

sNAPshot

Colombia's Progress in Developing a National Monitoring and Evaluation System for Climate Change Adaptation

Country Brief 5A

This sNAPshot describes the development of the National Monitoring and Evaluation (M&E) system for adaptation in Colombia and shares lessons learned and the next steps in the process. The document builds on previous [sNAPshots](#) that highlight the importance of M&E as part of the adaptation to climate change process.

Introduction

Colombia is highly vulnerable to climate variability and change. The Third National Communication on Climate Change (Spanish acronym TCN), based on a multidimensional analysis, indicates that the entire country is exposed to some level of climatic risk. It also foresees greater climate changes in the Eastern region, where temperature increases of up to 2.6° C are expected; in the Andean region, where precipitation would increase by up to 30 per cent and in the Atlantic region, where rainfall would decrease by up to 30 per cent (Gutiérrez et al., 2017).

Although adaptation efforts in Colombia began in 2006, it was only in 2010 that the topic was included on the political agenda, as a result of a La Niña weather phenomenon that flooded about 8 per cent of the country's most populated area, affecting almost 9 per cent of the population and resulting in damages and losses estimated at USD 8 billion dollars (Hoyos et al., 2013). In response, the formulation of the [National Plan for Adaptation to Climate Change \(or PNACC\)](#) (in Spanish) was initiated with the objective of reducing the risk and the socioeconomic impacts associated with climate variability and climate change in Colombia (DNP, 2012).

The design of the monitoring and evaluation system (M&E) for adaptation began in 2014, and since then the country has made progress in defining indicators and guidelines to monitor the objectives and progress of the PNACC process.



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M&E for Adaptation

The PNACC was developed as a four-phase process (Figure 1), including one specific for the M&E for adaptation. This was initially defined as a system of indicators to systematically analyze the results and impacts of adaptation measures and to provide feedback on the decision making (DNP, 2012). Figure 1 illustrates some of the outputs and tools that have been created in each of these phases.

Between 2015 and 2016, as part of the PNACC implementation process, the country received technical assistance from the Climate Technology Centre and Network¹ (CTCN) to design the National Indicator System for Adaptation to Climate Change (Spanish acronym SNIACC) and created an inter-institutional round table to support its conceptualization. This was the first effort from the national level to develop a system to monitor impacts of adaptation actions in Colombia. Its design began by reviewing adaptation actions and plans formulated within the framework of the PNACC, such as the adaptation project in the [Chingaza-Sumapaz-Guerrero corridor](#), the [Cartagena 4C Adaptation Plan](#) (in Spanish) and some international experiences (e.g., Argentina, Brazil and Mexico), where monitoring needs and suggested indicators were identified.

The [SNIACC](#) (in Spanish) was based on the review of more than 150 indicators, and a group of 34 was selected and grouped according to: threat, exposure, sensitivity, adaptation capacity and impact (CTCN, 2016). These were calculated for seven categories:

- i) Biodiversity and ecosystem services
- ii) Water resources
- iii) Agricultural and food security
- iv) Infrastructure
- v) Energy
- vi) Human habitat
- vii) Health

