RESILIENT CALI
A CITY OF OPPORTUNITIES FOR PROGRESS

RESILIENCE STRATEGY

100 RESILIENT CITIES
Cali progresa contigo
ALCALDÍA DE SANTIAGO DE CALI
We are building a city that is working on strategies for facing future challenges.

The people of Cali have been resilient for many years, even when the concept of resilience was not well known. This word, which may sound complicated, expresses our capacity to overcome persistent challenges and unforeseen events. In 2015, Cali became the second Colombian city to join the Rockefeller Foundation’s 100 Resilient Cities program, and since then, the city has moved exceptionally fast to consolidate its resilience strategy, especially considering the challenges it faces.

As Mayor, I have provided my full support, and my team is committed to incorporating resilience in this administration’s work. The reasons for this fast development are two-fold: first, the Municipal Government was already strengthening its capacity to mitigate and respond to situations that pose a risk to its inhabitants; second, several of this administration’s strategic projects pursue targeted and sustainable solutions to challenges that Cali has been facing for some time, which must be resolved to guarantee its inhabitants’ quality of life.

Challenges faced by the city have led us to undertake the following: a comprehensive improvement in our educational system by making a huge investment in educational infrastructure and quality; efficient urban mobilization through changes to the mass transportation system and expansion of its supplemental network; water management by reinforcing the jarillon (dike) that protects Cali from flooding of the Cauca River and ensuring the potable water supply both during drought and rainy seasons; the reduction of violence by offering decent life alternatives and support to reincorporate young people involved in lives of violence into society as well as opportunities for young people marginalized by violence; and an improvement in our planning process thanks to tools that now provide us with clear, objective information that will ultimately help us make informed decisions.

The Santiago de Cali Resilience Strategy provides a structured framework for these efforts. With this document we can understand that, beyond solving specific challenges, we are building a city with not only the capacity to overcome the challenges it has been facing for years, but that is also working on strategies for facing future challenges. I am confident that this publication will be our navigation guide to achieving these objectives.
LETTER FROM THE PRESIDENT OF 100 RESILIENT CITIES

Michael Berkowitz

On behalf of the 100 Resilient Cities staff, I want to congratulate Cali, Mayor Maurice Armitage, and the Chief Resilience Officer, Vivian Argueta Bernal, for launching this Resilience Strategy, an important milestone for the city and our association.

In addition to being one of the oldest cities in the Americas, Cali is also one of the most important, not only in Colombia but in the region. It is a critical gateway to the Pacific, to the industrial interior of the country, and to all of South America. During the last few years, the city has made great progress in overcoming the economic stress and the violence that beset it in the last years of the 20th century.

This Strategy is intended to move forward on those efforts and other essential developments to guarantee a more resilient city that can face the challenges of the 21st century.

The Resilience Strategy addresses challenges that have undermined Cali’s capacity for resilience. These challenges include acute shocks, such as a floods, earthquakes and landslides, and chronic stresses, such as endemic crime, poor access to education, and mobility challenges, that rip the urban fabric apart and exacerbate impacts when they occur. A city will only become stronger if both type of challenges are addressed.

The Resilience Strategy includes innovative initiatives that not only address these challenges but that are based on work already underway in the city. These include several education initiatives that foster investment in the educational quality as well as the physical infrastructure of educational institutions, all of which should further educational opportunities. These initiatives aim to provide a solid foundation for the education of the city’s future citizens. The Strategy also targets mobility and stresses collaboration with SIM-MIO on priorities for the mass transportation system, which not only impacts the most vulnerable areas but acts as a catalyst for the sustainable development of the city, the region, and the country.

It is also important to acknowledge Mayor Armitage and his commitment to institutionalizing the Cali Resilience Officer from the very beginning. As this document shows, the integration of the concept of resilience across the structure of the Municipal Government and with the municipal budget was one of the most critical actions taken. This investment in resilience is one of the most impressive in our network and has been a great example for other cities.

The dedication and hard work of the Chief Resilience Officer, Vivian Argueta Bernal, are clearly revealed in these pages, in initiatives that reflect months of collaboration and leadership. The document also shows the commitment and support of Mayor Armitage, which is so crucial for the future potential and effectiveness of this ambitious plan.

While the launching of the Resilience Strategy is a very important achievement, work is far from being completed. A continuous effort and unwavering commitment will no doubt be needed to make the vision described in these pages a reality. We look forward to continued collaboration with the city.

LETTER FROM THE CHIEF RESILIENCE OFFICER

Vivian Argueta

When we started the Resilient Cali process, we knew we were facing a great challenge; it was not an easy task to include an approach and a concept in the city agenda that were totally new for many people. We were aware, by then, of the great opportunity we had of being part of the 100 Resilient Cities program, with access to a methodology and a wide array of international experts who would help us understand our challenges, find solutions, and develop a long-term vision for the city.

The tools for building this Resilience Strategy were made possible thanks to the support of Mayor Maurice Armitage, the entire municipal cabinet, and the technical staff of various organizations, particularly the staff of the Territories of Inclusion and Opportunities (TIO) and its Deputy Secretary.

In addition, many in the private sector, the academic world, and the community at large joined the project and provided us with information. It has been deeply satisfying as we’ve moved forward to find that resilience has always been an underlying feature of Cali’s vibrant and diverse population. This is clearly demonstrated by the joy, creativity and innovation with which Cali has always faced its challenges. Resilience makes us see these challenges from a different perspective and think outside the box to get back on our feet.

That said, we also need to develop a deeper understanding of the new physical and social challenges emerging in the city so that we can turn them into opportunities and make decisions that will ensure a bright future for the city. Cali’s Resilience Strategy is an example of how important it is to work in a structured manner to achieve a common good. We are focusing our efforts on providing the citizens of Cali with a better city, one with a good quality of life, a safe and healthy environment, an efficient public transportation system, and a quality educational system that is inclusive and provides opportunities for all. With everyone’s participation, we will continue working together to make Cali a more resilient city.

“Resilience has always been an underlying feature of Cali’s vibrant and diverse population.”

VIVIAN ARGUETA
CHIEF RESILIENCE OFFICER
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## RESILIENT CALI

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Abbreviations and Acronyms

The abbreviations and acronyms listed below are the Spanish versions and therefore may not correspond exactly to the English translations.

1

Abbreviations and Acronyms

ARN Agencia para la Reintegración y Normalización (National Agency for Reincorporation and Normalization)

100 RC 100 Resilient Cities program

C.A.L.I. Centros de Atención Local Integrada (Integrated Local Assistance Centers)

CDI Consejo de Política Fiscal (Tax Policy Council)

CONFIS Consejo de Política Fiscal (Tax Policy Council)

COP Colombian Pesos

CTI Cuerpo Técnico de Investigación (Criminal Investigation Unit)

CVC Corporación Autónoma Regional del Valle del Cauca (Regional Department of Environmental Management)

CSA Compensaciones por servicios ambientales (Compensation for Environmental Services)

DAGMA Departamento Administrativo de Gestión del Medio Ambiente (Department of Environmental Management)

DAPM Departamento Administrativo de Planeación Municipal (Department of City Planning)

DATIC Departamento Administrativo de Tecnologías de la Información y las Comunicaciones (Department of Communication and Information Technology)

DNP Departamento Nacional de Planeación (Department of National Planning)

EMCALI empresa de Servicios Públicos de Cali (Cali Utility Company)

EMRU Empresa Municipal de Renovación Urbana (Urban Redevelopment Authority)

FARC-EP Fuerzas Armadas Revolucionarias de Colombia-Ejército del Pueblo (Revolutionary Armed Forces of Colombia - The People’s Army)

ICAU Índice de Calidad Ambiental Urbana (Urban Environmental Quality Index)

IDEAM Instituto de Hidrología, Meteorología y Estudios Ambientales (National Weather Institute)

IED Instituto educativo oficial (Public Educational Institution)

JAC Junta de acción comunal (Community Action Board)

MEN Ministerio de Educación Nacional (National Ministry of Education)

MOVIS Observatorio de Movilidad Sostenible (Sustainable Mobility Observatory)

NEET No Education, Employment or Training

NSU Nivel de Satisfacción del Usuario (User Satisfaction Level)

OSSO Observatorio Sismológico y Geofísico del Suocidente Colombiano (Colombian Southwest Seismological and Geophysical Monitor)

PIMU Comprehensive Plan for Urban Mobility

PMO Project Management Office

PSA Pagos de servicios ambientales (Payment for Environmental Services)

SEM Secretaría de Educación Municipal (Secretariat of Education)

SICIED Sistema de Información de Infraestructura Educativa del MEN (Educational Infrastructure Information System of the National Ministry of Education)

SITM - MID: Sistema Integrado de Transporte Masivo (Integrated Mass Transit System)

STC Sistema de Transporte Colectivo (Supplemental Transportation System)

SUDS Sistema Urbano de Drenaje Sostenible (Sustainable Urban Drainage System)

TIC Tecnologías de la información y las comunicaciones (Communication and Information Technology)

TIO Territorios de inclusión y oportunidades (Territories of Inclusion and Opportunities)

TIPS Tratamiento integral de pandillas (Comprehensive Gang Treatment Program)

UAESPM Unidad Administrativa Especial de Servicios Públicos Municipales (Special Administrative Unit of Municipal Utilities)

UDS Unidades de servicio (Service Units)

WISE World Innovation Summit for Education

*“The abbreviations and acronyms listed below are the Spanish versions and therefore may not correspond exactly to the English translations.”
Santiago de Cali is facing the challenge of overcoming the many obstacles that have built up over the years. This Resilience Strategy identifies concrete ways for the city to move forward. **Cali seeks to be a resilient city that progresses through the diversity of its people and creates opportunities for all, while preparing to face its challenges with quality education, new transportation options, and respect for the environment.**
In 2015, Cali was chosen to be a member of Rockefeller Foundation’s 100 Resilient Cities program. As a member of this network, the city is provided with the resources needed to develop a roadmap to resilience along four main pathways:

2. Financial and logistical guidance for establishing a new position in the Municipal Government, a Chief Resilience Officer who will lead the city’s innovative resilience efforts.
3. Access to solutions, service providers, and partners from the private, public and nonprofit sectors who can help develop and implement the city’s Resilience Strategy.
4. Membership in a global network of cities that learn from and help each other.

A methodical, highly participatory process was conducted to design this Resilience Strategy. The process was divided into three phases, and the first began in 2016. During the first phase, a Chief Resilience Officer (Vivian Argueda) was appointed and an assessment of Cali’s current state was conducted (Preliminary Resilience Assessment). Phase 2 analyzed the challenges identified during Phase 1 in further depth, and the strategies that make up the Resilience Strategy were prepared. Phase 3, which began with the launching of the Resilience Strategy, consists of implementing the 5 lines, 11 goals, and 45 initiatives summarized below.

Resilience is defined as the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow, no matter the challenges they experience. For a better understanding of this concept, challenges are classified as acute Shocks — sudden, unexpected one-time events affecting cities, such as earthquakes, floods, and cyber attacks — and chronic stresses — day-to-day or cyclical situations that weaken the fabric of a city over time, such as high unemployment, violence, water shortages, or a poor public transportation system.
Santiago de Cali is the capital city of the Department of Valle del Cauca. It is located between Cordillera Occidental and the Cordillera Central in the Colombian Andes, which makes it vulnerable to seismic events. Founded in 1536, it is one of the oldest cities in the Americas.
3.1 CONTEXT

With a population of about 2.4 million inhabitants, Cali is the most important city in southwest Colombia and on the Pacific Coast.

The city is the third largest in the country, with a population of about 2.4 million inhabitants, which makes it the most important city in southwest Colombia and on the Pacific Coast. The city has the largest Afro-Colombian population in the country, making up 23% of the city’s overall population.

There are 22 city districts and 15 rural districts in Cali. The 335 neighborhoods in the urban areas represent 98% of the Municipality's population and 84 rural settlements represent the remaining 2%.

The structure of the Municipal Government is described as follows: The Mayor is the top official of the city. The executive branch is divided into 24 municipal entities, including 15 secretariats that are in charge of managing and executing the Mayor’s Development Plan; 9 departments that provide guidelines and ensure administrative operations; and 14 decentralized entities, including the healthcare networks, the Urban Redevelopment Authority (EMRU), the Cali Utility Company (EMCALI), the Public Transportation Authority (Metro Cali S.A.), and others (Corfecali, the Special Housing Fund).

Given its geographic location, Cali connects to the Buenaventura Harbor on the Pacific Coast and with the Yumbo Industrial Center to the northeast. The city is an important point along the Pan American Highway and therefore an essential connection between Colombia and Ecuador. This easy access makes Cali one of the main economic and industrial centers of Colombia.
In the second half of the 20th century, the city experienced social, economic and, above all, cultural prosperity, and became internationally known for culture, sports, and the entrepreneurial drive of its citizens. The department of the Valle del Cauca is the most important agro-industrial center of southwest Colombia. From 1946 to 1960, Cali built large companies and attracted multinational industrial, pharmaceutical and chemical companies, as well as paper and cardboard factories. This growth brought about progress, investment, and a wave of migration. Colombian sugar mills are a good example of this growth. They are located in the valley of the Cauca River and encompassing an area that includes more than 47 municipalities of Cauca, Valle del Cauca, Rica- ralda, Caldas, and Quindio.

Between 1970 and 1990, Cali endured one of the hardest times in its history due to drug trafficking and the armed conflict within Colombia. Many people moved to Cali during these years, making it one of the cities with the greatest number of displaced people. The city has suffered from violence, corruption and unplanned growth, and is still suffering from their impacts.

In recent years, the city has been moving in a positive direction and has continued some of the key programs established by prior administrations. One such program is the Territories of Inclusion and Opportunities (TIO) program, which contributes to the city’s Sustainable Development Objectives: a sustainable city and communities; clean water and sanitation; peace, justice and stable institutions; and the reduction of inequality.
Given [...] the fact that the city has absorbed many victims of this armed conflict, Cali has put a huge effort into its legal response and measures to enforce the peace agreement. Given this context and the fact that the city has absorbed many victims of this armed conflict, Cali has put a huge effort into its legal response and measures to enforce the peace agreement. In a recent administrative modification, the Peace Advisory Body became the Secretariat of Peace and Civic Culture, which has two subsecretariats: (1) Violence Prevention and Civic Culture and (2) Human Rights and Building Peace. The goal of the Secretariat of Peace and Civic Culture is to design and implement policies, programs, and projects to prevent violence, to peacefully settle any conflicts, to promote and protect human rights, and to foster a peace and reconciliation culture and education.

### 3.2 Cali in the Peace Process

After 4 years of peace talks between the Colombian Government and the Colombian Revolutionary Armed Forces (FARC-EP), the two stakeholders executed the Final Agreement to End the Armed Conflict in late 2016. After 50 years of armed conflict in the country, this was a transformative event for it and for the world. One of the main stepping stones in the process to end the conflict was the approval in 2011 of the Law on Victims and Land Restitution, which explicitly acknowledged the existence of an armed conflict and called for compensation for the victims and the pursuit of truth, justice, reparations, and peace guarantees.

