



# **3<sup>rd</sup> Webinar: Collaborative Climate Action: Experiences from Local Leaders**

CPMUD webinar series on **“Local climate leadership in times of COVID-19:  
The case for collaborative action and national support”**

Climate Policy Meets Urban Development | October 5, 2020

# Agenda

## 1. Welcome and Introduction to Collaborative Climate Action

**Hermann Amecke**, Policy Officer at the division for “International Cooperation on Environment, Energy and City”,  
German Ministry for the Environment, Nature Conservation and Nuclear Safety

## 2. Tbilisi Forest Regeneration and Urban Greening (2018-2021) in Tbilisi, Georgia

**Giga Gigashvili**, Head of the Municipal Service for Environmental Protection, Municipality of Tbilisi

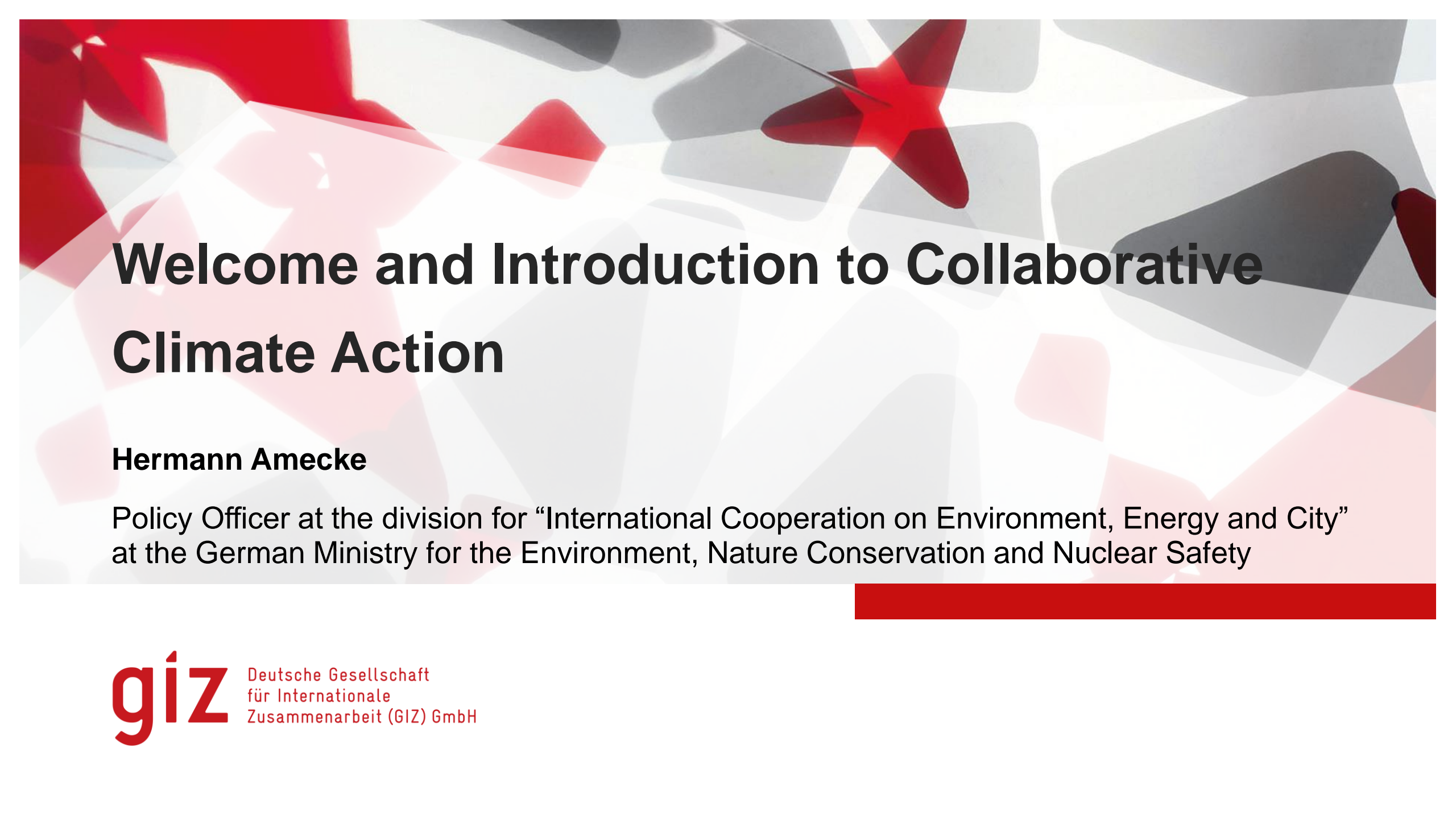
## 3. Green Infrastructure and Sustainable Mobility in Hermosillo, Mexico

