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EcoZones: An approach for co-designing, scaling and replicating inclusive climate action at the neighborhood level

Green City Pioneers of Change: Creation of Synergies between Mobility, Urban Space and Energy Solutions

19 January 2022

Belo Horizonte/Brazil

- Belo Horizonte was one of the first ‘planned’ cities in Brazil; the structured design of its urban core was built in 1897 to accommodate a projected upper limit of 200,000 inhabitants. Nowadays, the City of Belo Horizonte covers an area of 331 km² and is home to over 2.5 million people, making it the sixth largest city in Brazil = challenges for urban planning and service provision.
- The city is prioritizing urban development policies that emphasize both quality of life and environmental protection.
- The City of Belo Horizonte’s comprehensive PlanMob-BH urban mobility strategy reflects a philosophy that is grounded in practical experience: reducing the vulnerability of pedestrians and bicyclists and providing quality infrastructure and service for ecomobile transport modes can help to change user behavior.
- The modal share for public transportation ridership fell from 57.6 per cent in 2002 to 34.6 per cent, while private automobile use rose from 34 per cent to 48.1 per cent over the same time period => urban mobility was responsible for 53 per cent of city-wide emissions

The Zone 30 Process in Belo Horizonte

Cachoeirinha

- 1st one
- April 2019
- School area
- Became permanent

Lagoinha

- Context: Street art festival
- Sept 2019
- Become permanent

Confisco

- Context: Mobility Week
- Sept 2019
- School area

Why?

- Road traffic is the leading cause of death of children aged 10 to 19 in developing countries
- Need to reclaim public space from cars

EcoZones - Concept

Co-creating sustainable, inclusive and liveable neighbourhoods

SUSTAINABLE NEIGHBORHOOD | SOCIAL COHESION | LOCAL DEVELOPMENT | LOW EMISSIONS | ZERO WASTE | CLEAN AIR

Key Stakeholders

LOCAL CHAMPION

Eveline Prado Trevisan

Sustainability & Environment Coordiinator BHTrans

INSTITUTIONAL SUPPORT

- Municipality
- Public Transport & Transit Company (BHTrans)
- Waste Management Department (SLU)

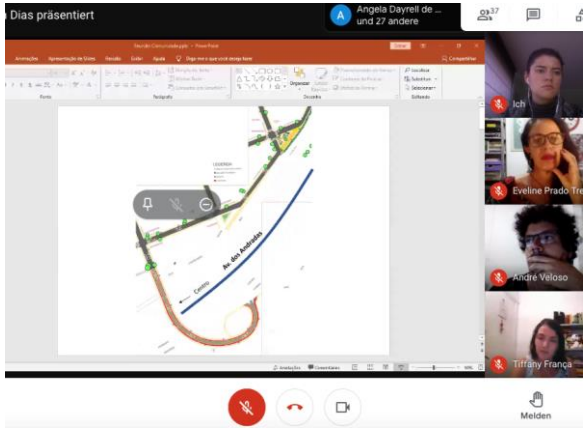
EXTERNAL

- Wuppertal Institute
- UN HABITAT
- WRI Brasil
- TUMI (GIZ)
- SDSN Youth

COMMUNITY

- School
- Neighbours
- Business owners
- Local NGOs / collectives
- Volunteers
- Universities

Participatory Design



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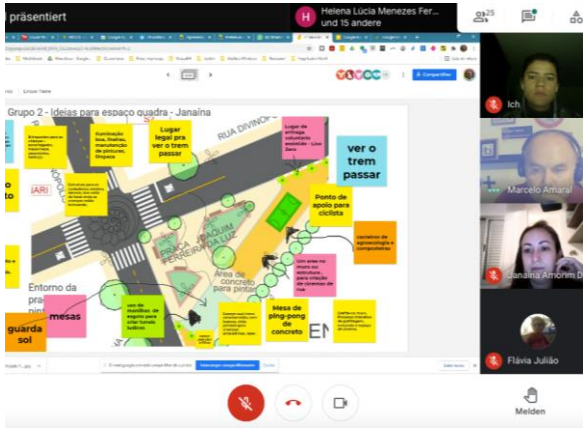

