

Curitiba: Operationalizing Green Infrastructure Through Climate Governance

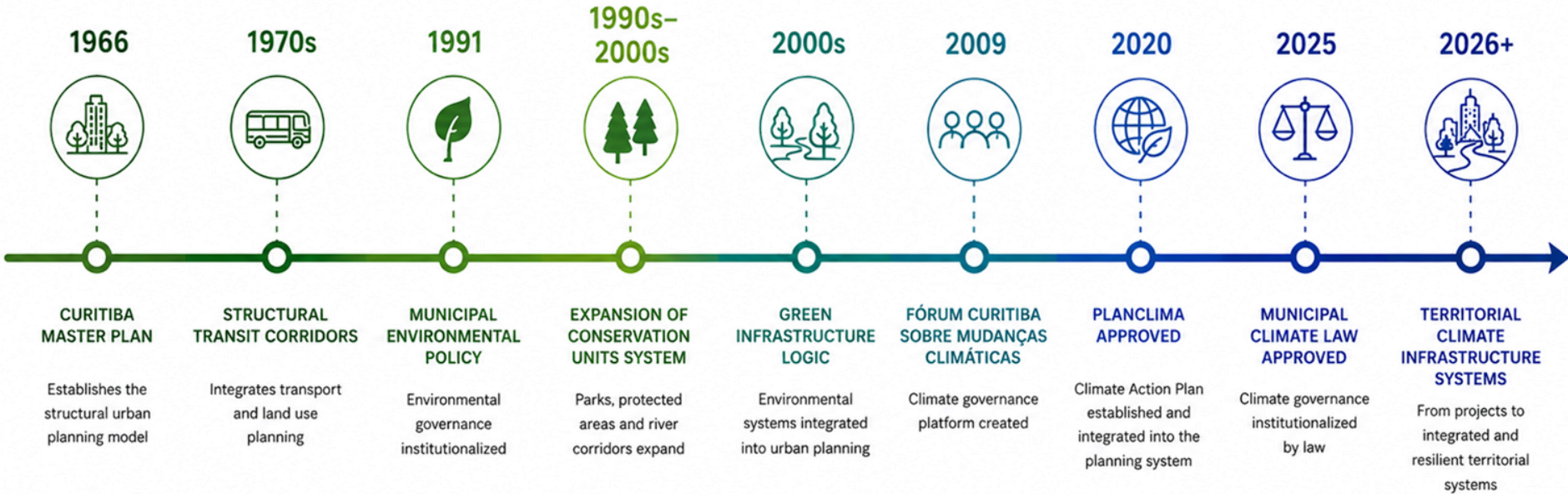
GPSC City Academy on Green Urban Infrastructure and Nature-Cultural Tourism
Samarkand, Uzbekistan – June 2026

