and functions, as well as weaknesses stemming from the absence of centralized monitoring institutions. The authors also highlight gaps in the use of tools due to the lack of clear methodologies and challenges in the development of monitoring systems based on performance indicators. Furthermore, they point to limitations in communicating results and methodologies to the public.

Other studies have analyzed the success factors of M&E systems. A World Bank study (2014) highlights the credibility of the systems, technical expertise, methodological diversity, institutional design, strengthening of stakeholders, integration of new participants, and their

linkage with the central government. In contrast, the study identifies obstacles such as excessive centralization, weak coordination between implementers and policymakers, and the limited use of information by legislatures. Other challenges include a lack of resources, limited data availability, methodological fatigue, an excessive number of indicators, insufficient measurement of results and impact in budgetary decision-making, and the absence of feedback mechanisms for new public policies.

These studies agree that M&E systems have made progress in terms of institutionalization and methodologies, but challenges remain in their effective application. The limited dissemination of experiences and the lack of integration between governmental and social actors hinder the use of these systems as tools for learning and policy improvement. In this context, it is essential to strengthen inter-institutional coordination, improve the availability and use of information, and foster a culture of evaluation that moves beyond accountability to contribute to evidence-based decision-making.

In this context, Colombia has developed its own Monitoring, Tracking, and Control Strategy (MSCS) applied to the resources of the General System of Participations. Its main characteristics are detailed below.

2.3. Monitoring, Follow-up, and Control Strategy for SGP Resources

The EMSC was implemented through Decree Law 028 of 2008 with the aim of ensuring the achievement of continuity, coverage, and quality targets in the services financed with SGP resources. The process consists of three stages: (i) monitoring, in which the sectoral ministries, through the systematic collection of information in the education, health, and drinking water sectors, calculate specific and strategic indicators that make it possible to identify actions or omissions by territorial entities that could jeopardize the proper use of resources; (ii) follow-up, which involves the evaluation and analysis of the administrative, institutional, fiscal, budgetary, contractual, and sectoral processes of territorial entities, allowing for the identification and qualification of risk events; and (iii) control, in which preventive and/or corrective measures are adopted to address the identified risk events.

The measures adopted within the EMSC are classified as preventive or corrective. Preventive measures refer to Performance Plans, which aim to strengthen territorial entities through programmed actions designed to mitigate risks. Corrective measures[3], on the other hand, consist of the suspension of transfers and the temporary assumption of responsibilities (ATC), which are applied in the face of imminent risks and directly affect financial management or service delivery. The suspension of transfers restricts the flow of resources allocated to the entity, preventing their execution, while the ATC suspends the territorial entity's authority over service delivery, which is then temporarily assumed by the national government or the department.

[3] Corrective measures such as direct transfer and the suspension of contractual processes are provided for in the regulations. The former has been considered unfeasible in practice due to the risk of the national government's co-responsibility in cases of mismanagement, while the latter lacks the regulatory development necessary for its implementation.

Since its inception, the Strategy was conceived as a public policy implemented by the national government through a Special Administrative Unit, in coordination with the sectoral ministries. However, due to budgetary constraints, responsibility for carrying out the follow-up and control phases fell to the Ministry of Finance and Public Credit. This entity has been in charge of implementing preventive and corrective measures.

Due to the sectoral focus of the SGP, the Strategy has adopted an independent operation for each sector. Consequently, it has been structured around specialized teams that coordinate with the respective sectoral ministries to undertake the necessary actions with territorial entities to address the identified risks[4].

The EMSC is based on the premise that, by improving management, efficiency, and transparency in the use of SGP resources, territorial entities will be better able to meet targets for coverage, quality, and continuity of public services, which in turn should translate into a reduction of territorial inequalities.

Between 2008 and 2023, the EMSC has engaged with a total of 201 territorial entities in the education sector, adopting 312 measures with an average duration of 1.8 years, of which 37% were preventive and 63% corrective. Sixty measures in 49 territorial entities were reformulated and/or extended[5]. In the health sector, 60 measures have been adopted, with an average duration of 3.4 years, of which 84% were preventive and 16% corrective; in this sector, 44 measures were reformulated and/or extended. Finally, in the drinking water and basic sanitation sector, the EMSC has applied 126 measures in 82 entities, with an average duration of 2.7 years, of which 58% were corrective and 42% preventive. Of the total measures adopted in this sector, 12 were extended and/or reformulated, and only one measure of temporary assumption of responsibilities has been applied, corresponding to the Department of La Guajira.

Although Colombia has made progress in implementing M&E systems, challenges to their effectiveness still persist. Analyses of systems related to SGP resources have, for the most part, been descriptive in nature. In an evaluation of the development and evolution of the SGP's EMSC, the Ministry of Finance and Public Credit (2021) recommended the elimination or merging of unused risk events, the identification of common risks across multiple territorial

[4] In the EMSC, the identified risks correspond to events that may affect the proper use of SGP resources or the achievement of targets in the provision of public services. Initially, the sectoral ministries and the National Planning Department (DNP), through monitoring, classify territorial entities into different risk levels using specific and strategic indicators. Subsequently, the Ministry of Finance and Public Credit, through the DGAF, evaluates and assesses the risk events among the 18 defined in Article 9 of Decree Law 028 of 2008 during the follow-up phase. The identification of these risks makes it possible to adopt preventive or corrective measures to protect public resources and ensure the achievement of the SGP's objectives.

[5] These measures, depending on the progress made by the entity in carrying out the required activities, could be extended or reformulated. Extensions or reformulations of the measures are understood as additional actions undertaken with territorial entities to achieve the objectives set when the measures were adopted. The reasons for such adjustments include the incorporation of new risk situations, the anticipation of insufficient time to complete the activities, and/or the reconsideration of those activities. Operationally, extensions were applied until 2019, the year from which measures began to be established with an indefinite duration — remaining in effect until the targets of the measures were met, subject to prior evaluation by the Ministry of Finance and Public Credit (MHCP).

entities to enable the implementation of mass response measures, the removal of ineffective controls, and the delegation of monitoring to a third party, such as the National Planning Department.

This highlights the limited empirical evidence on the EMSC in Colombia and reinforces the need for analyses on the effects of adopting preventive and/or corrective measures in the country. Providing inputs regarding the system's progress, challenges, and weaknesses is a key element in the debate on closing territorial gaps.

3. Methodology

This research conducts a quantitative analysis using the synthetic control method, to estimate the effect of the EMSC on closing gaps in the provision of services financed by the SGP, particularly in education, health, and drinking water and basic sanitation. This method makes it possible to compare the performance of territorial entities subject to the Strategy with a weighted combination of unaffected/untreated entities that have not been under its application. In addition, a qualitative analysis was conducted based on semi-structured interviews with key actors involved in the implementation and management of the EMSC, with the aim of guiding the design of the quantitative strategy, defining its outcome variables, and gathering perceptions on the Strategy's achievements, challenges, and opportunities for improvement.

The results are presented by budget category, at both the departmental and municipal levels. It should be noted that Law 617 of 2000 classifies territorial entities into categories according to their level of government, based on two main criteria: (i) their revenue-generation capacity and (ii) the number of inhabitants. This disaggregation makes it possible to compare results among entities with similar conditions, as it provides an approximation of both their fiscal capacity and citizens demand for goods and services.

3.1. Synthetic controls

From the perspective of causal inference, estimating the effect of a policy requires comparing an observed outcome with an unobserved counterfactual outcome (Imbens & Rubin, 2015; Rubin, 1974). In randomized experiments, this counterfactual is constructed from control groups exogenously assigned. However, in the case of a public policy such as the EMSC, interventions are not based on an experimental design but rather respond to technical, financial, and administrative criteria defined by the specific regulatory framework and the interaction among the various institutional actors.

To conduct a quasi-experimental analysis in this context, the synthetic control technique was employed. This methodology makes it possible to construct a more precise counterfactual by combining data from multiple non-intervened territorial entities with characteristics similar to those of the intervened ones, thereby reducing selection bias and allowing the capture of the expected evolution of a set of outcome variables in the absence of the implemented measures. In essence, the method is based on the premise that when

the treated units represent a fraction of the aggregate, a weighted combination of similar untreated units usually provides a more suitable comparison than any isolated untreated unit (Abadie, 2021).

Methodologies commonly applied in public policy analysis, such as difference-in-differences or propensity score matching, do not prove to be the most suitable option in this case, mainly due to the inherent heterogeneity of the SGP's EMSC. These features reinforce the relevance of using synthetic controls (Abadie, 2021; Abadie et al., 2010) for the following reasons:

i. Temporal heterogeneity: Preventive and corrective measures (interventions) do not have a single moment of implementation; instead, they are applied at different points in time, with varying durations depending on the risks identified and the intensity of mitigation measures adopted. In other words, there is no single defined treatment period for the treated units.
ii. Heterogeneity of interventions: The measures applied vary in scope, intensity, focus, and implementation mechanisms, both within each sector and across sectors. Each intervention is unique and responds to the specific conditions of the territorial entity, which are analyzed during the follow-up phase.
iii. Territorial heterogeneity: The structural asymmetry in financial, administrative, and sectoral performance among subnational governments makes it impossible to assume parallel trajectories between treated and untreated entities.

For the present analysis, the information corresponds to annual data for each treated unit during the period between 2008 and 2023. In the context of the EMSC, a treated unit is defined as any territorial entity (department, district, or municipality) subject to a preventive measure (performance plan) or a corrective measure (suspension of transfers or temporary assumption of responsibilities). The treatment year corresponds to the period in which the measure was implemented, marking the beginning of the post-treatment period.

Furthermore, the evaluation is differentiated across the sectors of education, health, and drinking water and basic sanitation. This differentiated analysis is based on the specificity of each sector, the public policy objectives pursued, and the particular characteristics of the Strategy in each of its phases (monitoring, follow-up, and control). In essence, each sector evaluated responds to different population needs, with the aim of guaranteeing better living conditions and, consequently, achieving progress in key indicators for closing gaps.

Regarding the pre-treatment period, there is an extensive time horizon available, given that the SGP was created in 2001 and implemented starting in 2002. Post-treatment period, information is available up to 2023 to analyze the intervention period.

The fundamental principle of the synthetic control method is to reproduce the trajectory of the treated unit before the intervention so that any difference in the observed outcome variable after the intervention can be attributed exclusively to the evaluated policy. In other words, the control group (untreated units) is determined by a combination of variables that characterize the treated entities (institutional, economic, demographic, etc.).