#### Of the Total of Displaced Population

<table>
<thead>
<tr>
<th></th>
<th>73.3%</th>
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<tr>
<td>HAVE BEEN DISPLACED BY THE ARMED CONFLICT</td>
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<table>
<thead>
<tr>
<th>Region</th>
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<tbody>
<tr>
<td>CHOCO</td>
<td>4.6%</td>
</tr>
<tr>
<td>VALLE DEL CAUCA</td>
<td>38.6%</td>
</tr>
<tr>
<td>CAUCA</td>
<td>23.3%</td>
</tr>
<tr>
<td>NARIÑO</td>
<td>20.7%</td>
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</tbody>
</table>

#### Source

Diagnóstico Socio-Económico SDC/2014
Informe Anual DDHH Personería de Cali /2015
3.3 CALI STATISTICS

4.9% OF COLOMBIA’S POPULATION

51.4% OF VALLE DEL CAUCA’S POPULATION

2,420,114 TOTAL POPULATION

217,762 mi² CALI EXTENSION

564 km²

FEMALE
1,156,839
48%

MALE
1,263,275
52%

POPULATION IN URBAN AREA
1,000,000
2,000,000
3,000,000

POPULATION IN RURAL AREA
2,383,485
36,629

2% 98%

POPULATION BY AGE
0 - 14
15 - 24
25 - 65
+ 65

22.5%
16.9%
52.2%
8.4%

100%

1 URBAN AREA
335 URBAN NEIGHBORHOODS
22 CITY DISTRICTS

2 RURAL AREA
84 RURAL SETTLEMENTS
15 RURAL DISTRICTS

Resilient Cali | A City of Opportunities for Progress

Notes:
1 National Administrative Department (DANE) (2007)
### 3.4 CALI TIMELINE

* (1536 - Present)

- **1536**: **JULY 25**  
  SEBASTIAN DE BELALCAZAR FOUNDED SANTIAGO DE CALI

- **1810**: **DECLARATION OF COLOMBIA’S INDEPENDENCE**

- **1915**: **THE RAILROAD ARRIVES IN THE CITY AND CONNECTS IT TO BUENAVENTURA HARBOR**

- **1929**: **NAVIGABILITY ON THE CAUCA RIVER IS REPLACED BY RAILROAD TRANSPORTATION**

- **1931**: **THE CALI UTILITY COMPANY (EMCALI) IS CREATED**

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2. Visual Archive of the Valle del Cauca and Visual Archive of the Municipality of Cali
1940
**INDUSTRIAL DEVELOPMENT ACCELERATES**
In a final transformation of the sugar production industry, the traditional plantation gives way to an industrialized model throughout the economy.

1950

1956
**THE WORST TRAGEDY AUGUST 7:** A large explosion involving six trucks loaded with dynamite results in damages to key infrastructure, loss of human lives, and an economic recession.

1957
**A FIRST VERSION OF THE FERIA DE CALI TAKES PLACE AND BECOMES AN OPPORTUNITY TO OVERCOME THE EXPLOSION TRAGEDY AND AN ENGINE OF ECONOMIC RECOVERY**

1958
**THE CAUCA RIVER DIKE IS CONSTRUCTED TO PROTECT CALI FROM FLOODS**

1971
**THE VI PAN AMERICAN GAMES TAKE PLACE IN THE CITY AND FOSTER RAPID ECONOMIC AND INFRASTRUCTURE GROWTH**
**CALI IS VIEWED AS A CIVIC CITY**

1974
**THE CALI GROUND TRANSPORTATION TERMINAL BEGINS OPERATIONS**

1980
**DRUG TRAFFICKING AND THE RISE OF THE CALI CARTEL STARTS A PERIOD OF VIOLENCE**

1990
**THE RISE OF THE DRUG TRAFFIC AND THE TRAFFIC RISE OF THE CALI CARTEL STARTS A PERIOD OF VIOLENCE**

**RESILIENT CALI | A CITY OF OPPORTUNITIES FOR PROGRESS**
1997

First version of Petronio Álvarez Festival, the largest festival dedicated to Afro-Colombian music and folklore.

2001

The economic crisis forces the municipality to dramatically reduce investments.

2009

The SITM-MIO mass transit system begins operation.

2010

The worst documented La Niña event causes heavy rainfall and floods in the city.

2013

The Cali Jarillon Plan to reduce flood risks from the Cauca River is launched; the plan aims to protect the lives and property of 900,000 inhabitants on the western edge of Cali.

2017

The administrative reform of the municipal government aims for a more efficient and transparent management of the city.

2017

Today

Cali hosts the IX World Games.
3.5 GROWTH OF THE URBAN PERIMETER

1962 URBAN PERIMETER
AREA: 85.52 Km²

1980 URBAN PERIMETER
AREA: 86.96 Km²

1991 URBAN PERIMETER
AREA: 112.79 Km²

2014 URBAN PERIMETER
URBAN AREA: 119.21 Km²
AREA FOR PLANNED CITY GROWTH: 16.34 Km²

CONVENTIONS
- Cauca River
- Rural Settlements
- Roads
- Area for planned city growth

PERIODS OF CHANGE
In 2013, the Rockefeller Foundation created the 100 Resilient Cities (100RC) program in response to the 21st century challenges that all cities in the world face, such as globalization, urbanization and climate change.
Member cities are provided with the resources needed to develop a resilience roadmap along four main pathways:

1. Financial and logistical guidance for establishing an innovative new position in city government, a Chief Resilience Officer who will lead the city’s resilience efforts
2. Expert support for the development of a robust Resilience Strategy
3. Access to solutions, service providers, and partners from the private, public, and nonprofit sectors who can help develop and implement the Resilience Strategy
4. Membership in a global network of member cities that learn from and help each other. The 100RC program provides its members with a methodology and tools that can be adapted to their context.

Resilience is defined as the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow no matter what kinds of acute shocks and chronic stresses they experience.
The Conceptual Resilience Framework consists of 4 dimensions, 12 drivers and 52 indicators that help identify the critical areas that cities must address to develop resilience. This framework was developed by Arup, a consulting firm, with support from the Rockefeller Foundation (The Rockefeller Foundation & Arup, 2014), and its two main goals are to:

**Provide a Lens Through Which a City’s Resilience Status Can Be Assessed, Analyzed, and Understood.**

**Provide a Common Language and Shared Vision for the Various Cities, Which Will Facilitate the Exchange of Knowledge, Experiences, Best Practices, and Lessons Learned.**

### Dimension: Health & Wellbeing
- **1A:** Meets basic needs
- **1B:** Supports livelihoods and employment
- **1C:** Ensures public health services

### Dimension: Economy & Society
- **2A:** Promotes cohesive and engaged communities
- **2B:** Ensures social stability, security and justice
- **2C:** Fosters economic prosperity

### Dimension: Infrastructure & Environment
- **3A:** Enhances and provides protective natural & man-made assets
- **3B:** Ensures continuity of critical services
- **3C:** Provides reliable communication and mobility

### Dimension: Leadership & Strategy
- **4A:** Promotes Leadership and Effective Management
- **4B:** Empowers a broad range of stakeholders
- **4C:** Fosters long-term and integrated planning
4.2 RESILIENCE QUALITIES

Cities that are resilient have seven qualities that enable them to withstand, respond, and adapt more easily to different challenges:

- REFLECTIVE: Analyses past experiences to inform future decision-making.
- ROBUST: Designs systems that are well conceived, well built, and well managed to ensure that any system failure is predictable, safe, and not disproportionate to the cause.
- INCLUSIVE: Gets a broad spectrum of stakeholders involved in decision-making and creates a joint vision and a sense of shared ownership.
- RESOURCEFUL: Recognizes alternative and creative ways to use resources.
- FLEXIBLE: Is willing and able to adopt alternative strategies in response to changing circumstances or sudden crises.
- REDUNDANT: Has a “Plan B” in place to proactively deal with disruptions.
- INTEGRATED: Brings together systems and institutions to share resources and enable stakeholders to work together.

4.3 RISK CATEGORIES

The risks and challenges cities face are classified as either acute shocks or chronic stresses:

- ACUTE SHOCKS: Sudden or unexpected one-time events such as earthquakes, fires, floods, or cyberattacks.
- CHRONIC STRESSES: Day-to-day or cyclical events that weaken the fabric of a city over time, such as high unemployment rates, water shortages, and a deficient public transportation system.
4.4 NETWORK MAP
AND INSPIRATIONAL CITIES

FIRST ROUND CITIES
Bangkok
Berkeley
Boulder
Bristol
Byblos
Christchurch
Da Nang
Dakar
Durban
El Paso
Glasgow
Los Angeles
Mandalay
Medellín
Mexico City
New Orleans
New York
Norfolk
Oakland
Porto Alegre
Quito
Ramallah
Rio de Janeiro
Rome
Rotterdam
San Francisco
Semarang
Surat
Vejle

SECOND ROUND CITIES
Accra
Amman
Athens
Barcelona
Belgrade
Boston
Cali
Chennai
Chicago
Dallas
Deyang

S.- de los Caballeros
Santiago de Chile
Singapore
Saint Louis
Sidney
Thessaloniki
Toyama
Tulsa
Wellington

THIRD ROUND CITIES
Addis Ababa
Atlanta
Belfast
Buenos Aires
Calgary
Can Tho
Cape Town
Colima
Greater Manchester
Miami and the Beaches

Guadalajara
Honolulu
Jaipur
Jakarta
Kyoto
Lagos
Louisville
Luxor
Melaka
Minneapolis
Montevideo
Narobi
Nashville
Panama
Paynesville
Pune
Salvador Bahia
Seattle
Seoul
Tbilisi

BOSTON
LINE ONE
Education for Opportunities

MEDELLÍN
LINE TWO
Coexistence for Life

SANTIAGO
LINE THREE
Mobility for Development

DA NANG
LINE FOUR
Sustainability for the Future

ROTTERDAM
LINE FIVE
Planning for Progress

RESILIENT CALI
100 Resilient Cities received more than one thousand applications from cities around the world to be part of the program. The selection process took place in three rounds and in 2015, Cali was selected out of 331 cities to be part of the second round.
In 2016, Cali’s work began with a workshop to launch the 100RC program, more than 120 local stakeholders from the public and private sectors, and civil society took part in the workshop (“Towards a Resilience Agenda for Cali”), which aimed to identify the main challenges the city faces with respect to resilience. Subsequently, Vivian Argüeta was appointed as Cali’s Chief Resilience Officer. The team she created is part of the TIO program, and it works collaboratively with 100RC and AECOM (Cali’s strategic partner) to implement the resilience methodology.

The institutionalization of the Cali Resilience Office began with its inclusion in the Municipality’s administrative structure. Office space and a budget to support the resilience team and were allocated. In addition, close relationships were fostered with the various Municipal Government entities that will execute the proposed initiatives. Among the most notable of these is the permanent liaison with the International Cooperation and Relations Office, which will share the leadership of the implementation of the Urban Resilience Index with the Department of City Planning and the Technical Management Office, which are involved in “Mi Comunidad es Escuela,” the major Municipal Government project to improve educational quality.

In 2016, Cali’s work began with a workshop to launch the 100RC program, more than 120 local stakeholders from the public and private sectors, and civil society took part in the workshop (“Towards a Resilience Agenda for Cali”), which aimed to identify the main challenges the city faces with respect to resilience. Subsequently, Vivian Argüeta was appointed as Cali’s Chief Resilience Officer. The team she created is part of the TIO program, and it works collaboratively with 100RC and AECOM (Cali’s strategic partner) to implement the resilience methodology.
TIMELINE
RESILIENT CALI PHASES
(2015 - PRESENT)

2015
DECEMBER
Cali is selected to be part of the 100RC network.

JANUARY
Maurice Armitage takes office as Mayor of Cali.

MAY
Start of Phase I
Preparation of the Preliminary Resilience Assessment.

APRIL
Publication of the Preliminary Resilience Assessment.

SEPTEMBER
Start of Phase II
Preparation of the Resilience Strategy.

OCTOBER
Creation of Cali’s resilience team and participation in Habitat III in Quito.

NOVEMBER
Participation in the Resilient Cities Global Forum in New York City.

DECEMBER
100RC CoLab Educational Infrastructure, a collaborative laboratory with international experts.

2016
JUNE
100RC program launches with a workshop: “Toward a Resilience Agenda for Cali.”

DECEMBER
Start of Phase I
Preparation of the Preliminary Resilience Assessment.

2017
APRIL
Start of Phase II
Preparation of the Resilience Strategy.

JULY
Participation in the Resilient Cities Global Forum in New York City.

SEPTEMBER
Appointment of Cali Chief Resilience Officer.

OCTOBER
Start of Phase II
Preparation of the Resilience Strategy.

NOVEMBER
Participation in the World Innovation Summit on Education (WISE).

DECEMBER
Cali Progresa-Living Lab, an exchange of international experiences on violence prevention and social inclusion.

2018
MARCH
Launch of “Mi Comunidad es Escuela” (My Community is My School).

AUGUST
Start of Phase III
Implementation.
In 2017, Cali’s Preliminary Resilience Assessment was published. This diagnosis of the city’s resilience identified Cali’s weaknesses, strengths, capacities, challenges, opportunities, and cross-cutting issues. During the development of this diagnosis, Cali’s resilience team used the following tools, which were designed by the 100RC program to facilitate the process:

**THE PERCEPTIONS TOOL**

Facilitated the prioritization and identification of Cali’s weaknesses and strengths as perceived by its residents and experts from civil society and the private, public, and academic sectors.

**THE ACTION INVENTORY TOOL**

Helped with the identification of the existing initiatives, programs, campaigns, projects, and studies in civil society and in the private, public, and academic sectors that are contributing to Cali’s resilience (the public sector is leading the majority of these efforts).

**THE ASSETS AND RISKS TOOL**

Identified Cali’s exposure to acute shocks (e.g., earthquakes, river floods, civil unrest) as well as the city’s important infrastructure that is so critical to its resilience.

The assessment process brought together more than 400 participants. Interviews and focus groups were held with Cali’s fire department, police, academics, journalists, handicapped population, women, judges, entrepreneurs and businessmen, government officials, private sector leaders, community leaders, and ordinary citizens. In addition, the assessment also took into account the results of two citizen perception surveys conducted by the Municipal Government in which 803 and 3,720 citizens of Cali were surveyed (INSearch and Municipal Government of Cali, 2017; Corpovisionarios, 2016). The surveys revealed citizens’ perceptions of the city’s status on topics related to the Conceptual Resilience Framework components (see page 38), such as mobility, health and the economy.
The result of this process was the identification of **three acute shocks and five chronic stresses** that pose challenges for Cali.

