

 BARRANQUILLA

Nature Positive: Cities' Efforts to Advance the Transition

INSIGHT REPORT
NOVEMBER 2025



Contents



Foreword	03
About the initiative	04
About this paper	05
Executive summary	06
1 City overview	11
1.1 Barranquilla	12
1.2 Situational context	13
2 Assessment of enabling environment	16
2.1 System enablers	17
2.2 Governance	23
2.3 Policy and regulations	26
2.4 Financing	28
2.5 Data and analytics	30
2.6 Stakeholder engagement	32
2.7 Capabilities	33
3 Exemplary solutions	35
Conclusion	39
Contributors	40
Endnotes	41

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Foreword



Alejandro Char Chaljub
Mayor, Barranquilla,
Republic of Colombia

Barranquilla breathes nature. Strategically located at the convergence of the Magdalena River, the Atlantic Ocean and the Mallorquín Swamp, the city occupies a unique position in the Colombian Caribbean. This privileged setting, rich in biodiversity and home to ecosystems such as tropical dry forests and mangroves, shapes Barranquilla's vision as a city that embraces its natural identity while advancing towards a sustainable future.

Over the past 17 years, Barranquilla has spearheaded a profound transformation to restore its natural spaces and ensure harmonious coexistence between urban life, nature and its inhabitants. Biodiversity has been the guiding principle behind every decision, from territorial planning to the execution of flagship projects. The Environmental and Sustainable City Strategy outlined in the Territorial Development Plan *Barranquilla to Another Level 2024-2027* reflects this commitment, establishing a model that

safeguards natural resources, enhances quality of life and positions the city as a benchmark for sustainable urban development in Latin America.¹

Barranquilla has tackled local and global challenges related to air quality, natural resource management and climate change adaptation with determination. Nature-based solutions (NbS) have driven this transformation, revitalized degraded spaces and strengthened the relationship between people and their environment. With an investment of COP 1.65 trillion (Colombian pesos) (approximately \$380 million) in green space rehabilitation, waterbody restoration and renewable energy projects, the city has achieved remarkable progress.

Barranquilla is advancing towards its consolidation as a green and inclusive city, which has enabled it to increase its capacity to attract sustainable green financing and establish itself as an attractive destination for foreign investment. Initiatives such as the comprehensive restoration of the Mallorquín Swamp, the rehabilitation of beaches like Puerto Mocho and an ambitious urban greening strategy have marked a turning point in the city's evolution. These actions have recovered over 1.8 million square metres (m²) of green spaces, ensuring that 93% of households have access to natural areas within an eight-minute walk, significantly improving residents' quality of life.

The city's strategy places circular economy and renewable energy at its core. Initiatives like the biogas plant, solar-powered public lighting systems and programmes integrating informal

recyclers demonstrate a steadfast commitment to sustainable development. The target of achieving a 50% recycling rate reinforces environmental sustainability while promoting social inclusion, cultivating a positive impact on the most vulnerable sectors.

Climate resilience is another cornerstone of Barranquilla's transformation. Green corridors protecting the coastline, over 70km of canalized streams preventing flooding and nature-aligned infrastructure projects illustrate how the city combines urban development with environmental sustainability.

Barranquilla has also prioritized empowering its most vulnerable groups. Efforts to formalize informal recycling workers and educational programmes have cultivated a culture of sustainability and shared responsibility for environmental stewardship. Citizen participation remains a central tenet, ensuring that every action aligns with community needs.

The journey, however, has not been without its challenges. Mobilizing resources, establishing clear regulatory frameworks and strengthening data measurement systems have required sustained effort. Barranquilla continues to prioritize the strategic objectives of addressing climate change, mitigating risks and ensuring equitable community benefits.

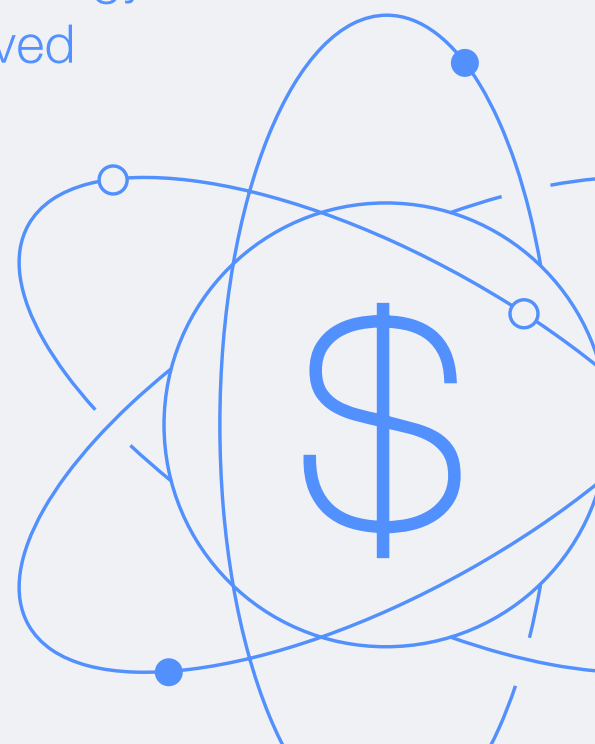
This model positions Barranquilla as a beacon of resilience and progress in the Caribbean, inspiring other cities to learn from its experience. Through

innovative solutions, strategic alliances and an inclusive vision, Barranquilla demonstrates that urban challenges can be addressed without compromising the human and natural essence that defines its identity.

This document reflects Barranquilla's unwavering commitment to building a future in balance with nature. It is an invitation for all sectors of society to continue working together towards a resilient, biodiverse and sustainable city. With strategic planning, responsible investments and an inclusive vision, Barranquilla projects itself as a global model of urban sustainability, proving that prosperity can thrive hand-in-hand with care for and celebration of our natural environment.

\$380 million

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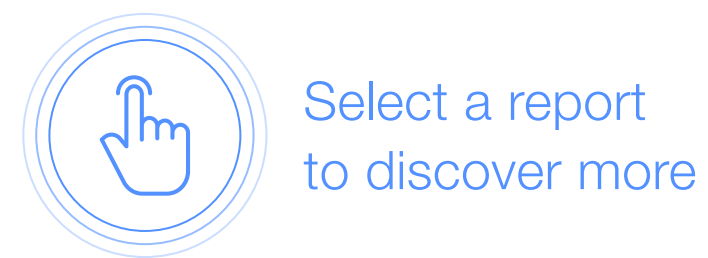


About the initiative

The **Nature Positive: Cities' Efforts to Advance the Transition** is published by the World Economic Forum in collaboration with Oliver Wyman. It is part of the World Economic Forum's Nature Positive Transitions report series, outlining pathways that sectors and cities can take to halt and reverse nature loss by 2030 – the mission at the heart of the Global Biodiversity Framework (GBF).

The series consists of two parts: sector transitions and city transitions. These reports highlight the relevance of nature-related risks, identify the impacts and dependencies of the economy and society on nature, and provide guidelines for city and business leaders on key actions to accelerate the nature-positive transition.

The Nature-Positive Transitions reports build on the New Nature Economy Report series, a collaboration between the World Economic Forum's Centre for Nature and Climate and Centre for Urban Transformation.



Sectors reports



Nature Positive:
Role of the
Chemical Sector



Nature Positive:
Role of the Household
and Personal Care Sector



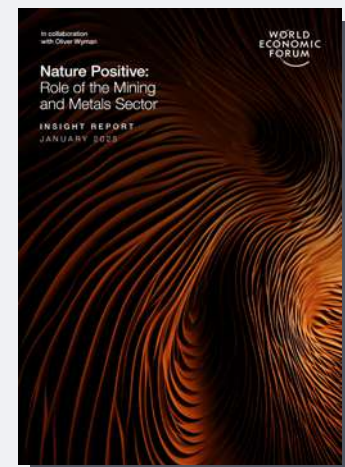
Nature Positive:
Role of the Cement
and Concrete Sector



Nature Positive:
Role of the Port Sector



Nature Positive:
Role of the Offshore
Wind Sector



Nature Positive:
Role of the Mining
and Metals Sector



Nature Positive:
Role of the
Automotive Sector
China Deep-dive



Nature Positive:
Role of the Automotive
Sector

Cities reports



Nature Positive:
Guidelines for the
Transition in Cities



Nature Positive:
Leaders' Insights for
the Transition in Cities



Nature Positive:
Financing the
Transition in Cities



Nature Positive:
Cities' Efforts to
Advance the
Transition – Durban



Nature Positive:
Cities' Efforts to
Advance the Transition
– San Francisco

About this paper

Each of the five champion cities of the Nature-Positive Cities initiative, now a constituent part of the [Davos Baukultur Alliance](#), has engaged with the World Economic Forum to identify ongoing nature-related efforts, pinpoint the main challenge areas impeding a successful nature-positive transition and define required actions to address them.

The champion cities are: San Francisco (US), Barranquilla (Colombia), Belem do Pará (Brazil), Durban (South Africa) and Incheon (South Korea).

Following extensive engagement with the city of Barranquilla, this report aims to assess and illustrate the city's greatest challenges, as well as barriers hindering radical progress towards being nature-positive, and potential solutions to overcome these challenges. The exemplary solutions are intended to spotlight innovative approaches and provide inspiration to city officials globally.



Dedicated work with the five champion cities of the Nature-Positive Cities initiative was deployed to:



Understand and explore key elements of each city's nature strategy, including nature-related targets and ongoing projects and initiatives that have a positive impact on nature



Identify challenges related to each city's nature-positive transition



Outline solutions to detected challenges



Facilitate connection with the private sector and support innovators to progress on the transition

Executive summary

Balancing resources, harmonizing datasets and training officials on nature-related topics are key to building a nature-positive future for Barranquilla.

Overview

Barranquilla, officially designated as a special, industrial and port district, is the capital of the Atlántico Department in Colombia. Strategically located on the western bank of the Magdalena River, just 7.5km from its mouth at the Caribbean Sea, the city has approximately 1.2 million inhabitants and covers an area of 156 square kilometres (km²), according to data from DANE (Departamento Administrativo Nacional de Estadística). It is the fourth most populous city in the country and has established itself as the main urban, cultural, political and economic centre of Colombia's Caribbean region.

The city faces significant environmental challenges, including the increasing risk of flooding and coastal erosion – intensified by climate change and human activity – the degradation of urban water bodies, air pollution caused by industrial and vehicular emissions, and inadequate solid waste management.

Barranquilla is an urban biodiversity reservoir, home to over

 **300** bird species

as well as numerous varieties of fish, reptiles and mammals that inhabit its local ecosystems.

The city has declared

 **2,720 ha***

of protected land, 31 ha of public green areas, 762 ha of marshlands and 6 ha of beach. These environments support both migratory birds and endemic species, forming a strategic natural heritage for Colombia's Caribbean region.

The average temperature is

 **28°C**

*hectares

Key statistics

Gini (equality metric) 2023: 0.500

Gini (equality metric) 2024:² 0.492

Barranquilla stands out as a key economic driver in Colombia, with a gross domestic product (GDP) per capita of approximately COP \$38.5 million (Columbian pesos) per inhabitant (\$9,447), calculated based on a projected population of 1,279,120 inhabitants for 2024 – well above the regional average. Alongside the Department of Atlántico, the city ranks among the top contributors to the national economy. In 2023, Barranquilla's GDP was estimated at \$11.8 billion, placing Atlántico as the municipality with the sixth-highest GDP in the country. According to DANE, Barranquilla's estimated GDP for 2024 is \$12,084 million. Barranquilla represents 64% of the GDP of the Atlántico department and approximately 20% of the GDP of the Colombian Caribbean Region.³



Summary of enabling environment

Barranquilla implements a collaborative environmental governance model through a strong network of public and private institutional actors to develop and implement nature-based solutions (NbS). The effective coordination between municipal entities, regional environmental authorities, organizations specialized in managing urban natural capital and strategic partnerships with the private sector positions the city favourably to attract and optimize external funding for environmental initiatives.

The district administration has systematically integrated NbS into its territorial planning instruments and public policies, demonstrating a strong commitment to sustainable urban development. However, challenges remain, such as:

- Limited access to sustainable financing due to the need to allocate resources concurrently to address both unmet basic needs and urgent social priorities
- Lack of centralized processes for the approval of international climate-related loans
- Gaps in specialized technical capacities for urban environmental management

At the same time, regulatory constraints on land use planning remain, alongside long-term impacts of past urban growth that occurred without effective inter-institutional coordination. These issues compromise the protection of strategic ecosystems, are compounded by limited institutional technical capacity, and reflect low public awareness and engagement with the benefits generated by NbS initiatives.

