

# Measuring and Monitoring Child Wellbeing and Inequality at the Local Level – *Implementation Phases*



## Introduction

The table below summarizes the process of implementing civic accountability at the local level and is based on the Equity for Children experience, in partnership with Fundación Corona and Cómo Vamos, a network of organizations working on measuring citizen wellbeing in urban environments, in ten cities in Colombia. Phases and sub-phases include:

<b>Phase I: Feasibility and requirements</b> <ul style="list-style-type: none"><li>• Reviewing the public policy landscape and local government institutions</li><li>• Identifying information sources</li><li>• Mapping actors and partnership opportunities</li></ul>
<b>Phase II: Initiating the process</b> <ul style="list-style-type: none"><li>• Determining operational processes and team roles</li><li>• Establishing agreements, rules and guidelines</li><li>• Appointing a technical committee of experts</li></ul>
<b>Phase III: Measurement and analysis</b> <ul style="list-style-type: none"><li>• Defining a set of indicators</li><li>• Gathering information and data</li><li>• Processing and analyzing the data</li><li>• Reporting the final results and findings</li></ul>
<b>Phase IV: Communication</b> <ul style="list-style-type: none"><li>• Defining a communication strategy</li><li>• Roll out of the strategy</li></ul>
<b>Phase V: Monitoring and participation</b> <ul style="list-style-type: none"><li>• Defining advocacy actions and social accountability mechanisms</li><li>• Citizen participation</li></ul>

Each phase and sub-phase is detailed below.

### Phase I: Feasibility and Requirements

Implementing a civic accountability initiative requires that local governments have access to:

- Technical capacity to monitor a set of indicators over time (with the help of civil society or other mechanisms);
- Local partners with expertise in the field of early childhood, childhood, and adolescence to support the analysis of indicators proposed in each city.

#### A. Reviewing the public policy landscape and local government institutions

As a first step, a full review of instruments that frame local public policy targeting children and adolescents should be conducted. This includes development plans, agreements, decrees and regulations, as well as national and international instruments that can be useful

design, implementation, monitoring and evaluation of plans and programs impacting children's quality of life should be identified in this review.

Recognizing key departments and stakeholders within the local administration will help define potential areas to work with during the implementation of the project, with the goal of ensuring sustainability over time. It will also help to better understand the range of programs and services proposed to the local population; to gauge the level of decentralization and autonomy of the city within the national context; and, to get an initial idea of the importance given to children's rights in the country.

## **B. Identifying Information Sources**

A survey of public statistics institutions should be conducted as these stakeholders will help to calculate the strategic indicators proposed during the implementation phase. To construct the indicators, information and statistics should be obtained from official sources, as this will make the data less susceptible to questioning by authorities, leading to greater buy-in later on when it is used to introduce policy and program recommendations.

The search for official data should include sources such as: national statistical institutes, which in most countries conduct general household surveys; information databases with a focus on themes related to children (ie: education, health, social development, etc.); other sources that are traditionally not designed to measure statistics about children and adolescents but can provide key information for welfare analysis of this population, such as statistics on crime, infrastructure, investment and budget.

Consulting additional independent sources can prove valuable, in particular for areas and dimensions of child wellbeing that are not addressed in official sources. Information from these sources can be helpful in the analysis of indicators to contextualize public information. Some examples of external sources of data include research centers, universities and civil society organizations that produce their own data.

When conducting the research on sources of information and data, it is essential to note:

- Whether the data is local, regional or national;
- How frequently it is updated;
- How accessible it is;
- Whether or not it can be disaggregated (at the municipal, local, microterritorial levels).

## **C. Mapping Actors and Partnership Opportunities**

When implementing the civic accountability methodology, a diverse team including local partners and partners with subject matter expertise should be set up. This will strengthen the project being implemented and, in turn, each participating member:

- It will establish a strong base for the initiative in different local contexts, as well as guarantee its continuity and the regular monitoring of inequities affecting local children and adolescents.
- It increases the probability of obtaining quality results.
- It contributes to empowering and mobilizing civil society to improve urban quality of life in the cities where the program is being implemented.