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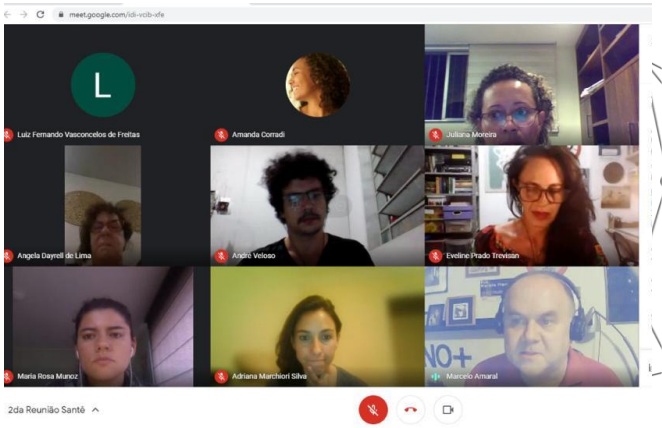

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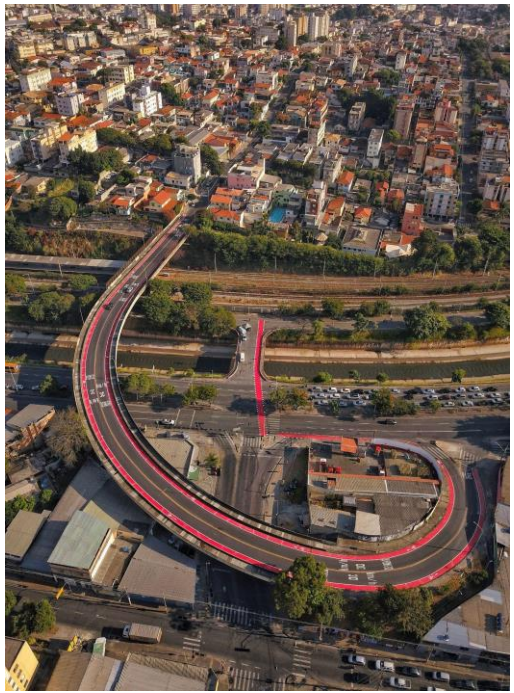
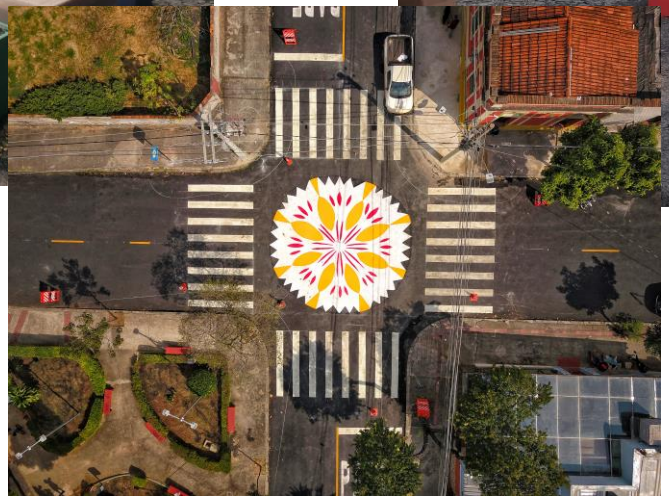
Volunteers

Cycle Lane



Permanent Open Street

Urban Paint and Furniture



Stakeholders locais: FabLab Newton Paiva

Monitoring and Evaluation

ASSESSMENTS BEFORE AND AFTER

SURVEYS

WOMEN SAFETY AUDIT

AQ & NOISE MONITORING

PEDESTRIANS /CYCLISTS COUNTS

Urban Living Labs

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Success factors

Results

- Low-cost Zone 30
- Increased safety around the school area
- Increased social cohesion
- Reduced air and noise pollution