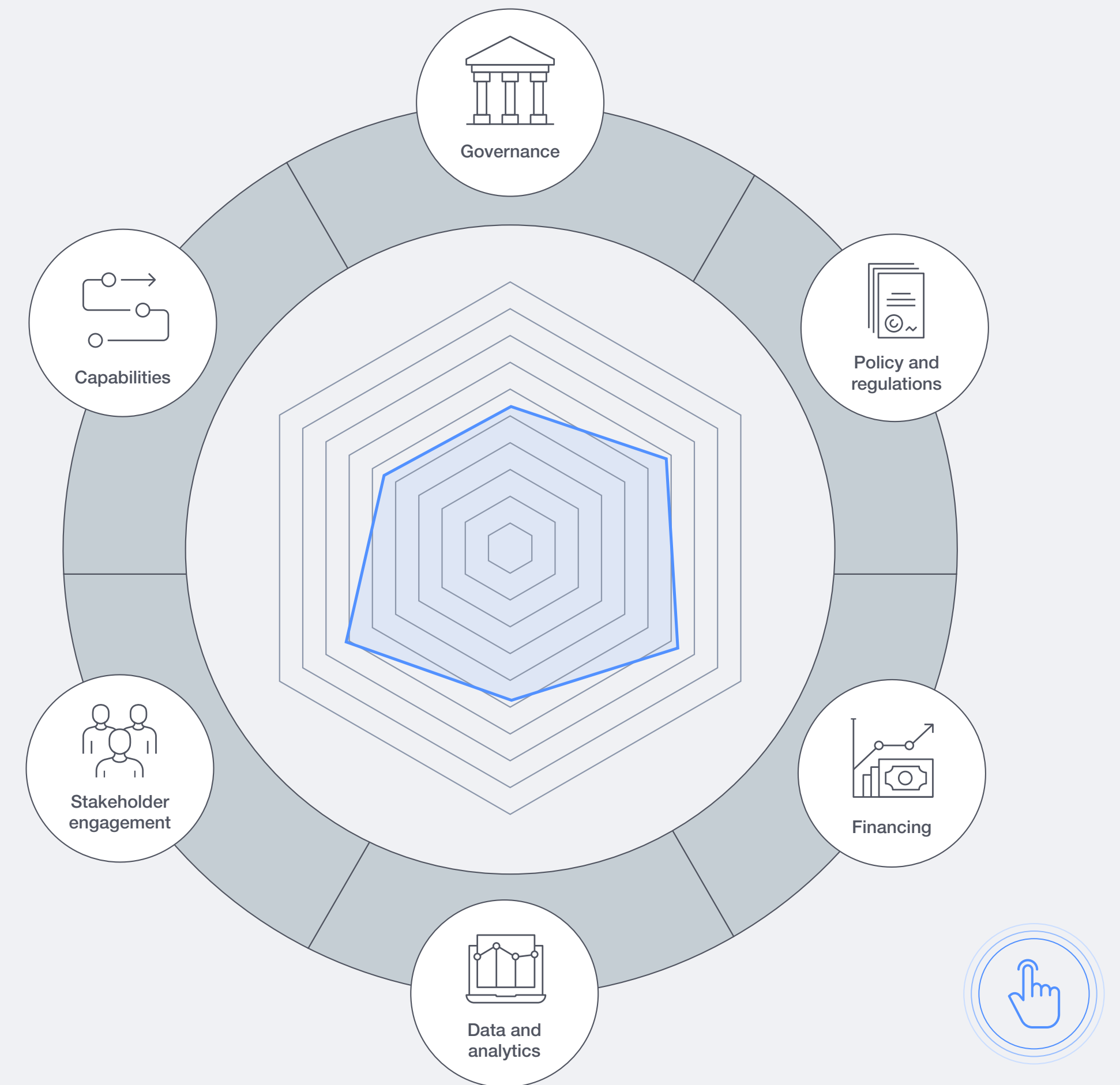
Despite these challenges, Barranquilla has a favourable environment in which to consolidate its green transition. The 2024–2027 Territorial Development Plan considers an investment of COP 1.65 trillion (Columbian pesos) (approximately \$380 million) in green infrastructure and ecosystem-based strategies, positioning the city as a national benchmark in urban sustainability. The success of this strategy depends on three key actions:

- 1 Strengthening institutional capacity for the valuation and management of natural capital
- 2 Developing standardized frameworks for measuring environmental, social and economic impacts
- 3 Expanding access to green and hybrid financing instruments internationally

These actions will allow Barranquilla to align with global sustainability commitments and open new opportunities for resilient, low-carbon urban development.

FIGURE 1

Snapshot of Barranquilla’s enabling environment



Source: World Economic Forum.

Key initiatives

1 The Mallorquin Swamp Ecopark

The Mallorquín Swamp Ecopark restores and conserves the biodiversity of this strategic urban coastal ecosystem, creating an ecological, recreational and cultural space for the local community. The park is organized into complementary functional zones connected by wooden pedestrian paths built on stilts, which protect 298.4 hectares (ha) of mangrove cover. These mangroves play a key role in water regulation, carbon sequestration and biodiversity preservation in the urban coastal interface of Barranquilla. This project incorporated the restoration of Puerto Mocho beaches, where accessible and sustainable facilities – such as pedestrian pathways, rest areas and kiosks – were constructed using wood sourced from sustainable crops.

2 All to the Park (Todos al Parque)

In response to growing concerns about limited public green spaces and declining social cohesion, Barranquilla launched a transformative initiative: Todos al Parque (aimed at promoting urban well-being, social inclusion and sustainability). The programme has significantly expanded and

modernized parks and public spaces across the city, ensuring equitable access to high-quality green areas and strengthening the social fabric.

Since its implementation, the initiative has produced tangible benefits such as reduced crime rates, increased cultural participation and a boost to local economic activity. By intervening in more than 350 public spaces, the programme has restored 2.5m² of green and public space and ensured that 93% of households have a green space within an eight-minute walk, effectively democratizing access to healthy, safe and vibrant urban environments. Through these efforts, parks have become dynamic hubs for community life, recreation and sustainable development, demonstrating the power of NbS to cultivate resilience, inclusion and civic engagement.

3 Clean and Beautiful Barranquilla (Barranquilla Limpia y Linda)

The Barranquilla Limpia y Linda strategy represents the city's commitment to responsible environmental management and improving the quality of public spaces. By implementing a comprehensive waste management system and strengthening recycling programmes, the city has modernized its infrastructure, improved operational efficiency and cultivated a civic culture centred on environmental care.

This initiative has significantly reduced the presence of waste in public spaces, improved environmental health and raised public awareness about the importance of sustainable practices, including waste separation and recovery, as an essential part of urban life.

4 Energy innovation

Since May 2018, Barranquilla has strategically positioned itself in the global energy landscape, becoming the only Latin American city to be an official member of the World Energy Cities Partnership (WECP). This membership has catalysed international trade missions and promoted multisectoral development in education, environmental technology, biosciences and tourism, enabling the city to both share and adopt best practices in municipal governance and energy innovation. The district administration has implemented a carefully structured roadmap for the energy transition, realized through concrete diversification projects such as photovoltaic installations, wind energy development and innovative agrovoltaic solutions. This commitment also encompasses ambitious offshore wind projects in the Colombian Caribbean – harnessing the region's maritime potential, as well as the progressive transformation of the mass public transport fleet, and incorporating natural gas-powered

and all-electric vehicles. These measures significantly reduce the urban carbon footprint and pollution while establishing a sustainable mobility model that can be replicated in other cities across the country.

5 Great River Boardwalk (Malecon del Rio)

The Great River Boardwalk embodies the district plan's **Capital of Spaces for People** strategic focus, implementing the **Return to the River** policy. This urban renewal landmark, with over 70 million visitors since its inauguration, has been recognized as a national sustainable tourism destination for meeting more than 200 sustainability requirements. Its 5km of restored riverside public space serves as an inclusive meeting point open to all, hosting ongoing tourist activity year-round. The space also functions as an ecological corridor for 244 bird species, seamlessly integrating urban development with environmental preservation.

1

City overview

Barranquilla addresses climate risks through pioneering planning that integrates waterflow regulation, mangrove restoration and green public spaces.



1.1 Barranquilla

Barranquilla, a major industrial and commercial centre in Colombia, is known for its rich cultural heritage and lively atmosphere. The city is located on Colombia's northern coast, at the mouth of the Magdalena River, next to the Caribbean Sea.⁴ Water and water ecosystems are woven deeply into the fabric of the city, which has a major port and industrial site. The geographic configuration of the city, with numerous wetlands and streams, makes it especially susceptible to flooding.

It has a tropical climate, which supports a diversity of ecosystems, including coastal mangroves and wetlands.

In recent years, Barranquilla has emerged as a national leader in urban sustainability and ecological restoration. The city has pioneered innovative initiatives in green infrastructure, nature-based solutions (NbS) and public space recovery, such as the rehabilitation of the Ciénaga de Mallorquín and the Todos al Parque programme. Additionally, its Territorial Development Plan incorporates a strategic vision for climate adaptation and environmental management, with significant investments aimed at strengthening urban resilience and citizen well-being. Barranquilla's growing commitment to transitioning towards a green economy positions it as a city in transformation. It is moving towards a more inclusive, regenerative and nature-connected model of urban development.



Surface area
156km²
(2024)⁶

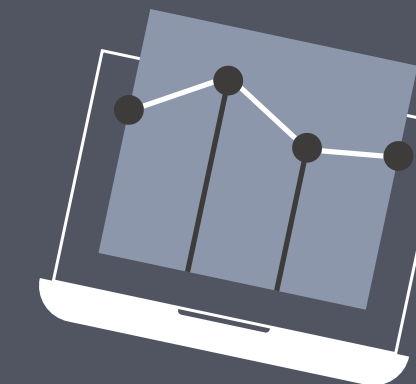


Population

1.2 million
(2024)⁵

The city's GDP per capita
is approximately

\$9,447
(2024)




1.2 Situational context




Select the tabs to discover more


ENABLER



Economical and developmental context



Local biodiversity and the natural environment



Nature and climate change strategies

KEY STATISTICS

\$7.9 billion GDP

7,823 people per km²

In 2024, Barranquilla reported a gross domestic product (GDP) per capita of \$9,447, with a robust economy primarily driven by sectors such as commerce, manufacturing and logistics. Its privileged strategic position as the main port in the Colombian Caribbean strengthens its role as an industrial and commercial hub of both national and international relevance.

Despite its sustained economic growth, the city has struggled with issues affecting its urban streams – sudden water currents that transform streets and avenues into dangerous torrents during intense rainfall due to the combination of pronounced topographical slopes and surfaces waterproofed by urbanization. These water streams, characteristic of Barranquilla’s geography, cause mobility paralysis, considerable economic losses and risk situations for inhabitants, particularly in areas of greater socioeconomic vulnerability.

To address this historical problem, the city has successfully implemented innovative and sustainable infrastructure solutions for channelling the streams, complemented by tree planting throughout the city and the construction and maintenance of parks and urban forests. This combined strategy not only seeks to reduce the risk of flooding but also to transform these problematic spaces into multifunctional green corridors that improve urban environmental quality, increase climate adaptation capacity and promote more equitable urban development in areas traditionally affected by this condition.



↑ Image credit: Barranquilla City Hall



Select the tabs to discover more

1.2 Situational context

ENABLER



Economical and developmental context



Local biodiversity and the natural environment



Nature and climate change strategies

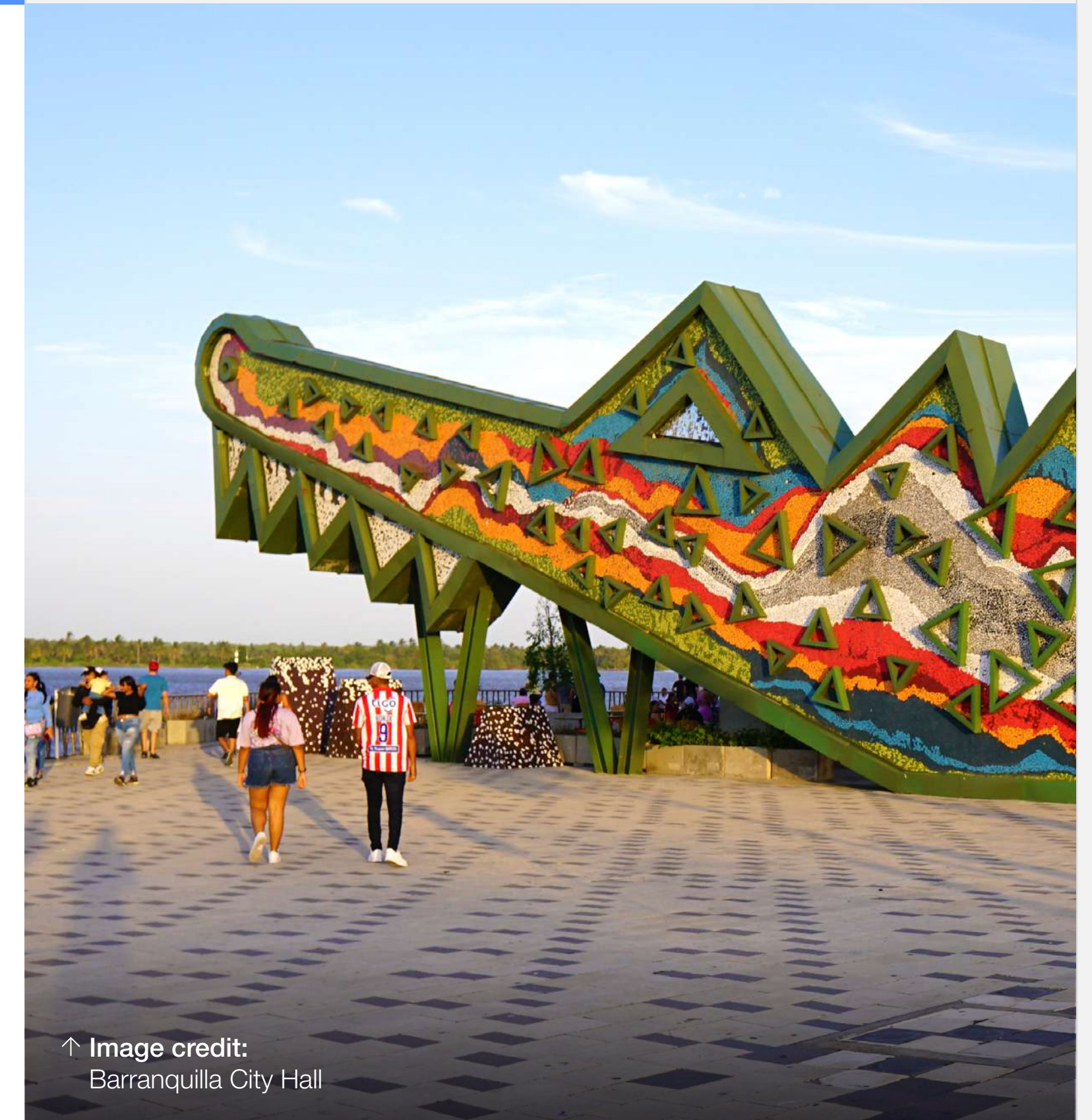
KEY STATISTICS

Barranquilla is a major city in one of the world's

17 megadiverse countries

Located on Colombia's northern coast, at the mouth of the Magdalena River and along the Caribbean Sea, Barranquilla is situated in a geographically privileged region. Colombia is one of the world's 17 megadiverse countries and ranks second globally in the number of endemic species, after Indonesia. Within this context, Barranquilla is surrounded by valuable ecosystems such as mangroves, coastal wetlands, streams and tropical dry forests. These natural systems support rich biodiversity and provide vital ecosystem services that contribute to climate adaptation, coastal protection and overall urban resilience.

However, Barranquilla's natural capital faces mounting pressures due to rapid urban expansion, land use conflicts, pollution and the absence of adequate environmental infrastructure. Unplanned growth has encroached upon sensitive ecological areas, increasing the city's vulnerability to climate-related risks such as flooding. In response, the city is advancing NbS through its public policies and urban development strategies. Landmark initiatives such as the restoration of the Ciénaga de Mallorquín exemplify Barranquilla's commitment to strengthening climate resilience, safeguarding biodiversity and promoting a more inclusive and sustainable model of urban growth.



↑ Image credit: Barranquilla City Hall



1.2 Situational context

ENABLER



Economical and developmental context



Local biodiversity and the natural environment



Nature and climate change strategies

KEY STATISTICS

84%

of the country's population is at risk from extreme weather events.