- It enhances the visibility of specific key themes in the public agenda, based on validated evidence and methodologies.
- It contributes to generating more democratic, plural and participatory spaces for the evaluation and improvement of the public policies directed towards children.

Establishing partnerships with expert stakeholders in the field of child rights should be done through a systematic approach that begins with a mapping of community leaders possessing a strong capacity for reflection and dialogue, as well as experience with advocacy and community mobilization. To this effect, the selection criteria might include:

- Having at least 5 years experience developing solutions to improve child quality of life (through research or in practice).
- Being recognized for contributions towards child wellbeing and/or child rights, in a specific field or among the general public.
- Having the capacity to establish dialogue with the local government.
- Having the institutional and technical capacity to develop the civic accountability program for at least four consecutive years.

Some examples of potential local partners to consider include, university research groups and centers; civil society organizations focused on children's rights; organizations linked to coalitions and groups with representation in spaces of public participation, such as forums to evaluate public decision-making and policy proposals.

## Phase II: Initiating the Process

### A. Determining operational processes and team roles

Once partners are identified and commit to the project, it is important to establish guidelines for communication and collaboration, as well as specific roles that each partner will assume. Based on Equity for Children's experience in Colombia, the set of responsibilities below illustrates how tasks could be distributed among partners.

#### Local partner responsibilities:

- Engage with local communities;
- Request statistical information in accordance with the defined indicators;
- Design a communications strategy for dissemination;
- Design a dialogue and advocacy strategy targeting local authorities;
- Execute the communications strategy developed;
- Organize at least one event to disseminate results;
- Coordinate other events with partners.

#### Other partner responsibilities:

- Participate in defining the set of indicators used to analyze child wellbeing;
- Provide support in calculating the indicators, based on official information obtained;
- Analyze the official data collected from local, national and international sources;
- Generate reports with specific added value, based on the partner's expertise;
- Generate synergies with other projects being worked on by the partner and/or with other partner organizations to promote citizen debate and participation;
- Participate in forums of exchange with public decision-makers;

## **B. Establishing agreements, rules and guidelines**

Once an agreement is reached, a contract is signed to define the principal functions and technical obligations of the parties. The document may include specific deliverables, guidelines in recognizing authorship of the documents produced and joint activities to be developed in order to publish the results, among other responsibilities.

## **C. Appointing a technical committee of experts**

The partners should agree on creating a technical committee charged with monitoring the implementation of the civic accountability program. This committee of experts can include academics and civil society representatives who will be tasked with providing technical advice and will participate in validating the results of the analysis. In Colombia, the technical committee included one city coordinator for each city in which the *Cómo Vamos* network worked as well as local partner representatives.

## **Phase III: Measurement and Analysis**

The process of measuring and analyzing child wellbeing and inequity depends on available statistical evidence as well as existing political and institutional frameworks affecting children in each city where the initiative is implemented.

### **A. Defining a set of indicators**

A minimum indicator set (see Annex I) can be expanded upon depending on the context, issues, needs and interests of each city. The input of local partners is necessary to determine the most relevant information to evaluate the situation of children in each context.

The selection of indicators, which is made during the first year of measurement, will be decisive for the monitoring conducted in subsequent years. It will create a baseline from which it will be possible to observe the changes in the living conditions of the child population analyzed.

#### **a. Expanding the basic indicator set**

New measures added to the basic set of indicators should be:

- Child-centered, taking into account the context of their families and communities;
- Relevant within the local public policy context;
- Current and have the potential to drive mobilization and social accountability.

If new indicators are particularly specific and/or relate to data that is not updated regularly, such as in the case of national censuses, it is recommended to specifically state this in the report of findings. These additional indicators should also be comparable over the years.