### Acute Shocks

**Earthquakes**

Cali is in the Northern Andes, which crosses Ecuador, Colombia and Venezuela, and its location is highly susceptible to seismic activity (DeMets et al., 1994).

**Floods** *(from river and heavy rainfall)*

Rainfall in Cali and Valle del Cauca is known to cause floods that result in significant property damage and loss of human life. The La Niña in 2010 was cause for alarm due to the vulnerability of the Cauca River dike [jarrón], which nearly failed (Resilient Cali, 2017).

**Landslides**

In the mountainous areas of the city, there are informal settlements with structures that do not comply with seismic standards and have no protection against earth movements. Consequently, they are vulnerable to the impacts of heavy rainfall and earthquakes (Corporacion OSSO, 2005).

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**Sudden or unexpected one-time events that affect the city, such as earthquakes, fires, floods or cyberattacks.**
Day-to-day or cyclical events that weaken the fabric of a city over time, such as high unemployment, water shortages, and a deficient public transportation system.

CHRONIC STRESSES

VIOLENCE AND A LACK OF PUBLIC SECURITY
Cali is still one of the cities with the highest homicide rates in the country. According to the Municipal Security Observatory, the city had 1,240 homicides in 2017 (a 5% reduction from 2016). The local homicide rate was 51 homicides for every 100,000 inhabitants, while the national rate was 23.9 homicides every 100,000 inhabitants.

EDUCATION AND EDUCATIONAL INFRASTRUCTURE
National standardized test results show that 50% of the public education institutions were deficient in providing a basic grade school education. In addition, a majority of the 342 educational institutions managed by the Municipality require repairs to their water and sanitation systems, and reinforcement of their buildings, as they are not in compliance, partially or fully, with seismic-resistance standards and codes (Resilient Cali, 2017).

MOBILITY
The lack of traffic routes and coordinated multi-modal management of SITM-MIO, the mass transit system, has been exacerbated by financial issues. As a result, the system has not become the primary transportation choice in the city that it was intended to be and informal public transportation networks have begun operating illegally in the city (Department of City Planning, 2016a).

DEFICIENT CITY MANAGEMENT AND URBAN PLANNING
The city has lacked a strategic vision for implementing the actions of earlier administrations and for working with the private and academic sectors and civil society. In addition, the lack of guidelines regarding standardization, integration and periodic municipal information updates is reflected in the inadequate monitoring of indicators (Resilient Cali, 2017).

WATER RESOURCES AND SHORTAGES
Pollution due to mining activities in the upper basins, waterway diversions for agriculture, contamination due to industrial and residential water waste, deforestation, extreme and more frequent climate events, among others, are the main threats to Cali’s water supply, with the potential to cause shortages in both the city and the surrounding areas (Resilient Cali, 2017).
Once the risks had been studied in detail, Cali’s most urgent needs were prioritized.

**EDUCATIONAL QUALITY AND RELEVANCE**

To foster programs to improve the quality of education and educational infrastructure.

**COEXISTENCE, DIVERSITY AND TRUST**

To build and implement a comprehensive plan for achieving peaceful coexistence and public security that is inclusive and participatory.

**SUSTAINABLE AND RESILIENT PUBLIC TRANSPORTATION**

To contribute to the development of a sustainable and efficient mobility model.

**PREPAREDNESS AND RESILIENCE IN THE FACE OF CLIMATE CHANGE**

To identify stakeholders and actions that can help mitigate the impacts of climate change and prepare the city to face future challenges from climate change.

**ROBUST PROCESSES AND PLANNING**

To implement effective processes that facilitate urban planning, project evaluation, and data and information gathering for decision-making.

These vulnerabilities were selected as the five pillars for all the resilience initiatives:
During this second phase, the five priority issues identified in the Preliminary Resilience Assessment were studied in depth to identify the underlying causes of each challenge. In addition, various organizations and key stakeholders were brought together to develop initiatives to address the identified challenges. These initiatives were prioritized, validated and then incorporated as part of this Resilience Strategy. A work plan consisting of 52 detailed tasks was prepared to guide the work during this phase, which addressed a set of questions arising from the Preliminary Resilience Assessment. The work required research that ranged from stakeholders analyses to knowledge exchanges, such as Cali Progresa-Living Lab (see page 99).

The final step of this second phase was prioritization, distillation, and validation of more than 90 initiatives developed to address the identified challenges. The initiatives were prioritized by their potential impact, difficulty and implementation cost, capacity to address the root challenge, and importance to the city. Of the 90 or so initiatives, 45 major initiatives were selected and then validated by the Mayor of Cali, the initiative’s implementers, and the Resilience Steering Committee so that they could be incorporated eventually into the Resilience Strategy.  

### 5.2 PHASE TWO

**RESILIENCE STEERING COMMITTEE**

- Tracks and monitors the city’s resilience activities.
- The group consists of:
  - The Mayor’s Advisors
  - The Secretaries of:
    - Education, Culture and Sports
    - Finance, Legal Affairs, Contracting, and Communication and Information Technologies.
  - Each one provides knowledge and support based on a particular competency to enable the implementation of the Resilience Strategy in the short, medium and long term.

#### 1 DEVELOPMENT OF INITIATIVES TO ADDRESS THE CHALLENGES

- More than 10 secretariats and entities of the Municipal Government
  - Academia
  - Civil Society
  - Representatives of the Private Sector
  - Working groups
  - Work sessions
  - Workshops

#### 2 EXISTING STRATEGIES AND PLANS WERE ANALYZED

- Municipal Development Plan
- Municipal Zoning Plan
- Comprehensive Plan for Urban Mobility
- Comprehensive Climate Change Adaptation and Mitigation Plan

- To identify initiatives to be supported and incorporated in the Resilience Strategy

#### 3 THE STRATEGY WAS ENRICHED BY THE SHARING OF IDEAS AND EXPERIENCES AT THE FOLLOWING GLOBAL EVENTS

- Medellín Lab on safe and resilient cities
- World Bank Experience Exchange for a Comprehensive Improvement of Neighborhoods in Latin America
- 100 RC Global Summit on urban resilience
- The World Innovation Summit on Education - Wise in Doha, Qatar
- The Inclusive Economies conference in Bellagio, Italy
### Challenge

- Cali is located along the Cauca River, Colombia’s second most important waterway, which is at the city’s western edge.
- To counter the river overflows and avoid floods, between 1958 and 1962, the Regional Department of Environmental Management (CVC) built a dike that is 10.56 miles (17 kilometers) long and 5.57 feet (1.70 meters) high.
- Over the years, lack of control over the dike resulted in informal settlements and other constructions on top of the dike, which put its stability at risk.
- DESTRUCTION OF THE JARILLÓN would cause economic losses of about $1.434 million USD and would leave 80 percent of the city without potable water. The city would no longer be able to treat waste water and about 900,000 inhabitants would be directly affected.
- From 2010 to 2011, Cali was one of the cities most affected by La Niña. The water levels reached by the Cauca River almost overflowed the height of the Jarillón.

### Initiatives

- Reinforce the dike and REDUCE THE RISK OF DIKES COLLAPSING FROM FLOODING ALONG THE CAUCA RIVER, SouthInterceptor Channel, Cali, River, and Cali’s western drainage system.
- Implement programs to IMPROVE FAMILIES’ LIVING SITUATIONS and social inclusion in the life of the city.
- RELOCATE 8,777 FAMILIES WHO ARE LIVING ON THE JARILLÓN.

### Progress

- 80% OF THE CITY WITHOUT POTABLE WATER.
- OF THE 10.56 MILES OF THE JARILLÓN HAVE BEEN CLEARED OF INFORMAL SETTLEMENTS.
- 3,390 FAMILIES HAVE ALREADY MOVED TO ANOTHER LOCATION.
- OF THE 8,777 FAMILIES THAT WERE TO BE RELOCATED BY 2019.

### The National Government

- HAVE INVESTED US $182 MILLION THROUGH THE:
  - National Climate Adaptation Fund
  - Cali Municipal Budget
  - EMCALI and the CVC

New public policy laws and initiatives have strengthened the institutional capacity of the Municipal Government and other entities and have brought the Municipal Government closer to the citizens it serves.
Cali, a resilient city that progresses through the diversity of its people, and creates opportunities for all, while preparing to face its challenges with quality education, new transportation options, and respect for the environment.
Cali’s Resilience Strategy consists of 5 lines, 11 goals and 45 initiatives. **Lines are the basis of the strategy.** Each line is made up of goals, which in turn form the basis for identifying initiatives, which are the specific programs or projects that will help develop a more resilient city.
Cali’s Resilience Strategy is organized into five lines that reflect the stake Cali’s inhabitants have in their city’s progress and transformation.

1. **Strengthen the Relevance and Quality of the Education**
   - 1.1 Public Policy on Educational Quality
   - 1.2 Methodology to Assess Educational Quality Programs and Projects
   - 1.3 Quality Management Platform for Cali’s Public Education Institutions

2. **Create a Resilient Educational Infrastructure**
   - 1.2.1 Maintenance Plan for Cali’s Public Education Institutions
   - 1.2.2 Strategy to increase coverage of Cali’s Schools
   - 1.2.3 Retrofit of Existing Official Educational Sites to Meet the SR-10 Standards
   - 1.2.4 Retrofit of Existing Public Educational Sites to Meet the Single Shift Goal
   - 1.2.5 Service Units (IDS) Construction Pilot Project to Expand Coverage of Early Childhood Education
   - 1.2.6 Infrastructure Physical Assessment System for Cali’s Public Educational Institutions

3. **Design Interventions that Will Build Peace and Prevent Violence**
   - 2.1 Social Laboratories for Building Peace
   - 2.2 Peace and Civic Culture Observatory
   - 2.3 Violence Prevention Strategy
   - 2.4 Civic Culture Public Policy

4. **Strengthen Initiatives that Foster Coexistence and Support Diversity**
   - 2.1.1 Community Cohesion and Violence Prevention Pilot
   - 2.2.1 Ambassadors of Civic Culture for Peace
   - 2.2.2 Comprehensive Gang Treatment Program / Jovenes Sin Fronteras (TIPS)
   - 2.2.3 Vertigo and Deporvida Programs Using Sports as an Educational Tool
   - 2.2.4 FutsiNet Cali
3.1 Achieve the Sustainability of the Public Transportation System

3.1.1 Institutional Strengthening of Municipal Entities Working on Mobility

3.1.2 Structuring for the Implementation of SITP-MID Transportation Subscriptions and a Zone Rate Policy

3.1.3 Operational Framework of the SITP-MID Mass Transit System

3.2 Strengthen the SITP-MID Network and Its Supplementary Systems

3.2.1 Improvement and Renovation of Bicycle Infrastructure

3.2.2 Urban - Metropolitan Railroad System

3.2.3 Universal Accessibility to SITP-MID for Pedestrians and People with Reduced Mobility

3.2.4 SITP-MID Preferred Lanes

3.2.5 Supplemental Public Transportation System for the Mountainous Communities

3.2.6 Implementation of the SITP-MID West Trunk Route Design

4.1 Strengthen the Use of Land to Preserve Natural Resources

4.1.1 Natural Hydraulic Network Recovery Program as a Regulator of Urban Drainage

4.1.2 Protection and Restoration of Water Production Areas under Compensation for Environmental Services (PSA) and Environmental Services Considerations (CSA)

4.1.3 Implementation of the Public Policy for Comprehensive Habitat Improvement

4.1.4 Strategy for Illegal Occupation Control and Ecosystem Protection

4.1.5 Comprehensive Management of Stormwater through the Sustainable Urban Drainage System

4.2 Establish Effective Mechanisms for Decision-Making

4.2.1 Establishment of a Socio-Environmental Observatory

4.2.2 Information Management Tool for Decision-Making in Cali’s Storm Early Alert System

4.2.3 Establishment of a Governance Mechanism to Coordinate Climate Change Mitigation Actions

4.2.4 Crisis Room Construction

5.1 Effectively Manage Public Administration

5.1.1 Investment Project Incubator

5.1.2 Information Services Integration Platform

5.1.3 Automation and Standardization of Processes, Procedures and Services

5.2 Design an Effective Monitoring, Tracking and Measuring System

5.2.1 Call’s Monitoring, Tracking and Measuring System

5.2.2 Call’s Monitoring, Tracking and Measuring System

5.2.3 Call’s Monitoring, Tracking and Measuring System
**RESILIENCE QUALITIES**

**EXECUTION TIME HORIZON**
- **SHORT TERM:** 1 to 4 years.
- **MEDIUM TERM:** 5 to 8 years.
- **LONG TERM:** 9 to 12 years.

**DESCRIPTION:**
The initiative promotes the development of flexible and robust education policies, ensuring the sustainability of education models that are resilient to various challenges. It stresses the importance of reflective and resourceful strategies to address educational quality and equity. The initiative aims to strengthen the resilience of educational systems through strategic planning and integration of flexible and redundant measures. It addresses the needs of the most vulnerable communities, ensuring equity in education.

**INDICATORS:**
1. Percentage of students participating in educational activities.
2. Number of schools receiving educational support.
3. Number of educational projects implemented.

**RESILIENCE DIVIDEND:**
The initiative’s indirect benefits include the promotion of educational resilience and improved educational outcomes. It contributes to the development of a more equitable and resilient educational system.

**GOAL:**
Name that identifies the goal that is being developed along with its respective icon.

**INITIATIVE NAME:**
Short name identifying the initiative.

**STAR:**
Priority initiative.
A Cali with education and safe neighborhoods prepares its inhabitants to contribute to society, to transform their environment, and to make the most of opportunities.
Cali’s public education system has significant gaps in its educational performance. In domestic standardized tests, 50% of public grade schools were rated as deficient, while only 34% of private institutions received the same rating (Resilient Cali, 2017). Cali’s educational infrastructure is in extremely poor shape. More than half of the existing infrastructure requires interventions to even minimally serve Cali’s students and meet seismic resistance standards (Resilient Cali, 2017). The municipality lacks the data collection tools and management systems to develop plans and strategies to address the gaps in educational infrastructure and quality and the needs in real time. Public policies and strategies must therefore be accompanied by the development of tools, methodologies, and data collection and management systems to facilitate and support the following goals:

By implementing the proposed initiatives under this line, young graduates of public education institutions will gain the socio-emotional, academic and work skills needed to achieve a successful life, contribute to society, transform their environment, foster coexistence, and strive for dignity, fairness, and social equality. In addition, the city’s educational infrastructure will be upgraded and renovated, its useful life will be extended, and it will be prepared to function during and after an emergency.

1.1 STRENGTHEN THE RELEVANCE AND QUALITY OF THE EDUCATION.
1.2 CREATE A RESILIENT EDUCATIONAL INFRASTRUCTURE.
**My Community is my School** is a program that prioritises the most vulnerable territories in Cali, and the schools that need the most attention.