Efforts to promote blue and green infrastructure have been essential parts of Barranquilla's efforts to manage the effects of climate-related disasters.

Colombia is at high risk of extreme weather events, such as floods, hurricanes and extreme heat. An estimated 84% of the population is at risk due to potential infrastructure damage caused by these events.⁷

City plans and initiatives, including *Barranquilla a Otro Nivel – Plan de Desarrollo 2024-2027*,⁸ the Plan de Gestion Ambiental Distrital (PGAM), Todos al Parque, Barranquilla Verde y Limpia and others, aim to promote sustainable urban development in the city.

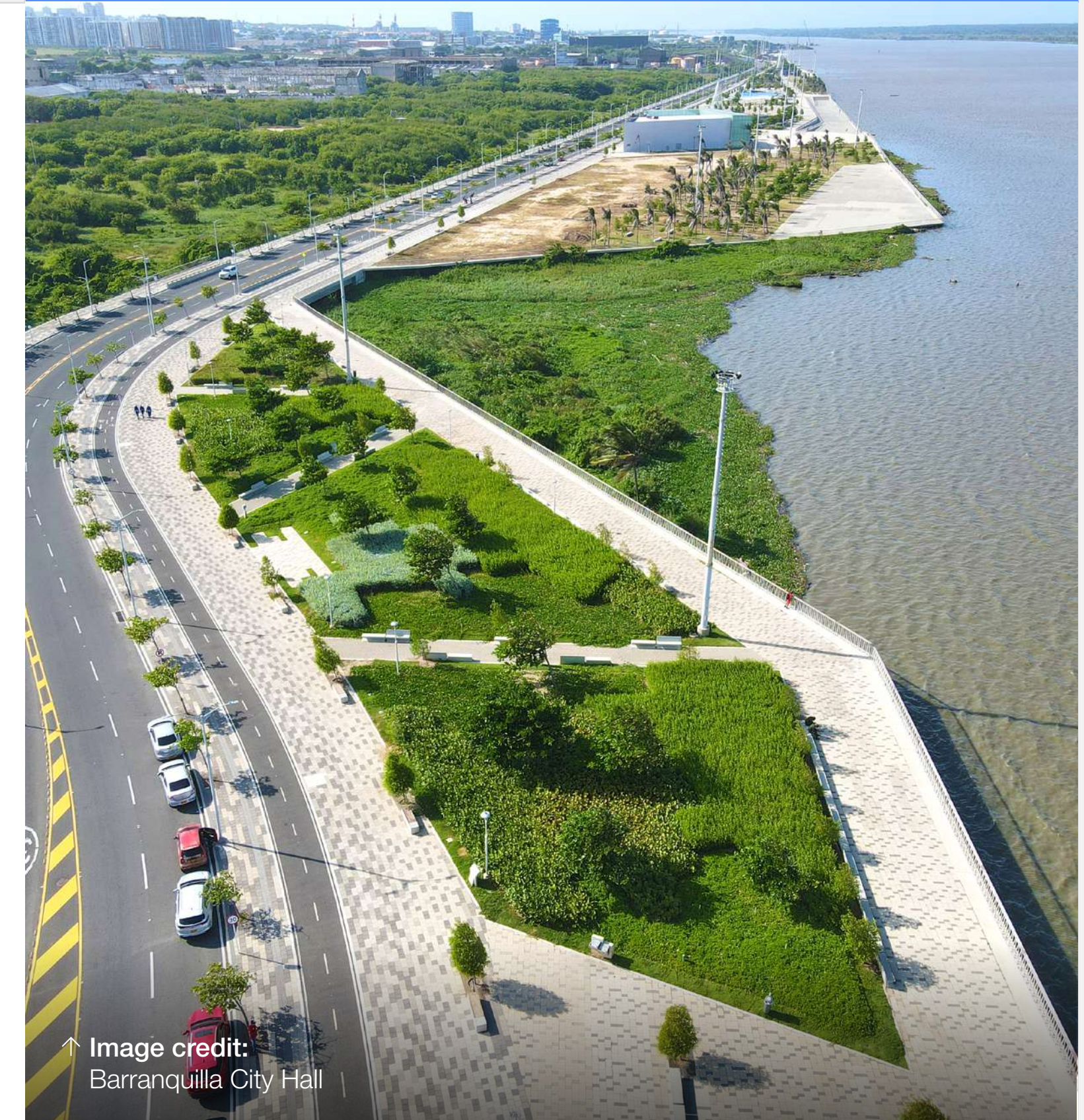


Image credit: Barranquilla City Hall

2

Assessment of the enabling environment

Municipal institutions are evolving to lead sustainability, aligning with city, national and international nature goals.

2.1 System enablers

An assessment of the system-enabling environment has highlighted six enablers that have the most impact in shifting the dial on nature-positive solutions in cities. These enablers are critical in mitigating risk, maximizing the potential of private investment and cultivating private-sector participation in nature-related initiatives at the city level. Further detail on each enabler is provided in the World Economic Forum's 2024 [Nature Positive: Guidelines for the Transition in Cities](#) report.



Select each enabler to discover more



○ DEFINITION

Structures, units and official roles and processes in place to oversee nature-positive efforts

◇ SUB-COMPONENTS

- Governance structure



↑ Image credit:
Barranquilla City Hall

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Select each enabler to discover more

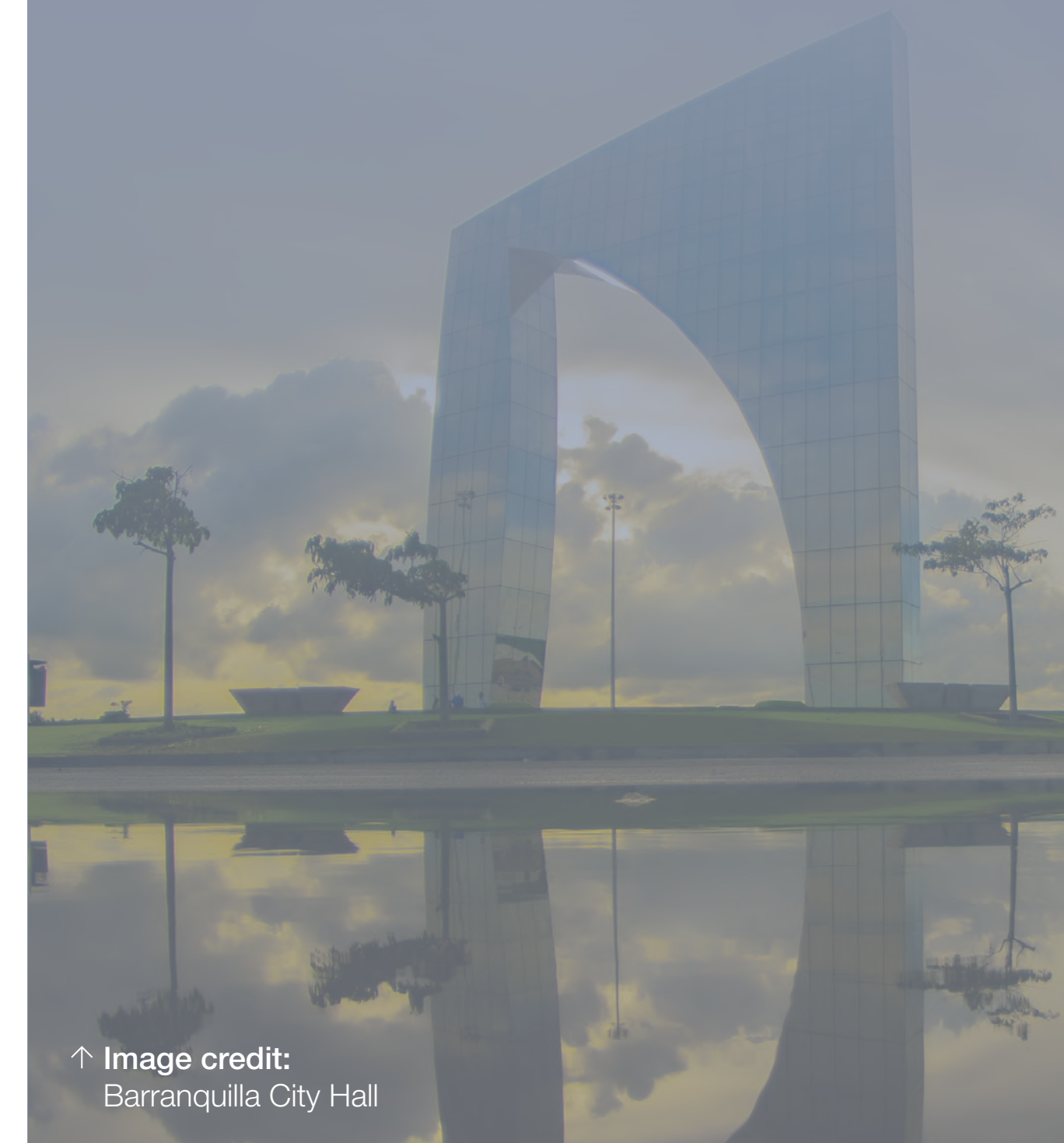


○ DEFINITION

Incentives and requirements that guide and promote the implementation of nature-positive solutions

◇ SUB-COMPONENTS

- Policy and regulations



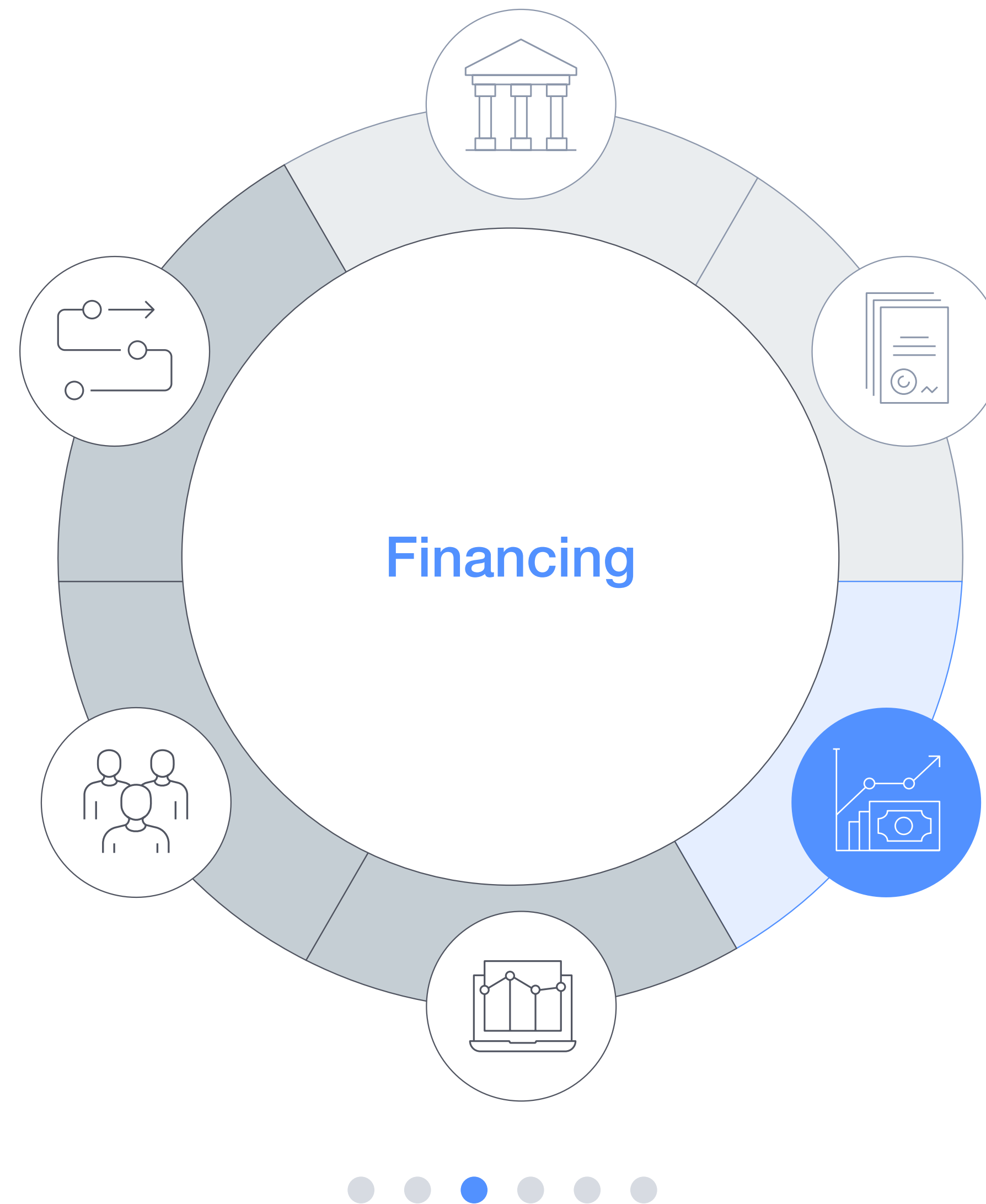
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Select each enabler to discover more



○ DEFINITION

Resources and mechanisms to obtain sufficient and timely funding for nature-positive solutions