#### **b. Finding a common denominator: The population variable**

The number of children living in the city analyzed is of vital importance as it is the common

When determining the child population variable it is key to keep in mind:

- Official population projections, which are generally calculated by the national statistical institutes, should always be utilized.
- These projections are made based on population censuses, therefore, it is necessary to take into account that the greater the amount of time spent since the last population census, the greater the possibility that there are gaps between the actual population and these projections, especially in highly dynamic groups such children under 5.
- The official population estimates do not always come from national sources. For example, when a city is analyzed, it is usual that the local planning secretariat provides population estimates, when such estimates are used, the source must be explicitly indicated.
- If there are several sources of official projections for the same groups (eg, national and municipal), a comparison of the data estimated by each source should be done, explicitly presenting both values and analyzing the implications of the differences.
- Analysis of birth or mortality statistics may be useful as a substitute for official population projections (for example, when coverage rates for vaccination of children under one year of age are calculated).
- For case accounting, the place of residence (of the mother or child) should be taken as the criterion and not the place of birth or death.
- It should be determined whether the calculation of indicators with a population denominator, different from official projections, is a procedure accepted by the national authorities.

## **B. Gathering information and data**

Once the indicator set is determined and the official sources that produce the data for its calculation are identified, the process of obtaining information can be initiated. The gathering of the data and the formal petitions to government agencies are based on the findings of the feasibility analysis carried out in the initial phase of the exercise and on the identification of public information sources that produce the necessary inputs for the calculation of local indicators.

### **a. Information sources**

At this stage, it is key to have identified government stakeholders, at the local and national levels, who are responsible for generating and managing data and information. Starting a dialogue with these stakeholders helps to socialize the objectives, scope and expectations of the civic accountability initiative and to better engage them in the implementation phase.

Government agencies responsible for monitoring the quality of life of children at the national and local levels should also be contacted, particularly those involved in participative forums, such as local councils for social policy and children and youth councils. Because these stakeholders both supply and validate information, it is important to develop a close and consistent relationship with them. Their knowledge and expertise will be invaluable during the child wellbeing measurement and monitoring phases of the initiative.

## b. Publicly available data

Some of the data needed to calculate indicators proposed for a specific city is available from open databases that are published regularly by official sources. Most publicly available data corresponds to demographic information, such as: population projections, infant and maternal mortality, child and adolescent fertility. However, some data extracted from national household surveys, such as the rate of child labor and the proportion of adolescents who neither study nor work or the count of children victims of armed conflict, is also useful.

This type of information can be obtained from official websites of national institutions. It is recommended, however, to verify the accuracy of the data with the public entities to ensure it is up-to-date.

## c. Guidelines for handling formal information requests

Below are basic considerations when requesting data:

- It is essential to explicitly request the most disaggregated data for all variables. Ideally datasets provided should be disaggregated by:
  - Age - early childhood (0 to 5 years), childhood (6 to 12 years) and adolescence (13 to 17)
  - Sex
  - Geographical area
    - Sub-region
    - Rural-urban
    - By existing administrative division in the country (municipalities, localities, communes, dependencies, neighborhoods, etc.)
  - Socio-economic status (strata, levels or socioeconomic scores)
  - Ethnicity (indigenous, Afro-descendants, etc.)
  - Disability status
  - Vulnerability or situations of special protection: displacement, restitution of rights, victims of armed conflict.
- Should data be unavailable, an official response must be requested to clarify the reason for the absence of information. This is key to ensuring a quality analysis as information gaps will inform later policy recommendations for public officials.
- When an exercise is carried out simultaneously in several cities, requests for information should contain the same description of indicators and disaggregation criteria to allow for comparisons of methodologies and results.
  - Differences in the types of information obtained in the different cities should be noted, including any biases caused by the coverage of measurements, demographic composition, infrastructure and systems of social assistance.
- Any communication with national agencies should be explicitly centralized and include information requests to ensure the uniformity and comparability of data.