The synthetic control is obtained by assigning a weighting vector (W) to each of the untreated units in the control group, minimizing the difference with the treated unit during the pre-intervention period. The estimation is based on the following optimization equation:

$$\textbf{(1)}\ \ \mathbf{W}^* = (\mathbf{w}_2^*, \dots, \mathbf{w}_{\mathbf{J+1}}^*)$$

$$\min \|\mathrm{X}_1 - \mathrm{X}_0 \mathrm{W}\|$$

Subject to:

$$\mathrm{w_j} \geq 0 \text{ for any j}, \sum_{\mathrm{j=2}}^{\mathrm{J+1}} \mathrm{w_j} = 1$$

Where:

X_1: *Vector of characteristics of treated unit 1 before the intervention.,*

X_0: *Vector of characteristics of the untreated units before the intervention.,*

$W = (w_2, w_3, \dots, w_{J+1})$ *Weighting vector assigned to the untreated unit.*

The effect of the intervention on the outcome variable Y is defined as:

$$\textbf{(2)}\ \tau_{1t} = \mathrm{Y_{1t}} - \sum_{\mathrm{j=2}}^{\mathrm{J+1}} \mathrm{w_j^* Y_{jt}}$$

Where:

τ_{1t}: *Estimated effect of treated unit 1 at time t,*

$\mathrm{t} = T_0, \dots, T$ *where* T_0 *is the year of the intervention*,

$\mathrm{Y_{1t}}$: *Observed outcome of treated unit 1 at time t (under the intervention).*

$\mathrm{w_j^* Y_{jt}}$: *Estimated counterfactual outcome for the treated unit at time t if it had not been treated, where* w_j^* *are the weights assigned to the untreated units j, y* Y_{jt} *the observed outcomes of the untreated units at time t.*

Following Abadie (2021), a public policy such as the EMSC can be evaluated using the synthetic control methodology, given that it meets the contextual conditions that guarantee the validity of the estimates: (i) effect size and outcome volatility (it is expected that the interventions of the Strategy will generate structural effects on the management and execution of SGP resources and, therefore, on coverage, quality, and continuity in service delivery); (ii) availability of a comparison group (there is a large number of entities that have not been intervened); (iii) no anticipation (preventive and corrective measures are not predictable, since not all entities identified as high risk through monitoring are prioritized by the Ministry of Finance); (iv) absence of interference between units (the application of the measures is individual in nature)[6]; (v) convexity condition (the control groups are diverse in terms of fiscal performance, demographic level, coverage, quality and continuity of service provision, amount of SGP allocations, and socioeconomic, environmental, and geographic

[6] Possible cross-effects from interventions in the health sector are isolated for the drinking water and basic sanitation sector.

conditions, among others); (vi) time horizon (there is a sufficient pre-treatment period, given that the SGP was created in 2002 and the Strategy was formalized in 2008).

3.2. Robustness analysis

To ensure the robustness and validity of the results, placebo tests and prediction error comparisons were conducted. Regarding the former (placebo tests in space), in each of the models the synthetic control methodology (Equations 1 and 2) was replicated, considering each of the entities in the control group as a treated unit. This was done in order to verify whether the effect obtained in the evaluated/intervened entity was in fact a placebo. In cases where the number of donors[7] was very large, placebo tests were carried out only for the 10 control group entities with the highest weights assigned within the synthetic control.

As for the latter (prediction error comparison), the post-treatment to pre-treatment ratio of the mean squared prediction error (Equation 3) was compared both for the evaluated entity and for each of the entities in the control group (Equation 4). Estimates in which this ratio was close to 1 (r_j) were discarded, in line with the methodology of Abadie, Diamond, and Hainmueller (2010), unless the placebo test yielded conclusive results.

$$\textbf{(1)}\quad \mathrm{R_j}(t_1, t_2) = \sqrt{\frac{1}{t_2 - t_1 + 1}\sum_{t=t_1}^{t_2}(\mathrm{Y_{jt}} - \widehat{\mathrm{Y}}_{\mathrm{jt}}^{\mathrm{N}})^2},$$

Where:

J: Treated unit and control group, $J = \{1, \ldots., J+1\}$

T: Year of intervention, $0 \leq t_1 \leq t_2 \leq T$

Y_{jt}*: Observed outcome of treated unit j at time t*

$\hat{Y}_{jt}^{N}$*: Counterfactual outcome in period t when unit j is assumed to be treated, using the other units j within the donor pool*

$$\textbf{(2)}\quad \mathrm{r_j} = \frac{\mathrm{R_j}(\mathrm{T_0}, \mathrm{T})}{\mathrm{R_j}(1, \mathrm{T_0})}$$

3.3. Variable selection

The variables used for each allocation are presented below. The details, description, empirical expectations, and sources of information can be found in Annex 1.

- **Education**

The outcome variable Net Enrollment Rate (Tasa de Cobertura Educativa Neta - TCN) was used, which measures the capacity of the education system to serve the school-age population according to the expected age range for each level. This variable was selected considering that the EMSC's focus on the education sector centers on institutional processes

[7] Donors are understood as those untreated entities that, in the process of selecting the synthetic control, showed the smallest difference compared to the control group.

related to targeting and identifying the student population, as well as staff management, which enables the provision of educational services — such as the timeliness and quality of sectoral information. Additionally, the emphasis on strengthening budgetary, financial, and planning processes, which influence the allocation and optimization of resources, was also taken into account.

For the construction of the synthetic control, three predictive variables were included: (i) the size of the student population served (quartiles of total official enrollment served by the Certified Territorial Entities – CTEs[8]), which distinguishes the volume of students that defines educational demand; (ii) the resources managed (quartiles of per capita SGP education allocation assigned to the CTEs), which controls for differences among donor entities in terms of the amount of resources available for service provision; and (iii) the institutional capacity of the territorial entities (Institutional Performance Index), which seeks comparability among entities based on their institutional framework and capacity for service delivery.

For the selection of the control group in the study, departments and municipalities certified in education during the period 2005–2024 were considered. The identification of comparable units was based on the analysis of enrollment quartiles and per capita resources allocated through SGP Education, using the specific year of the intervention as a reference. Additionally, segmentation by the Institutional Performance Index[9] was applied, which helped reduce the model's mean squared errors, thereby improving the accuracy of the estimates by having control groups composed of similar territorial entities.

- **Health**

In estimating the EMSC's effects of the health allocation, the outcome variables were the adolescent pregnancy rate among those aged 15 to 19 (Tasa de Embarazo Adolescente - TEA) and the perinatal mortality rate (Tasa de Mortalidad Perinatal - TMP). These variables were selected for their relevance in evaluating the effects from a territorial gap-closing perspective, given their sensitivity to promotion and prevention actions led by subnational governments, especially in contexts of high vulnerability.

The adolescent pregnancy rate is an indicator influenced by public health interventions and reflects structural inequalities and gaps in access to sexual and reproductive health services. Its reduction depends largely on the funding and political will of territorial governments to prioritize actions such as comprehensive care for adolescents, sexual

[8] In the decentralized model for the provision of primary, basic, and secondary education services, the Certified Territorial Entities (CTEs) are the levels of local government to which the responsibility for the administration, management, and delivery of educational services in their respective territories has been assigned. As a general rule, this responsibility falls to departments and districts, and additionally to municipalities that obtain certification in compliance with the requirements established in Law 715 of 2001 and other provisions, thereby assuming educational responsibilities within their jurisdictions. Currently, there are 97 CTEs (32 departments and 67 districts and municipalities).

[9] The Institutional Performance Index (IDI) is a tool that measures the capacity of public entities to direct their management toward the production of quality goods and services, seeking to address citizens' needs effectively and transparently. It is measured by the Administrative Department of the Public Service (DAFP).

health counseling, and access to contraceptive methods. Empirical evidence has shown that these strategies (resource allocation and political commitment at the territorial level), together with the strengthening of local care networks, have significant effects in reducing this indicator (Darney et al., 2022).

Perinatal mortality — which includes late fetal deaths and early neonatal deaths — constitutes a critical measure of the quality of maternal and child healthcare. Its reduction is associated with investment in prenatal care, the strengthening of healthcare networks, and the training of health personnel. In resource-limited contexts, interventions such as preeclampsia management, emergency obstetric care, and neonatal resuscitation have proven effective (Lwan et al., 2010).

The estimation of the effects of the EMSC in the health sector focused exclusively on the SGP allocation designated for public health, as this is the component over which territorial entities have direct management capacity and influence through collective interventions. This contrasts with the insurance[10][11] and supply[12] subsidy components, on which the Strategy has marginal influence.

For the synthetic control, in addition to the lags of the outcome variables, two predictive variables were considered: the per capita allocation of the public health component of the SGP and the number of inhabitants per municipality. The supply of resources per inhabitant and the demographic component — understood as a proxy for service demand — were key in constructing comparable entities.

For the estimation of the synthetic controls, the following criteria were established for the selection of the comparison group. In departments and capital cities, entities at the same level of government that had been intervened between 2008 and 2022 were excluded. The high-risk criterion in the year of intervention was not applied in order to avoid an excessive reduction of the comparison group. In non-capital municipalities, intervened entities were excluded, and only those classified as high-risk in the same year as the intervention were included.

- **Drinking water and basic sanitation**

[10] In the case of capital municipalities (cities) and non-capital municipalities, no restrictions related to the level of government were established. The same criteria — enrollment quartiles, per capita resources, and institutional segmentation — were maintained in order to ensure the comparability and robustness of the control group across the different territorial levels analyzed, given that, in terms of responsibilities, the level of government has no implications.

[11] It is framed within a national financing model, in which SGP resources form part of the pool that covers health insurance expenditures. These resources are administered by ADRES and represent less than one-fifth of the Monthly Settlement of Enrollees in the subsidized regime. It should be noted that, although the payment for services and technologies under the subsidized regime falls under the responsibility of the central level, the affiliation processes are carried out by the territorial entities in coordination with the public and private EPS and IPS.

[12] This allocation, which finances State Social Enterprises that hold monopolies in tracer services and those that are not sustainable through the sale of services or public infrastructure managed by third parties, is not significant in relation to the total health sector allocation, which limits its impact on strengthening the public hospital network.

In the allocation for drinking water and basic sanitation (APSB), the outcome variable used was the incidence of Acute Diarrheal Disease (Incidencia de Enfermedad Diarreica Aguda - IEDA)[13]. Although the EMSC's approach to APSB has been predominantly corrective and focused on the budgetary management of resources, these measures are fundamental for the proper use of funds, which in turn contributes to improving access to services for vulnerable populations and, consequently, reducing EDA incidence. Institutional capacities are also strengthened, and although these are administrative in nature, they help ensure that resources can be allocated and executed more effectively for APSB projects, which in turn have an impact on public health.

For the construction of the synthetic control, seven predictive variables were included: municipal population, to control for demographic factors; water supply and sewerage coverage, since access to drinking water and adequate wastewater management influence the level of water provision and exposure to pathogens from the final disposal of liquid waste; environmental variables such as altitude, temperature, and average precipitation, due to their influence on water quality and the proliferation of pathogenic agents; and per capita SGP-APSB resources allocated, to control for the level of financing in the APSB sector.

For the selection of the entities that make up the comparison group in the construction of synthetic controls, the criteria established were as follows: during the monitoring stage, the entity had been categorized as high risk, or in some cases medium risk; that it belonged to the same level of government as the treated entity, considering the differences in competencies and responsibilities assigned in the use of SGP resources; and that it had not adopted preventive or corrective measures in the evaluated sector at any point during the evaluation period.

4. Results[14]

4.1. General effects

EMSC interventions within the SGP, across the sectors of education, health, and drinking water and basic sanitation, have generated positive effects on gaps reduction for 22.5% (43 entities) of the entities that implemented preventive and/or corrective measures during the period 2008–2023. The results by sector and outcome variables are summarized in Table 1 and are detailed in the following subsections.

[13] This condition, which corresponds to a syndrome caused by various infectious agents, is closely linked to access to drinking water and adequate sanitation, allowing the measurement of the number of reported cases per 1,000 inhabitants over a given period.

[14] To explore the specific characteristics and results of each sector analyzed in greater depth, it is recommended to consult the complementary research report, which serves as an extension of the present study.