◇ SUB-COMPONENTS

- Funding
- Financing processes



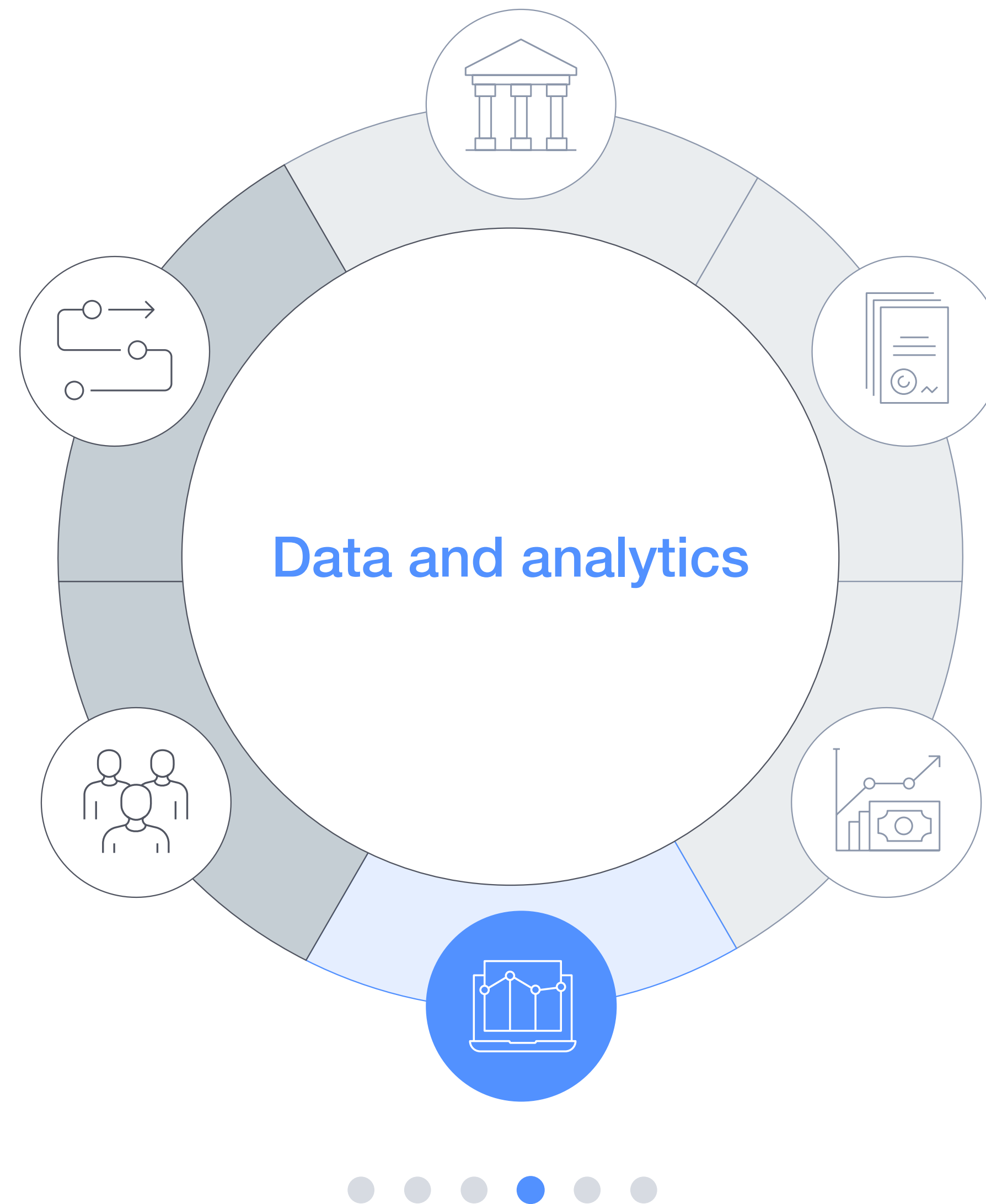
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Select each enabler to discover more



○ DEFINITION

Processes and systems to gather and manage data on nature risks and impacts, and to harness analyses to inform decision-making

◇ SUB-COMPONENTS

- Data management
- Risk and impact analytics

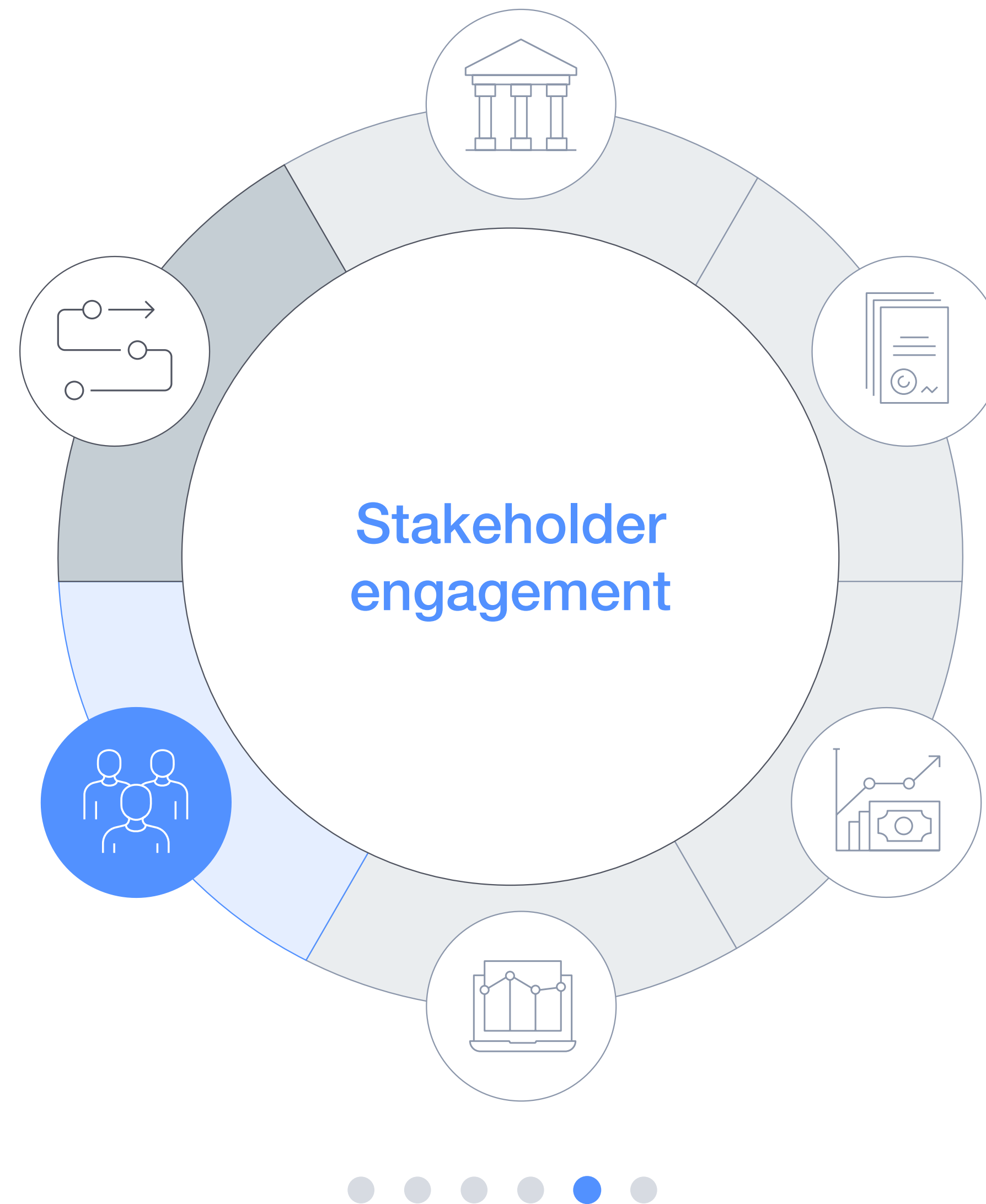
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Select each enabler to discover more

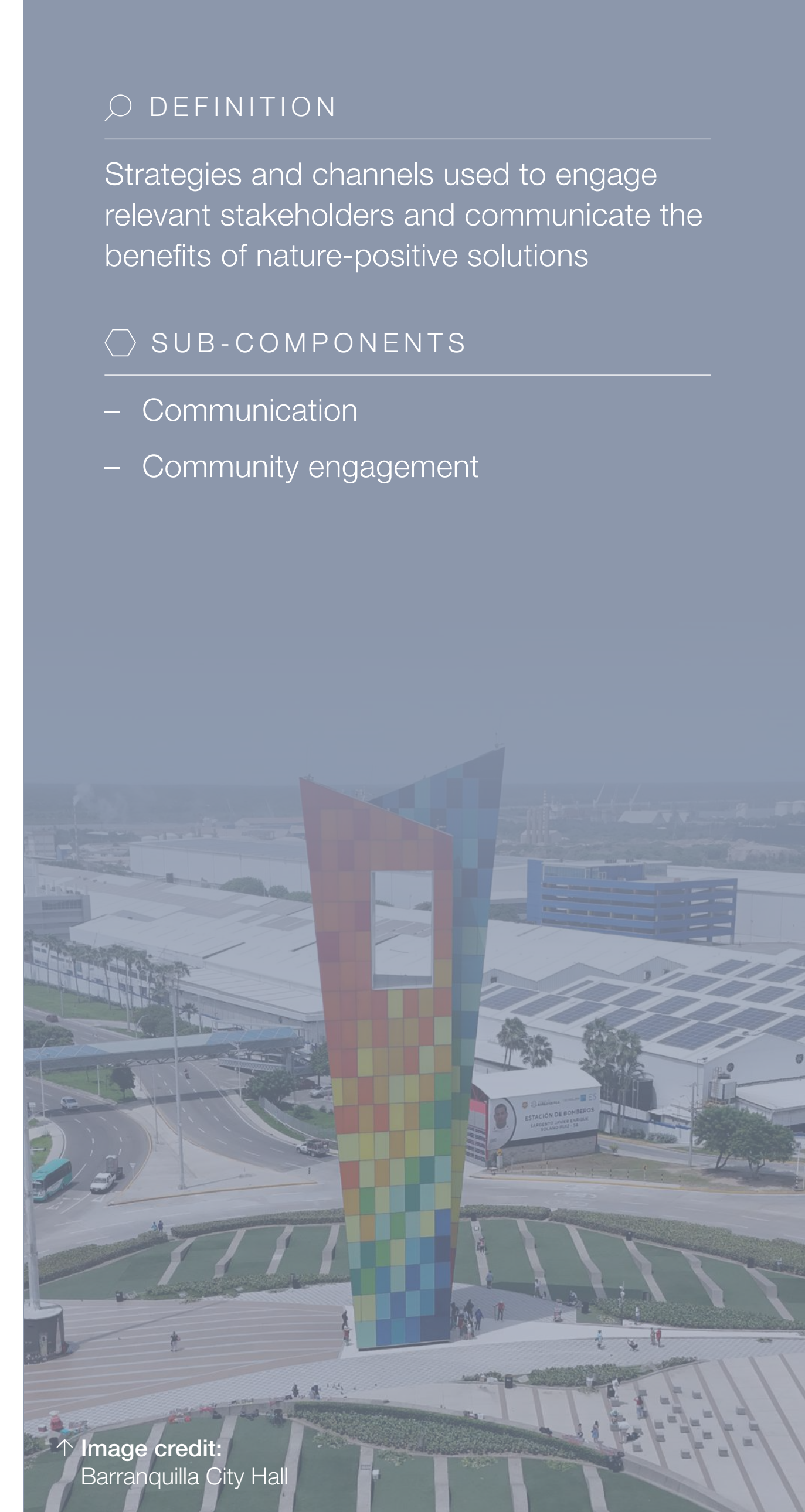


○ DEFINITION

Strategies and channels used to engage relevant stakeholders and communicate the benefits of nature-positive solutions

◇ SUB-COMPONENTS

- Communication
- Community engagement



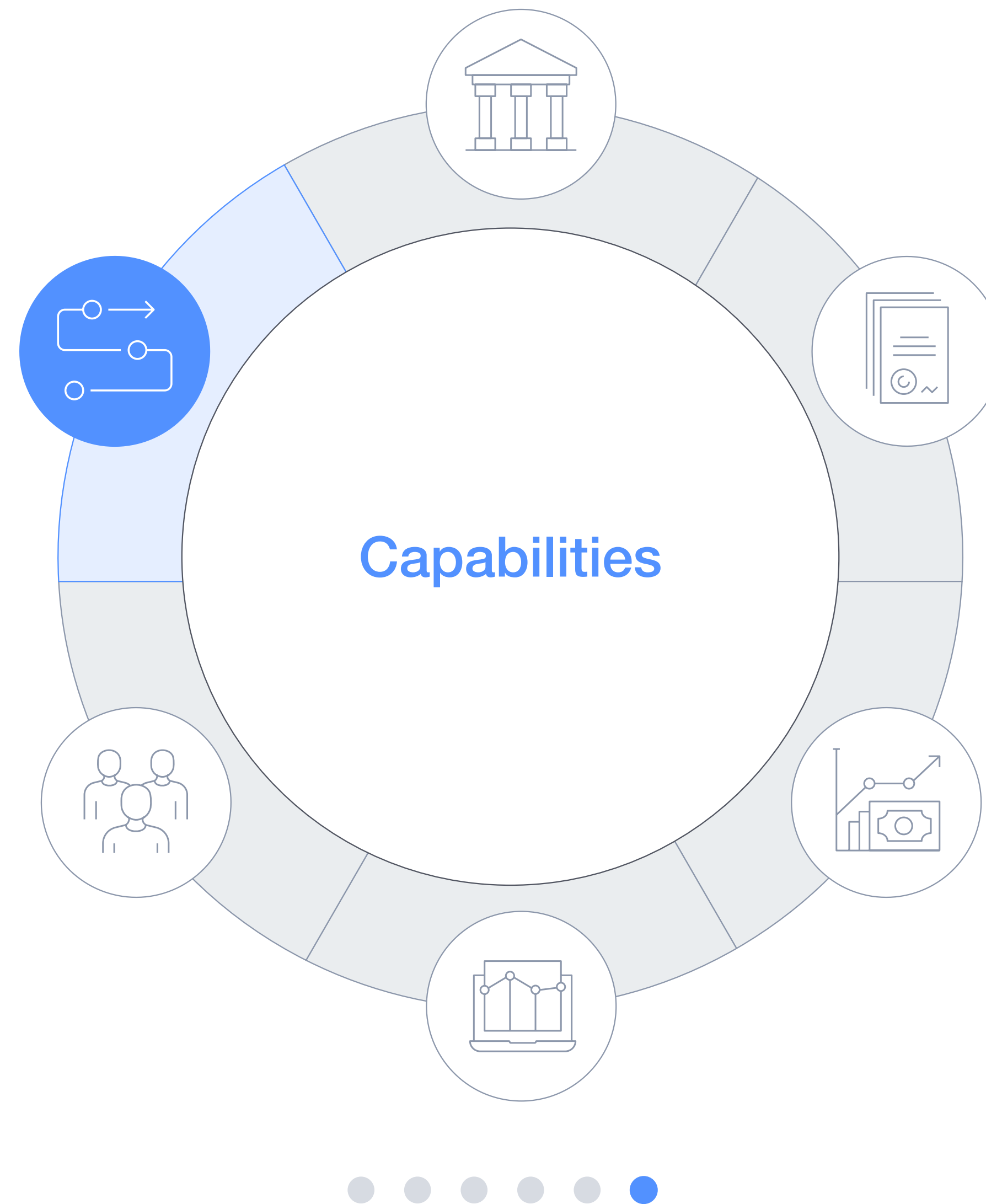
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Barranquilla City Hall

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Select each enabler to discover more



○ DEFINITION

Availability and talent of human resources, and adoption of a culture of innovation

◇ SUB-COMPONENTS

- Human capital
- Research and innovation



↑ Image credit:
Barranquilla City Hall

2.2 Governance

Overview

Barranquilla's nature management and governance structures include numerous bodies and agencies that manage elements of nature from water bodies to green spaces. These agencies continue to evolve to align more closely with the city's nature objectives and national and international policies.