**Guadalupe Peñúñuri**, General Director of the Municipal Institute for Planning, Municipality of Hermosillo

## 3. Q & A Session

## 4. Wrap-up and Outlook

**Constanze Böning**, Project Director “Climate Policy Meets Urban Development”, GIZ



# Welcome and Introduction to Collaborative Climate Action

**Hermann Amecke**

Policy Officer at the division for “International Cooperation on Environment, Energy and City”  
at the German Ministry for the Environment, Nature Conservation and Nuclear Safety



# Tbilisi Forest Regeneration and Urban Greening (2018-2021)

**Giga Gigashvili**

Head of the Municipal Service for Environmental Protection, Municipality of Tbilisi





# Tbilisi City Hall

Municipal Service for Environmental Protection



## Tbilisi Forest Regeneration and Urban Greening (2018-2021)

Tbilisi  
2020

## ❖ New forest policy from 2018

The main directions of the policy:

- ✓ Create management strategy and action plan for local importance forest;
- ✓ Forest inventory;
- ✓ Do research of forest condition and make relevant recommendations based on the results;
- ✓ Take measures for forest care and protection, including forest phytosanitary research and other relevant actions;
- ✓ Plan, manage and coordinate forest restoration/renewal activities;
- ✓ Develop and update the list of species suitable for the landscape and climate of Tbilisi;
- ✓ Develop and implement in practice a common standard for planting trees;