## C. Processing and analyzing the data

Once the information and necessary data is obtained by the technical team and local partners, a framework for analysis should include:

- calculating the agreed upon indicators for each local context;
- uncovering and highlighting inequities;

- contextualizing the analysis within the local public policy and programs framework.

#### **D. Reporting the final results and findings**

Upon the completion of the analysis, results and findings should be compiled in a final report to be shared with all stakeholders, including local government agencies, civil society and local communities.

##### **a. Presenting indicators**

To present resulting indicators in an organized and user-friendly way, a table including the dimension and component to which each indicator belongs can be created (see Annex I). A column can also be included with information on available disaggregated data and an explanation for each indicator of the way inequalities were calculated.

##### **b. Recording disaggregating data and inequities**

If data was obtained to perform inequity calculations, the totality of the disaggregated data should be archived in a single file. To this effect, each file should contain:

- Values obtained for the proposed variables
- Results produced according to each methodology used to calculate or represent inequities.

Using the example of the city of Bogotá, Colombia, if the data was disaggregated by geographic area and the calculation of inequities used the Relative Inequality Gap methodology (see Annex III), the following inputs should be archived in a single file:

- Values by geographic location;
- Relative Inequality Gap calculation results.

If data obtained for a particular indicator was further disaggregated and supplementary inequity calculations were made, this should also be kept in the archive file corresponding to the indicator. For example, for Bogota, if the data obtained for a specific indicator and inequities calculated were georeferenced on a map, the map must be included in the file archive.

##### **c. Providing contextual analysis**

Once the results of indicator and inequity calculations have been consolidated, local partners will be responsible for representing the analyzed information within an analytical and contextual framework and translating it into recommendations for local governmental mandates and public policies. Inputs such as local development plans, sector plans, sectoral policy and city public planning reports will be taken as the basis for the analysis. Reference to national documents and to international goals or objectives can also enrich the contextual analysis. As part of this exercise, a comparison between the discourse and actions of local government agencies should be conducted to identify areas that require greater intervention and to formulate recommendations for a more efficient approach to improving child wellbeing.

A useful methodology for this analysis includes cross-referencing results for each indicator with the local government's program objectives, projections and budgets. This can help to

local child wellbeing. The overall wellbeing analysis should focus on the most critical inequalities affecting groups that face the greatest disadvantages and vulnerabilities.

#### d. Preparing the analysis report

The final report should present, in a concise and analytical way, the child wellbeing and inequity analysis within the context of the city or local urban environment. It is a key product that should be strategically introduced in time to influence the public policy cycle so as to benefit and strengthen the development of early childhood, childhood, and adolescence.

The final report should clarify the objectives and purpose of the civic accountability initiative, the conceptual and methodological framework, criteria used for the selection of indicators, and how the analysis of the data collected was conducted. It should also outline concrete recommendations for public policy going forward.

### Phase IV: Communications

The final report of findings should be widely communicated to stakeholders. It is recommended to hold a public presentation in an open forum and to invited official decision makers responsible for child and adolescents wellbeing as well as private social services providers (ie: in the areas of health or education). A public presentation of results will enable debate and dialogue about the child wellbeing measurement and monitoring process, as well as concrete actions and civic accountability mechanisms that can be implemented going forward.

The report should also be widely publicized to reach a wide and diverse audience, namely, through mass communication strategies. The target audience should include stakeholders as diverse as governors, mayors, public officials, researchers, civil society organizations, community leaders, families, children and adolescents.

To this effect, some of the methods used can include:

- Contacting mass media journalists;
- Conducting interviews for the media and participating in public forums with experts to discuss and reflect on possible solutions to the problems highlighted;
- Producing written articles or op ed pieces (journalistic notes, reports, columns, editorials) for circulation in various media to position key messages about the results, and actions necessary to address issues highlighted;
- Using social media platforms, particularly those of the initiative's partner organizations;
- Posting resources connected with the local child wellbeing and inequity analysis online and creating a publicly accessible virtual library.