In its journey to educate and create better citizens, Boston has prioritized the expansion of a high-quality early childhood educational system as well as the improvement of programs that enable young people to develop their social and emotional well-being. High-quality pre-school and early childhood education is part of the holistic development young people need, but due to persistent gaps, not all of Boston’s children have access to such educational choices. A study conducted by Columbia University in New York City (Belfield et al., 2015) shows the importance of this kind of education and explains that, on average, for each dollar investment in socio-emotional learning programs, there is an eleven-dollar return.

In February 2018, Cali’s resilience team, with the support of the Rockefeller Foundation’s 100 Resilient Cities program, organized a collaborative laboratory (CoLab) to develop knowledge and best practices to address the resilience of the city’s educational infrastructure. Where proposals were developed to address the issues faced by Cali’s educational infrastructure, several of them were included under this Education for Opportunities line.
1.1 STRENGTHEN THE RELEVANCE AND QUALITY OF EDUCATION

1.1.1 PUBLIC POLICY ON EDUCATIONAL QUALITY

STATUS: Research
- START DATE: 2018
- TYPE: Public Policy

RESILIENCE QUALITIES:
- Robust
- Flexible

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
The Secretariat of Education will establish a public policy on educational quality for Cali that is aligned to national policies but addresses the local context and needs. The policy will aim to increase educational quality by creating guidelines for teacher training, by fostering relevant and regular community involvement, by improving school environments, and by implementing information and communication technologies that support the learning process. To design this policy, the Secretariat of Education must conduct an analysis of lessons learned and best practices with respect to integrated school management, school environments, learning process improvement, and the strengthening of relationships between communities and schools.

OWNER:
- Secretariat of Education

LOCAL ALLIES:
- Empresarios por la Educación
- Ministry of Education
- Universidad del Valle

INTERNATIONAL ALLIES:
-

INDICATORS:
1. Percentage of trained teachers.
2. Percentage of information and communication technologies included in classroom practices (institutional education project).
3. Percentage improvement in citizen participation in activities related to the public policy on educational quality.
4. Approved public policy.

RESILIENCE DIVIDEND:
Strengthens and enhances the robustness of the city’s school system; thus improving the holistic development of its youngest citizens.

1.1.2 METHODOLOGY TO ASSESS EDUCATIONAL QUALITY PROGRAMS AND PROJECTS

STATUS: Execution
- START DATE: 2018
- TYPE: Other

RESILIENCE QUALITIES:
- Robust
- Reflective

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
The Secretariat of Education will develop a quality assessment methodology for programs and projects in Cali’s public education institutions. This methodology will increase the number of stakeholders with a shared vision, and it will be endorsed by the various stakeholders involved in the quality assessment of educational projects.

OWNER:
- Secretariat of Education

LOCAL ALLIES:
- Ministry of Education
- Teachers and administrators of public education institutions
- NGOs working with public education institutions

INTERNATIONAL ALLIES:
- United Way through Dividendo por Colombia

INDICATORS:
1. Number of stakeholders involved in the development of the curricula assessment methodology.
2. Number of institutions using the assessment methodology.
3. Number of institutional improvement plans that include assessment feedback.

RESILIENCE DIVIDEND:
Organizes the collaboration of multiple stakeholders in the assessment of the curricula, which will enable the city to identify programs that should be replicated and programs that must be strengthened, thus improving the quality of the educational system.
1.1.3 Quality Management Platform for Cali’s Public Education Institutions

**Description:**

The Secretariat of Education will develop a simple and easy-to-use technology platform that includes educational quality data (i.e., information on curricula, improvement plans, teacher training) from public education institutions. This platform will communicate with the educational infrastructure management tool. To feed data into the technology platform, a tool will be required to collect information on each institution’s educational quality and the quality of their satellite schools.

This initiative will gather standardized data on every public educational institution in Cali into a technology platform through which critical educational quality data can be viewed by the public in real time. In addition, it will provide the main stakeholders in the educational system (MEN, SEM, IEO) access to exactly the same data on public education institutions, students, and teachers, so that everyone will be able to understand the specific needs of each public education institution and its satellite schools.

**Indicators:**

1. Quality management platform operating.
2. Number of institutions using the platform.
3. Satisfaction level of platform users.
4. Number of organizations using the database for decision-making.

**Resilience Dividend:**

Allows information-based, systematic decision-making and monitoring, tracking and planning for the long term, thus maintaining and developing the quality of the educational system.

**Status:**

- Execution

**Start Date:**

- 2018

**Type:**

- Other

**Resilience Qualities:**

- Robust
- Reflective

**Execution Time Horizon:**

- Short Term
- Medium Term
- Long Term

**Owner:**

- Secretariat of Education

**Local Allies:**

- Ministry of Education
- Public education institutions, teachers, and administrators
- NGOs working with public education institutions
- Universidad del Valle

**International Allies:**

- Inter-American Development Bank
- United Way through Dividendo por Colombia
### 1.2 CREATE RESILIENT EDUCATIONAL INFRASTRUCTURE

#### 1.2.1 MAINTENANCE PLAN FOR CALI’S PUBLIC EDUCATION INSTITUTIONS

**DESCRIPTION:**
As was done with the construction of new public education institutions and early childhood development centers, the Secretariat of Education will design a comprehensive maintenance plan to address the systematic organization and planning of the infrastructure of public education institutions in the short, medium and long term. This initiative will consolidate ideas proposed during the educatio-

**RESILIENCE QUALITIES:**
- Robust
- Integrated

**EXECUTION TIME HORIZON:**
- SHORT TERM
- MEDIUM TERM
- LONG TERM

**OWNER:**
Secretariat of Education.

**LOCAL ALLIES:**
- Ministry of Education
- Department of City Planning
- Department of Finance
- Department of Public Contracting (Special Administrative Unit to Manage Assets and Services)
- Immediate community
- Academic community

**INTERNATIONAL ALLIES:**
World Bank

**INDICATORS:**
1. Maintenance plan compliance.
2. Number of public schools with maintenance plans.
3. Criteria defined to prioritize investments in public education sites.

**RESILIENCE DIVIDEND:**
Organizes and plans the long-term sustainability of the Municipality’s educational infrastructure, thus ensuring the physical well-being of young people and the stability and usability of infrastructure during natural disasters.

#### 1.2.2 STRATEGY TO INCREASE COVERAGE OF CALI’S SCHOOLS

**DESCRIPTION:**
The Secretariat of Education will design a strategy to increase coverage of Cali’s Schools that will support the increase in students per site until a site reaches its coverage cap. The strategy must result in an increase in the number of children actually attending school and will use the grant from the Ministry of education to increase the number of teachers. In addition, it must increase the number of vulnerable children with access to education and reduce the NEET population in Cali.

**RESILIENCE QUALITIES:**
- Robust
- Inclusive

**EXECUTION TIME HORIZON:**
- SHORT TERM
- MEDIUM TERM
- LONG TERM

**OWNER:**
Secretariat of Education.

**LOCAL ALLIES:**
- NGOs
- Ministry of education
- Community Action Boards
- Secretariat of Territorial Development and Citizen Participation

**INTERNATIONAL ALLIES:**
- World Bank

**INDICATORS:**
1. Number of teachers hired.
2. Number of Schools with an investment strategy.
3. Growth or reduction of the NEET (youth with no education, employment or training) population in Cali.

**RESILIENCE DIVIDEND:**
Promotes educational quality initiatives that enable more young people to take part in the educational system, thus reducing the illiteracy rates and the number of young people who feel excluded by society.
1.2 CREATE RESILIENT EDUCATIONAL INFRASTRUCTURE

1.2.2 STRATEGY TO INCREASE COVERAGE OF CALI’S SCHOOLS

1.2.2.1 CONSTRUCTION PLAN FOR NEW SCHOOL SITES TO EXPAND PUBLIC EDUCATION COVERAGE

### RESILIENCE QUALITIES:
- Integrated
- Inclusive

### EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

### DESCRIPTION:
The Secretariat of Education will develop a construction plan for new public education institutions in Cali to increase the educational capacity of the city. The plan will promote the building of schools featuring the resilience qualities defined by the 100RC CoLab (adaptive, integrated, environmentally friendly, among others), and will be based on each region’s needs, land availability, and population growth. The plan seeks to increase the cost-effectiveness of the investment by reducing the cost per child through short, medium, and long term planning. In addition, it will strengthen the city’s capacity to anticipate needs, to find equitable solutions to the limited amount of public space in vulnerable neighborhoods, and to leverage investments in the medium and long term.

### LOCAL ALLIES:
- Ministry of Education.
- Colombian Infrastructure Association.
- Department of City Planning.
- Department of Finance.

### INTERNATIONAL ALLIES:
- World Bank.

### INDICATORS:
1. Cost of site per child.
2. Number of new and enhanced public education sites.
3. Percentage of plan compliance.

### RESILIENCE DIVIDEND:
Coordinates the construction and ensures the quality of new public education sites built to increase young people’s access to the public education system, thus reducing the number of youth who feel alienated from society.

### OWNER:
Secretariat of Education.

### LOCAL ALLIES:
- Ministry of Education.
- Secretariat of Risk Management for Emergencies and Disasters.
- Department of City Planning.
- Department of Finance.

### INTERNATIONAL ALLIES:
- World Bank.

### RESILIENCE QUALITIES:
- Robust
- Redundant

### EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

### INDICATORS:
1. Percentage of seismic-resistant public education sites that comply with NSR-10 standards.
2. Number of people in the academic community that are trained in seismic-resistant building techniques.
3. Number of people exposed to risk management practices.

### RESILIENCE DIVIDEND:
Strengthens the educational infrastructure to protect the student community, to provide aid during times of crisis, and to support the city’s recovery after a crisis.

### STATUS:
Planning

### START DATE:
2018

### TYPE:
Plan/Strategy/Program

### DESCRIPTION:
The Secretariat of Education will develop a construction plan for new public education institutions in Cali to increase the educational capacity of the city. The plan will promote the building of schools featuring the resilience qualities defined by the 100RC CoLab (adaptive, integrated, environmentally friendly, among others), and will be based on each region’s needs, land availability, and population growth. The plan seeks to increase the cost-effectiveness of the investment by reducing the cost per child through short, medium, and long term planning. In addition, it will strengthen the city’s capacity to anticipate needs, to find equitable solutions to the limited amount of public space in vulnerable neighborhoods, and to leverage investments in the medium and long term.

In addition, the Secretariat of Education will promote a proposal from the 100RC CoLab to raise awareness in the academic community and public school community of risk management practices, will protect sites adjacent to an educational institution that could be impacted by its collapse, and will train the academic community on seismic-resistant building techniques. In implementing this initiative, the Secretariat of Education seeks to strengthen the resilience of Cali’s public education institutions in the event of an earthquake and to protect students, especially those who are most vulnerable.
1.2 CREATE RESILIENT EDUCATIONAL INFRASTRUCTURE

1.2.4 RETROFIT OF EXISTING PUBLIC EDUCATIONAL SITES TO MEET THE SINGLE SHIFT GOAL

DESCRIPTION:
The Secretariat of Education will build and retrofit the educational infrastructure of Cali so that it can accommodate one shift of classes at least seven hours long instead of two shorter shifts, which is the situation in a significant number of schools in Colombia. This initiative seeks to strengthen the city’s educational quality by extending the number of hours in a school day, making a single shift the standard in all schools. To achieve this purpose, the Secretariat of Education must plan the use of physical and human resources so that Cali’s educational system can be migrated to a single shift and leverage national resources (50% of the investment needed) by this strategic investment in the implementation of the single shift.

INDICATORS:
1. Percentage of refurbished sites that can implement a single-shift school day.
2. Leveraging of resources from the National Government to refurbish Cali’s public education sites.

RESILIENCE DIVIDEND:
Structures the intervention needed to expand the educational system, thereby reducing the illiteracy rate and the number of youth excluded by society.

OWNER:
Secretariat of Education.

LOCAL ALLIES:
• Ministry of Education.
• Colombian Infrastructure Association.

INTERNATIONAL ALLIES:
-
1.2 CREATE RESILIENT EDUCATIONAL INFRASTRUCTURE

1.2.5 SERVICE UNITS (UDS) CONSTRUCTION PILOT PROJECT TO EXPAND COVERAGE OF EARLY CHILDHOOD EDUCATION

**DESCRIPTION:**

The Secretariat of Social Welfare will develop and implement a pilot project to expand early childhood education by constructing newer, more cost-effective, types of service units. The goal is to achieve construction and maintenance costs that are based on Cali’s economic reality and that will therefore be feasible in the long term. In general, this initiative seeks to design a scalable solution that will expand early childhood education in Cali. To minimize the cost of the service unit per child, the Secretariat must find an innovative way to address the limited availability of public spaces in the city.

**RESILIENCE QUALITIES:**

- Robust
- Inclusive

**EXECUTION TIME HORIZON:**

- SHORT TERM
- MEDIUM TERM
- LONG TERM

**INDICATORS:**

1. Seismic-resistance features of the service units.
2. Construction cost of the service units per student.
3. Maintenance per year cost of each service unit.
4. Percentage of benefited population under 6 years old.

**RESILIENCE DIVIDEND:**

Expands early childhood education in the city, thus enabling more women to work and ensuring that the youngest children receive quality care.

**LOCAL ALLIES:**

- Colombian Family Welfare Institute
- Community Mothers’ Network
- Secretariat of Education
- NGOs

**INTERNATIONAL ALLIES:**

- World Bank

**OWNER:**

Secretariat of Social Welfare

**STATUS:**

Execution

**START DATE:**

2018

**TYPE:**

Project

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1.2 CREATE RESILIENT EDUCATIONAL INFRASTRUCTURE

1.2.6 INFRASTRUCTURE PHYSICAL ASSESSMENT SYSTEM FOR CALI’S PUBLIC EDUCATIONAL INSTITUTIONS

**DESCRIPTION:**

The Secretariat of Education will create and implement a regularly scheduled, standardized assessment of Cali’s public educational infrastructure that will supplement the SICIED (the Educational Infrastructure Information System of the National Ministry of Education). To enable the Secretariat to manage the educational infrastructure, the assessment system will require a simple technology platform that is easy to use and that includes the main information on public education institutions, on the progress of the retrofit plans for implementation of the single shift in schools, and on the application of the NS-10 seismic resistance standards. In addition to the technology platform, the Secretariat will also require a systematic assessment tool or methodology to determine the general status and structural vulnerability of the buildings on public education sites. This tool would be based on the standards for existing buildings set out in the Colombian Regulation for Seismic Resistant Construction (NSR-10).

The assessment system will support financial planning for the maintenance, retrofit and reinforcement of educational infrastructure. By providing up-to-date, standardized information on the status of Cali’s public educational infrastructure, the system will also enhance understanding of the degree to which that infrastructure is resilient.

**RESILIENCE QUALITIES:**

- Robust
- Reflective

**EXECUTION TIME HORIZON:**

- SHORT TERM
- MEDIUM TERM
- LONG TERM

**INDICATORS:**

1. Assessment system in operation.
2. Number of organizations using the system’s information for decision-making.
3. Number of public education sites reporting information to the system.