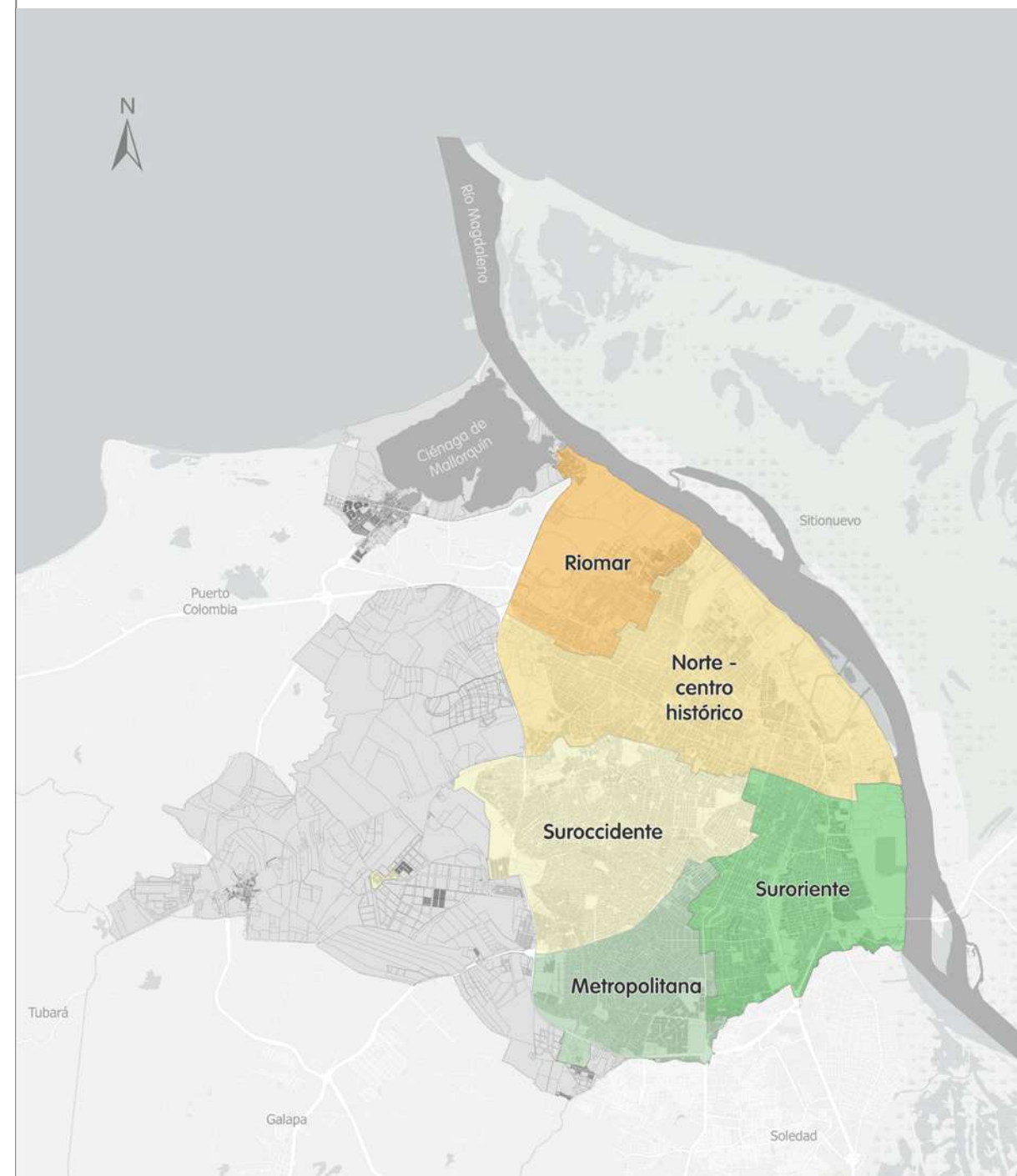
Various municipal institutions are taking the lead in promoting sustainability and environmental protection in the city. They work with the public parks administration and port management, and they integrate sustainability into the activities of numerous government agencies and departments. Outside the municipal governance structure, the private sector remains a core partner in developing and implementing solutions.

Governance operations

In the public sector, numerous agencies, bodies and committees influence environmental governance at the city level. These include, but are not limited to:

- The Barranquilla Industrial and Port Special District plans, executes and monitors policies and actions, guides the strategic vision and finances positive actions.

FIGURE 2
Port District of Barranquilla



Districts, as in the case of Barranquilla, are a special category of municipality. The central sector of the District of Barranquilla is administratively organized into secretariats, management departments and offices. It may also create working groups attached to these departments to assist in carrying out institutional tasks.

- With this in mind, the district, through the City Management Office, the Secretariat of Urban Control and Public Space, the Planning Secretariat, the Secretariat of Social Management and the Risk Management Office, promotes concrete actions for ecosystem conservation, sustainable territorial planning and the inclusion of environmental programmes in urban planning. This is conducted in accordance with the provisions of its territorial development plan, Barranquilla a Otro Nivel Plan de Desarrollo 2024–2027.
- The district, through its Planning Secretariat, monitors and manages development and investment plans, including the implementation of public policies, ensuring that all development is sustainable. Likewise, through the Risk Management Office, it manages disaster risk coordination, guaranteeing risk reduction and ensuring a resilient city by integrating climate change adaptation policies.

- The District Sustainability Committee monitors indicators and progress towards the United Nations Sustainable Development Goals (SDGs).
- The Public Environmental Agency of Barranquilla – Barranquilla Verde – serves as the city's official environmental authority. It is responsible for leading the formulation, implementation and oversight of policies related to climate, biodiversity and natural resource protection. As the governing body for environmental matters at the municipal level, Barranquilla Verde plays a key role in promoting sustainable land management, ensuring regulatory compliance and advancing actions that strengthen the city's ecological resilience.
- The Corporación Autónoma Regional del Atlántico (CRA) serves as the environmental authority for rural areas, defining strategies and principles for environmental protection.
- The Territorial Planning Council creates, monitors and evaluates territorial development plans, ensuring ample citizen engagement in decision-making to align outcomes with local needs.

2 Assessment of the enabling environment

- The Department of Planning monitors and manages the development and investment plans, including the execution of public policies, ensuring all development is sustainable.
- The Risk Management Office manages disaster risk coordination, ensuring risk reduction and securing a resilient city by integrating climate change adaptation policy.
- The District Infrastructure Agency (ADI) is responsible for planning, executing, supervising and maintaining public infrastructure projects in the Barranquilla district. Its mission is to ensure the development of sustainable, high-quality urban projects that improve connectivity, mobility, public spaces and basic services in the city. Additionally, the ADI plays a crucial role as the executor of stream channelization and the cleaning and restoration of the city's water bodies, contributing to the mitigation of flood risks and the improvement of the urban environment. The ADI plays a strategic role in Barranquilla's nature-positive approach to urban transformation, aligning infrastructure investment with the district's social, environmental and territorial development priorities.

At the national level, the Ministry of Environment and Sustainable Development oversees environmental management and use of renewable resources, while the District Sustainability Committee offers guidance, support and monitoring to ensure Barranquilla meets sustainability commitments.

- The Ministry of Environment and Sustainable Development provides the national regulatory framework for environmental management.

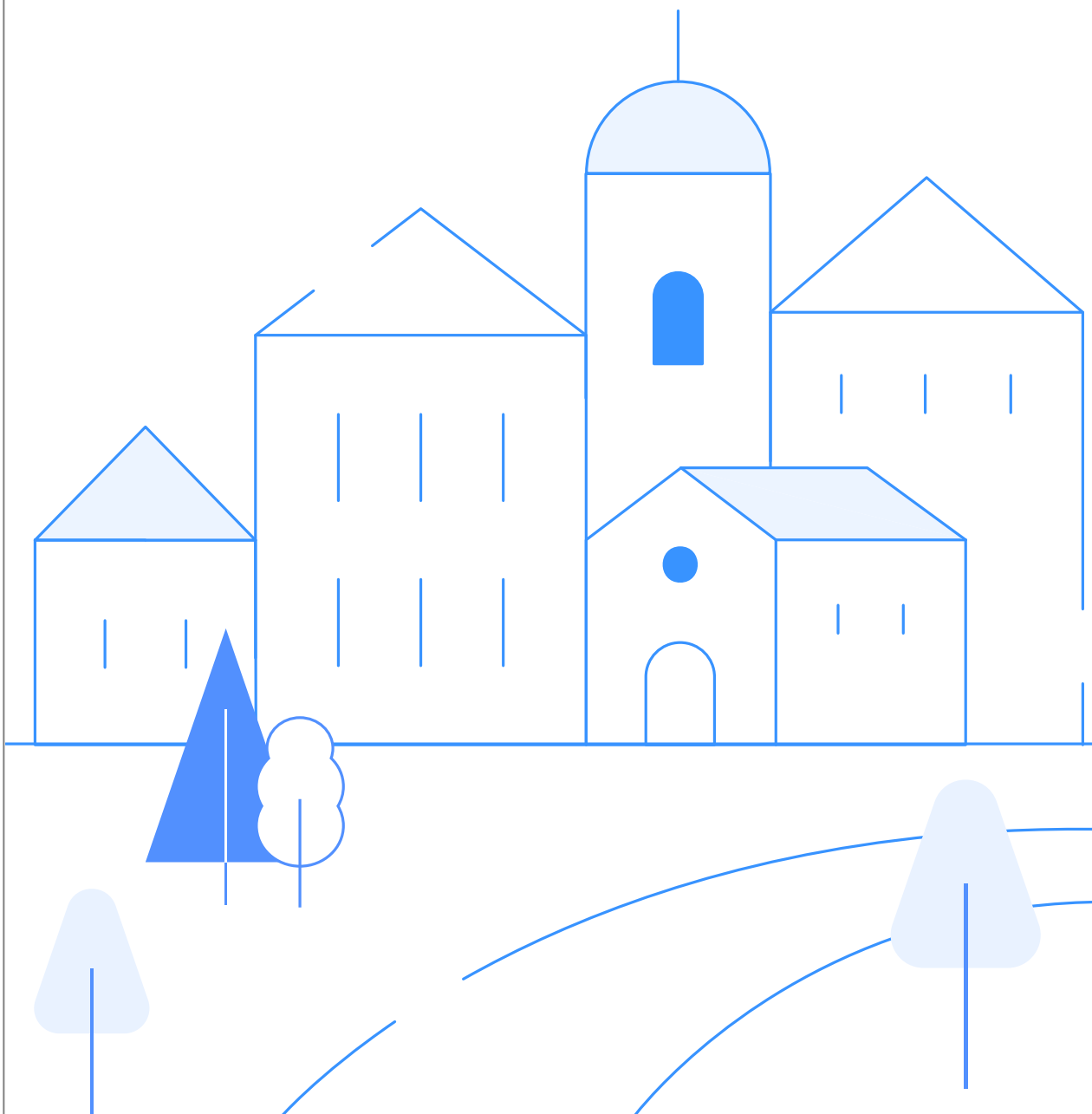


FIGURE 3

Barranquilla nature governance structures and roles

National governance



Ministry of Environment and Sustainable Development

Provides the national regulatory framework for environmental management

Municipal governance



Barranquilla Industrial and Port Special District

Conducts planning, implementation and monitoring of policies and actions to protect and improve the port region



The Municipal Council Mayor's Office

Guides the strategic vision and finances nature-positive action



Barranquilla Environmental Public Establishment (Barranquilla Verde)

Leads the establishment of and compliance with climate and nature policies and which regulates the protection of natural resources



The District Sustainability Committee

Monitors indicators and SDGs



The Corporación Autónoma Regional del Atlántico (CRA)

Serves as the environmental authority for rural areas, defining strategies and principles for environmental protection



The ADI

Coordinates environmental efforts related to water conservation and water system management



The Territorial Planning Council

Create, monitor and evaluate territorial development plans, ensuring ample citizen engagement in decision-making, to align outcomes with local needs



Department of Planning

Monitors and manages the development and investment plans, including the execution of public policies, ensuring all development is sustainable



Risk Management Office

Manages disaster risk coordination, ensuring risk reduction and securing a resilient city by integrating climate change adaptation policy



Challenges identified

- **Divergent national priorities:** Successive national administrations have concentrated environmental investments in rural areas or conservation zones outside the urban footprint, sidelining the urbannature agenda within the city. This lack of consistent political support limits the flow of resources and institutional backing needed to consolidate green infrastructure projects and ecological restoration projects in critical urban areas.
- **Intersectoral coordination for a unified environmental strategy:** Planning, execution, oversight and monitoring of environmental initiatives is distributed among institutions with legally defined mandates. The challenge lies in cultivating agile intersectoral coordination that avoids duplication and information gaps, makes each entity's progress visible and enables the formulation of a single environmental strategy for the city. This strategy should be coherent, efficient and free of unnecessary bureaucracy.



Improvement areas

- Identify international organizations (e.g. multilateral development banks) that can champion and advocate for nature-positive investment in cities through country platforms.
- Enhance the capabilities of government officials and contractors through continuous training and technical assistance, enabling them to design, implement and monitor projects that meet international standards for sustainability and governance. This will increase the quality of public initiatives and facilitate access to global financing.
- Develop a body or mechanism that ensures oversight across all nature initiatives conducted by the city.

2.3 Policy and regulations

Overview

According to Colombia's constitution, the national government is responsible for developing climate change and environmental regulations, while municipalities like Barranquilla hold authority over urban planning and land use.

The primary national environmental framework is the Environmental Law, complemented by specific regulations addressing topics such as biodiversity, waste management and air quality. Colombia has committed to its nationally determined contribution (NDC) under the Paris Agreement and passed the Climate Change Law in 2018. Barranquilla has developed its own climate action strategy, aligning with the country's commitments under the Paris Agreement.

The city also contributes to the implementation of the National Biodiversity Strategy and Action Plan (NBSAP), which guides conservation efforts from 2015 to 2025. At the regional

level, the Atlántico Department serves as a coordinating and supporting body, helping municipalities – despite their administrative and financial autonomy – align their environmental initiatives with national priorities, thereby ensuring coherent and impactful public policies across the entire territory.