Video – EcoZone Santa Tereza

Conclusions

- Low complexity interventions => high potential for local impact
- Transition guidelines for sustainable urban development
- Increased interest in public areas and sense of belonging
- Integrated monitoring of environmental and social impacts (air quality, noise pollution, safety perception)
- Multi-sectorial financial constellation (need for greater integration of local resources to ensure project sustainability)
- Local socio-economic development

Projects for 2022

Focus Areas

- GHG emissions reduction

Low Emissions Zones

- Green urban regeneration

Nature-based Solutions

- Organic waste management

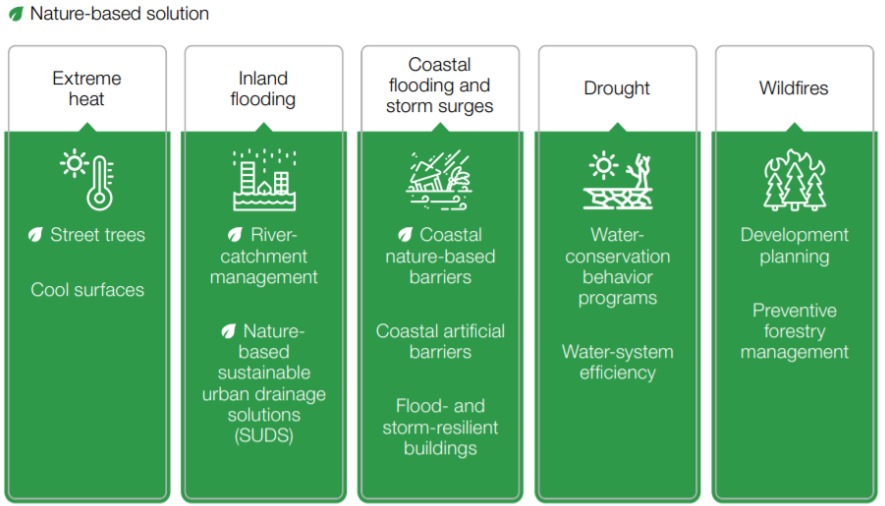
Composting

- Awareness-raising and capacity building

Urban Pedagogy

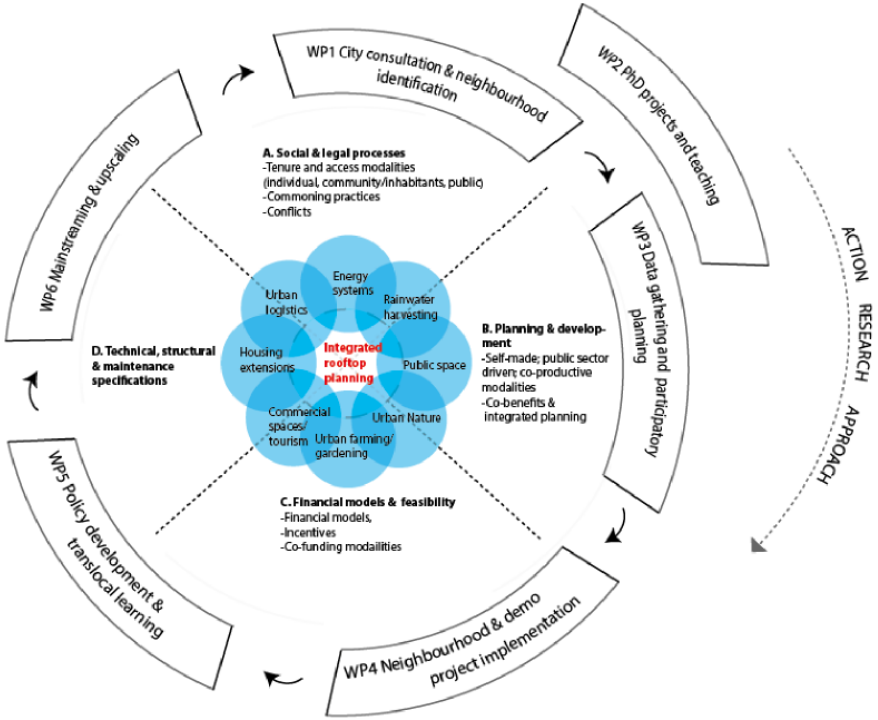
Resilient Cities

Nature-based Solutions (NbS) can help cities address urgent and fundamental environmental challenges by bringing ecosystems services back into cities and rebalancing cities' relationships with their surrounding areas



Rooftops

Project Framework



WP1. City consultation and project identification

WP2. PhD projects and teaching component

WP3. Data gathering and participatory planning

WP4. Neighbourhood plans and project implementation

WP5. Policy development and local learning


Thank you!