**RESILIENCE DIVIDEND:**

Facilitates decision-making, leads to better management of educational infrastructure, thus supporting the services the infrastructure can provide during and after a crisis.

**LOCAL ALLIES:**

- Ministry of Education
- Teachers and administrators of public education institutions
- Department of Education
- NGOs
- Educational institutions
- Regulatory agencies
- Students
- Parents

**INTERNATIONAL ALLIES:**

- World Bank

**OWNER:**

Secretariat of Education

**STATUS:**

Planning

**START DATE:**

2018

**TYPE:**

Other
A Cali where diversity is respected and acknowledged, where conflicts are resolved without violence, and where young people have opportunities that keep them from crime is a city for life.

RESILIENT CALI | LINE TWO: COEXISTENCE
HEAT MAP OF HOMICIDES

2017
ANNUAL RATE: 1,242 HOMICIDES

2018
STATISTICS TO MARCH: 311 HOMICIDES

CONVENTIONS
- Cauca River
- Rivers
- Neighborhoods
- TIO Territories
- Urban Perimeter
- Municipalities
- Area of planned city growth
- Less density of Homicides
- More density of Homicides

Source: Social Observatory Municipal Government

7 Source: Social Observatory Municipal Government
“In recent years, violence rates - especially homicide rates - have noticeably dropped in the country and its main urban centers.”

Following the country’s trend, Cali has shown an important reduction in its homicide rates. However, the rates are still significantly higher than the national average and those of other major cities in the country.

Despite the efforts the city has made through the various programs of the Municipal Government, Cali still has a long way to go to significantly reduce all forms of urban violence (e.g., organized crime, gangs, intolerance, and domestic violence). Cali requires an approach based on peace, security, and civic culture. In this approach, people are the stars in their own transformation, and their common aspirations for peaceful coexistence and security require the commitment, sense of ownership, and shared responsibility of all the city’s residents.

The Homicide Rate in 2017 was 51 people for every 100,000 inhabitants while the national rate was 23.9.

High rates of violence, much of it involving young people, continue to occur in many areas of the city. To address this, the following initiatives will be pursued:

2.1 Design interventions that will build peace and prevent violence.

2.2 Strengthen initiatives that foster coexistence and support diversity.

The initiatives presented in this line aim to reduce homicide rates and other types of violence, and to sustain these reductions over time. Interventions that go beyond policing are therefore proposed. This is why Cali’s resilience team has been collaborating with the Secretariat of Peace and Civic Culture, the Subsecretariat of Territories of Inclusion and Opportunities, the Secretariat of Security and Justice, the Secretariat of Culture, and the Secretariat of Sports and Recreation to develop a policy that will build a Cali where all people coexist in peace and security.

2017, Lowest Homicide Rate in the Last 25 Years

In November 2017, the first Living Lab on violence prevention was conducted in Cali. More than 30 national and international experts as well as public officials shared their experiences and exchanged knowledge. This forum and its methodology enabled the participants to reflect on the challenge and propose joint solutions to problems identified by the community members who were interviewed and shared their direct experience in the territories.

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LIVING LAB CALI PROGRESA

In November 2017, the first Living Lab on violence prevention was conducted in Cali. More than 30 national and international experts as well as public officials shared their experiences and exchanged knowledge. This forum and its methodology enabled the participants to reflect on the challenge and propose joint solutions to problems identified by the community members who were interviewed and shared their direct experience in the territories.

CITIES THAT INSPIRE US

MEDELLÍN COLOMBIA

CULTURE, YOUNG CITIZENS AND COEXISTENCE

Sports and Coexistence

To strengthen its vision for peace and advance towards true reconciliation in society, Medellín has established direct dialogue with communities and stakeholders through a project that considers the voices of victims, State agents and people undergoing reintegrations.

Sports and Coexistence: In 2011, Medellín created Community Sport Schools, a program to foster civic pride through sports, and to help shape integrated human beings empowered by a belief in civic principles such as peaceful coexistence, civic culture, and non-violence. This program is targeted to men and women between 6 and 60 years old, and it is organized by age groups.
2.1 DESIGN INTERVENTIONS THAT WILL BUILD PEACE AND PREVENT VIOLENCE

2.1.1 SOCIAL LABORATORIES FOR BUILDING PEACE

**DESCRIPTION:**

The Secretariat of Peace and Civic Culture will develop violence prevention programs and promote a culture of peace through education and social and community training for different groups (girls, boys, youth, adults, and community leaders). Through innovative in-field training, such as La paz es mi cuento, Yo no parí para la muerte, Sumar paz - restando violencias, Fortalecimiento de cultura de paz, and Graficalia, the Secretariat seeks to empower citizens to manage conflicts and transform them into opportunities for social change.

**INDICATORS:**

1. Numbers of neighborhoods actively involved in violence prevention projects.
2. Number of participants in violence prevention activities.

**RESILIENCE QUALITIES:**

- Reflective
- Inclusive

**EXECUTION TIME HORIZON:**

- SHORT TERM
- MEDIUM TERM
- LONG TERM

**OWNER:**

Secretariat of Peace and Civic Culture.

**LOCAL ALLIES:**

- Secretariat of Culture.
- Secretariat of Sports and Recreation.
- Community.

**INTERNATIONAL ALLIES:**

- 

**RESILIENCE DIVIDEND:**

Uses innovative methodologies to foster socio-emotional development and to build a society of coexistence and security, thus enabling people who live in the city to focus on realizing their dreams rather than on their safety.

**STATUS:**

Execution

**START DATE:**

2018

**TYPE:**

Plan/Strategy/Program

2.1.2 PEACE AND CIVIC CULTURE OBSERVATORY

**DESCRIPTION:**

The Secretariat of Peace and Civic Culture will define, implement, and validate a framework for measuring peace and civic culture that takes into account the different urban areas of the city and region, population, and social development. The Peace and Civic Culture Observatory will uncover, analyze and document community practices that promote peace and coexistence so that they can be used to inform the development of public policies on human rights and civic culture.

**INDICATORS:**

1. Peace observatory in operation (producing periodic information for decision-making).
2. Percentage of geo-referenced data collected.

**RESILIENCE QUALITIES:**

- Reflective
- Integrated

**EXECUTION TIME HORIZON:**

- SHORT TERM
- MEDIUM TERM
- LONG TERM

**OWNER:**

Secretariat of Peace and Civic Culture.

**LOCAL ALLIES:**

- Universities.
- Police Department.
- Attorney General’s Office.
- CTI.
- Forensic Medicine Agency.
- NGOs working on coexistence issues.

**INTERNATIONAL ALLIES:**

- 

**RESILIENCE DIVIDEND:**

Builds peace and coexistence in Cali by supporting community initiatives, thus creating a more united and friendly society.
2.1 DESIGN INTERVENTIONS THAT WILL BUILD PEACE AND PREVENT VIOLENCE

2.1.3 VIOLENCE PREVENTION STRATEGY

DESCRIPTION:
The TIO program will establish a strategy that allows various entities involved in violence prevention to design effective government interventions. The offices of the Municipal Government will work together to implement initiatives leading to violence prevention and reduction.

RESILIENCE QUALITIES:
- Integrated
- Robust

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

OWNER:
Subsecretariat of Territories of Inclusion and Opportunities.

LOCAL ALLIES:
- Secretariat of Peace and Civic Culture.
- Secretariat of Public Health.
- Secretariat of Security and Justice.
- Secretariat of Education.
- Secretariat of Sports and Recreation.

INTERNATIONAL ALLIES:
- World Bank.

INDICATORS:
1. Number of Municipal Government offices involved in violence prevention.
2. Number of public policy decisions on violence reduction that are made in a strategic manner.

RESILIENCE DIVIDEND:
Brings together executing entities to maximize the impact of violence reduction initiatives, thus enabling residents to focus on realizing their dreams rather than on their safety.

2.1.3.1 COEXISTENCE AND VIOLENCE PREVENTION PILOT

DESCRIPTION:
The TIO will develop and pilot a strategic model of territorial intervention to sustainably reduce urban violence through an array of initiatives developed by the agencies involved. These initiatives will focus on young people, families, and communities. The model will define roles, timelines, and areas of action and will require regular communication and collaboration among all the different organizations participating in the pilot project.

RESILIENCE QUALITIES:
- Reflective

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

OWNER:
Subsecretariat of Territories of Inclusion and Opportunities.

LOCAL ALLIES:
- Secretariat of Peace and Civic Culture.
- Secretariat of Public Health.
- Secretariat of Security and Justice.
- Secretariat of Education.
- Secretariat of Sports and Recreation.

INTERNATIONAL ALLIES:
- World Bank.

INDICATORS:
1. Number of initiatives developed.
2. Number of people involved in more than one initiative.

RESILIENCE DIVIDEND:
Fosters security and coexistence, thus facilitating economic growth in areas that endured instability caused by urban violence.
2.1 DESIGN INTERVENTIONS THAT WILL BUILD PEACE AND PREVENT VIOLENCE

2.1.4 CIVIC CULTURE PUBLIC POLICY

**RESILIENCE QUALITIES:**
- Inclusive
- Robust

**EXECUTION TIME HORIZON:**
- SHORT TERM
- MEDIUM TERM
- LONG TERM

**STATUS:**
- Planning

**START DATE:**
- 2018

**TYPE:**
- Public policy

**DESCRIPTION:**

The Secretariat of Peace and Civic Culture will design a public policy on civic culture to foster a sense of belonging in Cali and to promote intercultural coexistence by expanding the citizens’ understanding of the rights and responsibilities of coexistence. Based on this policy, the Municipal Government will have concrete tools to promote civic culture in the city.

**OWNER:**
- Secretariat of Peace and Civic Culture

**LOCAL ALLIES:**
- Corpovisionarios.
- Council on Civic Culture.
- Cali’s Resilience Team.

**INTERNATIONAL ALLIES:**
- 

**INDICATORS:**
1. Approved public policy.
2. Investment made by each entity in implementing the public policy.

**RESILIENCE DIVIDEND:**

Improves the sense of belonging and fosters coexistence in Cali, thus increasing the number of areas in the city where residents can feel comfortable and safe.
2.2 STRENGTHEN INITIATIVES THAT FOSTER COEXISTENCE AND SUPPORT DIVERSITY

2.2.1 AMBASSADORS OF CIVIC CULTURE FOR PEACE

RESILIENCE QUALITIES:
- Inclusive
- Resourceful

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
The Secretariat of Peace and Civic Culture will strengthen the Ambassadors of Civic Culture for Peace program and promote its improvement and sustainability over time through technical, financial, and communication alliances.

Ambassadors of Civic Culture for Peace is a comprehensive social intervention program for demobilized soldiers, victims of armed conflict, young people at high risk, and residents of communities torn by violence. The Ambassadors are trained in promoting and implementing initiatives that support civic culture in the city.

OWNER:
Secretariat of Peace and Civic Culture.

LOCAL ALLIES:
- Co-reconstruccion
- National Agency for Reincorporation and Normalization (ARN)
- Department of Environmental Management (DAGEMA)
- Secretariat of Economic Development
- CUSO International

INTERNATIONAL ALLIES:
- U.S. Agency for International Development (USAID)
- International Organization for Migrants

INDICATORS:
1. Annual program budget
2. Number of ambassadors entering the program
3. Percentage of ambassadors completing the program
4. Number of external institutions collaborating with the program

RESILIENCE DIVIDEND:
Develops a civic culture of respect for all citizens, thus reducing the need for police agencies and other regulatory organizations.

2.2 STRENGTHEN INITIATIVES THAT FOSTER COEXISTENCE AND SUPPORT DIVERSITY

2.2.1 AMBASSADORS OF CIVIC CULTURE FOR PEACE

RESILIENCE QUALITIES:
- Resourceful
- Integrated

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
Call’s resilience team will train members of Civic Culture for Peace, environmental and sports Ambassadors program in personal resilience. The training will help them become more aware of the shocks and stresses in their environment, so they can implement initiatives for change. This training will supplement training in respect, teamwork, dialogue, and peaceful resolution of conflicts, as well as the use of sports as an educational tool.

OWNER:
Call’s resilience team.

LOCAL ALLIES:
- Secretariat of Peace and Civic Culture
- Secretariat of Sports and Recreation
- Department of Environmental Management

INTERNATIONAL ALLIES:
- AECOM

INDICATORS:
1. Number of trained Ambassadors
2. Percentage of people who have graduated from the programs
3. Number of solutions developed to increase the personal resilience of the Ambassadors

RESILIENCE DIVIDEND:
Develops the personal resilience of members of vulnerable communities, thus increasing their ability to face and survive poverty, violence and other high-risk situations.
2.2 STRENGTHEN INITIATIVES THAT FOSTER COEXISTENCE AND SUPPORT DIVERSITY

2.2.2 COMPREHENSIVE GANG TREATMENT PROGRAM / JÓVENES SIN FRONTERAS (TIPS)

**DESCRIPTION:**

The Secretariat of Security and Justice will strengthen the Comprehensive Gang Treatment Program (TIPS) to ensure its success and sustainability over time. TIPS works with young gang members (those who have not joined organized crime groups) to rebuild their lives and make a commitment to nonviolence. The program offers them opportunities for personal development and provides psychosocial and active support so that they can transform the direction of their lives.

**INDICATORS:**

1. Percentage of young people completing the program.
2. Annual program budget.
3. Number of young gang members entering the program.
4. Number of external institutions collaborating with the program.

**RESILIENCE QUALITIES:**

- Inclusive
- Resourceful

**EXECUTION TIME HORIZON:**

- SHORT TERM
- MEDIUM TERM
- LONG TERM

**OWNER:**

Secretariat of Security and Justice

**LOCAL ALLIES:**

- Metropolitan Police.
- Cisalva-Univalle.
- Subsecretariat of Territories of Inclusion and Opportunities

**INTERNATIONAL ALLIES:**

- 

**RESILIENCE DIVIDEND:**

Reduces the sense of insecurity in Cali, thus facilitating economic growth in areas that have endured instability caused by urban violence.
2.2 STRENGTHEN INITIATIVES THAT FOSTER COEXISTENCE AND SUPPORT DIVERSITY

2.2.3 VÉRTIGO AND DEPORVIDA: PROGRAMS USING SPORTS AS AN EDUCATIONAL TOOL

DESCRIPTION:
The Secretariat of Sports and Recreation will support the execution of programs that use sports as an educational tool to help children and young people develop social-emotional skills and teamwork, avoid violence, and live healthy, peaceful lives. Vértigo focuses on extreme sports, while Deporvida focuses on team sports.

INDICATORS:
1. Annual program budget.
2. Number of external institutions collaborating with the program.
3. Number of initiatives, with participants organized by age group and gender.