Felipe Maia Ehmke

Climate Change Director

Municipal Secretariat of the Environment

Curitiba's Environmental and Climate Planning Evolution



Curitiba's City Context



Estimated population (2025) **1,830,795** people



Population in the last Census (2022) **1,773,718** people



Metropolitan region population (2025) **3,740,000** people



Territorial area **435.4** km²



Demographic density **4,078.53** hab/km²

GREEN INFRASTRUCTURE & CONSERVATION

CONSERVATION UNITS



Parks and Forest Conservation Units **53** units



Municipal Private Natural Heritage Reserves (RPPNMs) **65** reserves



Green area per inhabitant **68** m² per inhabitant

URBAN GREEN AREAS

SQUARES, SMALL PARKS, PUBLIC GARDENS AND OTHER GREEN AREAS



Public green areas **1,223** areas



MUNICÍPIO DE CURITIBA

LEGENDA

- ÁREAS VERDES - 2019
- ARRUAMENTO
- HIDROGRAFIA
- DIVISA DE BAIROS
- DIVISA DE REGIONAIS
- DIVISA DE MUNICÍPIO

ELABORAÇÃO: MARÇO/2025

FONTE:
ÁREAS VERDES: SMMA-PMC / IPPUC, 2019
ARRUAMENTO: IPPUC, 2025

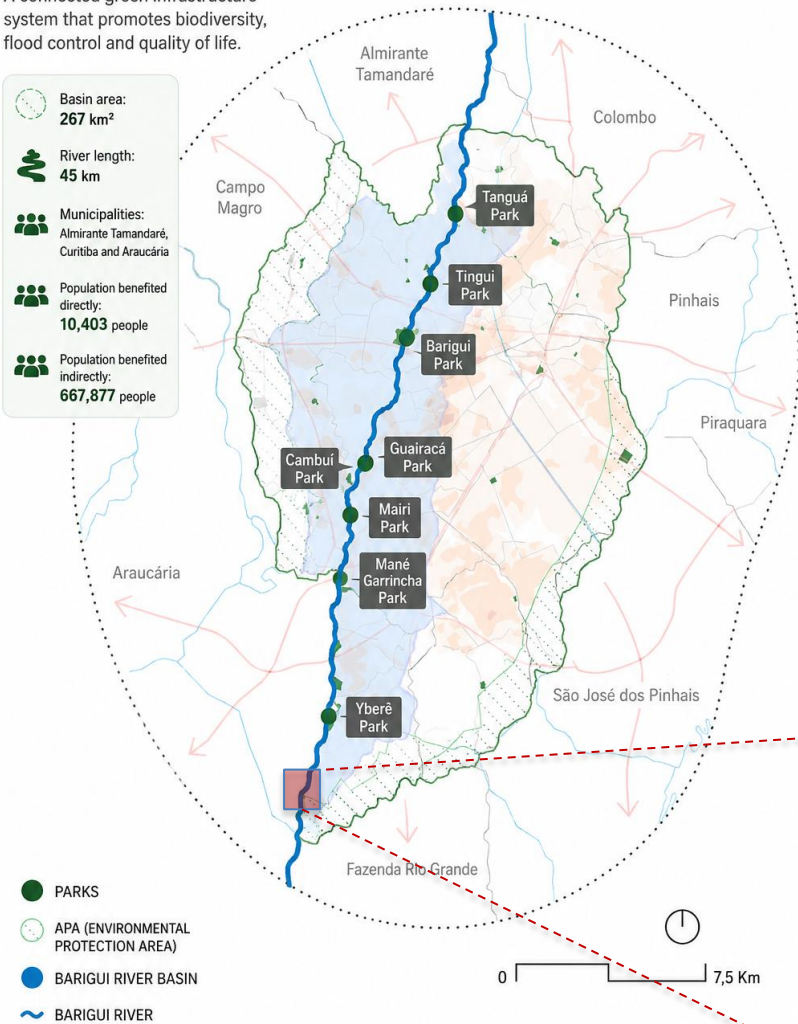


Bairro Novo do Caximba Project

BARIGUI RIVER BASIN PARK NETWORK

A connected green infrastructure system that promotes biodiversity, flood control and quality of life.

- Basin area: **267 km²**
- River length: **45 km**
- Municipalities: Almirante Tamandaré, Curitiba and Araucária
- Population benefited directly: **10,403 people**
- Population benefited indirectly: **667,877 people**



Environmental Conditions

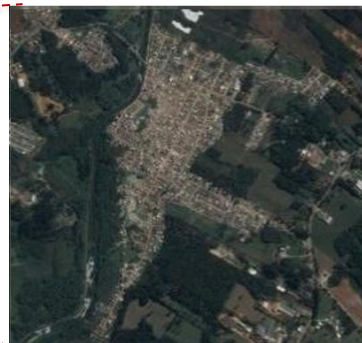
- Presence of waste and pollution near water bodies
- Sanitation deficiencies affecting public health

Community Vulnerability

- High exposure to climate risks, including flooding and landslides
- Need for relocation of families living in high-risk areas

Urban Infrastructure

- Urbanized area with precarious infrastructure
- Need for improvements in roads, lighting, and basic public services