### Phase V: Monitoring and Participation

Civic accountability will have the most impact on local policy and programs affecting children if mechanisms ensuring continued measurement and monitoring of child wellbeing and inequity are in place. Engaging local communities, as co-guarantors of child and adolescent rights, to follow up with policy makers on the results of the initial analysis is crucial.

This section underscores two key lines of actions for sustaining civic accountability once the initial baseline analysis of child wellbeing has been completed.

#### a. Defining advocacy actions and social accountability mechanisms

The initial measurement and analysis of child wellbeing should be complemented by an ongoing monitoring process. This will ensure children's quality of life is taken into account in long term policy decisions.

The monitoring strategy should be aligned with the local administration's policy cycles so as to provide relevant evidence and data to support policies and programs that are tailored to children's needs. It is key to determine the best periods of the year to develop information gathering activities, analysis and results dissemination.

The monitoring cycle should include both measurement and analysis activities as well as provide opportunities for discussion and dialogue among community members, civil society representatives and public policy makers. The objective is to promote concrete actions to overcome the most critical problems identified. Public dialogue activities should therefore aim to involve the most influential individuals possible and those who hold power over decision-making and execution.

Proposed formats for these forums include private presentations to specific key individuals, thematic reports, workshops, and consultations with experts. These exchanges must promote concrete agreements that lead to the monitoring of the key issues identified.

It is recommended to run the monitoring and analysis cycle annually, although this will depend on the team in charge of the cycle's implementation. It should not last more than two years, however, since childhood presents key milestones for human development, as well as very short periods of time to implement solutions. A child who is counted today as part of the early childhood population will have completed this stage of his or her life in three years.

#### b. Citizen participation

While the results of the child wellbeing measurement and monitoring exercise mainly impacts the work of policy makers, it is also a tool that can empower local communities to help address inequities affecting the healthy development of children and adolescents.

Social advocacy, which is based on community knowledge and experience, is recognized as a way of designing and implementing public policies that are tailored to the needs of those they most affect. It also enables direct action in areas and contexts closest to children and adolescents: cities, neighborhoods, schools and families.

In implementing a social accountability methodology it is recommended to prioritize communities where the most urgent cases of child inequity have been found in order to contribute most effectively to reducing inequalities. Social accountability also requires that findings and results of child wellbeing be contextualized within specific communities to establish a concrete link between the information analyzed and the actual experience of the people living there. In particular, the measurement and analysis work should engage community leaders, grassroots organizations and other key citizen groups interested in contributing to the transformation of children and adolescents' quality of life in the communities in which they live

To this effect, a few suggested paths to consider include:

- Presenting findings and results at local workshops to disseminate the information produced and collect feedback;
- Promoting actions that increase the visibility of issues identified;
- Developing strategies of inquiry about the needs of communities that provide a human voice to the problems encountered;
- Identifying cases and real stories that exemplify the living conditions of children, adolescents and their families in relation to the results of the data analysis;
- Facilitating in-depth discussions organized within communities in which local administrative leaders, experts and representatives of civil society participate to address specific local problems.

# **ANNEX**

## Annex I: Basic Indicator Set

Basic set of childhood wellbeing indicators		
Dimension	Component	Indicator
Population	Demographic	Population between 0 and 17 years old by city
Identity	Legal identity	Birth certificate
Material Wellbeing	Poverty	Multidimensional poverty
	Quality of housing	Access to public utilities
		Structure of housing
Health	Mortality	Child mortality rate
	Nutrition	Prevalence of chronic malnutrition*
	Prevention of diseases	Vaccination coverage DPT3 *
	Sexual and reproductive health	Adolescent fertility rate
	Health coverage	Percentage of children affiliated according to health regime
Care, Education and Game	Care and initial education	Children in public care and early education programs
	Preschool education	Gross coverage rate in preschool
	Coverage in basic education	Gross coverage rates
		Repeat rate
		Adolescents who neither study nor work
Game, recreation and culture	Available for game and recreation	
Familiar Surroundings	Maternal mortality	Maternal mortality ratio
	Situations of mother and father	Parent Education*
	Children who do not live with	Children in foster care,