RESILIENCE QUALITIES:

EXECUTION TIME HORIZON:

RESILIENCE DIVIDEND:
Helps young people to become good citizens, thus reducing the number of people who pursue a life of crime.

OWNER:
Secretariat of Sports and Recreation.

LOCAL ALLIES:
• Subsecretariat of Territories of Inclusion and Opportunities.
• Secretariat of Peace and Civic Culture.
• Community.
• Community Action Boards.

INTERNATIONAL ALLIES:
• FC Barcelona Foundation.
• Inter-American Development Bank.

2.2.3.1 FUTBOLNET CALI

DESCRIPTION:
The Secretariat of Sports and Recreation will support the implementation of the FutbolNet methodology, which uses sports as a tool to educate the children and young people of Cali who are part of the Deporvida program and will exchange knowledge with the Vértigo program and the Ambassadors of Civic Culture for Peace. The Barcelona Foundation will ensure the monitoring, evaluation, and certification of Cali’s implementation of the FutbolNet methodology.

INDICATORS:
1. Number of trained monitors in FutbolNet methodology.
2. Number of interventions using the FutbolNet methodology.

RESILIENCE QUALITIES:

EXECUTION TIME HORIZON:

RESILIENCE DIVIDEND:
Strengthens the programs for violence prevention through sports, thus increasing security and stability in Cali’s most vulnerable areas.

OWNER:
Secretariat of Sports and Recreation.

LOCAL ALLIES:
• Resilient Cali.
• Secretariat of Peace and Civic Culture.

INTERNATIONAL ALLIES:
• FC Barcelona Foundation.
• Inter-American Development Bank.
A Cali with multiple sustainable, reliable and safe transportation options is a city that is prepared for development.
In the last 10 years, the number of cars in Cali has doubled and the number of motorcycles has tripled. In the last 10 years, the number of cars in Cali has doubled and the number of motorcycles has tripled (Department of City Planning, 2016a). Traffic jams in the city occur more frequently every day and this situation will only worsen if there is no commitment to developing alternative modes of transportation to Cali’s public transportation system, Masivo integrado de Occidente (MIO). Until recently, SITM – MIO (who is managed by a decentralized entity called Metro Cali S.A.) was facing financial and legal challenges that were hindering its success and development. But even without these factors, the system requires interventions to achieve full sustainability. In addition, the current situation is exacerbated by the lack of infrastructure to support alternative ways of getting around the city. In light of all this, the city is pursuing the following goals:

3.1 ACHIEVE THE SUSTAINABILITY OF THE PUBLIC TRANSPORTATION SYSTEM.

3.2 STRENGTHEN THE SITM-MIO NETWORK AND ITS SUPPLEMENTARY SYSTEMS.
MIO BRT TRUNK ROUTES MAP

- **MIO BRT Trunk Route**
  - Existing: 154.99 km²
  - Planned: 64.46 km²
  - TOTAL: 219.45 km²

- **Cauca River**
- **Rivers**
- **Neighborhoods**
- **TIO Territories**
- **Urban Perimeter**
- **Municipalities**
- **Area for planned city growth**

BICYCLE INFRASTRUCTURE MAP

- **Bicycle Infrastructure**
  - Existing: 124.05 km²
  - Planned: 267.5 km²
  - TOTAL: 562.82 km²

- **Cauca River**
- **Rivers**
- **Neighborhoods**
- **TIO Territories**
- **Urban Perimeter**
- **Municipalities**
- **Area for planned city growth**
By implementing the initiatives proposed under this line, Cali seeks to develop a range of transportation modalities that can be added and integrated into the SITM-MIO, including bicycle lanes, a commuter train, and better-quality platforms, to ensure SITM-MIO’s long-term success and sustainability.

CITIES THAT INSPIRE US

SANTIAGO DE CHILE

MAXIMIZING THE USE OF EXISTING TRACKS

COMMUTER TRAIN NETWORK - To facilitate the commutes of residents of the suburbs of Santiago de Chile to and from the city, the region’s commuter train services are being strengthened by maximizing the use of the existing tracks, increasing the frequency of trains, and offering intermediate intermodal hubs at the stations. These strategies are the city’s alternative to building more highways and roads, which would only increase the use of private cars and encourage low-density urban sprawl with more people who would be highly dependent on the automobile.

SANTIAGO PEDALEABLE PLAN - To developing an alternative means of transportation, Santiago de Chile created the Santiago Pedaleable (Bicycle-Friendly Santiago) plan, which seeks to boost the use of bicycles as a sustainable, clean means of transportation through investments, programs, projects, and multidisciplinary workshops throughout the Metropolitan Region.

Cali seeks to develop a range of transportation modalities that can be added and integrated into the SITM-MIO, including bicycle lanes, a commuter train, and better-quality platforms.
3.1 Achieve the Sustainability of the Public Transportation System

### 3.1.1 Institutional Strengthening of Municipal Entities Working on Mobility

**Description:**
The stakeholders will strengthen the municipal entities working with mobility issues by developing human capital and providing computer tools for advanced analysis. In addition, stakeholders propose to increase the number of staff with undergraduate and graduate degrees and increase inter-institutional cooperation by creating collaborative spaces among agencies and joint responsibility for programs and projects. Stronger institutions will be more effective and better prepared to achieve their goals and objectives.

**Resilience Qualities:**
- Robust
- Integrated

**Execution Time Horizon:**
- Short Term
- Medium Term
- Long Term

**Indicators:**
1. Number of goals accomplished from Metro Cali’s Strategic Plan.
2. Number of job descriptions developed (undergraduate and postgraduate).
3. Number of professionals hired (undergraduate and postgraduate) to fill the newly established positions.
4. Annual investment in computer tools for advanced analysis.

**Resilience Dividend:**
Improves the operations of municipal entities working on mobility issues, thus improving Cali’s public transportation system and the current mobility issues.

**Local Allies:**
- Secretariat of Infrastructure.

**International Allies:**
- 

**Owner:**
- Department of City Planning, Secretariat of Mobility, Secretariat of Infrastructure, Metro Cali S.A.

**Status:**
- Planning
- Start Date: 2018
- Type: Project

### 3.1.1 Implementation of the Sustainable Mobility Observatory

**Description:**
The Department of City Planning will create the Sustainable Mobility Observatory (MOVIS), which will have primary responsibility for monitoring and assessing Cali’s Comprehensive Plan for Urban Mobility (PIMU). The general objective of MOVIS is to monitor, analyze, and assess the population’s needs and desires with respect to different modes of transportation and the impact of public and private sector policies, strategies, programs, and projects. MOVIS will develop projects to address mobility trends in the city.

**Resilience Qualities:**
- Reflective
- Resourceful

**Execution Time Horizon:**
- Short Term
- Medium Term
- Long Term

**Indicators:**
1. Number of completed research projects.
2. Number of ongoing research projects.
3. MOVIS in operation.

**Resilience Dividend:**
Identifies mobility policies, strategies, programs, and projects that work and those that need to be improved, thus optimizing the quality of the mobility system and the quality of life in Cali.

**Owner:**
- Department of City Planning.

**Local Allies:**
- Metro Cali S.A.
- Secretariat of Mobility.

**International Allies:**
-
Institutional Strengthening of Municipal Entities Working on Mobility

3.1.1.2 METRO CALI S.A. PROJECT MANAGEMENT TEAM

**RESILIENCE QUALITIES:**
- Reflective
- Integrated

**EXECUTION TIME HORIZON:**
- Short Term
- Medium Term
- Long Term

**DESCRIPTION:**
Metro Cali S.A. will create a project management team to manage and monitor the execution of Metro Cali’s Strategic Plan. This multidisciplinary team will include representatives from all the entities involved in the plan’s execution. Metro Cali S.A. aims to improve the quality of its work and enhance its ability to execute the strategic plan. In addition, with the help of EY, they will define a strategy to improve inter-institutional coordination and development of the Strategic Plan’s projects from 2017 through 2022.

**INDICATORS:**
1. Percentage of projects in compliance with the timeline.
2. Percentage of projects not incurring additional costs.
3. Percentage of the Metro Cali S.A. Strategic Plan that has been executed.
4. Number of amendments to the Metro Cali S.A. project timeline.

**RESILIENCE DIVIDEND:**
Supports the successful execution of Metro Cali S.A. Strategic Plan, thus improving the quality of SITP-MIO’s service and reducing commute times for Cali’s most vulnerable communities.

**OWNER:**
Metro Cali S.A.

**LOCAL ALLIES:**
• Cali’s resilience team.

**INTERNATIONAL ALLIES:**
• EY.

**EXECUTION TIME HORIZON:**
- Short Term
- Medium Term
- Long Term

**RESILIENCE QUALITIES:**
- Flexible
- Inclusive

**DESCRIPTION:**
Metro Cali S.A. will prepare the technical, legal and financial framework for implementing temporary public transportation subscriptions and create a zone rate policy that will encourage user loyalty. This effort will require comprehensive studies to lay the groundwork for implementation of the subscriptions and zone rates. Subscription to public transportation is proven with a personal, non-transferable travel smart card that allows (1) a specified number of trips or (2) an unlimited number of trips in a specified time period. In the future, the public transportation system will cover the entire metropolitan area as well as other regions, so Cali must also develop and implement a zone-based travel rate policy based on concentric circles.

**INDICATORS:**
1. Completed framework for temporary subscriptions.
2. Number of subscriptions used/distributed.

**RESILIENCE DIVIDEND:**
Reduces short-distance travel rates and the financial barriers people face when traveling within the same zone.

**OWNER:**
Metro Cali S.A.

**LOCAL ALLIES:**
- The southwest regional transportation authority yet to be created.

**INTERNATIONAL ALLIES:**
-
3.1 ACHIEVE THE SUSTAINABILITY OF THE PUBLIC TRANSPORTATION SYSTEM

3.1.3 OPERATIONAL FRAMEWORK OF THE SITP-MIO MASS TRANSIT SYSTEM

STATUS:
Planning

START DATE:
2018

TYPE:
Plan/Strategy/Program

RESILIENCE QUALITIES:
Reflective  Flexible

EXECUTION TIME HORIZON:
SHORT TERM  MEDIUM TERM  LONG TERM

DESCRIPTION:
Metro Cali, S.A. will work to improve the system’s performance and the level of user satisfaction with the redesign of SITM-MIO’s operations and service. The redesign of SITM-MIO’s operational framework is based on the results of technical studies contracted by Metro Cali S.A. with Steer Davies Gleave in 2015, among others. The redesign will focus on reducing the trunk feeders by adding inter-zone direct routes through pre-trunk corridors as well as by reducing the number and time length of transfers required. It will also involve an increase in the fleet initially estimated, both in number and type.

OWNER:
Metro Cali S.A.

LOCAL ALLIES:
-

INTERNATIONAL ALLIES:
-

INDICATORS:
1. Average number of transfers required per journey.
2. Average waiting time per transfer.
3. Number of redesigned routes.
4. Approval of the operational and service redesign.

RESILIENCE DIVIDEND:
Improves SITM-MIO’s service quality, thus increasing the time that Cali residents may spend on their health, their studies, and work.
3.2 STRENGTHEN THE SITM-MIO NETWORK AND ITS SUPPLEMENTARY SYSTEMS

3.2.1 IMPROVEMENT AND RENOVATION OF BICYCLE INFRASTRUCTURE

DESCRIPTION:
The stakeholders will provide the city with a 272.65-mile (438.8-kilometer) bicycle network for regional accessibility. The network will include bicycle lanes (located in the roadway), bicycle paths (located outside of the roadway) and bicycle-bus lanes (shared reserved lanes of the mass transit system). At present, the network is just 19.07 miles (30.7 kilometers), and the contract is for construction of a network that is 14 times larger. The bicycle network will facilitate trips using one or more modes of transportation (bicycle/public transportation) for mandatory trips (trips related to work or school) as well as non-mandatory trips (trips related to shopping, services or leisure).

OWNER:
- Secretariat of Infrastructure
- Secretariat of Mobility
- Metro Cali S.A.

LOCAL ALLIES:
- Department of City Planning
- Secretariat of Mobility
- Secretariat of Infrastructure
- Regional Government of Valle del Cauca
- Foundation for the Integral Development of the Colombian Pacific Region

INTERNATIONAL ALLIES:
- 

INDICATORS:
1. Kilometers of bicycle lanes built.

RESILIENCE QUALITIES:
- Integrated
- Inclusive

EXECUTION TIME HORIZON:
- Short Term
- Medium Term
- Long Term

RESILIENCE DIVIDEND:
It facilitates the use of bicycles as a means of transportation, thus reducing pollution caused by motor vehicles.

3.2.2 URBAN-METROPOLITAN RAILROAD SYSTEM

DESCRIPTION:
The entity to be created will contribute to the development of a multimodal metropolitan public transportation system with operational, physical and fee integration by including the railroad system. The system has the potential to gradually increase traveler capacity while reducing the urban pollution caused by the particulate emissions and fuel consumption of motor vehicle traffic. The system will involve mixed use of the railroad tracks, and passenger and freight trains will be run on different schedules.

OWNER:
Management entity created to manage the system

LOCAL ALLIES:
- Department of City Planning
- Secretariat of Mobility
- Metro Cali S.A.
- Secretariat of Infrastructure
- Regional Government of Valle del Cauca
- Foundation for the Integral Development of the Colombian Pacific Region

INTERNATIONAL ALLIES:
- 

INDICATORS:
1. Number of urban-metropolitan railroad system users.
2. Miles (kilometers) of railroad tracks built.
3. Average travel time between Cali and neighboring municipalities (those connected by the railroad system).

RESILIENCE QUALITIES:
- Integrated
- Resourceful
- Inclusive

EXECUTION TIME HORIZON:
- Short Term
- Medium Term
- Long Term

RESILIENCE DIVIDEND:
Facilitates traveling between Cali and adjacent municipalities, thus strengthening economic ties between the cities.
3.2 STRENGTHEN THE SITM-MIO NETWORK AND ITS SUPPLEMENTARY SYSTEMS

3.2.3 UNIVERSAL ACCESSIBILITY TO SITM-MIO FOR PEDESTRIANS AND PEOPLE WITH REDUCED MOBILITY

DESCRIPTION:
The stakeholders will work to guarantee universal accessibility (physical accessibility and accessible communications) for people with disabilities throughout the mass transit system of SITM-MIO. This will be accomplished gradually and will include adapting various SITM-MIO features, such as ramps in stations, elevators in high-floor vehicles, and visual and sound communication signals in stations and system vehicles.

RESILIENCE QUALITIES:
- Inclusive
- Robust

EXECUTION TIME HORIZON:
- Short Term
- Medium Term
- Long Term

INDICATORS:
1. Number of buses with access for people with reduced mobility.
2. Number of stations with access for people with reduced mobility.

RESILIENCE DIVIDEND:
Facilitates access for people with disabilities to SITM-MIO, thus creating a more equitable society.