Table 1. Estimation of the Effects of EMSC Interventions on Gap Reduction (Variables, Number of Entities, and Average Effect)
Source: The authors

Sector	Outcome Variables	Number of Entities Evaluated	% of Entities with Positive and Significant Effects	Estimated Average Effect
Education	Net Enrollment Rate (TCN)	57 (*)	33%	4,7 pp
Health	Adolescent Pregnancy Rate (TEA)	37	22%	1,7 pp
	perinatal mortality rate (TMP)	37	11%	0,2 pp
Drinking water	Incidence of Acute Diarrheal Disease (IEDA)	44	25%	16,3 x 1.000 hab

(*) Certified Territorial Entities in Education

At the end of each section, a complementary gap-reduction analysis is presented, which examines, on the one hand, the behavior of the outcome variables and, on the other, the results of post-implementation monitoring to identifying management gaps. This exercise allows for contrasting the impact on outcome indicators performance with the entities' capacity to properly manage SGP resources, as reflected in the monitoring indicators.

4.2. Education[15]

The results show that 19 of the 57[16] certified territorial entities evaluated exhibited significant positive effects as a result of the measures adopted within the framework of the EMSC. Positive effects were identified in 9 departments, 5 capital municipalities, and 5 non-capital municipalities. In the remaining entities, no significant effects were observed, as they were considered to present placebo effects based on the results of the inference and robustness tests[17].

When analyzing these results in relation to the implementation of the Strategy in the education sector with the aim of identifying patterns that determine the effects, it was observed that 31.3% of the strengthening activities in entities where the intervention was positive and significant corresponded to improvements in the quality and timeliness of sectoral information systems, which serve as inputs for the optimal distribution of teaching staff[18] and the identification of the target population.

However, upon observing that both in entities with significant positive effects and in those without such effects, the EMSC incorporated similar strengthening actions in the processes of managing SGP Education resources — particularly in payroll management for teaching

[15] The measures adopted in each evaluated entity are presented in Annex 2.1.
[16] Fourteen active measures that had been adopted were excluded, as well as 132 municipalities where mass control measures were implemented to strengthen the quality of sectoral budget reporting.
[17] The summary of the prediction errors is presented in Annex 3.1.
[18] The optimization of reports related to the identification of student demand and supply was addressed, including the technical annexes of the National Information System for Basic and Secondary Education (SINEB), the Single Directory of Educational Institutions (DUE), and the Single Contracting Form (FUC), as well as other general reports such as the Single Territorial Form (FUT), the CUIPO categories, and the uploading of contractual information to the SECOP and SECOP II platforms.

staff (service provision), as well as in the strengthening of contractual processes[19] and sectoral reporting[20] — it becomes evident that the comprehensive approach of the intervention does not appear to be a determining or differentiating factor in generating positive effects, at least in relation to the NER.

On average, the positive impact of the intervention on CTEs was estimated at 4.7 percentage points. For departments, the impact was 3.9 points; for capital cities, 3.4 points; and for non-capital municipalities, 5.4 percentage points (Figure 1). It is also observed that, even though the responsibility for service provision under the certification framework is the same across all levels, the institutional capacities to perform this responsibility differ, resulting in differential impacts of the EMSC.

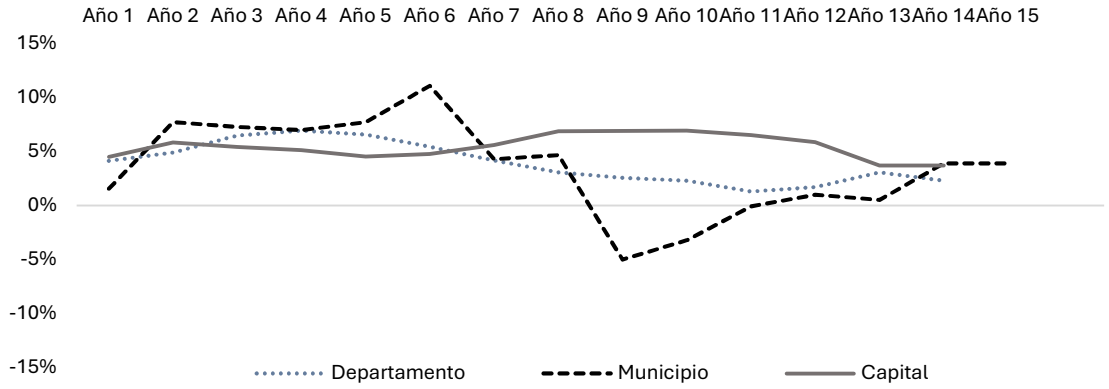
In the departments, considering that they serve the population in their non-certified territorial entities, the effect of the intervention persists for up to four years after its implementation and then gradually diminishes. In contrast, in capital municipalities (cities), which serve only their own population, a greater persistence of the effects is observed, reflecting the implementation of strengthening actions that permeate the exercise of this responsibility.

It is important to note that the strengthening efforts have focused on the exercise of responsibilities by the administrative staff of the sector, whose work is financed with SGP Education resources. However, the high turnover of this staff leads to a loss of institutional knowledge, which negatively affects the quality and continuity of services provided to the educational population. Thus, Figure 1 also shows that sectoral staff in capital cities exhibit higher retention rates than those in municipalities and departments.

[19] It involves the implementation of improvements in the processes of contract monitoring and oversight, in compliance with Ministerial Directive 09 of 2008 and current procurement regulations, with particular emphasis on pedagogical monitoring of contracts for the provision of educational services. In addition, planning processes were optimized for identifying the sector's procurement needs and, based on this, for managing contracts related to the provision and/or administration of services, as well as for the educational package provided by third parties (at all stages, according to needs and the educational model).

[20] In particular, coordination was strengthened to ensure the timely delivery of staff allowances accrued during the period of temporary administration, as well as the timely recognition of hard-to-reach areas.

Figure 1. Positive Effects of EMSC Interventions on the Net Enrollment Rate in Education (Percentages)
Source: The authors



From the perspective of performance gap reduction, and based on information from the EMSC monitoring stage[21], it was found that 80% of the evaluated entities that showed an effect on the NER recorded a risk level[22] in education monitoring that was equal to or lower at the end of the measure compared to its beginning. This suggests that the intervention helped reduce the risk associated with the improper use of resources for service provision.

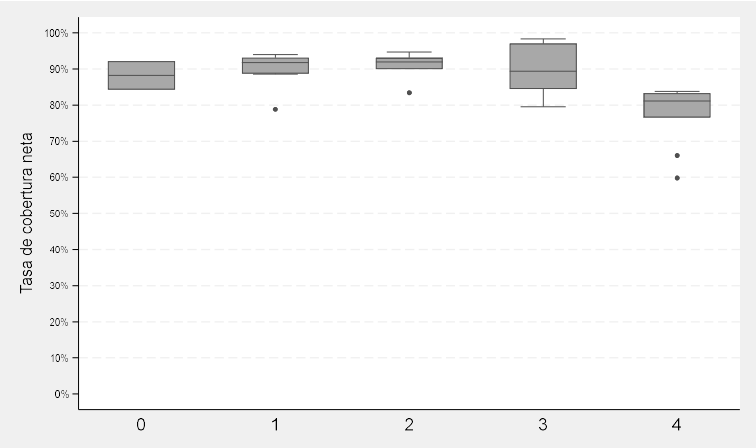
Furthermore, from the perspective of sectoral gaps measured through the outcome variable, the average positive effects on the NER in CTEs with significant results amounted to 4.7 percentage points, which represents 0.5 times the standard deviation of the average for the period 2009–2023. This indicates a moderate effect size according to Cohen's (1988) criteria. In relative terms, this effect may represent an improvement of approximately 5.1% compared to the national median, constituting a meaningful impact from the perspective of public policy on access to education.

At the departmental level, the effect reached 0.42 standard deviations, indicating an estimated sectoral gap reduction ranging from 1.2% to 11.7% compared to the median (Figure 2a), with the largest effects identified in category 3[23] entities. In municipalities, the effect was 0.48 standard deviations, which may translate into an estimated sectoral gap reduction ranging from 1% to 13.7% (Figure 2b), with the most significant impacts observed in category 3 and 4 entities.

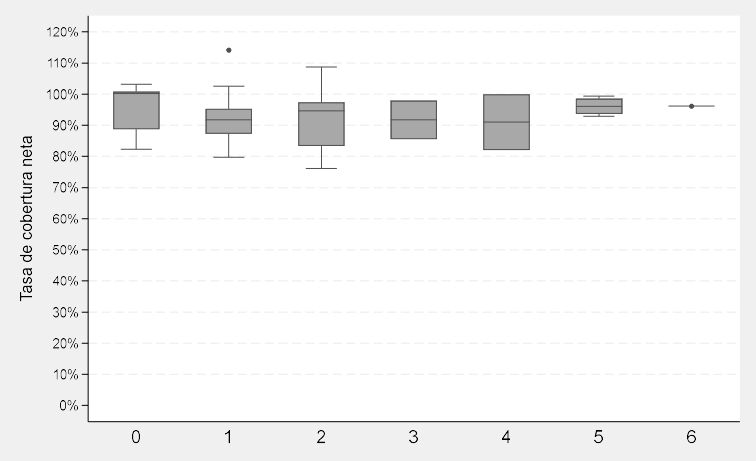
[21] In the monitoring methodology for education, the financial and information reporting component represents the highest percentage weight in the measurement of the sector's overall indicator.
[22] In the municipalities of Lorica (Córdoba) and Palmira (Valle del Cauca), the intervention concluded in 2024, which is why, as of the date of this study, no sectoral monitoring measurement is available.
[23] The differentiation in the use of budgetary categories under Law 617 of 2000 makes it possible to analyze gap reduction while taking into account differences in population size and fiscal capacity among territorial entities, which are closely related to their institutional capacities for assuming and carrying out responsibilities.

Figure 2. Distribution of the TCN in departments and municipalities (*) by categories (Average 2009 – 2022)
Source: The authors

(a) Departments



(b) Municipalities(*)



(*) Special category corresponds to group 0.

4.3. Health[24]

The results show that 22% of the evaluated entities had statistically significant positive effects in the adolescent pregnancy rate (TEA) among those aged 15 to 19, and 11% in the perinatal mortality rate (TMP), attributable to the measures adopted within the framework of the EMSC. These effects passed the inference and robustness tests and are therefore considered non-placebo (Equations 3 and 4)[25].

A positive effect is understood as a larger decrease in the outcome variable in the treated entity compared to its synthetic control, or a more moderate increase. No significant effects were observed in the rest of the entities.

[24] The measures adopted in each evaluated entity are presented in Annex 2.2.
[25] The summary of the prediction errors is presented in Annex A.3.2.

The analysis suggests that the occurrence of positive effects is closely related to the type of measures adopted. Although financial measures were predominant in all cases, entities with positive effects had a higher proportion of sectoral measures — aimed at transforming the provision of public health services — (27%) compared to the placebo group (14%). This difference, which is statistically significant at the 10% level[26], indicates that sectoral measures are key to achieving sustainable impacts in terms of gap reduction.

Additionally, the observed effects cannot be attributed to the use of freely disposable current revenues, since these represented only 5% of the financing sources in the entities with positive results. Conversely, the observed effect is mainly associated with improved execution of SGP Public Health resources, which accounted for 37% of total financing.