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Lalitpur – Kathmandu valley

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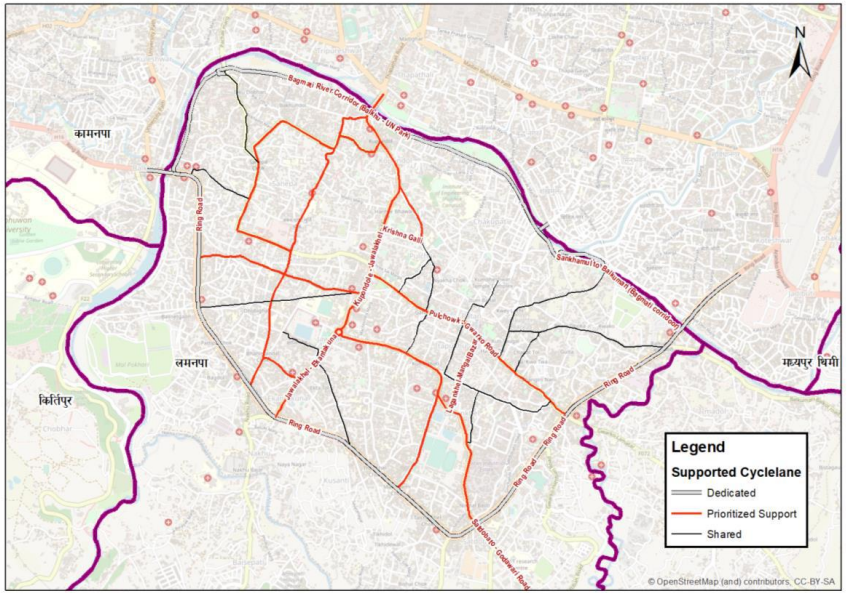
Sustainable Mobility



Road transport dominates transport infrastructure in Nepal accounting for over 90% of the movement of passengers and goods (ADB, 2013). Buses are one of the main modes of public transportation in the valley, followed by micro-bus, vans and 3-wheelers (tempos). Nepal imports 100% fossil fuels which has many issues including energy security.

Biking

Sustainable mobility

Co-development

Business Development

Affordable and Inclusive

Establishing and networking infrastructure

Approach

Pedaling towards healthy cities post Covid 19

Establishing Vision

Building Partnerships

Improve Biking Infrastructure

Towards safe, sustainable and inclusive mobility

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Buenos Aires - Argentina

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Approach

Buenos Aires is the capital and most populated city of the Argentine Republic. The Autonomous City of Buenos Aires (CABA by its Spanish Acronym) has a population of ca. 3 million inhabitants. However, the CABA is part of an urban agglomeration of approximately 15 million people, known as the Metropolitan Area of Buenos Aires.