Bairro Novo do Caximba Project

PROJECT PHASING

Climate Risk Management Project

1-3 HOUSING & ESSENTIAL INFRASTRUCTURE



- Relocation and housing construction
- Roads and urban infrastructure
- Water supply and sewage systems
- Public lighting implementation

4 URBAN REGULARIZATION



- Land regularization
- Infrastructure upgrading
- Expansion of basic services

5 CONSOLIDATION OF THE URBAN AREA



- Additional housing units
- Road and sanitation improvements
- Public lighting and accessibility

6 CLIMATE RESILIENCE INFRASTRUCTURE



- Macrodrainage canal
- Flood detention basins
- Belvedere / slope stabilization

7 GREEN INFRASTRUCTURE & ECOLOGICAL RESTORATION



- Linear park implementation
- Ecological corridor restoration
- Urban forestry and planting
- Cycling and walking infrastructure
- Leisure and sports areas

8 FINAL INFRASTRUCTURE INTEGRATION



- Completion of urban infrastructure
- Water and sewage integration
- Public lighting
- Mobility connections



Phased implementation to integrate housing, climate adaptation, ecological restoration and resilient urban infrastructure.

PHASING OVERVIEW

1-3



Housing & Essential Infrastructure

4



Urban Regularization

5



Urban Consolidation

6



Climate Resilience Infrastructure

7



Green Infrastructure & Restoration

8



Infrastructure Integration

1-3 HOUSING & ESSENTIAL INFRASTRUCTURE

4 URBAN REGULARIZATION

5 CONSOLIDATION OF THE URBAN AREA

6 CLIMATE RESILIENCE INFRASTRUCTURE

7 GREEN INFRASTRUCTURE & ECOLOGICAL RESTORATION

8 FINAL INFRASTRUCTURE INTEGRATION

7 AREA TO RELOCATE



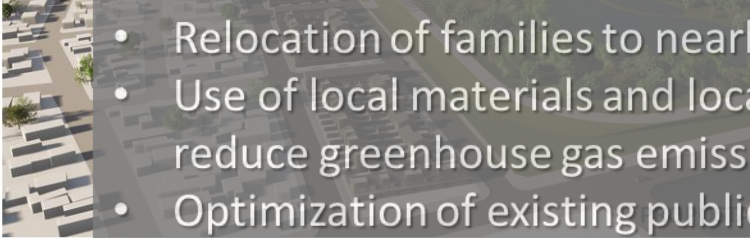
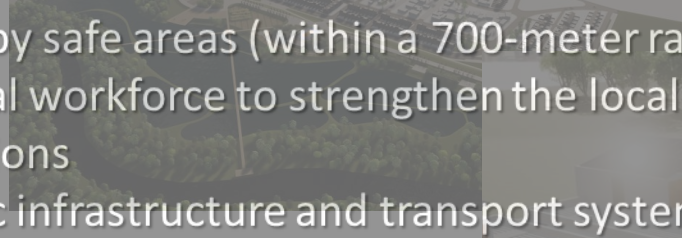
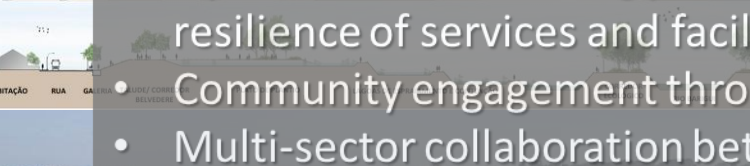
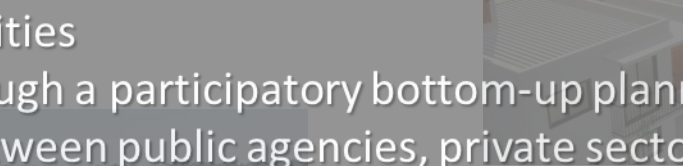
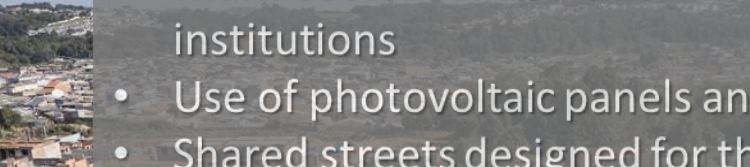
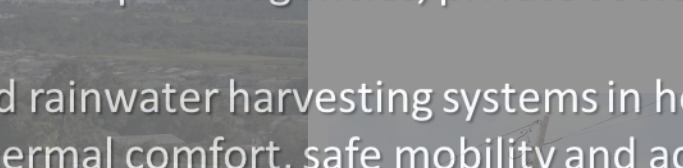
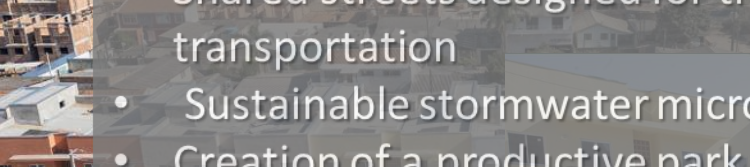
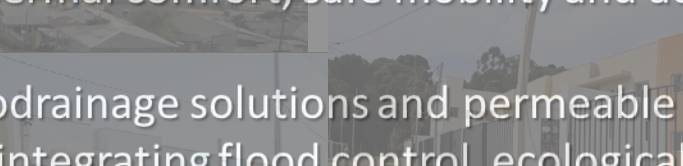
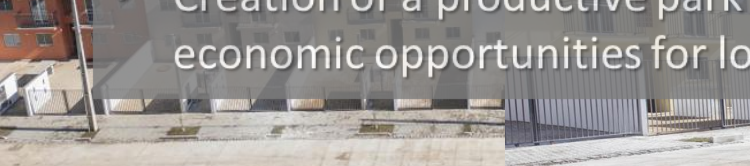