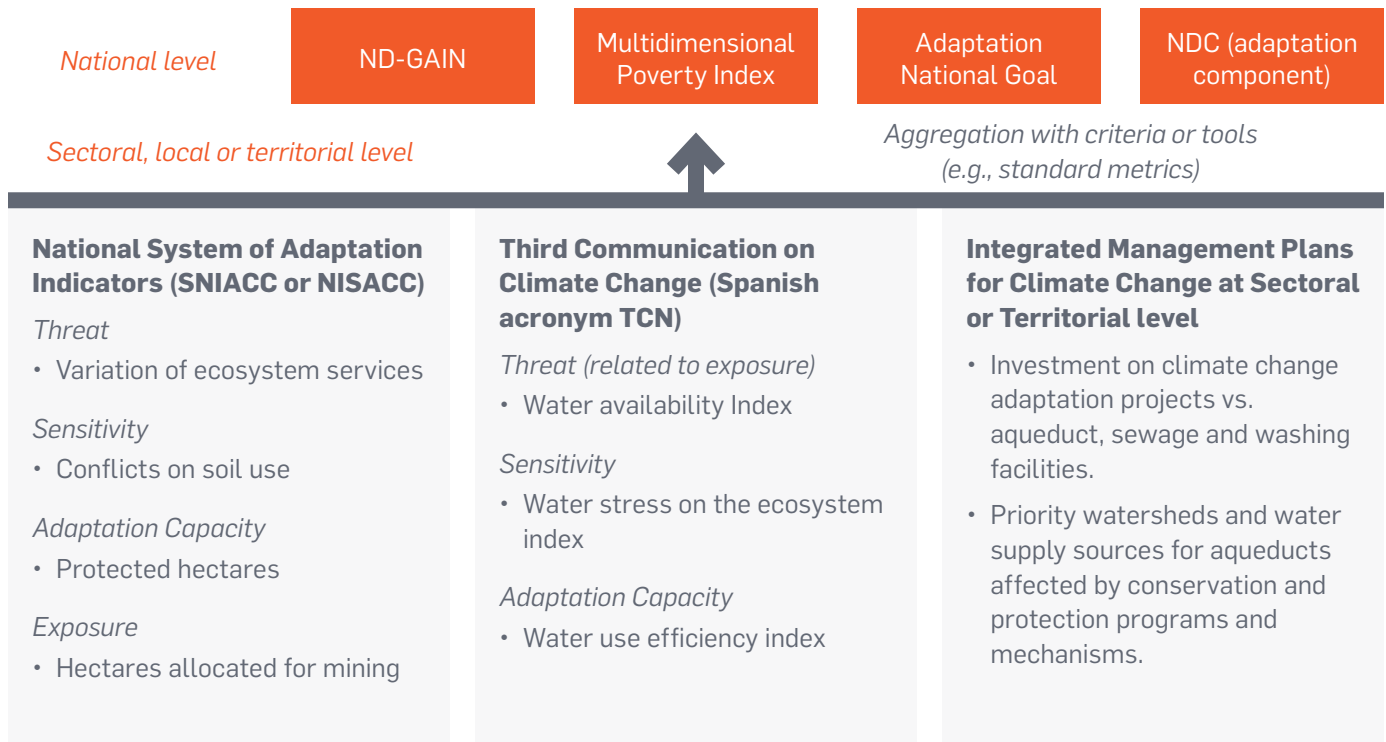
Subsequently, Colombia published the results of its TCN, including an analysis of risk and vulnerability to climate change based on the collection and analysis of 113 additional indicators that account for threat, sensitivity and adaptation capacity at the municipal level. This showed that vulnerability and risk monitoring can be addressed through different methodologies, and therefore M&E for adaptation should be redefined under a more strategic objective, by evaluating the management and impact of actions and generating learning processes on adaptation (Olivier et al., 2014).

Figure 1. PNACC Phases in Colombia



¹ The CTCN is the operational arm of the Technology Mechanism of the UNFCCC

Figure 2. Multilevel conceptualization of the M&E for adaptation system in Colombia



The SNIACC provided valuable lessons that will inform the design of a more holistic system for the monitoring and evaluation of adaptation actions:

- There are numerous sectoral and territorial information sources for the development of indicators.
- Indicators are not the ultimate goal of M&E, but are instead tools to measure specific aspects that require quantitative and qualitative instruments (e.g., interviews, formal social science methods, etc.) to gain a general overview of adaptation.
- The indicators constructed with national-level information² have limitations of scale and may underestimate or disregard the results of local adaptation actions.
- There must be linkage mechanisms generated between M&E at different levels, e.g., establishing standard metrics to facilitate the aggregation of information at the national and subnational levels.



Photo: REUTERS/John Vizcaino

² Information from existing systems at the national level such as the Water Resource Information System (SIRH), the Air Quality Information System (SISAIRE), the Government Goals Reporting System (SINERGIA), others.



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In the context of the [National Climate Change Policy](#) (in Spanish), the M&E inter-institutional round table³ resumed discussions to conceptually redesign the system, including new initiatives such as the [NAP readiness of the Green Climate Fund](#) and convening new actors, such as various project implementers and adaptation plans.⁴ Once the new approach⁵ for the M&E system for adaptation is defined, the qualitative and quantitative instruments necessary to achieve its objective must be integrated.

Thus, the specific indicators of the regional and sectoral projects included in the SNIACC, the TCN, the Integrated Climate Change Management Plans at territorial and sectoral levels (NAP Global Network, 2016), should monitor the specific progress of their own level, but they should be aggregated to:

- Evaluate the achievement of the PNACC objectives at national level
- Monitor the national adaptation goal⁶
- Estimate impact on macroeconomic indicators (e.g., in the [Multidimensional Poverty Index](#) [in Spanish])
- Allow comparability with other countries (e.g., through the [ND-Gain Index](#))

³ The “Adaptation Monitoring and Evaluation (M&E) round table” is a working instance, led by the Ministry of Environment and Sustainable Development, formed from the need for projects, programs and other initiatives to share experiences and collectively build the technical inputs for a National M&E System for adaptation. It is made up of the same entities that are part of the Coordinating Committee of the PNACC plus other institutions, projects and initiatives that have been linked.