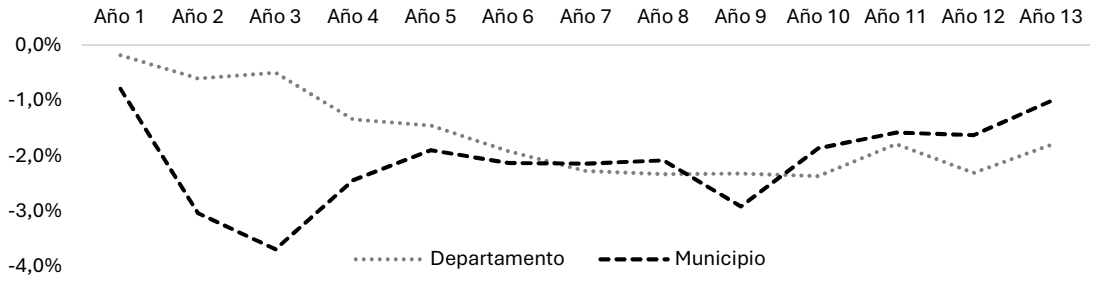
In quantitative terms, the intervention had an effect of 1.7 percentage points on TEA in departments and non-capital municipalities, with no positive results observed in capital cities. For TMP, the average effect was 0.17 percentage points, with effects observed at all levels of government.

The EMSC intervention measures in the health sector lasted an average of 2 years in departments, while in municipalities the average duration was 3 years. The temporal effects on TEA showed greater intensity in the short term, especially in non-capital municipalities, while in departments an incremental pattern was observed over time. This suggests progressive improvements in territorial public health management, with effects sustained beyond the political cycle (Figure 3a).

In the case of TMP, although the effects were also persistent, they exhibited greater volatility, possibly related to factors external to the EMSC and public health actions — a hypothesis that is beyond the scope of this document (Figure 3b).

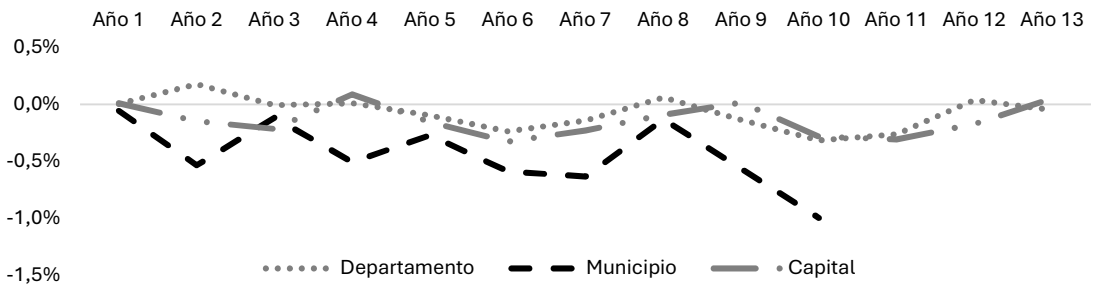
Figure 3. Effects of EMSC Interventions on TEA and TMP (Percentages)
Source: The authors

(a) Adolescent pregnancy rate



[26] Statistical Test of Difference in Proportions (Z-Test)

(b) Perinatal mortality rate



From the perspective of performance gap reduction, 62% of the entities with positive effects on TEA and 75% of those with positive effects on TMP recorded a risk level that was the same or better at the end of the intervention, according to EMSC monitoring. These findings suggest that the interventions contributed to improved management of SGP public health resources[27].

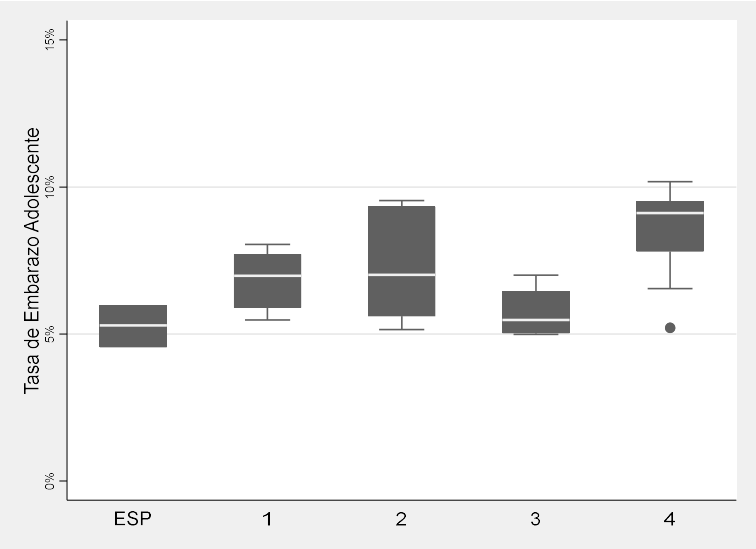
The estimated average effect of EMSC interventions on TEA between 2009 and 2022 was 0.38 standard deviations, which corresponds to a moderate magnitude according to Cohen's (1988) criteria. This result represents a relative improvement of 97% compared to the national median, standing out as a significant effect from the perspective of territorial gap reduction.

At the departmental level, the effect reached 0.86 standard deviations, translating into a gap reduction of between 16% and 28%, depending on the budgetary category (Figure 4a). At the municipal level, the effect was 0.45 standard deviations, showing even greater relative impacts: an average decrease of 122% compared to the median in municipalities with initial endowments in groups 1 to 4, and 115% in group 5, suggesting a high potential for interventions in more lagging contexts (Figure 4b).

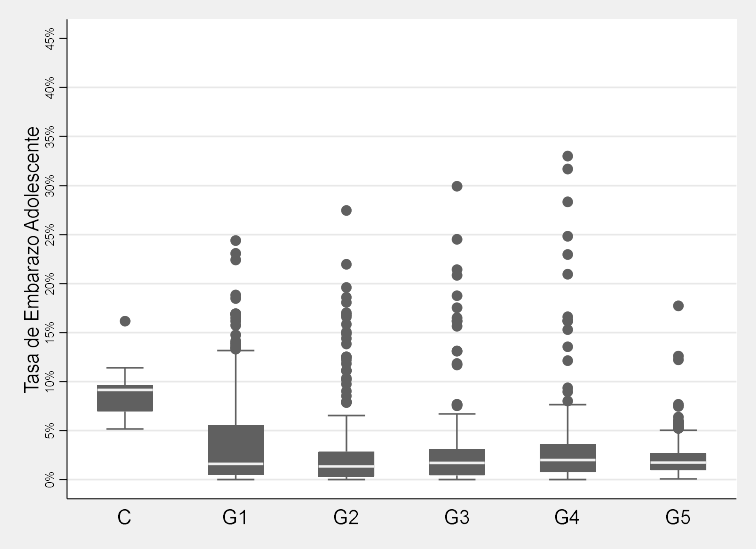
[27] Changes in monitoring methodologies — such as the transition of the Ten-Year Health Plan from dimensions to strategic pillars — limit the possibility of quantitatively assessing these advances over time.

Figure 4. Distribution of TEA in Departments and Municipalities (Average 2009 – 2022)
Source: The authors

(a) Departments



(b) Municipalities (*)



(*) Values equal to zero are excluded from the figure.

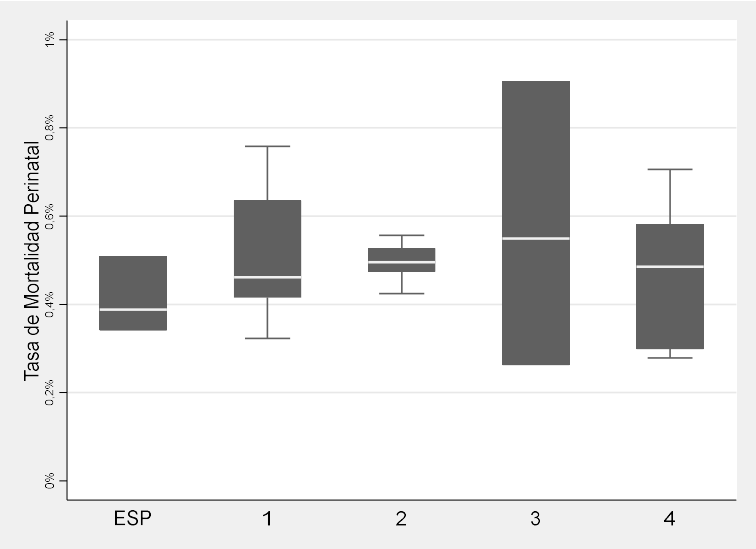
For TMP, the average effect was 0.23 standard deviations, also classified as moderate. This effect translates into a reduction of between 10% and 12.8% relative to the median in departmental contexts (Figure 5a). At the municipal level, where dispersion is greater, the effect reached up to 214% of the median in groups 2 to 5 of initial endowments, further reinforcing the usefulness of the EMSC as an instrument for territorial equity (Figure 5b).

Overall, it was observed that in contexts with high dispersion and the presence of extreme values in the outcome variables analyzed — as well as in municipalities with more critical structural conditions — the sustainability of the effects of EMSC intervention measures could

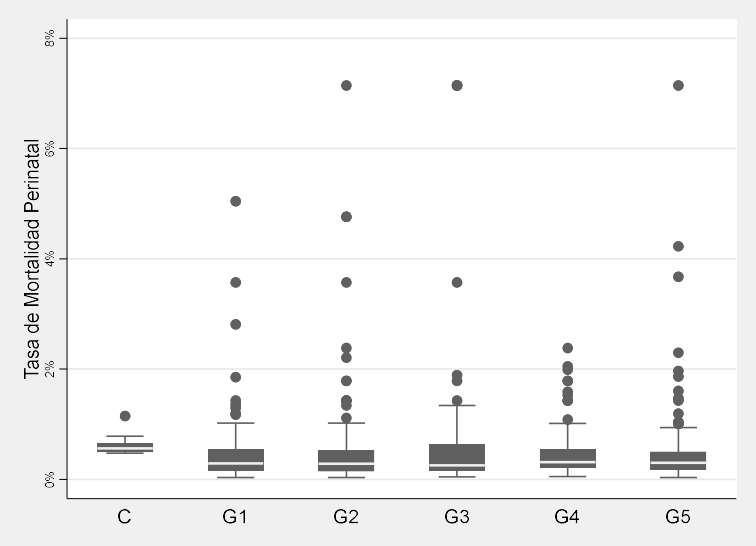
be limited. This underscores the need to design and implement complementary measures to ensure lasting impacts.

Figure 5. Distribution of TMP in Departments and Municipalities
(Average 2009 – 2022)
Source: The authors

(a) Departments



(b) Municipalities (*)



(*) Values equal to zero are excluded from the figure

4.4. Drinking Water and Basic Sanitation

A differential effects assessment was carried out between capital and non-capital municipalities due to differences in access conditions of drinking water. In general terms, capital municipalities exhibit higher levels of service coverage and quality, supported by more consolidated infrastructure and greater institutional capacity. In contrast, non-capital municipalities — especially those in rural or remote areas — face persistent barriers that limit

safe and continuous access to water, which has direct impacts on public health, such as a higher incidence of waterborne diseases like EDA.