Policies and regulations in place

- 1 The Barranquilla a Otro Nivel Plan de Desarrollo 2024–2027 is the near-term city development plan, with an embedded nature action plan. The plan emphasizes environmental responsibility, including environmental preservation, climate change adaptation, flora and fauna protection, responsible consumption, recycling, reforestation, green businesses and water body restoration. The plan establishes a strong framework for public-private collaboration, recognizing public-private partnerships (PPPs) as a key pillar for the city's sustainable development.
- 2 The Land Use Plan is a planning and management instrument through which the organization of land use, territorial occupation and physical development of the municipality or district is established.
- 3 The PGAM, managed by Barranquilla Verde operationalizes actions and measures to protect natural resources within and around Barranquilla. The strategy includes reforestation projects, actions to increase citizen volunteering efforts and integration of environmental education into schools.
- 4 Barranquilla Verde is currently developing a Comprehensive Climate Change Management Plan.
- 5 A decree on risk management issued by the District Mayor's Office has approved agreements on urban forestry and waste management to combat major climate risks and environmental challenges in the city.

Its aim is to promote balanced, sustainable and resilient growth. The Land Use Plan guides territorial development to ensure it is compatible with environmental protection, guaranteeing that decisions related to urbanization, infrastructure and land use respect ecological values and contribute to long-term sustainability.



↑ Image credit:
Barranquilla City Hall



Challenges identified

- Urban conservation and environmental management plans exist, but ecosystem assessments remain limited, hindering the design of effective, context-specific strategies.
- Despite the proven long-term benefits of NbS, traditional grey solutions are still preferred for their perceived short-term profitability and reliability.
- Harmonizing environmental management instruments across stakeholders offers a chance to build a unified framework with clear municipal priorities and measurable sustainability goals.
- NbS require continuous maintenance and monitoring, yet current regulations lack clarity on long-term responsibilities, threatening their durability beyond initial implementation.
- Progress in sustainable urban design is evident, but the absence of clear standards limits the inclusion of green infrastructure and ecological restoration in development projects.
- Weak regulatory mechanisms fail to promote private-sector involvement in NbS; incentives such as tax benefits, carbon credits or payments for ecosystem services remain underdeveloped or unused.



Improvement areas

- Strengthen education and public-sector understanding of the measurable economic and environmental benefits of NbS for cities.
- Simplify policies and plans to make it easier for practitioners to understand:
 - Existing policies and environmental targets
 - Where to implement measures that favour nature and are environmentally conscious
- Design and implement regulatory incentives – such as tax benefits, expedited permitting or public recognition – to encourage private-sector participation in NbS projects, including from real estate developers, utility companies and industrial zones.
- Develop legal and financial tools (including land acquisition mechanisms, ecological easements or PPPs for joint management) to support the restoration of degraded or strategic areas.
- Incorporate specific NbS indicators into urban and environmental monitoring systems, enabling more effective impact assessments and regulatory compliance tracking for implemented projects.

↑ Image credit:
Barranquilla City Hall

2.4 Financing

Overview

The municipal public budget is the main source of funding for natural conservation and climate change adaptation projects in Barranquilla. The District Development Plan of Barranquilla 2024–2027, under its strategic line “**Environmental and Sustainable City**”, allocates resources of COP 1.6 trillion (Colombian pesos) (approximately \$390 million) to environmental management programmes and projects. This includes green infrastructure, waste management, habitat restoration and systems for managing and channelling large volumes of rainwater. This allocation represents 8% of the total investment resources in the plan, showing a steady increase in spending related to climate and nature projects and a firm commitment to the city’s environmental sustainability.

Other major funding sources for nature-positive action are available – however, the city is highly dependent on local budgets to ensure the delivery of nature-positive action within Barranquilla.

– **National public budgets:** The national government provides funds for conservation and sustainability projects. For example, the national government allocated COP 105 billion through the National Planning Directorate as part of the Territorial Pacts programme, developed by En Territorio, for the construction of the Ecoparque Mallorquín. Also, the Mayor of Barranquilla allocated revenues from royalties to finance the implementation of the Siembra Barranquilla project and promote sustainable urban development and environmental care.

– **International funds and multilateral organizations:** Grants and loans come from entities such as the Inter-American Development Bank (IDB), the French Development Agency (AFD) and the Spanish Agency for International Development Cooperation (AECID).

– **Private sector and corporate social responsibility (CSR):** Local and foreign companies contribute to sustainable projects as part of CSR policies.

– **Philanthropy, grants and donations:** Funding received from philanthropic sources for community initiatives and environmental restoration projects.

– **Revenue-generating instruments:** Revenue is collected from taxes, fees and land sales, which are used to cover conservation costs. The Ecoparque Mallorquín was financed through the sale of development rights and compensation funds.

Currently, the district has not issued novel instruments or sustainable financial instruments, such as green bonds and environmental or social impact bonds. However, the city structured a sustainable project framework that received a strong rating from Moody’s environmental, social and governance (ESG) report.



↑ Image credit:
Barranquilla City Hall

Projects supported by international development banks

The AFD:

The AFD provided €170 million to finance a range of actions, including:

- 1 Restoration of Mallorquín Swamp, including mangrove planting and construction of the ecopark functional units 1 and 2
- 2 Construction of the Miramar Urban Forest and the planting of 8,000 trees in the city
- 3 Restoration of the city's canals to better control flooding
- 4 The installation of solar panels in government buildings to boost renewable energy production
- 5 Development of a comprehensive air quality management plan to reduce the carbon footprint of the industrial sector
- 6 Strengthening solid waste recycling programmes to reduce waste going into landfill or the environment

The IDB:

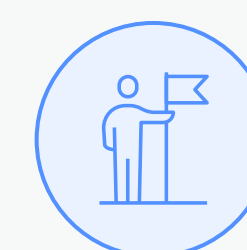
The IDB has granted a \$100 million sovereign-guaranteed loan to Barranquilla for the Biodiversity and Urban Equity Programme, which consists of three components:

- 1 **Strategic ecosystems:** This project aims to promote the sustainable use of ecosystems by funding the construction of environmental protection barriers to stabilize the coastline and prevent mangrove deforestation. It is also intended for the development of the Ecoparque Mallorquín, addressing pollution and urban growth.
- 2 **Todos al Parque:** This project focuses on increasing equitable access to public spaces and community centres through community-designed park spaces and the recovery of existing recreational areas. This component incorporates climate change adaptation, gender perspectives and universal accessibility.
- 3 **Equitable city:** This promotes integration and access to social services for migrants, women and people with disabilities. This component ensures universal access by financing multifunctional community centres and low-carbon, climate-resilient recreational infrastructure.



Challenges identified

- The current international financial architecture is country-centred, directing most development finance to national – rather than sub-national – governments. This limits cities' direct access to capital and sidelines local priorities in funding decisions.
- Municipal access to international finance is restricted by the need to align with national policies, loan conditions and timelines that rarely match local planning cycles.
- Complex requirements – such as sovereign guarantees, compliance with sustainability standards and extensive bureaucratic procedures – further delay or block cities' ability to secure affordable financing.
- Cities are often perceived as high-risk borrowers due to political cycles, weak credit ratings and institutional limitations, resulting in higher interest rates, shorter loan tenors and limited investment in climate and sustainability projects.
- Funding availability is often limited due to the government's need to prioritize essential services – such as education, security and health – and the development of critical infrastructure.



Improvement areas

- Continue to strengthen partnerships with multilateral development banks, philanthropic organizations and private-sector entities that have a clear nature-positive mandate and can help the city achieve its nature-positive objectives.
- Assess the viability of financing projects through green financing mechanisms such as green bonds, environmental impact fees, tax incentives and green revolving funds.

2.5 Data and analytics

Overview

The district administration of Barranquilla maintains a digital record of all environmental programmes and management indicators, and it publishes progress reports online. Departments also publish their activities and progress through social media channels and microsites.

Documents are available in digital format for public consultation. They detail progress on key indicators such as recovered green areas and the status of protected ecosystems and ongoing conservation programmes. In addition, public hearings and outreach events are held during which citizens can learn firsthand about the investments, achievements and challenges of the city's environmental management.

Monitoring of local species

In 2019, Barranquilla Verde – the city's Environmental Protection Agency (EPA), responsible for promoting, guiding and regulating the protection of natural resources and environmental sustainability – conducted an urban forest assessment using the i-Tree method.

i-Tree is a suite of tools developed by the US Forest Service to quantify the structure and environmental services of urban forests. It combines ground-

based data collection with satellite imagery and models, using either bottom-up (field plot sampling) or top-down (remote sensing) approaches. This method enables cities to estimate tree canopy coverage, assess planting potential and evaluate key ecosystem services such as carbon sequestration, air pollution removal, stormwater mitigation and oxygen production. It also serves as a monitoring tool to track changes in urban forest cover and inform strategic planning.

The findings were published in May 2022 under the report titled Barranquilla Ecosystem Analysis 2019. Based on data collected from 322 sample plots, the study estimated a total of 709,300 trees city-wide, with a canopy cover of 34.5%. Dominant species included *Mangifera indica*, *Tabebuia rosea* and *Terminalia kaernbachii*. The urban forest was found to play a critical environmental role, removing 170.5 tonnes of air pollutants, storing 207,000 tonnes of carbon and producing 20,040 tonnes of oxygen per year.

In addition, Barranquilla Verde is advancing the Urban Tree Canopy Improvement Project, aimed at enhancing the quality of the city's urban forest through coordinated restoration and management actions. The project addresses key challenges such as the degradation of existing tree cover, the lack of an updated inventory and the absence of a comprehensive urban forestry plan. Its goals include improving air quality, reducing urban heat islands and cultivating greener urban environments. Activities include tree characterization, the development of a detailed georeferenced inventory and continuous monitoring and treatment to address phytosanitary needs.

In terms of wildlife and species protection, Barranquilla Verde has faced challenges due to illegal trade and a long-standing Colombian tradition of keeping wild animals as pets. Since its inception, the authority has focused on rescuing and rehabilitating wildlife. Over the past three years, it has received and assessed 2,406 animals, which break down as follows:

2021

537 animals (180 reptiles, 86 mammals, 271 birds)

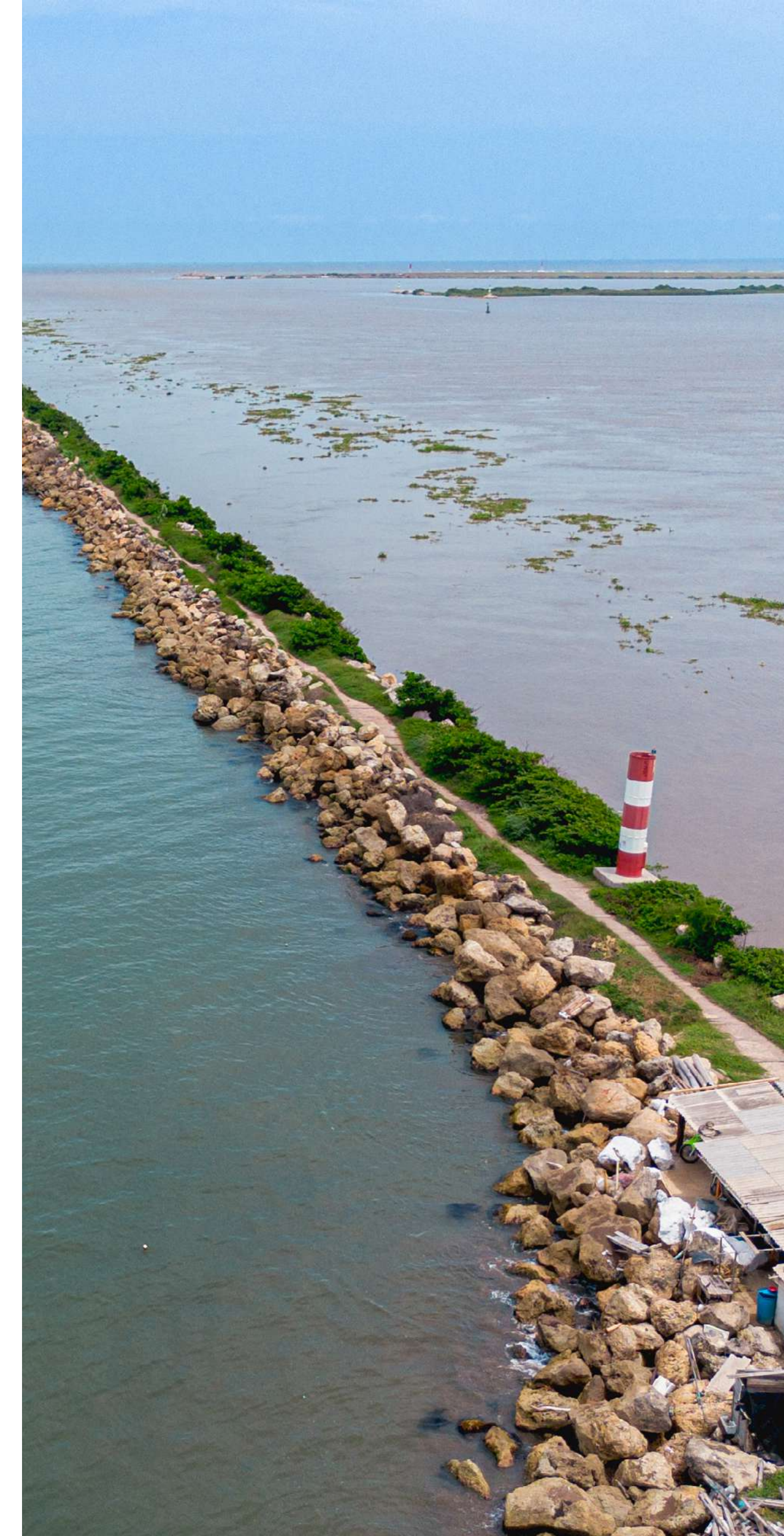
2022

990 animals (418 reptiles, 132 mammals, 437 birds, 1 malacostracan crustacean, 1 arachnid, 1 centipede)

2023

879 animals (384 reptiles, 113 mammals, 382 birds)

Of the 879 received in 2023, 589 were rescued following citizen requests, 194 were recovered from illegal wildlife trade operations and 97 were voluntarily surrendered by citizens. The inventory and records of wildlife species attended to by Barranquilla Verde remain confidential and are not publicly available.





Challenges identified

- Fragmented data systems: Environmental and programmatic data are scattered across various platforms, making it time-consuming and challenging to integrate them into a unified system, hindering effective decision-making.
- Unreliable data quality: Existing protocols fail to ensure the accuracy and reliability of data, which limits efforts to make informed policy and programmatic decisions.
- Delays in data processing: Slow processing of large datasets prevents the city from delivering real-time services, such as public transport, public safety measures and environmental monitoring.
- Limited impact measurement: The absence of mechanisms to assess the outcomes of nature-based projects makes it difficult to demonstrate their value and justify further investments.
- Lack of publicly accessible data: Insufficient availability of environmental and programme-related data restricts public awareness and engagement, reducing support for sustainability initiatives in Barranquilla.