Concept: the transport sector generates 28% of the total GHG emission. From those 97% are produced by road transport and 3% by trains and subways. More than 3 million people commute from the Metropolitan Area of Buenos Aires to the CABA every day.

Approach: among the measures that Buenos Aires has been implementing since 2010 are the extension of the BRT in 38,5 km, the extension of the subway system with 19 new stations, the construction of 140 km of additional bike lanes and the expansion of the bike sharing system with 400 new stations and 6,000 bicycles. In the context of the Clean Mobility Plan, a pilot programme was created to assess the technical, operational, economic and environmental feasibility of low-emission buses, as well as to analyse the scalability of the technologies. The City is extending the bicycle lane network: a new route on Forest Avenue and 4 popular neighbourhoods will be connected. 20 stations are added to the system and the bicycle fleet continues to be renewed. A total of 270 stations and 2,500 bicycles will be available and will be progressively added.

Infrastructure

1) Cycle lanes on avenues

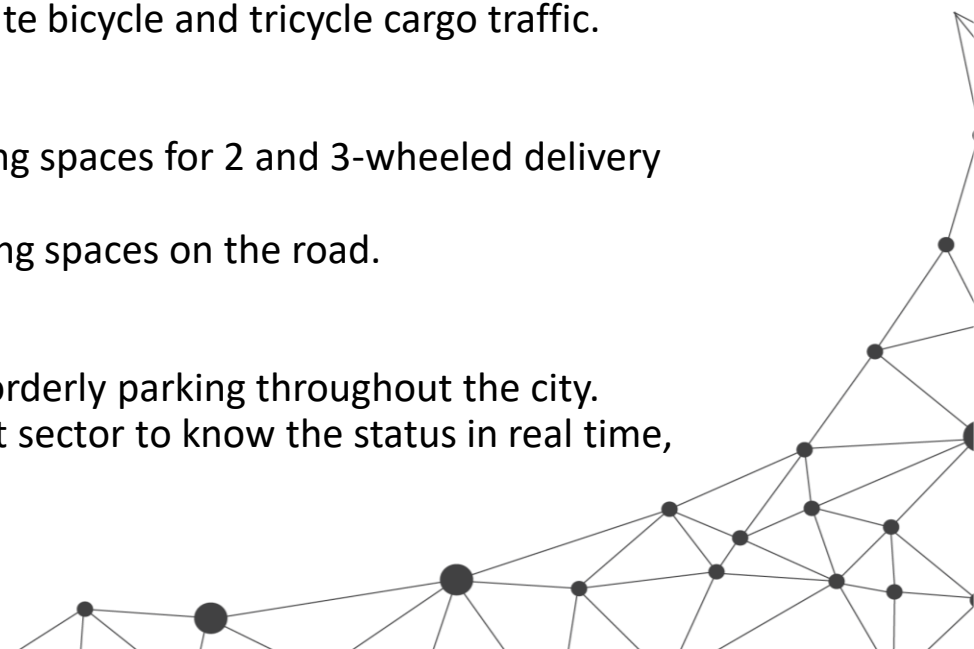
- More than 20 km of new dedicated lanes on major avenues in the city
- More cycle lanes planned on other iconic avenues
- Wider and safer cycle lanes to facilitate bicycle and tricycle cargo traffic.

2) Waiting spaces for deliveries and e-commerce.

- New signposted and dedicated waiting spaces for 2 and 3-wheeled delivery vehicles in areas of high food demand.
- Installation of bicycle racks and waiting spaces on the road.

3) Technology for reserved space management

- Inclusion in the general solution for orderly parking throughout the city.
- Specific tool via APP for the transport sector to know the status in real time, reserve their space and report misuse.



Projects for 2022
(Design phase)

1) Development of collaborative stations for cross-docking
2) Financing and testing electric vehicles for logistics
3) Technological solutions for blue box solutions
4) Sharing of e-bike sharing systems including cargo bikes
5) Learning on BRT systems and charging solutions