The results show that 24% of the entities analyzed displayed positive effects on the incidence of EDA, corresponding to 11 municipalities, of which 3 are capitals and 8 are non-capitals. The magnitude of the effect was more significant in capital municipalities, where the average reduction was 27.4 cases per 1,000 inhabitants, while in non-capital municipalities the decrease was 8 cases per 1,000 inhabitants[28].

When analyzing the effects according to the focus of the measures implemented under the EMSC in this sector, it is evident that, in general, the interventions had a predominantly financial focus. Particularly, entities that achieved significant positive effects were characterized by a higher frequency of financial activities (34%) and information reporting activities (27%). In contrast, entities without significant effects prioritized institutional and support actions, which, while strengthening management, did not directly translate into sanitary improvements. It is noteworthy that, although sector-specific activities were generally less implemented under the EMSC, they were more present in entities with significant positive effects (7% compared to 3% in those without significant effects), reinforcing the notion that direct actions on services are relevant to the outcomes achieved.

Capital municipalities show a deeper and more sustained reduction in the first five years, reaching a decrease of nearly 40 cases per 1,000 inhabitants. In contrast, non-capital municipalities display a more modest and volatile reduction. Although improvements are also observed, they are neither as deep nor as stable as in capital municipalities, with a tendency to return to levels close to zero in recent years. This may be linked to lower institutional and technical capacities in these municipalities to implement the control and sanitation measures promoted by the EMSC, which reduces their impact and sustainability over time (Figure 6).

It is important to note that the average duration of the measures under the Strategy for this sector was three years in non-capital municipalities and four years in capital municipalities. In this sense, it is evident that the greatest decreases in cases of Acute Diarrheal Disease occur during the first three years of the intervention, due to greater support from the Ministry of Finance, with this effect being more significant in capital municipalities.

In particular, in non-capital municipalities, the effect loses strength and the gap closure with respect to the control stabilizes at around 15 cases per 1,000 inhabitants. From year 6 — the maximum duration of a measure in this sector for these entities — the effect diminishes, resulting in a reduction of only 5 cases per 1,000 inhabitants compared to the control. In the case of capital municipalities, it is observed that after the fourth year of the intervention, the treatment effects weaken, decreasing from a reduction of 40 cases compared to the control to only 20 cases in year 6, reaching stability by year 9, which is the maximum duration of a measure in this sector for this type of entity.

[28] The summary of the prediction errors is presented in Annex A.3.3.

Figure 6. Effects of EMSC Interventions on the Incidence of EDA (Cases for each 1.000 inhabitants)
Source: The authors

When examining the evolution of the performance of territorial entities from the perspective of management gap reduction — understood as the difference between each entity's monitoring result and the national average, comparing the situation at the beginning and at the end of the intervention period — it is observed that 55% of the evaluated territorial entities managed to reduce the gap relative to the national average in the monitoring compliance indicator, suggesting an improvement in their relative performance.

This proportion was 56% in the placebo group and 63% among the entities where the effect estimated using synthetic controls was statistically significant, highlighting the positive impact associated with the intervention. Among the entities with significant positive effects identified through the synthetic control method, Firavitoba, San Pablo, Mitú, Barrancas, and Yopal stand out for having reduced the gap between their results and the national average by more than 15 percentage points between the beginning and the end of the intervention.

Regarding the effects observed in capital municipalities, the analysis was carried out based on the categorization established by Law 617 of 2000, given the limited heterogeneity among them in terms of rurality categorization. This is because most of these municipalities fall within the group of cities and metropolitan areas, which limits variability across rurality groups for analytical purposes.

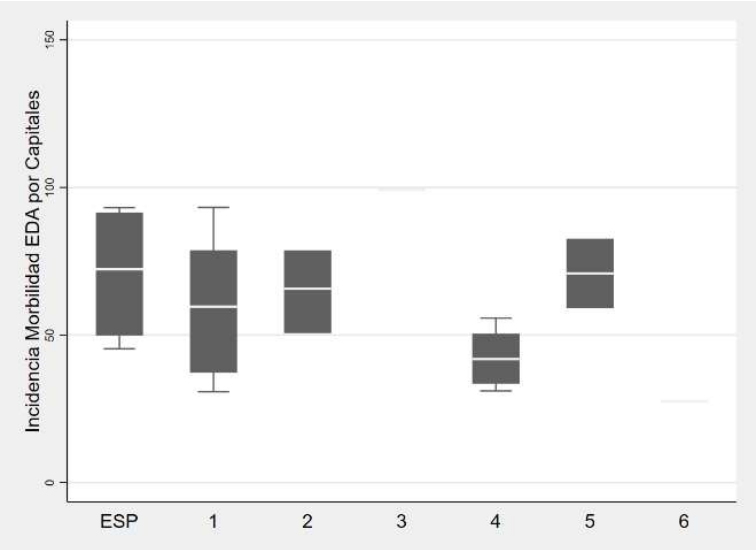
Taking the above into account, it is evident that the average effect for the non-placebo entities was a reduction of 27.13 cases per 1,000 inhabitants, which represents the standard deviation 0.8 times. According to Cohen's (1988) criteria, this effect is classified as a large effect, demonstrating the significant impact of the Strategy in these entities. A 50% improvement is also observed compared to the median value of 55 cases per 1,000 inhabitants, representing substantial progress from a public policy perspective and contributing meaningfully to the reduction of territorial gaps.

Regarding this latter aspect, it is worth noting that the municipal categorization established by Law 617 of 2000 reveals heterogeneous effects by category: while category 4 and 5 capitals show clear improvements, municipalities in higher categories still present high levels of incidence (Figure 7a).

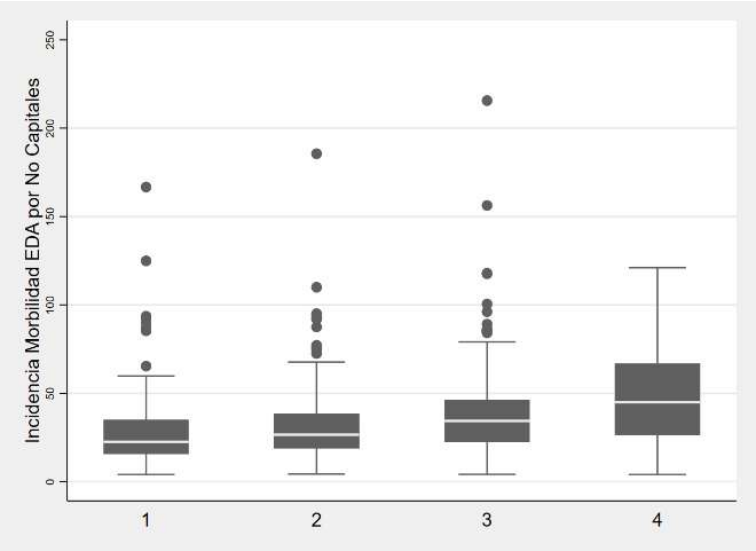
Meanwhile, in the measurement of gap reduction in non-capital municipalities, the Strategy shows an average effect of an 8.2-case reduction. This effect is equivalent to 0.1 times the standard deviation of the data, which represents a low level of gap reduction compared with the effects observed in capital municipalities. Nevertheless, a 30% improvement is observed relative to the median of 29 cases per 1,000 inhabitants, suggesting a moderate improvement in terms of gap reduction — particularly when compared with the median in rural and dispersed rural municipalities (groups 1 and 2), which present a lower number of cases (Figure 8b).

Figure 7 Distribution of EDA in Capital and Non-Capital Municipalities (Average 2009 – 2022)
Source: The authors

(a) Capital municipalities



(b) Non-Capital municipalities



The evaluation of the effects of the EMSC on the incidence of EDA shows that, under certain conditions, the Strategy can contribute to closing sanitation gaps. Entities that achieved positive results combined financial measures, sectoral actions, and improvements in information reporting, which enabled significant reductions in the incidence of EDA.

For entities that did not show significant positive effects, factors such as over-indebtedness due to Water Bonds, decertification, political discontinuity, or structural conditions (such as high IRCA levels[29]) have limited the effectiveness of the EMSC.

[29] According to Article 12 of Decree 1575 of 2007, the Water Quality Risk Index for Human Consumption (IRCA) is the degree of risk of the occurrence of diseases related to the failure to meet the physical, chemical, and microbiological characteristics of water intended for human consumption.

5. Conclusions and recommendations

The Comprehensive Monitoring, Follow-up, and Control Strategy for the use of resources from the General Participation System (EMSC), formalized by Decree-Law 028 of 2008, has been evaluated as an instrument with the potential to correct territorial inequalities and improve the provision of public services, provided it is supported by institutional mechanisms for monitoring, follow-up, and control. This evaluation seeks to provide empirical evidence on the effects of its preventive and/or corrective measures on closing territorial gaps. To achieve this objective, the synthetic control method was used to construct a counterfactual scenario for the intervened entities under the EMSC, in order to identify the effects of implementing different measures aimed at closing gaps in the education, health, and drinking water sectors.

The results show that approximately one quarter (22.5%) of the territorial entities intervened between 2008 and 2023 exhibited statistically significant positive effects in key sectoral variables, evidencing that the Strategy is not neutral regarding sectoral gap reduction. However, it is necessary for complementary research to assess these results in relation to the scale of the resources available for implementing the Strategy, in order to obtain a more accurate perspective of its impact in line with the EMSC's operational conditions.

The impact of the Strategy differs across sectors, a conclusion consistent with the perspectives of its implementation and aligned with the sectoral vision of decentralization in Colombia. The findings indicate the EMSC has had significant effects on the performance of territorial entities, although the effects on sectoral gap reduction have been moderate. This underscores the positive role it has played, particularly as a public policy tool aimed at strengthening territorial institutional capacity.

The sectoral results show that, in education, 33% of the intervened entities exhibited statistically significant positive effects on the Net Enrollment Rate (NER). An average effect of 4.7 percentage points (pp) was estimated for the NER; by level of government, 3.9 pp for departments, 3.4 pp for capital cities, and 5.4 pp for non-capital municipalities. This effect represents an improvement of approximately 5.1% relative to the national median, and its success is associated with the strengthening of information reporting processes and teaching staff management. Finally, 80% of the entities with positive effects on NER improved or maintained their risk level in the monitoring process.

In the health sector, the evaluation focused on the public health component, where territorial entities have direct management capacity. Positive effects were identified in 22% of the intervened entities for the Adolescent Pregnancy Rate (TEA) and in 11% for the Perinatal Mortality Rate (TMP). The estimated average effect was 1.7 pp for TEA and 0.17 pp for TMP. These effects were sustained over time, even after the lifting of the measures, suggesting processes of institutional improvement. Positive effects are associated with a greater use of measures with specific sectoral approaches. Additionally, 62% of entities with positive effects on TEA and 75% on TMP achieved the same or better risk level by the end of the intervention.

Finally, in the area of Drinking Water and Basic Sanitation, positive effects were observed in the incidence of Acute Diarrheal Disease (EDA) for 24% of the intervened entities. The incidence of EDA decreased by an average of 16.27 cases per 1,000 inhabitants, with a more pronounced decrease in capital municipalities (27.13 cases) than in non-capital municipalities (8.2 cases). Empirical results indicate that approximately 63% of the entities with positive effects managed to reduce their gap relative to the national average in the monitoring compliance indicator, reinforcing the favorable impact of the EMSC on their relative performance. Entities that achieved positive results combined financial management activities, transparency efforts, and direct actions on service delivery.