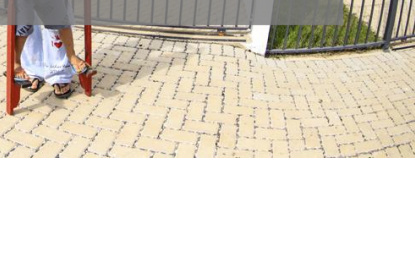

8 PROJECT SUMMARY



Bairro Novo do Caximba Project



Bairro Novo do Caximba Project

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- Relocation of families to nearby safe areas (within a 700-meter radius)
 - Use of local materials and local workforce to strengthen the local economy and reduce greenhouse gas emissions
 - Optimization of existing public infrastructure and transport systems to improve resilience of services and facilities
 - Community engagement through a participatory bottom-up planning process
 - Multi-sector collaboration between public agencies, private sector and institutions
 - Use of photovoltaic panels and rainwater harvesting systems in housing units
 - Shared streets designed for thermal comfort, safe mobility and active transportation
 - Sustainable stormwater microdrainage solutions and permeable paving systems
 - Creation of a productive park integrating flood control, ecological restoration and economic opportunities for local families

Lessons learned / Key takeaways

- Curitiba's experience demonstrates the importance of integrated governance
- Green infrastructure becomes transformative when connected through territorial logic
- Climate resilience depends on linking planning, infrastructure, ecosystems, and finance
- Cities must evolve from isolated sustainability initiatives toward systemic urban transformation
- Treat green infrastructure as essential urban infrastructure
- Think in networks, not isolated projects
- Integrate climate goals into planning and investment systems
- Build governance structures before scaling interventions
- Use pilot projects strategically to generate legitimacy and financing

THANK YOU!



Building a resilient, inclusive
and sustainable future
for our communities.



SOCIAL
INCLUSION



ENVIRONMENTAL
RESTORATION



CLIMATE
ADAPTATION



ACTIVE
MOBILITY



RENEWABLE
ENERGY



QUALITY OF LIFE
FOR ALL



CURITIBA

A CITY THAT PLANS,
CARES AND INSPIRES.