3.2.4 SITM-MIO PREFERRED LANES

DESCRIPTION:
Metro Cali, S.A. will work to give priority to SITM-MIO in mixed traffic lanes of pre-trunk corridors. The project consists of three stages and involves the introduction of mixed transit lanes into pre-trunk corridors, especially the right-hand lane of the road, to give priority to SITM-MIO buses to pass. Other vehicles will not be allowed to use the SITM-MIO preferred lane to pass but will be allowed to make specific maneuvers. This will help increase the frequency of SITM-MIO buses and reduce travel times for SITM-MIO users.

RESILIENCE QUALITIES:
- Resourceful
- Flexible

EXECUTION TIME HORIZON:
- Short Term
- Medium Term
- Long Term

INDICATORS:
1. Miles (kilometers) of preferred lanes in the city.
2. Number of fines issued to drivers who do not respect the SITM-MIO preferred lane.

RESILIENCE DIVIDEND:
Improves the service provided by SITM-MIO, thus improving the citizens’ quality of life.
### 3.2 STRENGTHEN THE SIT-MIO NETWORK AND ITS SUPPLEMENTARY SYSTEMS

#### 3.2.5 SUPPLEMENTAL PUBLIC TRANSPORTATION SYSTEM FOR THE MOUNTAINOUS COMMUNITIES

**Resilience Qualities:**
- Integrated
- Inclusive

**Execution Time Horizon:**
- Short Term
- Medium Term
- Long Term

**Description:**
The stakeholders will improve regional accessibility and connectivity of the west’s mountainous communities to the flat region of Cali’s urban area by implementing a Supplemental Transportation System (STC) that will integrate physically and operationally with SIT-MIO. This system must guarantee universal accessibility as specified by national legislation. Given the topographic conditions of the zone, the STC must have a fleet that is appropriate to such conditions and is approved by the Transportation Ministry. Given that the integration depends on a centralized fee collection system and a fleet management and control system, the fleet must have devices installed for smart card payment, global positioning systems (GPS), and communications with the control center, among other physical and technological requirements.

**Indicators:**
1. An implemented Supplemental Transportation System.
2. Establishment of the fee collection system for the STC.

**Resilience Dividend:**
Reduces the financial and physical obstacles of traveling in and out of Cali’s mountainous communities, thus allowing people to invest more money and time on other needs.

**Owner:**
- Metro Cali S.A.
- Secretariat of Mobility.

**Local Allies:**
- -

**International Allies:**
- -

### 3.2.6 IMPLEMENTATION OF THE SIT-MIO WEST TRUNK ROUTE DESIGN

**Resilience Qualities:**
- Robust
- Resourceful

**Execution Time Horizon:**
- Short Term
- Medium Term
- Long Term

**Description:**
Metro Cali, S.A. will implement the design of the West Trunk Route, which will consolidate the coverage of SIT-MIO’s trunk network. This initiative aims to increase the resilience dividends of this infrastructure project. The new trunk route will better respond to the city’s needs, improve the trunk route’s coverage and, in general, will improve the quality of the service.

**Indicators:**
1. Level of compliance with the project timeline.
2. Number of passengers entering the system through the West Trunk Route.
3. A fully designed West Trunk Route.

**Resilience Dividend:**
Adapts the new West Trunk Route to the community’s needs, thus improving the community’s sense of ownership.

**Owner:**
- Metro Cali S.A.

**Local Allies:**
- Resilient Cali

**International Allies:**
- -
Cali is prepared to mitigate climate change events and protect its water sources as well as their surrounding ecosystems.
Potable water shortages, which will affect basic household functions, and temperature increases in some areas of the city as well as the acute impacts of La Niña and El Niño are some of the results of climate change that Cali could face in the coming years. To be a resilient city, Cali must prepare and adapt now before the effects of climate change become more common. Multiple stakeholders must collaborate on initiatives that will mitigate the effects of climate change, especially those related to the city’s water supply.

Cali’s strategy for preparing for climate change is in the early stages. In the 2016-2019 Municipal Development Plan, climate change was not a specific component, but was addressed in a general way. However, in 2016 the Comprehensive Plan for Climate Change Mitigation and Adaptation for Santiago de Cali was completed. This plan is a collaboratively developed technical and political road map that promotes climate change adaptation and mitigation initiatives that will support social, cultural and economic development.

According to the Secretariat of Risk Management for Emergencies and Disasters, only one of the seven rivers crossing the city has acceptable water quality. The other six have poor quality due to deforestation, illegal mining, informal settlements, and inadequate waste disposal. In addition, tributaries of the Cauca River, including the Pance, Lili, Melendez, Cali and Aguacatal Rivers, are prone to flooding, and vulnerable populations illegally settled in high-risk zones contribute to the degradation of the ecosystem. In addition, urban sprawl from informal settlements, especially in the mountainous areas, contributes to negative impacts on biodiversity and the ecosystems of the river basins that supply water to the city.

To face these challenges, the proposals are as follows:

“Climate Change in Cali may have serious environmental, economic and social effects”.

4.1 STRENGTHEN THE USE OF LAND TO PRESERVE NATURAL RESOURCES.

4.2 ESTABLISH EFFECTIVE MECHANISMS FOR DECISION-MAKING.
By developing initiatives related to these goals, the effects of climate change can be mitigated, and multiple stakeholders can join together to develop a public agenda that will ensure the population’s future well-being.
4.1 STRENGTHEN THE USE OF LAND TO PRESERVE NATURAL RESOURCES

4.1.1 NATURAL HYDRAULIC NETWORK RECOVERY PROGRAM AS A REGULATOR OF URBAN DRAINAGE

**DESCRIPTION:**

The Department of Environmental Management will restore the interconnectivity of the various water bodies that form Cali’s natural drainage system and the existing drainage system in the city’s urban area in order to improve water quality and its hydraulic function. This will restore the ecological function of the natural drainage system, safeguard the water supply, and ensure the security of the city’s water bodies and their ecological function. It will focus on the high-risk areas in the urban hillsides, which are most vulnerable to the potential impacts of climate change on the city’s water supply.

**INDICATORS:**
1. Percentage of storm water channels in the urban areas of the Lili, Meléndez, and Cañaveralejo Rivers with suitable and environmentally friendly landscaping.
2. Percentage increase in biodiversity along the Lili, Meléndez, and Cañaveralejo Rivers.
3. Percentage implementation of the Sustainable Urban Drainage System (SUDS) guidelines in the channels of the Lili, Meléndez, and Cañaveralejo Rivers.

**OWNER:** Department of Environmental Management (DAGMA).

**LOCAL ALLIES:**
- Cali Utility Company (EMCALI).
- Regional Department of Environmental Management (CVC).
- Secretariat of Risk Management for Emergencies and Disasters.
- Department of City Planning.
- Cali Jarillón Plan.

**INTERNATIONAL ALLIES:**

**RESILIENCE QUALITIES:**
- Integrated
- Robust

**EXECUTION TIME HORIZON:**
- SHORT TERM
- MEDIUM TERM
- LONG TERM


4.1.2 PROTECTION AND RESTORATION OF WATER PRODUCTION AREAS UNDER COMPENSATION FOR ENVIRONMENTAL SERVICES (PSA) AND ENVIRONMENTAL SERVICES CONSIDERATIONS (CSA)

**DESCRIPTION:**

The Department of Environmental Management (DAGMA) will recover, protect, conserve, and ensure the flow of water, with the goal of preventing water shortages or reductions in the ecological function of the waterways during dry seasons in Cali’s urban and rural areas. It will offer containers for storing water and will propose a payment-for-environmental-services scheme to landowners and people living on plots of land in the most critical areas of influence on the hydrographic basins. In addition, through collaboration with other agencies, it seeks to develop other initiatives, such as water protection families and ecotourism.

**INDICATORS:**
1. Number of protected hectares in the areas along the Cali, Meléndez, Cañaveralejo, and Pance Rivers.
2. Number of identified and implemented PSA frameworks in the water protection areas.
3. Number of participants resulting from projects proposed by the Municipal Government.

**RESILIENCE DIVIDEND:**
Protects Cali’s water sources, thus protecting the residents’ health.

**OWNER:** Department of Environmental Management.

**LOCAL ALLIES:**
- Department of Finance (land registry).
- Department of Justice.
- Regional Department of Environmental Management (CVC).
- Cali Utility Company (EMCALI).
- Special Administrative Unit of Municipal Utilities.
- Secretariat of Housing.
- Secretariat of Tourism.
- Secretariat of Sports and Recreation.
- Secretariat of Economic Development.

**RESILIENCE QUALITIES:**
- Strategic
- Flexible

**EXECUTION TIME HORIZON:**
- SHORT TERM
- MEDIUM TERM
- LONG TERM
4.1 STRENGTHEN THE USE OF LAND TO PRESERVE NATURAL RESOURCES

4.1.3 IMPLEMENTATION OF THE PUBLIC POLICY FOR COMPREHENSIVE HABITAT IMPROVEMENT

STATUS:
Execution

START DATE: 2019

TYPE: Public policy

RESILIENCE QUALITIES:

OWNER: Secretariat of Housing

LOCAL ALLIES:
- Department of City Planning (DAPM)
- Private sector
- Cali Utility Company (EMCAL)
- EMRU
- Metro Cali S.A.

INTERNATIONAL ALLIES: -

RESILIENCE DIVIDEND:
It improves the housing of the most vulnerable inhabitants of Cali’s hillside areas, thus improving the overall quality of the neighborhoods, which will attract investment and create employment.

DESCRIPTION:
The Secretariat of Housing will implement the provisions of the Public Policy for Comprehensive Habitat Improvement (Agreement 411 of 2017) to accomplish comprehensive restoration of areas with informal settlements. This involves interventions on urban infrastructure, the provision of public utilities, and housing renovations (when possible). These interventions will help preserve water resources and ecosystems in areas where informal settlements are located, while the housing improvements will improve the inhabitants’ quality of life.

EXECUTION TIME HORIZON:

SHORT TERM  MEDIUM TERM  LONG TERM

INDICATORS:
1. Percentage of high-risk informal settlements benefiting from comprehensive interventions (per DAPM provisions).
2. Public investment (COP) made in partial redevelopment of informal settlements.
3. Number of annual landslides occurring in partially redeveloped urban settlements.
4.1.3.1 PILOT PROJECT FOR STRUCTURAL STRENGTHENING OF POORLY BUILT URBAN SETTLEMENTS IN RISK MITIGATION ZONES

RESILIENCE QUALITIES:
- Resourceful
- Flexible

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
The Secretariat of Social Housing and Habitat Secretariat will identify methods to minimize the risks and improve the housing conditions of Cali’s hillside inhabitants through a pilot project that, among other things, will assess the city’s capacity to face this challenge. The pilot results will help in the creation of a program to strengthen structures in informally/illegally built urban settlements in other parts of the city.

LOCAL ALLIES:
- Department of City Planning.
- Private sector.
- Cali Utility Company (EMCALI).
- Secretariat of Risk Management for Emergencies and Disasters.

INTERNATIONAL ALLIES:

INDICATORS:
1. Percentage of houses reinforced and brought up to code in the selected neighborhoods.
2. Number of structurally reinforced housing units in the selected neighborhoods of the pilot project.
3. Structural strengthening program for informally/illegally built urban settlements.
4. General compliance with the established timeline.

RESILIENCE QUALITIES:

OWNER: Secretariat of Housing.

4.1.4 STRATEGY FOR ILLEGAL OCCUPATION CONTROL AND ECOSYSTEM PROTECTION

STATUS: Execution
START DATE: 2018
TYPE: Plan/Strategy/Program

RESILIENCE QUALITIES:
- Reflective
- Resilient

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

DESCRIPTION:
The Department of Environmental Management will take action and implement measures to counter and prevent the illegal use of land, which threatens the environmental integrity and quality of that land. The department will implement occupation control and prevention activities in both urban and rural areas. This strategy seeks to prevent environmental degradation caused by illegal occupation and land use.

LOCAL ALLIES:
- Secretariat of Security and Justice.
- Secretariat of Infrastructure.
- Secretariat of Risk Management for Emergencies and Disasters.
- Secretariat of Affordable Housing.
- Special Administrative Unit of Municipal Utilities.
- Department of City Planning.

INTERNATIONAL ALLIES:

INDICATORS:
1. Number of attended events.
2. Number of recovered hectares.

RESILIENCE DIVIDEND: Prevents environmental degradation caused by illegal occupation of land, thus protecting the flora and fauna in these areas.
4.1.5 **COMPREHENSIVE MANAGEMENT OF STORMWATER THROUGH THE SUSTAINABLE URBAN DRAINAGE SYSTEM**

**DESCRIPTION:**
The Department of Environmental Management will efficiently manage stormwater in the city through the Sustainable Urban Drainage System (SUDS). Using stormwater management structural and non-structural measures, the department seeks to increase water resources and make the city more resilient in the event of stormwater impacts from climate change.

**RESILIENCE QUALITIES:**
- Risk management

**EXECUTION TIME HORIZON:**
- Short Term
- Medium Term
- Long Term

**STATUS:**
- Execution
- Start Date: 2018
- Type: Plan/Strategy/Program

**INDICATORS:**
1. Percentage of adopted SUDS guidelines integrated in planning regulations.
2. Updated data on the urban drainage system available for decision-making.
3. Frequency of storm floods.

**OWNER:**
Department of Environmental Management.

**LOCAL ALLIES:**
- Cali Utility Company (EMCALI).
- Regional Department of Environmental Management (CVC).
- Secretariat of Infrastructure.
- Colombian Building Association.
- Secretariat of Risk Management for Emergencies and Disasters.

**INTERNATIONAL ALLIES:**
- 

**RESILIENCE DIVIDEND:**
Systematizing the drainage of stormwater during the winter, thus reducing traffic jams caused by floods.
4.2 ESTABLISH EFFECTIVE MECHANISMS FOR DECISION-MAKING

4.2.1 ESTABLISHMENT OF A SOCIO-ENVIRONMENTAL OBSERVATORY

**DESCRIPTION:**
The Department of Environmental Management will establish a socio-environmental observatory to track and assess factors affecting environmental quality. These are factors resulting from the interaction of humans with the environment, changes in industrial production, and changes in lifestyles.

**RESILIENCE QUALITIES:**
- Reflective
- Resourceful

**EXECUTION TIME HORIZON:**
- Short Term
- Medium Term
- Long Term

**OWNER:**
Department of Environmental Management.

**LOCAL ALLIES:**
- Department of Communication and Information Technology.
- Department of City Planning.
- Regional Department of Environmental Management (CVC).

**INTERNATIONAL ALLIES:**
- Veolia.

**INDICATORS:**
1. Percentage of progress towards creating the monitor.
2. Number of environmental variables tracked through the monitor.
3. Number of implemented monitor directives.

**RESILIENCE DIVIDEND:**
Facilitating the monitoring and tracking of Cali’s environmental factors, thus improving decision-making and the population’s quality of life.