Improvement areas

- Adopt standardized data formats for nature terminology to simplify the harmonization of datasets.
- Develop data governance frameworks that define roles and responsibilities for monitoring and maintaining data.
- Upskill teams in nature and environmental topics, so that data can be used appropriately to inform decision-making.



↑ Image credit:
Barranquilla City Hall

2.6 Stakeholder engagement

Overview

The city recognizes the importance of aligning its goals with broader environmental conservation efforts. It is dedicated to cultivating a sustainable urban environment.

Barranquilla's commitment to sustainability takes a multifaceted approach that includes collaboration with local communities for the delivery of programmes (such as the Limpia y Linda project). It also encompasses crucial changes, including the formalization of waste pickers in the community.

By recognizing and empowering these individuals, the city aims to improve its waste management system and uplift marginalized communities, contributing to a more sustainable and equitable urban environment.

To achieve its sustainability objectives, Barranquilla engages in proactive interactions with key local organizations such as environmental non-governmental organizations (NGOs), community associations and academic

institutions. These collaborations support initiatives ranging from urban nature restoration and biodiversity monitoring to environmental education programmes and community-led sustainability projects, cultivating both ecological resilience and social engagement. This collaboration is essential for:

- **Aligning objectives:** ensuring that all parties share common goals related to nature conservation
- **Coordinating key messages:** developing consistent communication strategies that promote environmental awareness and action among residents and stakeholders



Challenges identified

- Lack of alignment in messaging among stakeholders, entities, and departments responsible for managing nature, which results in the uncoordinated implementation of critical city initiatives across agencies. Limited support is available to run environmental initiatives aimed at improving the conditions of vulnerable groups. This can limit programmes' scope and impact.
- Indifference or limited understanding of nature as a value and development priority among key community actors can generate resistance and hinder the success of projects.



Improvement areas

- Establish a central communications hub to engage the broader community, ensuring residents are informed, involved and empowered to participate in decisions and actions that benefit both the environment and their well-being.
- Establish community partnerships and run programmes with vulnerable groups to cultivate environmental stewardship.

2.7 Capabilities

Overview

Colombia's National Climate Change Policy, approved in December 2016, establishes **Territorial Integrated Climate Change Management Plans (PIGCCT)** to identify and recommend measures to mitigate greenhouse gas emissions and adapt to climate change. The measures are based on vulnerability analyses and regional greenhouse gas inventories.

In the second phase of formulating the PIGCCT, Barranquilla Verde organized community working groups to engage young people aged 14 to 28 and various community sectors. These groups aim to address climate change impacts collaboratively and promote sustainable practices. Barranquilla Verde also encourages citizen participation and cultivates a culture of environmental responsibility.

International collaboration initiatives

The City of Barranquilla engages with other entities and organizations across a broad range of topics to strengthen cross-sector and regional collaboration and promote innovation. Topics for key collaborations include:

- 1 **Urban development:** Programmes such as International Urban and Regional Cooperation (IURC) cultivate urban innovation and sustainable development, connecting cities globally through agriculture and urban regeneration projects.
- 2 **Business and economic growth** are promoted by organizations such as the United States Agency for International Development (USAID). Initiatives and programmes include:
 - **ReactivAcción**, a programme for post-pandemic socioeconomic recovery
 - **Growing Your Business**, which focuses on economic recovery and support for small businesses, helping them adopt eco-friendly practices

- **The United Nations Environment Programme (UNEP)**, which is active in issues related to global environmental sustainability, climate change mitigation, ecosystem protection, pollution reduction and the promotion of a circular economy
- 3 **Climate and energy** is conducted through the **Global Covenant of Mayors for Climate and Energy** and **Cities: Race to Zero**. Both programmes aim to achieve a global commitment to addressing climate change.
- 4 **Biodiversity and environmental protection:**
 - **The BiodiverCities Network**, established in 2021 with the support of the Development Bank of Latin America and the Caribbean (CAF), promotes environmental protection in urban development. Barranquilla leads projects such as the restoration and creation of Ecoparque Mallorquín.
 - The **Cities4Forest** network aids urban forest conservation, and Barranquilla has planted over 60,000 mangrove seedlings for coastal protection.
 - **CitiesWithNature** focuses on recovering water bodies and protecting species,

supporting Barranquilla's aim to be recognized as a "BiodiverCity".

5 Sustainability and urban planning:

- The **IDB Cities Network**, established in 2017 by the IDB, facilitates knowledge exchange and urban planning solutions to enhance collaboration among cities in Latin America and the Caribbean.
- Barranquilla joined the **World Energy Cities Partnership (WECP)** in 2018 to position itself as an energy hub in South America, emphasizing its potential in solar energy, oil and gas.
- **Local Governments for Sustainability (ICLEI)** supports Barranquilla in implementing environmental projects and updating its greenhouse gas inventory for data-driven decision-making.
- **UN-Habitat** collaborates on key projects such as the restoration of the Ecoparque Mallorquín, promoting biodiversity and improving residents' quality of life through various environmental recovery initiatives.



Improvement areas

- Deliver learning and development programmes to help the government identify, evaluate and implement nature solutions.
- Hire environmental experts to inform the development of plans, projects and external funding applications.
- Increase training and upskilling for existing staff, informing them on how to develop nature-positive urban plans and on the importance of environmental awareness within city management.



Challenges identified

- Understanding of the benefits of nature across government and partners is limited, causing resistance to the implementation of projects and diminishing their success.
- Expert availability in environmentally informed urban planning and management topics is limited, restricting the city's capacity to develop and implement nature programmes.
- A fragmented approach to initiatives hinders the effective, city-wide implementation of sustainability measures and nature-positive solutions.
- There is limited understanding of the long-term benefits of the adoption of green/nature-positive solutions.

Summary of challenges and improvement areas



Governance

Challenges identified

- Several central governments have concentrated environmental investment in rural areas or conservation areas outside the urban perimeter, relegating the nature agenda to the city. This lack of policy continuity limits the flow of resources and the institutional support needed to consolidate green infrastructure and ecological restoration projects in critical urban areas.
- Managing environmental initiatives requires coordination among multiple government levels – national, regional and local – with responsibilities distributed across various teams and departments. This administrative fragmentation creates significant interinstitutional coordination challenges, making it difficult to monitor project progress comprehensively.

Improvement areas

- Promote institutional reforms or agreements that allow territorial entities to access repayable resources, such as international loans or climate financing, more directly and quickly.
- Develop project proposals that clearly demonstrate the social, economic and environmental value of urban nature initiatives to attract national and international support.
- Design and implement training programmes for public officials, urban planners and decision-makers on the approach and benefits of NbS.
- Work in coordination with the national and local levels to adjust or create clear regulations that define technical standards, eligibility criteria and procedures for including NbS in infrastructure, territorial planning and land use projects.



Policy and regulation

Challenges identified

- Barranquilla is at a key stage in strengthening its political and regulatory framework for environmental sustainability. The city has the opportunity to further assess its natural environments, which will allow for more precise action plans and the definition of strategic improvement paths tailored to each ecosystem.
- Urban action plans exist for conservation and environmental management; however, assessments of local ecosystems need to be more comprehensive to support the development of effective context-specific improvement strategies.
- Although sustainable alternatives offer proven long-term environmental and economic benefits, traditional solutions are still often favoured because they are perceived as more immediately profitable and reliable.
- A fragmented array of environmental management instruments prevents the region from defining clear municipal priorities and achieving coordinated, measurable progress toward sustainability and ecosystem recovery.

Improvement areas

- Assess the city's strengths and weaknesses in each enabling factor to understand potential opportunities.
- Strengthen education and public-sector understanding of the measurable economic and environmental benefits of NbS for cities.
- Harmonize regional environmental management instruments into a single, goal-driven framework that favours nature and ecological restoration.



Financing

Challenges identified

- The current international financial architecture is country-centred, directing most development finance to national – rather than sub-national – governments. This limits cities' direct access to capital and sidelines local priorities in funding decisions.
- Municipal access to international finance is restricted by the need to align with national policies, loan conditions and timelines that rarely match local planning cycles.
- Complex requirements – such as sovereign guarantees, compliance with sustainability standards and extensive bureaucratic procedures – further delay or block cities' ability to secure affordable financing.
- Cities are often perceived as high-risk borrowers due to political cycles, weak credit ratings and institutional limitations, resulting in higher interest rates, shorter loan tenors and limited investment in climate and sustainability projects.

Improvement areas

- Continue to strengthen partnerships with multilateral development banks, philanthropic organizations and private-sector entities that have a clear nature-positive mandate and can help the city achieve its nature-positive objectives.
- Assess the feasibility of financing projects through green financing mechanisms such as green bonds, environmental impact fees, tax incentives and green revolving funds.

Summary of challenges and improvement areas continued



Data and analytics

Challenges identified

- Data that is fragmented across systems requires effort and time to integrate, limiting effective programme measurement.
- Established quality protocols do not guarantee reliable and accurate data, limiting effective decision-making.
- Delayed processing of large datasets results in an inability to provide real-time services such as public transport, safety and environmental monitoring.
- Lack of mechanisms to measure the impacts of solutions makes it more difficult to justify the investment in nature projects.
- Expanding public access to environmental data and programmes led by regional authorities and stakeholders would raise awareness, encourage citizen participation and strengthen community support for Barranquilla’s sustainability initiatives.
- Developing or updating tools to capture and share information publicly would enable real-time services in critical areas such as public transport, citizen security and environmental monitoring.
- Developing impact assessment mechanisms would provide tangible evidence to justify and attract investment in conservation and ecological restoration projects.

Improvement areas

- Adopt standardized data formats for nature terminology to simplify the harmonization of datasets.
- Develop data governance frameworks that define roles and responsibilities for monitoring and maintaining data.
- Upskill teams in nature and environmental topics so that data can be used appropriately to inform decision-making.



Stakeholder engagement

Challenges identified

- NbS requires strong collaboration among multiple stakeholders – across government levels, sectors and civil society. Furthermore, overlapping authorities and entities working on the development of the NbS necessitate implementation of key initiatives that are aligned, harmonized and coordinated.
- A key challenge is cultivating social ownership of environmental initiatives from local communities. Without targeted awareness and environmental education programmes, local communities may remain disengaged, hindering active participation in ecological restoration efforts.

Improvement areas

- Establish a central communications engine to manage communications with the broader community. This will ensure the community is informed, engaged and empowered to participate in decisions and actions that are positive for both the environment and their well-being.
- Establish community partnerships and run programmes with vulnerable groups to cultivate environmental stewardship.



Capabilities

Challenges identified

- When government knowledge of the long-term ecological benefits of environmental initiatives is limited, resistance to implementation can persist, slowing progress towards sustainability goals.
- Specialized training in environmentally sustainable urban development is both a necessity and an opportunity for effectively developing ecological conservation programmes. Clearly communicating investments in green solutions and their long-term economic impacts is a challenge that, if overcome, will transform perceptions and attract sustainable investment.

Improvement areas

- Deliver learning and development programmes to help the government identify, evaluate and implement nature solutions.
- Hire environmental experts to inform the development of plans, projects and external funding applications.
- Increasing training and upskilling for existing staff on how to develop nature-positive urban plans and the importance of environmental awareness within city management.

3

Exemplary solutions

Flagship initiatives showcase Barranquilla's integrated approach to urban sustainability, combining ecological restoration, social inclusion and innovation.



↑ Image credit:
Barranquilla City Hall

3 Exemplary solutions

Exemplary solution 1

Mallorquín Swamp



Challenge

The Ciénaga de Mallorquín has historically been a vital ecological resource for Barranquilla – however, it has suffered significant degradation due to human activities, such as its use as a landfill, and changes from port development and rapid urban growth. This has resulted in the loss of nearly 400 hectares (ha) of mangrove cover across the swamp since the 1980s, impacting biodiversity and the marsh’s ability to protect the city against floods. Water quality has deteriorated due to pollution and inadequate public services, creating a cycle of environmental and social decline, which hampers the economic growth of local fisheries.



Solution

To address the challenges of the Ciénaga de Mallorquín, an ambitious plan was launched to transform the degraded ecosystem into a model of sustainable development. The district administration partnered with local communities to restore the swamp, provide public service enhancements and increase opportunities for ecotourism in the site.

The plan included remediating the Ciénaga de Mallorquín Ecopark through algae phytoremediation, the construction of a sewer system in La Cangrejera, mangrove revegetation and environmental education initiatives to improve water quality and biodiversity.

The plan also called for the introduction of local community training programmes on sustainable practices, increased availability of public services and the development of a tourist train.



Impact

The rehabilitation of the site has had direct benefits to the economy, particularly through the creation of employment in a range of new industries and services within and around the site (e.g. food stalls, train operators, taxi drivers to the site).

Additionally, workshop sessions run from the site have engaged participants in various ways to enhance their knowledge of the marsh’s physical, biological, geographic, historical and cultural characteristics.

Lastly, community engagement and outreach programmes such as workshops and service fairs for the local community have been under way. These highlight to the local community the important role that nature preservation and maintenance play in the city’s environmental and socioeconomic health.



↑ Image credit:
Barranquilla City Hall

Exemplary solution 2

Todos al Parque programme



Challenge

As the fourth-largest city in Colombia, Barranquilla was facing urban growth pressures related to the accessibility of public spaces for social gatherings, with parks becoming sites of neglect and urban marginalization. Due to the limited availability of public spaces for recreation, leisure and sports, an initiative was launched in 2012 to enhance the quality of life for the 1.3 million residents in Barranquilla.

The ADI developed the Todos al Parque programme to create a system of inclusive parks that cultivate community engagement and social equity. By recovering, activating and rehabilitating urban green spaces, the city was able to cultivate social cohesion by increasing accessibility for all citizens.

The success of the Todos al Parque programme has positioned it as a model of innovative public management, illustrating how strategic investments in public spaces can profoundly alter perceptions, use of public spaces and overall quality of life in urban environments. This initiative has generated significant urban, social and cultural transformations in Barranquilla, making it a benchmark for urban renewal both nationally and internationally.



Solution

The Todos al Parque programme is a transformative urban initiative in Barranquilla, aimed at revitalizing public spaces and enhancing the quality of life for residents.