Collectively, these empirical findings support the relevance of the EMSC as a technical and territorial control instrument with the potential to influence gap reduction, while also highlighting operational, institutional, and regulatory limitations that must be addressed to strengthen its effectiveness. The recommendations derived from this study were developed based on both quantitative and qualitative analyses, including insights gathered from interviews with actors responsible for implementing the measures. These interviews helped reinforce the findings and underscored, among other aspects, the need for greater inter-institutional coordination, the strengthening of operational capacity at the decentralized level, and the consolidation of permanent technical assistance mechanisms to support territorial entities during and after the intervention process.

As a discussion input, this evaluation opens the public and academic agenda toward the analysis of monitoring, follow-up, and control systems for transfer resources in decentralized contexts. In particular, it emphasizes the need to link these systems with public policy outcomes — whether sectoral or territorial — and promotes the development of a broad range of complementary studies to inform decision-making. All of this aims to advance policy objectives related to quality, continuity, access, and permanence in the provision of local public goods and services.

In a conjunctural context, the recent constitutional reform of the SGP (Legislative Act 03 of 2024) and the development underway of the Organic Law on Competencies represent a strategic and unprecedented window of opportunity to redefine the role of the EMSC — not only as an ex post corrective mechanism, but also as a structural component of a comprehensive, preventive, and continuous system for evaluating territorial performance. Seizing this reformist moment is key to institutionalizing the EMSC within a more robust model of fiscal and sectoral governance, capable of generating learning, anticipating risks, and guiding public policy decisions.

In this regard, and based on the results of the evaluation of the EMSC's effects, Annex 4 presents a matrix of recommendations with an emphasis on closing territorial gaps, addressing the different phases or stages of the Strategy. The recommendations formulated constitute opportunities for improvement derived from the evaluation exercise and are aimed at optimizing accountability, strengthening inter-institutional coordination, and ensuring the fulfillment of the objectives established within the framework of the SGP.

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Annexes

A.1. Variables

Outcome and Predictive Variables by SGP Allocation

Allocation	Variable	Descripcion	Empirical Expectation	Source of information
Education	**Result** – Net coverage rate	Capacity of the education system to serve the school-age population according to the theoretical ages defined for each level.	**(+)**	MEN –SINEB.
	Predicted –	Total oficial enrollment	Not applicable	MEN –SINEB.
	Predicted –	Per capita SGP–Education allocation.	Not applicable	DANE population projections, DNP (SICODIS)
	Predicted -	Institutional Performance Index	Not applicable	DNP- Territorial performance statistics
Health	**Result** – Adolescent pregnancy rate	Proportion of adolescent pregnancies among women aged 15–19	**(-)**	DANE – Vital Statistics
	Result – Perinatal mortality rate	Proportion of perinatal mortality per live birth	**(-)**	DANE – Vital Statistics
	Predicted – SGP Public health	Per capita allocation of the public health component	Not applicable	DANE population projections, DNP (SICODIS)
	Predicted – Population	Number of inhabitants	Not applicable	DANE population projections
Drinking wáter and basic sanitation	**Resultado** – Morbidity from acute diarrheal disease. (EDA)	Reported cases in a municipality per 1,000 inhabitants.	**(-)**	DANE population projections
	Predicted – Population	Number of inhabitants.	Not applicable	DANE population projections
	Predicted – Water supply coverage	Percentage of the population with access to a drinking water supply service through a formal network.	Not applicable	Subdirección de Distribución de Recursos Territoriales SDRT – DPIP, DNP (SICODIS)
	Predicted – Sewerage coverage	Percentage of the population with access to formal wastewater collection and disposal systems.	Not applicable	Subdirección de Distribución de Recursos Territoriales SDRT – DPIP, DNP (SICODIS)

Allocation	Variable	Descripcion	Empirical Expectation	Source of information
	Predicted – Altitude	Average altitude of a municipality above sea level, measured in meters.	Not applicable	European Space Agency
	Predicted – Temperature	Average temperature of a municipality.	Not applicable	IDEAM
	Predicted – Precipitation	Average rainfall (in millimeters per year) received by a region over a given period.	Not applicable	Climate Hazards Group InfraRed Precipitation with Stations
	Predicted – SGP APSB per capita	Amount of SGP resources allocated to the APSB sector divided by the population of a specific territorial entity	Not applicable	DANE population projections, DNP (SICODIS)

A.2. Sectoral Criteria for the Selection of the Donor Group

Education

- Only departments and capital cities certified in education during the period 2005–2024 were taken into account.
- The donor group analysis considered enrollment quartiles and per capita SGP–Education resources both for the year of intervention and for the highest value reached during the 2005–2024 period.
- A segmentation was applied based on the Institutional Performance Index, which in some evaluated entities helped reduce squared errors.
- For capital cities and non-capital municipalities, no restrictions were applied based on the level of government during the 2005–2024 period. In both cases, the donor group analysis was based on enrollment quartiles and per capita SGP–Education resources, considering both the year of intervention and the highest value within the reference period.
- Given that interventions were implemented in different years with a heterogeneous distribution (4 in 2009, 11 in 2010, 11 in 2011, 2 in 2012, 4 in 2013, 2 in 2014, 4 in 2015, 4 in 2016, 4 in 2017, and 11 in 2019), the results were standardized based on the number of years elapsed since the start of the intervention. The post-treatment period was extended until 2024 to analyze the persistence and temporal evolution of the effects.

Table A.2.1. Evaluated Entities in the Education Allocation, Implemented Measure, and Year of Intervention
Source: The authors

Level	Treated entity	Type of measure	Treatment year
Department	Antioquia	Performance Plan	2016
Department	Atlántico	Performance Plan	2012
Department	Bolívar	Performance Plan	2013
Department	Vichada	Performance Plan	2011
Municipality	Bello	Performance Plan	2013
Municipality	Turbo	Performance Plan	2011

Level	Treated entity	Type of measure	Treatment year
Department	Boyacá	Suspension of Transfers	2019
Department	Caldas	Performance Plan	2010
Department	Caldas	Performance Plan	2017
Department	Caquetá	Performance Plan	2016
Department	Cesar	Performance Plan	2010
Department	Córdoba	Performance Plan	2013
Department	Chocó	Temporary Assumption of Responsibilities	2009
Department	Huila	Performance Plan	2014
Department	La Guajira	Performance Plan	2010
Department	La Guajira	Temporary Assumption of Responsibilities	2017
Department	Magdalena	Performance Plan	2010
Department	Magdalena	Performance Plan	2019
Department	Meta	Suspension of Transfers	2015
Department	Nariño	Performance Plan	2011
Department	Norte de Santander	Performance Plan	2011
Department	Santander	Performance Plan	2011
Department	Sucre	Performance Plan	2019
Department	Tolima	Performance Plan	2012
Department	Valle del Cauca	Performance Plan	2011
Department	Arauca	Performance Plan	2011
Department	Putumayo	Temporary Assumption of Responsibilities	2009
Department	San Andrés y Providencia	Suspension of Transfers	2019
Department	Amazonas	Performance Plan	2010
Department	Guainía	Performance Plan	2011
Department	Guaviare	Performance Plan	2015
Department	Vaupés	Performance Plan	2011

Level	Treated entity	Type of measure	Treatment year
Municipality	Malambo	Performance Plan	2015
Municipality	Soledad	Performance Plan	2010
Municipality	Lorica	Suspension of Transfers	2019
Municipality	Maicao	Temporary Assumption of Responsibilities	2017
Municipality	Uribia	Performance Plan	2010
Municipality	Ciénaga	Suspension of Transfers	2009
Municipality	Ipiales	Suspension of Transfers	2016
Municipality	San Andrés De Tumaco	Performance Plan	2010
Municipality	Dosquebradas	Performance Plan	2010
Municipality	Girón	Performance Plan	2011
Municipality	Buenaventura	Performance Plan	2010
Municipality	Cartago	Performance Plan	2013
Municipality	Jamundí	Suspension of Transfers	2014
Municipality	Palmira	Performance Plan	2019
Capital	Cartagena De Indias	Suspension of Transfers	2015
Capital	Tunja	Suspension of Transfers	2019
Capital	Florencia	Suspension of Transfers	2019
Capital	Riohacha	Temporary Assumption of Responsibilities	2017
Capital	Santa Marta	Performance Plan	2010
Capital	Villavicencio	Suspension of Transfers	2016
Capital	Pasto	Suspension of Transfers	2019
Capital	San José De Cúcuta	Performance Plan	2009
Capital	Sincelejo	Performance Plan	2011
Capital	Ibagué	Suspension of Transfers	2019
Capital	Yopal	Suspension of Transfers	2019

Health

- In both departments and capital cities, entities at the same level of government that were intervened during the 2002–2022 period were not included. In both cases, the high-risk rule from the monitoring conducted by the Ministry of Health and Social Protection in the year of intervention was not applied, as doing so would have significantly reduced the number of comparison entities, especially in departments.

- For non-capital municipalities, in addition to excluding entities that were intervened during the evaluation period, only those categorized as high risk in the same year as the intervention were considered.
- Since the interventions were carried out in different years, with a heterogeneous distribution (4 in 2009, 8 in 2010, 3 in 2011, 2 in 2012, 7 in 2013, 4 in 2014, 1 in 2015, 2 in 2016, 3 in 2017, 1 in 2018, and 2 in 2019), the results obtained were standardized based on the number of years elapsed since the intervention. The post-treatment period was extended until 2022 in order to identify whether the observed effects persisted over time or tended to fade.

Table A 2.2. Evaluated Entities in the Health Allocation, Implemented Measure, and Year of Intervention

Source: The authors

Level	Treated entity	Type of measure	Treatment year
Department	Atlántico	Performance Plan	2010
Department	Sucre	Performance Plan	2010
Department	Putumayo	Performance Plan	2010
Department	Amazonas	Performance Plan	2010
Department	Santander	Performance Plan	2011
Department	Guajira	Performance Plan Temporary Assumption of Responsibilities	2011
Department	Valle del Cauca	Performance Plan Suspension of Transfers	2012
Department	Magdalena	Performance Plan	2013
Department	Vaupés	Performance Plan	2013
Department	Vichada	Performance Plan	2013
Department	Cauca	Performance Plan	2014
Department	Cesar	Performance Plan	2014
Department	Guainía	Performance Plan	2014
Department	Guaviare	Performance Plan	2014
Department	Casanare	Performance Plan	2015
Department	Quindío	Performance Plan	2016
Capital	San José de Cúcuta	Performance Plan	2009
Capital	Santa Marta	Performance Plan Suspension of Transfers	2010
Capital	Popayán	Performance Plan	2012
Capital	Sincelejo	Performance Plan	2016
Capital	Bucaramanga	Performance Plan	2017
Capital	Cartagena	Performance Plan	2017
Municipality	Ciénaga	Performance Plan	2009
Municipality	San Andrés de Tumaco	Performance Plan	2009
Municipality	Corozal	Performance Plan	2009
Municipality	Soledad	Performance Plan	2010
Municipality	Tolú Viejo	Performance Plan	2010
Municipality	Cumaribo	Performance Plan	2010
Municipality	Turbo	Performance Plan	2011
Municipality	Aguachica	Performance Plan	2013
Municipality	El Carmen de Bolívar	Performance Plan	2013
Municipality	San Marcos	Performance Plan	2013