---

4.2.2 INFORMATION MANAGEMENT TOOL FOR DECISION-MAKING IN CALI’S STORM EARLY ALERT SYSTEM

**DESCRIPTION:**
The Secretariat of Risk Management for Emergencies and Disasters will gain information for official decision-making from comprehensive data generated by the Early Alert System. This will require the integration of existing technological tools into a single tool that provides a view of situations during city floods in real time. The development of this tool should be based on information provided by all of the city institutions that may use it, including EMCALI, DAGMA, CVC, and IDEAM. Therefore, an agreement as to the process should be made with each institution as well as with interested organizations in the private sector.

**RESILIENCE QUALITIES:**
- Integrated
- Reflective

**EXECUTION TIME HORIZON:**
- Short Term
- Medium Term
- Long Term

**OWNER:**
Secretariat of Risk Management for Emergencies and Disasters.

**LOCAL ALLIES:**
- Regional Department of Environmental Management (CVC).
- Cali Utility Company (EMCALI).
- Department of Environmental Management.
- IDEAM.
- Private sector organizations.

**INTERNATIONAL ALLIES:**
- Veolia.

**INDICATORS:**
1. Percentage of progress in developing the Early Alert System.
2. Availability of updated data regarding the status of Cali’s rivers.
3. Number of stakeholders collaborating on the system.

**RESILIENCE DIVIDEND:**
Facilitates the monitoring and tracking of the water levels in Cali’s rivers, thus giving the city time to prepare in the event of a flood.
DESCRIPTION:
The Department of Environmental Management will create a technical team of stakeholders who will work collaboratively on issues related to climate change and the conservation of hydrographic basins. This team will seek the cooperation of all stakeholders to conduct defined interventions and achieve common objectives. This is how the department will develop a range of plans that will contribute to climate change mitigation and ecosystem preservation.

INDICATORS:
1. Governance mechanism created.
2. Percentage of climate change mitigation initiatives managed through the governance mechanism.
3. Water resource preservation strategy prepared.
4. Number of climate change mitigation initiatives with a resilience lens.

RESILIENCE QUALITIES:
- Inclusive
- Robust
- Integrated

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

OWNER:
Department of Environmental Management.

LOCAL ALLIES:
- Regional Department of Environmental Management (CVC).
- Cali Utility Company (EMCALI).
- Secretariat of Risk Management for Emergencies and Disasters.
- Department of City Planning.
- Secretariat of Affordable Housing.
- Secretariat of Mobility.
- National Parks Agency.

INTERNATIONAL ALLIES:
- -

RESILIENCE QUALITY:
Maximizes the positive effects of environmental protection initiatives, thus improving water and air quality in Cali.

RESILIENCE DIVIDEND:
- Maximizes the positive effects of environmental protection initiatives, thus improving water and air quality in Cali.

STATUS:
Planning
START DATE:
2018
TYPE:
Entity

4.2 ESTABLISH EFFECTIVE MECHANISMS FOR DECISION-MAKING

4.2.3 ESTABLISHMENT OF A GOVERNANCE MECHANISM TO COORDINATE CLIMATE CHANGE MITIGATION ACTIONS

4.2 ESTABLISH EFFECTIVE MECHANISMS FOR DECISION-MAKING

4.2.4 CRISIS ROOM CONSTRUCTION

DESCRIPTION:
The Secretariat of Risk Management for Emergencies and Disasters will build a state-of-the-art technology complex to centralize information that stakeholders need for crisis decision-making and for facing and monitoring an acute shock, such as an earthquake, landslide, flood, or terrorist attack.

INDICATORS:
1. Crisis room built.
2. Number of annual emergencies coordinated from the crisis room.
3. Number of entities working together from the crisis room.

RESILIENCE QUALITIES:
- Robust
- Integrated

EXECUTION TIME HORIZON:
- SHORT TERM
- MEDIUM TERM
- LONG TERM

OWNER:
Secretariat of Risk Management for Emergencies and Disasters.

LOCAL ALLIES:
- Fire Department.
- Red Cross.
- Civil Defense.
- Police Department.
- Army.
- Cali Utility Company (EMCALI).
- Metro Cali S.A.
- Regional Department of Environmental Management (CVC).

INTERNATIONAL ALLIES:
- -
A Cali that **plans in a structured manner** is a city that is prepared for the future.
"An effective execution of the Municipal Government’s work plan, embodied in the Municipal Development Plan, requires a constructive planning process."

An effective execution of the Municipal Government’s work plan, embodied in the Municipal Development Plan, requires a constructive planning process that anticipates unforeseen events, sets appropriate goals, aligns stakeholders involved in the execution of those goals, and establishes initiatives that will enable compliance with the proposed objectives.

Decision makers tend to focus their activities on resolving day-to-day situations, and often have little time to devote to medium- and long-term strategic planning. Cali requires a public administration that serves the people and meets their needs, and that uses IT effectively to support it. The Municipal Government must have the capacity to plan and act to resolve existing challenges and secure early victories without forgetting about future generations.

More specifically, Cali needs a central database where government entities, academics, and civilians can provide input and access information. The absence of such a system often results in planning processes that neither achieve the right objectives nor comply with strategic plans. Without a central database, strategic plans cannot be developed at the same time as budgets, and citizen involvement becomes more difficult. In addition, there are no monitoring, tracking, and measuring mechanisms for plans, programs, and projects, and no objective indicators to facilitate decision-making in the public sector.

This line proposes the following goals:

5.1 Effectively manage public administration.

5.2 Design an effective monitoring, tracking, and measuring system.

By developing these goals, the Municipal Administration, using IT tools, will have fact-based, reliable and updated information on programs, plans, and projects, which will then assist with medium and long-term planning and with achieving the Municipal Development Plan’s objectives.

By 2015 its revenues increased by 13.3%.

Cali regained its tax autonomy in 2012.

CITIES THAT INSPIRE US

Rotterdam
The Netherlands

Open Data Platform - Rotterdam has developed a public database to increase city participation, transparency, and collaboration with companies and academia. In addition, this database seeks to support innovation and to develop Rotterdam into a “smart city.” The portal provides information about the city sewage system, the parking status in public parking lots, and the current air quality, and it also has aerial photos of the city.

Resilience Index

This is an online tool that measures urban resilience. Cali was selected to implement this tool and is currently collecting information to identify its strengths and weaknesses around resilience. Eventually, using the tool, Cali will be able to compare itself with other cities in the 100RC network.

To take into account
A cross-cutting issue for the whole strategy

The lack of objective and centralized information on the Municipal Government’s various programs, plans, and projects is a bottleneck in the decision-making process. For that reason, the Resilience Strategy concentrates on developing indicators for all lines and expects the Municipal Government to take on the challenge of collecting information in a systematic way to make better decisions.

City Resilience Index

RESILIENT CALI | A CITY OF OPPORTUNITIES FOR PROGRESS

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PLANNING

CHAPTER 7

153
**Efficacy of the Municipal Development Plan**

**Efficacy Level**
- Critical: 0% - 39%
- Low: 40% - 59%
- Medium: 60% - 69%
- Satisfactory: 70% - 79%
- Outstanding: 80% - 100%

Percentage of annual accomplishment of goals established in the Municipal Development Plan for a specific year.

**Accumulated Efficacy Index**

Percentage of implementation of the Municipal Development Plan for a specific government term.

<table>
<thead>
<tr>
<th>Year</th>
<th>Efficacy Index</th>
</tr>
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<tbody>
<tr>
<td>2008</td>
<td>64.46%</td>
</tr>
<tr>
<td>2009</td>
<td>62.02%</td>
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<tr>
<td>2010</td>
<td>49.43%</td>
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<td>2011</td>
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<td>64.40%</td>
</tr>
<tr>
<td>2013</td>
<td>66%</td>
</tr>
<tr>
<td>2014</td>
<td>62.50%</td>
</tr>
<tr>
<td>2015</td>
<td>81.01%</td>
</tr>
<tr>
<td>2016</td>
<td>78.70%</td>
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</tbody>
</table>

**Execution of the Municipal Budget**

**Percentage of Execution**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>82.7%</td>
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<tr>
<td>2009</td>
<td>82.5%</td>
</tr>
<tr>
<td>2010</td>
<td>85%</td>
</tr>
<tr>
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<tr>
<td>2016</td>
<td>88.6%</td>
</tr>
<tr>
<td>2017</td>
<td>87.2%</td>
</tr>
</tbody>
</table>

Source: Planning Department
5.1 EFFECTIVELY MANAGE PUBLIC ADMINISTRATION

5.1.1 INVESTMENT PROJECT INCUBATOR

DESCRIPTION:
The Department of City Planning will create an investment project incubator with representatives from all Municipal Government organizations. This incubator will facilitate knowledge exchange among those in charge of creating, modifying and monitoring the Municipality’s investment projects. The incubator will be led by the Department of City Planning and will meet periodically. It will require a high level of technical expertise among its members to ensure effective planning, investment, and project execution within established timelines. The incubator will also facilitate monitoring and tracking of physical and financial resources, will identify alerts early on, and will make the production of reports for documentation much easier.

INDICATORS:
1. Percentage of projects rejected by the Department of City Planning (Final feasibility analysis).
2. Number of CONFIS requests (budgetary modifications).
3. Investment project incubator in operation.

RESILIENCE DIVIDEND:
Fosters efficient planning, thus preparing Cali to face the challenges of the 21st century.

OWNER:
Department of City Planning.

LOCAL ALLIES:
- Municipal Administrative Bodies.
- Universities.

INTERNATIONAL ALLIES:
-
5.1 EFFECTIVELY MANAGE PUBLIC ADMINISTRATION

5.1.2 INFORMATION SERVICES INTEGRATION PLATFORM

**DESRIPTION:**
The Department of Communication and Information Technology will strengthen institutional processes using Communication and Information Technology (TIC) tools and will implement information systems that improve the provision of services to residents, thus reducing the risk of corruption and increasing efficiency through automated processes. This platform will facilitate the flow of information among organizations while reducing duplication of effort and contributing to greater efficiency and efficacy in public administration.

**OWNER:**
Department of Communication and Information Technology

**LOCAL ALLIES:**
- Municipal Administrative Entities
- Integrated Local Assistance Centers
- Universidad Autónoma de Occidente

**INTERNATIONAL ALLIES:**
- 

**INDICATORS:**
1. Percentage of progress in implementing the integration platform.
2. Percentage reduction in response time to residents’ requests.

**RESILIENCE DIVIDEND:**
Increasing the efficiency of institutional processes, thus enabling public resources to be redirected to address other issues.

**EXECUTION TIME HORIZON:**

**RESILIENCE QUALITIES:**

**STATUS:**
Execution

**START DATE:**
2018

**TYPE:**
Plan/Strategy/Program

---

5.1.2.1 AUTOMATION AND STANDARDIZATION OF PROCESSES, PROCEDURES AND SERVICES

**DESCRIPTION:**
The Department of Institutional Development and Innovation will simplify the processes, procedures and services of the Municipal Government using communication and information technologies. It will foster the elimination of procedures that cause public management inefficiencies. This way, it will promote transparency, efficiency and closeness with citizens, offering a better service and facilitating the day to day work of municipal administrative employees.

**OWNER:**
Department of Institutional Development and Innovation

**LOCAL ALLIES:**
- Public Administration Entities
- Alliance of Universities
- Colombian Building Association

**INTERNATIONAL ALLIES:**
- 

**INDICATORS:**
1. Number of automated or standardized processes.
2. Number of procedures that may be completed using Communication and Information Technology (TIC) tools.
3. Number of requests conducted at the one-stop counter.

**RESILIENCE DIVIDEND:**
Increasing the efficiency of institutional processes, thus allowing public resources to be redirected to address other issues.

**EXECUTION TIME HORIZON:**

**RESILIENCE QUALITIES:**

**STATUS:**
Execution

**START DATE:**
2018

**TYPE:**
Plan/Strategy/Program

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5.2 DESIGN AN EFFECTIVE MONITORING, TRACKING AND MEASURING SYSTEM

5.2.1 CALI’S MONITORING, TRACKING AND MEASURING SYSTEM

STATUS: Research
START DATE: 2018
TYPE: Plan/Strategy/Program

RESILIENCE QUALITIES:

EXECUTION TIME HORIZON:

SHORT TERM  MEDIUM TERM  LONG TERM

DESCRIPTION:
The Department of City Planning will develop a robust monitoring, tracking and measuring system for municipal investment (physical and financial investment projects) to enable informed decision-making. It will use communication and information technologies, so that officials and citizens will be able to consult processes and analyze results. It will give priority to issues related to the Resilience Strategy (and will develop a pilot program).

INDICATORS:
1. Percentage of the monitoring, tracking and assessment system that has been designed.
2. Number of annual assessments conducted.
3. Number of external users accessing the reported information.
4. Number of assessments consulted.

RESILIENCE DIVIDEND:
Facilitates the monitoring and assessment of programs, strategies and other initiatives, thus supporting strategic planning, promoting accountability (transparency), and enabling long-term planning.

OWNER: Department of City Planning.
LOCAL ALLIES: • Universities
INTERNATIONAL ALLIES: •
LEADING THE DIALOGUE

Cali’s Resilience Strategy seeks to raise awareness of the city’s challenges and highlight initiatives that are developing, or will develop, Cali’s resilience.

To that end, Cali’s resilience team must ensure that all city decision makers are:

Thinking with a resilience lens  
Talking with a resilience lens  
Acting with a resilience lens

BUILDING ON THE BUILT

This Strategy consists of new and existing initiatives that have been under way for some years.

Therefore, before starting new initiatives, it is important to:

Review in detail the status of each initiative already under implementation  
Design an action plan for new initiatives

IMPLEMENTING THE INITIATIVES

Cali’s resilience team is not the executing entity of most of the initiatives detailed in the Strategy, but has a supporting and articulating role.

The implementation will be:

Led by the owner of each initiative  
With the support of Cali’s resilience team

MONITORING THE IMPLEMENTATION

How do we know whether we are truly achieving the Strategy’s objectives? How do we know whether we are truly developing Cali’s resilience? Through regular monitoring and periodic evaluation of the initiatives, and by using the indicators detailed in this document, we will be able to identify the initiatives:

That are performing well  
That need a course correction

COLLABORATING WITH EACH OTHER

None of the objectives presented in this Strategy can be met without the support of Cali’s citizens, academic institutions, civil society, private companies, and government entities.

Resilience challenges are shared!  
Resilience benefits are shared!  
The responsibility to develop a Resilient Cali is shared!
ACKNOWLEDGMENTS

Since the inception of this work we have been fortunate to have the support and commitment of various stakeholders and institutions that have been essential to our work. Our gratitude is extended to those who have accompanied us in the consolidation of this Strategy and, in advance, to those who will accompany us in our next steps.
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Special Acknowledgments
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Secretariat of Economic Development
Secretariat of Risk Management for Emergencies and Disasters
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