As part of the programme, the city implemented:

- 1 Holistic park interventions:** Playgrounds, green spaces and security systems, transforming parks into vibrant social ecosystems
- 2 Numerous sites:** Urban parks through to larger projects, such as the Gran Malecón, Bosque Urbano Miramar and Siembra Barranquilla, in regions of greatest need
 - **Gran Malecón del Río:** This project has created over 5km of public space along the Magdalena River, attracting over 70 million visitors since 2017 and recognized as a sustainable tourist destination.
 - **Bosque Urbano Miramar:** A 30-hectare urban forest that enhances green space and captures 2,500 tons of carbon dioxide (CO₂) annually.
 - **Siembra Barranquilla:** Launched in 2017, this initiative has planted over 135,000 trees and landscaped more than 530,000m² of public space, reinforcing the city's commitment to sustainability.



Impact

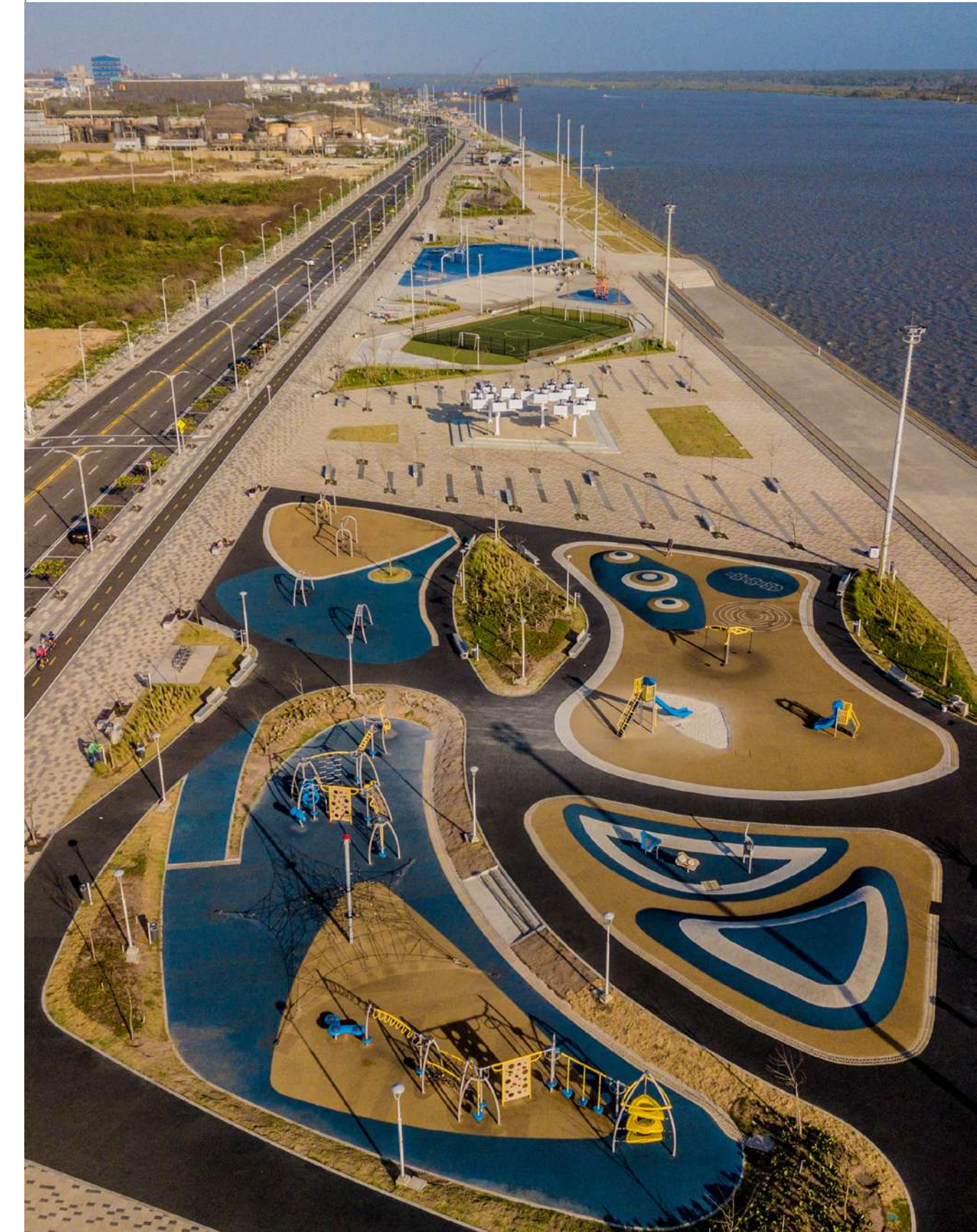
In line with key objectives, the Todos al Parque programme has had a profound impact on the city by addressing underlying social issues.

Key outcomes of the programme include:

- 1 Reduction in crime:** Between 2011 and 2020, the recovery of parks led to a significant decrease in thefts, with an average reduction of 20% within a 100m radius of the parks, 15.4% within 150m, and 9% within 200m. This decline in crime has cultivated a safer environment for residents.
- 2 Cultural and economic engagement:** The revitalized parks have transformed into vibrant venues for cultural events and local entrepreneurship fairs, providing essential spaces for recreation, particularly during pandemic restrictions. These activities have strengthened community ties and enhanced local economies.
- 3 Social cohesion:** Parks have emerged as crucial gathering spaces, promoting social interactions and community bonding. The increased use of these public spaces has significantly contributed to neighbourhood social cohesion, cultivating a sense of belonging among residents.



- 4 Community empowerment:** The programme has encouraged citizen participation, leading to greater social capital in Barranquilla's neighbourhoods. This engagement has cultivated empathy and trust between the community and local government institutions, enhancing transparency and collaboration in governance.



Exemplary solution 3

Barranquilla Limpia y Linda programme



Challenge

The inadequate management of solid waste in Barranquilla was leading to serious environmental and socioeconomic challenges in the city. These challenges included the accumulation of waste in public spaces (62 critical points intervened by the city) and pollution of the air, water systems and soil. This was caused by poor waste segregation and improper waste disposal due to a lack of civic engagement and awareness of environmental issues.

These challenges ultimately led to negative impacts on tourism, security and quality of life for Barranquilla's residents.



Solution

To address this issue, the Office of Public Services under the City Management developed and implemented the Barranquilla Limpia y Linda programme, focusing on educational, urban, social and economic interventions.

The key objectives of the initiative were to:

- 1 Promote the proper disposal of solid waste
- 2 Recover public areas affected by improper waste disposal
- 3 Encourage reduction, reuse and recycling through educational campaigns
- 4 Improve working conditions and dignity for waste pickers
- 5 Decrease the amount of waste reaching the landfill and critical points
- 6 Create appropriate infrastructure for waste use and treatment

The strategy was coordinated with multiple local stakeholders, including government entities, the Triple A company, community organizations, educational institutions and the police.

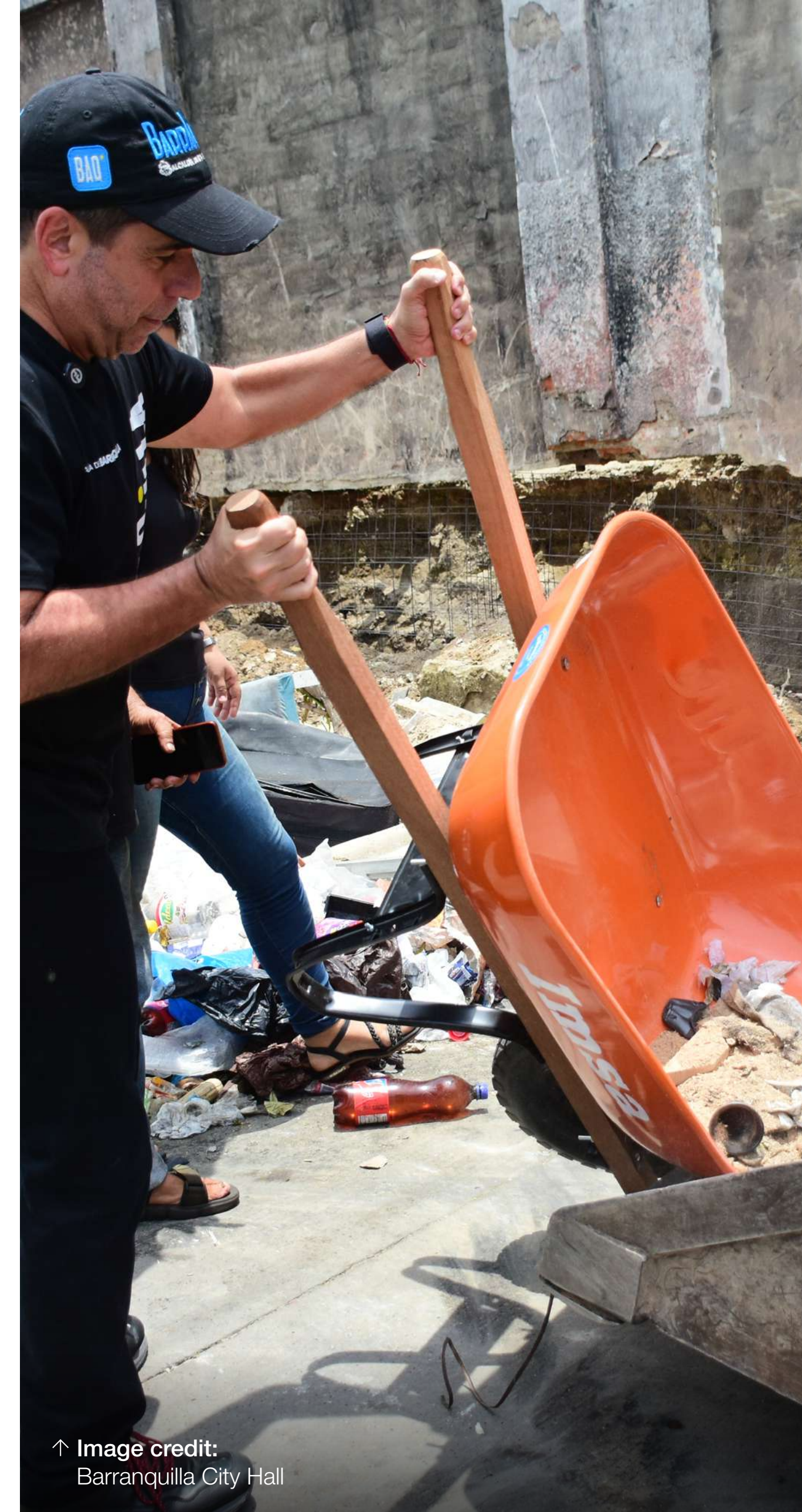


Impact

Through a comprehensive strategy focused on education, community participation, and infrastructure improvements, the city made considerable strides in solid waste management and urban cleanliness.

Key achievements of the initiative include:

- 1 **Critical points recovery:** Implementation of a patrol system that introduced 188 measures and recovered 62 critical points
- 2 **Public road interventions:** Remediation of almost 3km of road, with education for its maintenance and upkeep
- 3 **Educational initiatives and special waste management:** Collection of hundreds of tons of recyclable materials and waste from beaches and in waterbodies, using volunteer support
- 4 **Infrastructure enhancements:** Installation of 193 new public waste containers and new mechanical road sweepers to collect waste
- 5 **Incentives and community engagement:** Introduction of a waste exchange centre that collected 11,265kg of waste in exchange for monetary vouchers



↑ Image credit:
Barranquilla City Hall

Conclusion

Cities worldwide are being challenged to rethink their relationship with nature as global expectations for responsible nature stewardship continue to grow. Barranquilla is an example of a city that has risen to this challenge. It has redeveloped its urban landscape to be more nature-positive and has also strengthened its ecosystem to promote nature into the future.

To strengthen its connection with nature, Barranquilla has:

- Established a strong network of entities and organizations that can support the promotion of nature across programmes and sectors, including public and private partners
- Harnessed private-sector partnerships to attract external finance and retain independence from sovereign entities, which may have competing priorities
- Developed strategies and plans to embed nature across the city's urban planning initiatives and into educational programmes to ensure that citizens understand the urgency of the topic

To further the transition, Barranquilla should stand ready to:

- Establish clear data collection and management policies, so that it can set a baseline for progress towards becoming a nature-positive city
- Simplify and clarify policies and procedures so that they are easily understood and can be implemented by public and private sectors alike
- Develop a dedicated nature action strategy and plan that aligns Barranquilla's ambitions with a roadmap to achieve these

This report is one in a series of publications advocating for the regeneration of nature in – and by – urban areas. The series will help local leaders take account of the value of nature in their macro- and micro-economic decisions. It will highlight best practices and provide further guidance on governance arrangements, incentives, regulations, stakeholder engagement, capacity-building priorities, impactful solutions and funding opportunities, with the aim of making cities more resilient, prosperous and equitable.



↑ Image credit:
Barranquilla City Hall

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Endnotes

1. Alcaldía de Barranquilla. (2024). *Barranquilla a Otro Nivel Plan de Desarrollo 2024–2027*. https://www.concejodebarranquilla.gov.co/wp-content/uploads/dlm_uploads/2024/05/Plan-de-Desarrollo-2024-2027-Barranquilla-a-otro-nivel..pdf.
2. Departamento Administrativo Nacional de Estadística (DANE). (2025). *Monetary poverty and extreme monetary poverty*. <https://www.dane.gov.co/index.php/estadisticas-por-tema/pobreza-y-condiciones-de-vida/pobreza-monetaria>.
3. These figures, based on official data from Colombia’s National Administrative Department of Statistics (DANE), reflect current prices and were calculated using the official exchange rate of COP 3,822 (Columbian pesos) per US dollar as of 31 December 2023; Departamento Administrativo Nacional de Estadística (DANE). (2025). *Departmental national accounts (by department)*. <https://www.dane.gov.co/index.php/estadisticas-por-tema/cuentas-nacionales/cuentas-nacionales-departamentales>.
4. US Commercial Service. (2021). *Barranquilla Profile*. https://www.trade.gov/sites/default/files/2021-03/Barranquilla%20Profile_2.pdf.
5. Ibid.
6. DANE (Departamento Administrativo Nacional de Estadística). (2025). *Population projections*. <https://www.dane.gov.co/index.php/estadisticas-por-tema/demografia-y-poblacion/proyecciones-de-poblacion>.
7. Latin America and Caribbean Investment Facility (LACIF). (2024). *AECID and the European Union promote the urban transformation of Barranquilla to mitigate the impact of climate change*. <https://www.eulaif.eu/en/news/aecid-and-european-union-promote-urban-transformation-barranquilla-mitigate-impact-climate>.
8. Alcaldía de Barranquilla. (2024). *Barranquilla a Otro Nivel Plan de Desarrollo 2024–2027*. https://www.concejodebarranquilla.gov.co/wp-content/uploads/dlm_uploads/2024/05/Plan-de-Desarrollo-2024-2027-Barranquilla-a-otro-nivel..pdf.