Level	Treated entity	Type of measure	Treatment year
Department	Chocó	Performance Plan	2017
Department	Caldas	Performance Plan	2018
Department	San Andrés	Performance Plan	2019
Department	Bolívar	Suspension of Transfers	2019

Level	Treated entity	Type of measure	Treatment year
Municipality	Buenaventura	Performance Plan	2013

Drinking Water and Basic Sanitation

- Municipalities that were intervened by the Strategy in the health sector were excluded in order to isolate the effects exclusively of the measures on SGP drinking water and basic sanitation resources on morbidity from Acute Diarrheal Disease. This assumption does not apply to Buenaventura, Sincelejo, and Mitú, which underwent interventions in both health and water supply during the study periods.
- In the case of capital cities, for Quibdó specifically, no comparable entities were identified, which prevented the application of the methodology. For Mitú and San José de Cúcuta, capitals categorized as high and medium risk in the monitoring carried out by the Ministry of Housing, City, and Territory in the year of intervention were included to identify donor entities.
- For non-capital municipalities, capital municipalities and entities that were intervened during the evaluation period were excluded. Additionally, those categorized as high risk in the same year as the intervention were considered.
- In the cases of San Andrés de Tumaco, Firavitoba, Medina, Tabio, and San Sebastián de Buenavista, non-capital municipalities categorized as medium risk in the monitoring conducted by the Ministry of Housing, City, and Territory in the year of intervention were included to identify donor entities.
- Since interventions were carried out in different years, with a heterogeneous distribution (2 in 2012, 7 in 2013, 10 in 2014, 3 in 2015, 11 in 2016, 7 in 2017, 3 in 2018, 1 in 2019, and 1 in 2021), the results obtained were standardized based on the number of years elapsed since the start of the intervention. The post-treatment period was extended until 2022.

Table A 2.3. Evaluated Entities in the Drinking Water and Basic Sanitation (APSB) Allocation, Implemented Measure, and Year of Intervention
Source: The authors

Level	Treated entity	Type of measure	Treatment year
Capital	Mitú	Suspension of Transfers	2014
Capital	Yopal	Performance Plan	2015
Capital	Sincelejo	Performance Plan	2016

Level	Treated entity	Type of measure	Treatment year
Municipality	Itagüí	Performance Plan	2015
Municipality	Puerto Asís	Performance Plan	2015
Municipality	Consacá	Suspension of Transfers	2016

Level	Treated entity	Type of measure	Treatment year
Capital	San José de Cúcuta	Suspension of Transfers	2021
Municipality	Buenaventura	Suspension of Transfers	2012
Municipality	Magangué	Suspension of Transfers	2012
Municipality	Bello	Suspension of Transfers	2013
Municipality	Floridablanca	Performance Plan	2013
Municipality	Girón	Performance Plan	2013
Municipality	Jamundí	Suspension of Transfers	2013
Municipality	Mutatá	Performance Plan	2013
Municipality	Santa Rosa	Suspension of Transfers	2013
Municipality	Soacha	Performance Plan	2013
Municipality	Bosconia	Suspension of Transfers	2014
Municipality	Clemencia	Suspension of Transfers	2014
Municipality	El Banco	Suspension of Transfers	2014
Municipality	Florencia	Suspension of Transfers	2014
Municipality	Ipiales	Suspension of Transfers	2014
Municipality	Lebrija	Performance Plan	2014
Municipality	Pedraza	Performance Plan	2014
Municipality	Rionegro	Performance Plan	2014
Municipality	San Fernando	Suspension of Transfers	2014

Level	Treated entity	Type of measure	Treatment year
Municipality	Guatavita	Suspension of Transfers	2016
Municipality	Guavatá	Performance Plan	2016
Municipality	Muzo	Suspension of Transfers	2016
Municipality	Ráquira	Performance Plan	2016
Municipality	Riosucio	Suspension of Transfers	2016
Municipality	Tumaco	Suspension of Transfers	2016
Municipality	San Juan Nepomuceno	Suspension of Transfers	2016
Municipality	San Pablo	Suspension of Transfers	2016
Municipality	Tinjacá	Suspension of Transfers	2016
Municipality	Barrancas	Suspension of Transfers	2017
Municipality	Caparrapí	Suspension of Transfers	2017
Municipality	Cuaspúd	Performance Plan	2017
Municipality	Dibulla	Suspension of Transfers	2017
Municipality	Gachantivá	Performance Plan	2017
Municipality	Iles	Suspension of Transfers	2017
Municipality	San Vicente de Chucurí	Performance Plan	2017
Municipality	Firavitoba	Performance Plan	2018
Municipality	Medina	Suspension of Transfers	2018
Municipality	Tabio	Performance Plan	2018

A.3. Prediction Error Comparison Tests (Non-Placebo Treated Units)

Table A3.1 Prediction Error Comparison Tests – Education

Source: The authors

Sector	Variable	Entidad intervenida no placebo	RMSPE_pre	RMSPE_post	Ratio
EDUCACIÓN	TEA	Bolívar	2,777351141	4,638415337	1,670086026
		Cesar	0,469114333	8,861965179	18,89084244
		Huila	0,789384425	2,841011763	3,599021912
		La Guajira	4,434922695	8,851735115	1,995916486
		Santander	0,734247386	0,734247386	8,450716019
		Tolima	3,57132411	3,57132411	1
		Arauca	6,20484066	6,20484066	1
		San Andrés y Providencia	15,37681293	15,37681293	1
		Amazonas	1,794041634	8,086941719	4,507666588
		Lorica	2,383578539	3,942569256	1,654054642
		Ciénaga	4,743329525	8,122673988	1,712441444
		Ipiales	1,541814566	15,10120201	9,794434547
		Girón	1,565893173	5,573643684	3,559402227
		Palmira	1,636954188	0	1
		Tunja	1,072147131	0	1
		Riohacha	12,49755764	12,49755764	1
		Santa Marta	1,066942215	5,478989124	5,135225773
		Pasto	1,275480747	2,717350483	2,130451918
		Ibagué	1,066411972	5,282625675	4,953644276

Table A3.2 Prediction Error Comparison Tests – Health

Source: The authors

Sector	Variable de Resultado	Entidad intervenida no placebo	RMSPE pre	RMSPE post	Ratio
Salud	TEA	Putumayo	0,00836728	0,024846431	2,969475411
		Santander	0,00263235	0,00803096	3,050864458
		Valle	0,00261403	0,00717288	2,743991375
		Vaúpes	0,00895639	0,034170449	3,815203905
		Guaviare	0,02555833	0,02638421	1,032313824
		Casanare	0,00598057	0,0190909	3,192151546
		Tolú Viejo	0,00958269	0,00958269	1
		Cumaribo	0,01358605	0,037567411	2,765145063
	TMP	Putumayo	0,00081541	0,00166974	2,04774189
		Guanía	0,00201541	0,00201541	1
		Santa Marta	0,00170306	0,0020034	1,17635417
		Aguachica	0,00205438	0,0055074	2,680800676

Table A3.3 Prediction Error Comparison Tests – Drinking water and basic sanitation

Source: The authors

Sector	Variable de Resultado	Entidad intervenida no placebo	RMSPE pre	RMSPE post	Ratio
APSB	EDA	BARRANCAS	11,8589983	20,66776466	1,742791772
		CAPARRAPÍ	8,368837357	20,79153824	2,484399846
		FIRAVITOBA	1,53449082	8,90190315	5,801209778
		GUATAVITA	9,707313538	14,83135891	1,527854112
		ILES	9,358010292	20,23210144	2,16200889
		MITÚ	15,55257034	1,82114017	0,117095768
		RIOSUCIO	6,171439171	20,36216354	3,299418982
		SAN PABLO	4,719539642	7,581672192	1,606443163
		SINCELEJO	14,69468594	38,71910477	2,634905226
		TINJACÁ	4,173177719	14,43077946	3,457983443
		YOPAL	10,88979244	21,85557365	2,006977981

Annex 4 Recommendation matrix

Recommendations Matrix for Strengthening the EMSC of the SGP

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
1	Monitoring	Delegate the activity of consolidating monitoring to the National Planning Department, with the purpose of identifying territorial entities at risk in the provision of services, taking into account the inputs from the sectoral ministries.	Guarantee independence in supervision (relationships between the implementer and those responsible for public service policy)	General - EMSC	Sectoral ministries and DNP	1 year
2	Monitoring	Incorporate artificial intelligence tools and big data analysis for the identification of anomalous patterns in the use of SGP transfers, enabling the early detection of irregularities. To this end, transactional information from SECOP as well as movements in master accounts should be considered, facilitating predictive and preventive supervision.	Strengthen ex-ante monitoring mechanisms by improving risk detection and mitigation	General - EMSC	Ministry of Finance and Public Credit, DNP, and sectoral ministries	3 years

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
3	Monitoring and follow-up	Implement a unified monitoring and follow-up system for entities with ongoing preventive or corrective measures, in order to evaluate compliance with the actions implemented and adjust intervention strategies based on their effectiveness and type of measure.	Ensure effective supervision by strengthening the link between monitoring and the interventions carried out to improve results	General - EMSC	Ministry of Finance and Public Credit, DNP, and sectoral ministries	2 years
4	Monitoring and follow-up	Define and use sectoral gap indicators with the purpose of assessing risk and focusing the ESMC's attention on entities facing greater challenges in closing gaps.	Focus the ESMC on reducing territorial gaps, ensuring that supervision prioritizes entities with the greatest needs	General - EMSC	Sectoral ministries and DNP	1 year
5	Monitoring and follow-up	Incorporate, during the contractual selection process and project execution, analytical criteria to evaluate investment projects financed with SGP resources. For this purpose, the methodologies of the Project Management Index of the General Royalties System can be used as a reference	Improve the planning, execution, and evaluation of investment projects that are not aimed at social spending, ensuring their sustainability and relevance within the SGP.	General - EMSC	Sectoral ministries and DNP	3 year
6	Follow-up	Eliminate risk events defined in Decree 028 of 2008 that are not relevant (i.e., not used) or that correspond to common institutional processes with no direct impact on SGP management.	Strengthen institutional design and improve clarity in the identification of priority risks.	General - EMSC	Sectoral ministries and DNP	1 year

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
7	Follow-up and Control	Identify, on the part of the sectoral ministries, risk situations present in multiple territorial entities — such as weaknesses in financial and/or sectoral information reporting — in order to implement large-scale response measures and strengthen institutional response capacity.	Improve the technical knowledge of implementers and strengthen indicator-based evaluation.	General - EMSC	Sectoral ministries, DNP, and Ministry of Finance and Public Credit.	1 year
8	Follow-up and Control	Materialize the delegation to departments in follow-up and control tasks (performance plans and recommendations for additional measures to the National Government), based on their institutional capacities and the criteria defined by the Ministry of Finance and Public Credit.	Expand coverage and presence in the territory, improving supervision efficiency.	General - EMSC	Departments, Sectoral ministries, DNP, and Ministry of Finance and Public Credit.	3 years
9	Follow-up and Control	Strengthen the formal coordination mechanisms of the EMSC with the Office of the Comptroller General of the Republic and the Office of the Attorney General of the Nation, similar to the way the General Royalties System operates.	Improve the supervision and control of SGP resources, reducing inefficiencies and mitigating corruption risks.	General - EMSC	Comptroller's Office, Attorney General's Office, sectoral ministries, DNP, and Ministry of Finance and Public Credit	2 years