⁴ The Adaptation to the Impacts of Climate Change in Water Resources in the Andes Project (AICCA), The Project of Adaptation in the High Mountain Chingaza-Sumpapaz-Guerrero Corridor, the project of adaptation in Post-conflict areas, GIZ’s Project of Adaptation in coastal areas, the GCF’s NAP Readiness strengthening program.

⁵ Defined as the objective of monitoring (Olivier et al., 2014).

⁶ Which is being included in the National Development Plan 2018–2021.

Box 1. Progress in the redefinition of the monitoring objective

The institutional M&E round table made a survey to identify the new monitoring objectives. The three main results indicate the objectives should be:

- To measure the efficiency of climate change adaptation actions
- To follow up on the National Climate Change Policy
- To track the NDC commitments on adaptation

The round table will continue working in order to define the most adequate objective.

- Align with international reporting commitments (e.g., Nationally Determined Contribution) (Ospina, 2018).

Finally, while implementers of adaptation measures must have clear measurement and reporting obligations, the responsibility for estimating their long-term aggregate impact should rest on the national government. For this, the academic and research and statistics institutes are identified as strategic partners, because they have the capacity to guarantee the statistical rigour of these indicators or tools, and they have information systems to host information and data collection processes already established.

Lessons Learned

The M&E of adaptation goes beyond vulnerability. SNIACC and TCN indicators help to understand changes in climate risk at the national, sectoral and territorial levels. However, adaptation monitoring must also include the measurement of achievement of the objectives of the PNACC, adaptation management (or how climate change adaptation is integrated into public policy) and learning processes about change in the context of adaptation, among others.

The M&E for adaptation must inform decision making and public policies. In the development of the SNIACC and the TCN, numerous existing sources of information were identified, e.g., sectoral information systems (water, housing, finance, etc.), which are useful for developing adaptation monitoring indicators. However, a group of indicators without proper alignment with the relevant policies or plans, adaptation and change learning processes, the appropriation of actors responsible for monitoring and reporting information and resources allocated for their survey, and periodic reporting and analysis (Ospina, 2018), do not constitute a robust system.

The M&E system for adaptation must be flexible to reflect the various scales of adaptation and estimate the impact at the national level. The overall interest of those responsible for adaptation measures and plans is to have specific indicators to monitor their progress. However, it is important to have tools that aggregate individual advances to assess their impact at the national level on long-term macroeconomic variables, on national adaptation goals and on international reporting obligations on climate change adaptation.

Institutionalize the M&E process as part of the PNACC. Ensure that the adaptation plans define specific phases and people responsible for the design and operationalization of M&E efforts, defining operational and financial sustainability mechanisms. This includes the systematization and documentation of the design process to guarantee its continuity despite institutional changes, the formalization of the role of different actors involved in monitoring, reporting at different levels and the budget allocation for its operation.

Establish technical guidelines in the design of the M&E. When designing an M&E system for adaptation, clear guidelines should be agreed with those responsible for reporting (e.g., adopting standard methodologies or metrics so that results of different adaptation interventions are comparable), demonstrate their integration with investment systems, etc.

Next Steps

Colombia continues to progress in the conceptualization of a system to monitor and evaluate the impact of adaptation efforts, for which the following processes will continue:

- Defining the ultimate goal of the system, which must be agreed with those responsible for monitoring, evaluation and reporting on climate change adaptation.
- Identifying the necessary tools or methodologies for a robust M&E system that guarantees sustainable monitoring of adaptation's strategic aspects.
- Defining, within the National Climate Change Information System framework created by [Law 1931 in 2018](#) (in Spanish), agreements with strategic actors (such as the national research and statistics institutes and academia) to take advantage of their capacity in terms of reporting and consolidation of indicators at different levels (national, regional and local).
- Embedding the development of an M&E system for adaptation as part of the PNACC, including it in the National Development Plan 2018-2022, designating institutions and officials responsible for leading the process, documenting progress and making agreements for data generation and reporting.
- Using this documentation to share and exchange experiences and lessons learned with other member countries of NAP Global Network.

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