Participation	Means of information	Computers per child
		Internet connection
Protection against violence	Death by external causes	Homicide rates
		Rate of deaths due to external causes
	Victims of armed conflict	Victimization rate by case type *
	Violence against children	Street children
		Child abuse rate
		Cases of sexual violence
		Infant mortality rate
	Child labor	Child labor rate
Special guarantees of the justice system	Adolescents linked to the juvenile criminal system	

## Annex II: Calculating Indicators

Based on the data obtained and on a set of pre-determined technical criteria, indicators are calculated to monitor the wellbeing and quality of life of local children. To this effect, a set of minimum technical information describing and characterizing the indicator is defined, the indicator's basic metadata.

This basic metadata must include: the name of the indicator, the data necessary for its calculation (numerators and denominators), the frequency at which the data should be updated, the data sources, the formula for calculating the indicator, the indicator's unit of measurement and the ranges of values that the indicator can assume once calculated.

The following table shows the metadata for the *Infant Mortality Rate* indicator:

Indicator	Information Used	Calculation Formula	Frequency	Information Source	Unit of Measurement	Minimum and Maximum Values
Infant mortality rate	Numerator: Number of deaths among children under one year  Denominator: Number of live births	Mortality Rate in children under 1 year of age = (Number of deaths in children under 1 year / Number of live births) x 1,000	Annual	Numerator: DANE (National Statistics Office of Colombia) Death Statistics  Denominator : DANE Birth Statistics	Rate per 1000 live births	Minimum: 0 Maximum: N.A.

Each indicator's metadata may also include supplementary notes, as necessary for the indicator's calculation.

When an indicator uses rates (ie: growth rates) or percentages, it is recommended to ask the information source for the indicator's data for both the calculated indicator and the indicators necessary for its elaboration (ie: numerator and denominator and values at different periods for growth rates). This allows the civic accountability project's technical team to confirm the indicators' calculations and to validate official figures. When there are discrepancies between the two results, a clarification can be requested from the government entity that provided the data, or both results can be presented, indicating the difference between them, and explicitly mentioning which corresponds to the officially supplied data and which was calculated by the civic accountability project team.

When the measurement is performed repeatedly over time, it should be noted that the first experiment will create a baseline against which all future measurements of each indicator will be compared. During the second round of measurement, the technical team should ensure the comparability of indicators with the previous period by maintaining the same measurement and calculation procedures, the same population segments, and the same disaggregation criteria, whenever possible, with the available information.

## Annex III: Analyzing Inequalities

The objective of analyzing inequality gaps is to compare child wellbeing between frequently advantaged and disadvantaged groups, based on specific variables and the disaggregated data available. These variables and data are used to calculate inequity indicators that will help to better understand children's quality of life in a particular city or local context. Gaps and variables that lead to social vulnerabilities can include, for example, socioeconomic class, place and area of residence, gender, ethnicity and cases of violence against children. Additional variables may also be relevant and used in calculating inequity indicators depending on the contexts analyzed.

### a. Calculating the Inequality Gap

The calculation methodology below compares the likely impact of inequalities suffered by the most vulnerable population in a city according to different indicators of child wellbeing. For example, in the case of the infant mortality rate, an indicator can compare the chances of a child surviving until 5 years of age between the most disadvantaged and advantaged group in a city.

The "relative inequality gap" is determined by looking at the ratio between the value for the most advantaged and most disadvantaged group (ie, the quotient between extreme values). This operation expresses the number of times that one contains the other, so it is preferable to use the data with the greater value as the numerator.