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
10	Follow-up and Control	Establish the requirement for territorial entities that show high-risk scores (for example, compared with the national average or located in the worst-performing quintiles by sector) to implement performance improvement plans, which must be monitored by the higher level of government.	Expand the coverage and effectiveness of preventive measures, ensuring their timely implementation.	General - EMSC	Ministry of Finance and Public Credit and departments	1 year
11	Control	Eliminate or modify control measures that do not contribute to improving the quality, coverage, and continuity of services financed with SGP resources, and that have not demonstrated recurrent application during the implementation period analyzed.	Diversify methodological instruments and strengthen the capacity of system implementers.	General - EMSC	Ministry of Finance and Public Credit, Sectoral ministries and DNP	1 year
12	Control	Organize and coordinate field teams to carry out capacity-building actions aimed at territorial entities, either through departmental teams (depending on the location of the intervened entity) or through EMSC implementers.	Strengthen territorial entities by taking into account their dynamics and institutional capacities, ensuring that actions are effectively adapted.	General - EMSC	Departments in coordination with the sectoral ministries.	2 years

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
13	Control	Establish a clear regulatory procedure for requesting the suspension of contractual processes financed with SGP resources, based on a permanent and systematic review of SECOP, with the generation of timely alerts on potential risks.	Reduction of administrative and legal risk in the execution of SGP spending, without affecting the continuity of the services financed.	General - EMSC	Ministry of Finance and Public Credit and Office of the Attorney General of the Nation.	1 year
14	Control	Activate the measure of declaring contracts ineffective, as provided in Article 15 of Decree 028 of 2008, as a legal mechanism to correct contracts that compromise the proper execution of SGP resources. It is essential to define criteria for its activation and to align it with contractual risk analysis based on sources such as SECOP.	Reduction of legal risk and strengthening of institutional control beyond administrative measures.	General - EMSC	Ministry of Finance and Public Credit and Superintendence of Companies	1 year

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
15	Control	Define specific timeframes and establish sectoral conditions (in line with the identified risk events) for the implementation of preventive and corrective measures, ensuring the active participation of the sectoral ministries in their formulation and follow-up.	Ensure the effective fulfillment of sectoral commitments and improve the planning of interventions.	Education, Health, and Drinking Water and Basic Sanitation	Sectoral ministries	3 years
16	Control	Establish outcome indicators aligned with the objectives of the intervention, allowing the evaluation of the coverage, quality, and continuity of services financed with SGP resources.	Focus and optimize capacity-building efforts toward clear, measurable, and verifiable objectives.	Education, Health, and Drinking Water and Basic Sanitation	Sectoral ministries	1 year
17	General	Ensure, through legislative reform and in coordination with sectoral ministries and territorial entities, SGP resources to guarantee the sustainability and operability of the EMSC, enabling its consolidation in the medium and long term.	Expand coverage and improve effectiveness.	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	3 years

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
18	General	Design and develop interoperable, integrated, and transactional information systems that improve the traceability, control, and execution of territorial public resources, ensuring their efficient use.	Strengthen information systems and improve the evaluation of resources based on performance indicators.	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	1 year
19	General	Design and implement an interactive visualization tool for SGP resources on the websites of the Ministry of Finance and Public Credit and the National Planning Department, allowing real-time consultation of the risks identified in each sector, the preventive and corrective measures adopted, their current status, and other key information for decision-making and citizen oversight.	Enhance accountability and strengthen transparency in the management of the strategy	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	1 year
20	General	Design and implement a permanent virtual training course for officials of territorial entities, aimed at transferring specialized knowledge on the proper use of SGP resources and the operational components of the Monitoring, Follow-up, and Control Strategy.	Strengthen the technical capacities of human talent in territorial entities to improve the management of SGP resources	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	2 year

No	Step of the EMSC	Recommendation	Objective	Scope Affected	Responsible Entity	Expected Implementation Time
21	General	Design and implement a scheme of progressive sanctions for entities that persist in non-compliance or repeatedly require preventive and corrective measures, as a deterrent mechanism. The sanctions will be determined by the corresponding sectoral ministry in coordination with the Ministry of Finance and Public Credit.	Ensure compliance with preventive and corrective measures, reducing the recurrence of risks in the management and use of SGP resources.	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	3 years
22	General	Implement periodic studies to measure the results, effects, or impacts of the strategy, serving as an input for the feedback, improvement, and accountability of the EMSC at both the general and sectoral levels.	Generate information for decision-making and ensure the effectiveness of the strategy through evidence-based adjustments.	General - EMSC	Ministry of Finance and Public Credit, sectoral ministries and DNP	1 year
23	General	Align the EMSC with CONPES 4091, including guidelines on the objectives and stages of the EMSC, while ensuring differentiated and scalable technical capacities across the territory.	Strengthen territorial institutional capacities for comprehensive, efficient, and coordinated management of the SGP.	General - EMSC	DNP, Ministry of Finance and Public Credit, and Public Service Department.	4 years

Education

No	Step of the EMSC	Recommendation	Objective	Responsable	Expected Implementation Time
1	Monitoring	Integrate territorial and economic context variables into the monitoring phase to enable the appropriate prioritization and targeting of capacity-building efforts toward educational quality, coverage, and continuity.	Focus and direct municipal actions toward strengthening efforts aimed at closing gaps.	Ministry of Education and DNP	2 years
2	General	Adopt a performance- and/or sector-based monitoring and control model, focusing and coordinating efforts toward public education policy objectives with greater impact to ensure the provision of educational services.	Avoid broad interventions without clearly defined objectives, which dilute the institutional effort provided by the Strategy to strengthen certified territorial entities	Ministry of Education	2 years
3	General	Broaden the discussion on the variables that influence educational quality, with the aim of advancing toward a performance evaluation that makes it possible to determine the effectiveness of delivering the basic educational package, including aspects related to teaching staff as well as the pedagogical model and the provision of infrastructure, equipment, and complementary services to the educational offering.	Establishing clear criteria for measuring quality, based on a sectoral and territorial baseline, will enable the recognition of territorial and national efforts that contribute to closing gaps.	Ministry of Education	2 years
4	General	Develop a permanent technical assistance strategy, channeled from the national government to departments, their municipalities, and their educational institutions, related to the Educational Environments and Spaces Transformation Program (CONPES 4123).	Facilitate strategies in the education sector across different educational levels that allow for more efficient allocation of infrastructure spending according to the real needs of each entity	Ministry of Education	1 year

Health

No	Step of the EMSC	Recommendation	Objective	Responsable	Expected Implementation Time
1	Monitoring	Transition toward a continuous performance evaluation model, moving beyond the current annual lag model, in order to determine the effectiveness of the outputs planned in investment projects financed with SGP Public Health resources, as well as the achievement of outcome indicators included in territorial development plans. This monitoring should be supported by the interoperability of the SisPT, PIIP, and SECOP platforms.	Improve the traceability and timeliness of monitoring the performance of territorial public health spending.	Ministry of Health and Social Protection and National Planning Department	2 years
2	Monitoring	Establish permanent and systematic outcome evaluations focused on structural variables of collective public health. These evaluations should be conducted on a defined periodic basis, allow for comparative analysis across territories, and generate evidence to inform policy decisions, resource targeting, and the redesign of interventions.	Improve decision-making in collective public health through periodic outcome evaluations that enable resource targeting and strengthen the design of sectoral measures.	Ministry of Health and Social Protection	2 years
3	Control	Ensure that the temporary assumption of responsibilities measure is not limited solely to the management of SGP resources, but comprehensively encompasses all components (subsidized scheme, public health, and supply subsidy) of health service delivery in order to achieve a comprehensive impact on the service	Increase the effectiveness of health interventions and improve the sustainability of the system.	Ministry of Health and Social Protection with the Ministry of Finance and Public Credit	3 años

No	Step of the EMSC	Recommendation	Objective	Responsable	Expected Implementation Time
4	Control	Reinforce the role of the Ministry of Health and the Departmental Health Directorates in the control stage, ensuring that the adoption and lifting of preventive and corrective measures are conditioned on the implementation of concrete sectoral actions aligned with the Ten-Year Public Health Plans.	Strengthen the coordination between control measures and sectoral actions, in line with the preventive primary care model.	Ministry of Health and Social Protection and Departmental Health Directorates	2 years
5	Control	Expand the scope of the temporary assumption of responsibilities in health to encompass all components of service delivery.	Achieve greater systemic impact through comprehensive interventions during the implementation of assumption measures.	Minis Ministry of Health and Social Protection and the Ministry of Finance and Public Credit	3 years
6	General	Develop a permanent technical assistance strategy, channeled from the national government to departments and from there to municipalities, in line with CONPES 4091. It should include the use of SGP Health resources, the management of the General Social Security Health System (SGSSS), and guidelines on the EMSC.	Strengthen institutional capacities throughout the system for comprehensive and effective management of health resources.	Ministry of Health and Social Protection and Governor's Offices	3 years
7	General	Institutionalize the practice of periodic outcome evaluations, especially on structural variables of collective public health, in order to inform decisions on targeting, redesign, and the transfer of lessons learned across territories.	Consolidate an evaluation system aimed at interterritorial learning and the continuous improvement of public health policy.	Ministry of Health and Social Protection and National Planning Department	2 years

Drinking water and basic sanitation

No	Step of the EMSC	Recommendation	Objective	Responsable	Expected Implementation Time
1	Control	Ensure that the preventive and corrective measures applied to the Drinking Water and Basic Sanitation allocation also include oversight of funds other than the SGP — such as freely disposable current revenues, the solidarity surcharge, among others — that are aimed at financing public subsidies for water supply, sewerage, and sanitation services	Increase the effectiveness of interventions and improve the financial sustainability of subsidies.	Ministry of Housing, City, and Territory together with the Ministry of Finance and Public Credit	3 years
2	Monitoring	Establish regulatory and operational mechanisms that require public utility service providers to share periodic and standardized information on their investment plans, tariff structures, and project implementation, as input for monitoring by the Ministry of Housing, City, and Territory	Improve the alignment between the execution of SGP resources and the operation of public service providers to strengthen planning, monitoring, and territorial control.	Superintendence of Public Utilities and Ministry of Housing, City, and Territory	2 years
3	General	Establish inter-institutional coordination channels that define common, clear, and coherent technical criteria to guide intervention in territorial entities and service providers, improving the consistency, efficiency, and traceability of control and monitoring actions.	Optimize institutional action on entities and service providers through the adoption of coordinated technical guidelines that ensure coordinated and effective responses to risks in SGP management.	Superintendence of Public Utilities, Ministry of Housing, City, and Territory, and Ministry of Finance and Public Credit.	1 year

Special Allocation for Indigenous Reserves

No	Step of the EMSC	Recommendation	Objective	Responsable	Expected Implementation Time
1	Follow-up and control	Implement technical assistance and capacity-building activities within Indigenous communities, focused on the efficient management and administration of resources from the Special Allocation for Indigenous Reserves.	Improve the effectiveness of interventions to ensure the proper and efficient use of resources from the Special Allocation for Indigenous Reserves.	Ministry of Finance, Ministry of the Interior in coordination with sectoral ministries and the National Planning Department (DNP)	1 year

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