The formula for calculating this gap is expressed as follows:

$$\text{Relative Inequality Gap} = \frac{x_i \text{ (higher value)}}{x_j \text{ (lower value)}}$$

A result of 1 in calculating the relative gap indicates that there is no inequality between the two groups. A result greater than 1 would indicate that the advantaged group benefits more from a situation than the disadvantaged group. In this case, the higher the result, the greater the inequality.

For example, in looking at the city of Bogotá, Colombia, for the year 2013, the neighborhood of Sumapaz presented the worst results with 27 deaths per 1,000 live births, while La Candelaria had the lowest rate with 5.9 deaths per 1,000 live births.

The calculation of the relative inequity gap is done as follows:

$$\text{Relative Inequality Gap} = \frac{27}{5.9} = 4.576$$

This indicates that for the year 2013 the children of Sumapaz were close to five times more likely to die before reaching the age of five than the inhabitants of La Candelaria, with a relative gap of 4.576 points.

Based on this result, a finding within the scope of the civic accountability project in Bogotá is that children living in the most advantaged area of the city are almost five times more likely to make it to their sixth birthday than those living in vulnerable areas. The relative gap between traditionally disadvantaged and advantaged groups can also be calculated using

The table below outlines additional variables:

<b>Variable</b>	<b>Most Disadvantaged Groups</b>	<b>Most Advantaged Groups</b>
Socioeconomic class	Lower class	Medium and high class
Place of residence	Towns and villages with greater material poverty (infrastructure, Services, etc.)	Towns / municipalities formally urbanized
Area / sub-region	Rural	Urban
Sex	Female	Male
Ethnic group	Afro-descendants / indigenous	Whites / Mixed race
Education of the head of the household	No education or education up to primary	At least secondary education

## **b. Traffic Lights**

Inequality gaps within a city or local area can be visualized by representing the data for different neighborhoods using a traffic light system (or color coding). To this effect, the cumulative result of the inequality gap analysis for each neighborhood of the city is considered and the city is divided into four equal parts. The first and fourth quartiles of the total result are identified to classify each neighborhood based on its inequality situation, with one of three colors: first, in green the neighborhoods with the best child wellbeing situation (equal to or less than 25% of the data); Second, in yellow, the neighborhoods that are in an intermediate situation (between 25% and 75% of the data), and third, in red those that correspond to the worst conditions in the city (equal or greater than 75%). Once the three groups are classified according to their situation, the colors are assigned to each location. The following table illustrates the traffic light system described above for the localities of Bogota, Colombia:

<b>Locality (Bogota, Colombia)</b>		<b>Mortality rate in childhood</b>
		<b># deaths &lt;6 years / # live births * 1000</b>
17	The Calendaria	<b>5.9</b>
7	Bosa	<b>6.3</b>
5	Usme	<b>6.7</b>
6	Tunjuelito	<b>7.5</b>
19	Ciudad Bolivar	<b>8.0</b>

8	Kennedy	<b>9.0</b>
11	Suba	<b>9.6</b>
18	Rafael Uribe Uribe	<b>9.7</b>
9	Fontibon	<b>9.9</b>
10	Engativa	<b>10.5</b>
1	Usaquen	<b>12.7</b>
4	San Cristobal	<b>13.1</b>
16	Puente Aranda	<b>13.5</b>
14	Los Martires	<b>14.1</b>
3	Santa Fe	<b>14.3</b>
15	Antonio Narino	<b>14.6</b>
13	Teusaquillo	<b>14.8</b>
12	Barrrios Unidos	<b>17.4</b>
2	Chapinero	<b>19.3</b>
20	Sumapaz	<b>27.0</b>
Source		DANE (National Statistics Office of Colombia) - Individual Certificate of Death

### c. Georeferencing inequities among geographic areas

The plotting of indicators across a georeferenced map allows for an easy and immediate visual identification of the most vulnerable areas within the city and improves the understanding of geographical exclusion.