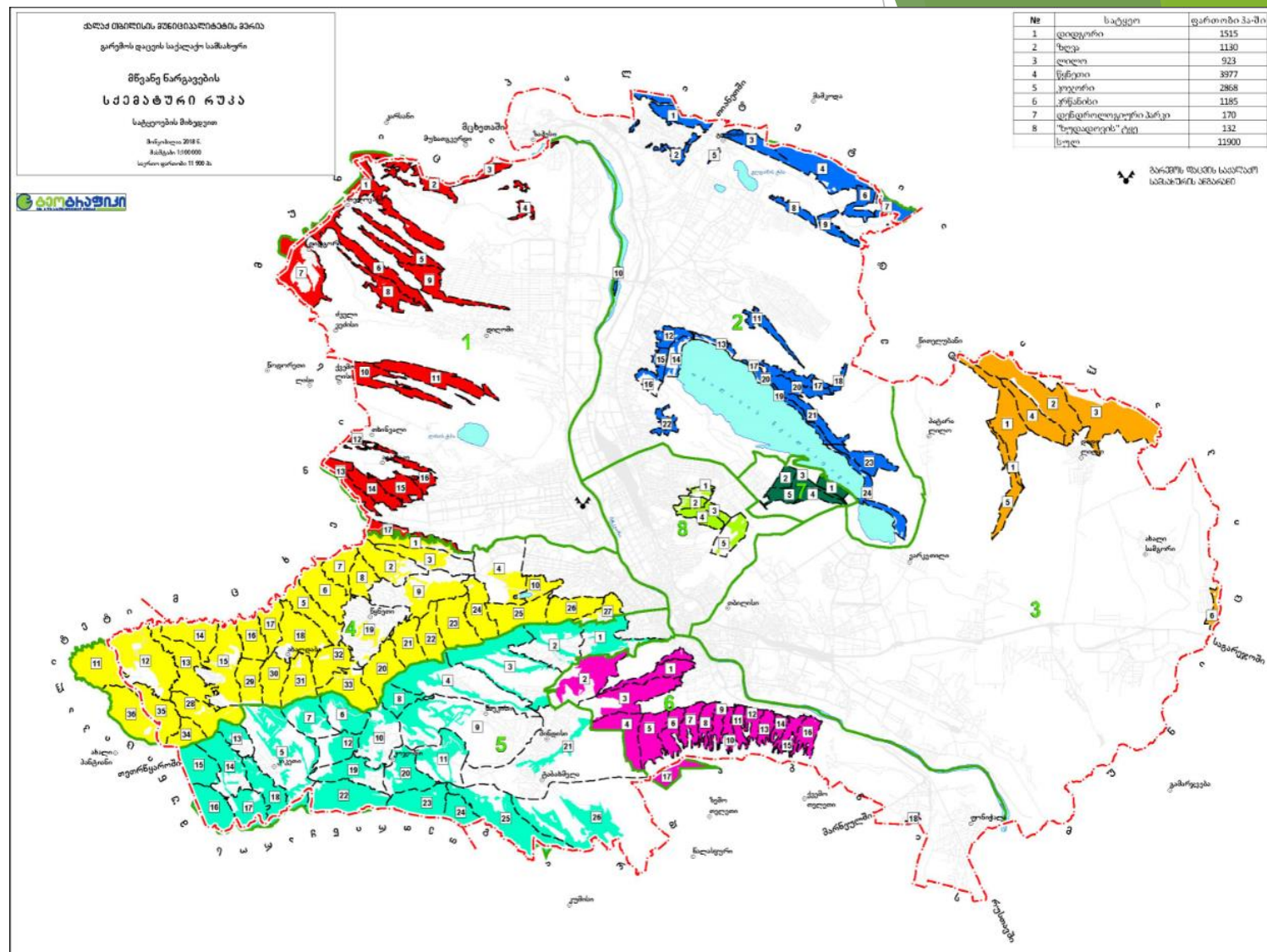


თბილისის მერია  
TBILISI CITY HALL



## ❖ Forest Inventory

- ✓ A 10-year forest area draft management plan was carried out in 2018.
- ✓ Forest covers 11,900 ha of the total land area; Forest area involves 8 districts (Didgori, Tbilisi sea, Lilo, Tskneti, Kojori, Krtsanisi, Dendrological park and Khudadovi forest) and 14 ranger districts.
- ✓ There are 52 different species of trees within forest areas, from which the main forest-forming species are Georgian oak (2716.4 ha), European hornbeam (1058.1 ha), common ash (362.9 ha), oriental beech (228.1 ha) and oriental hornbeam (1647.6 ha).
- ✓ 17% of the forest area (2055 ha) is represented by artificially planted cultures.



## Forest restoration/regeneration measures by management plan (2018-2028)

Land use category	Area (ha)	Culture Establishment	Natural Regeneration Encouragement
1	2	3	4
Grassland	566.7	547.9	18.8
Woodland (low-density grove)	387.8		387.8
Natural Origin	357.6		357.6
Artificial Origin	30.2		30.2
Scrubland	17.6	17.6	
All	1359.9	565.5	794.4

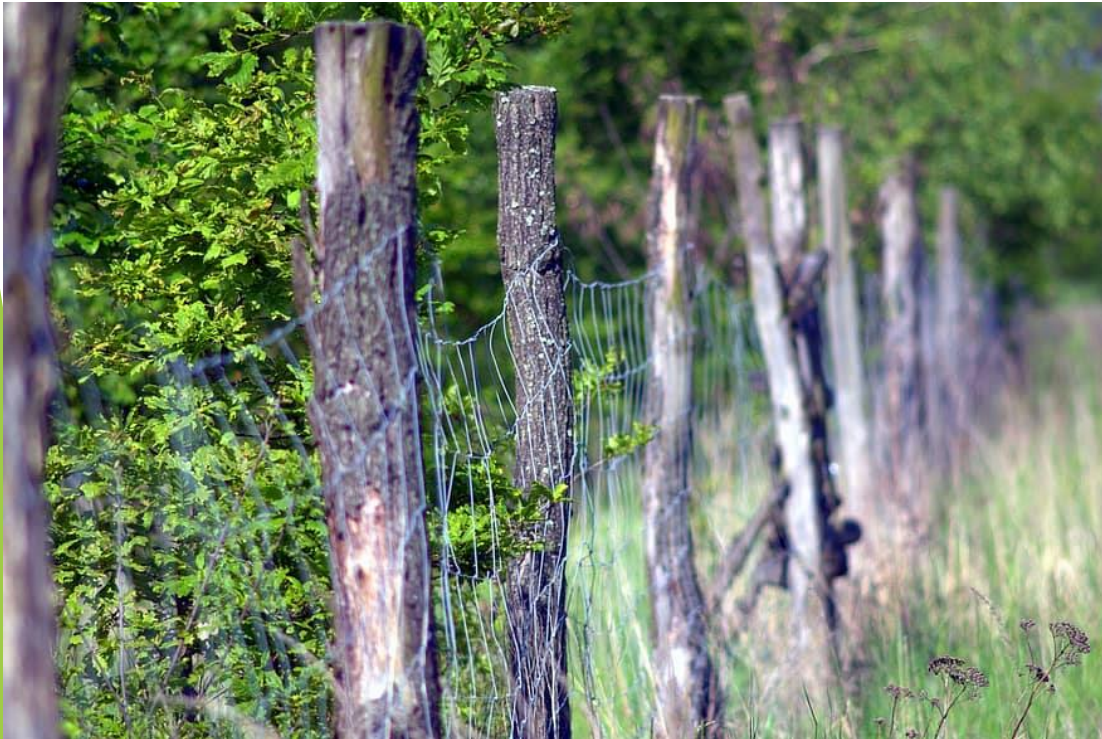


❖ **During the validity of forest management plan:**

- ✓ Total forest cultures should be established - over 565 ha.



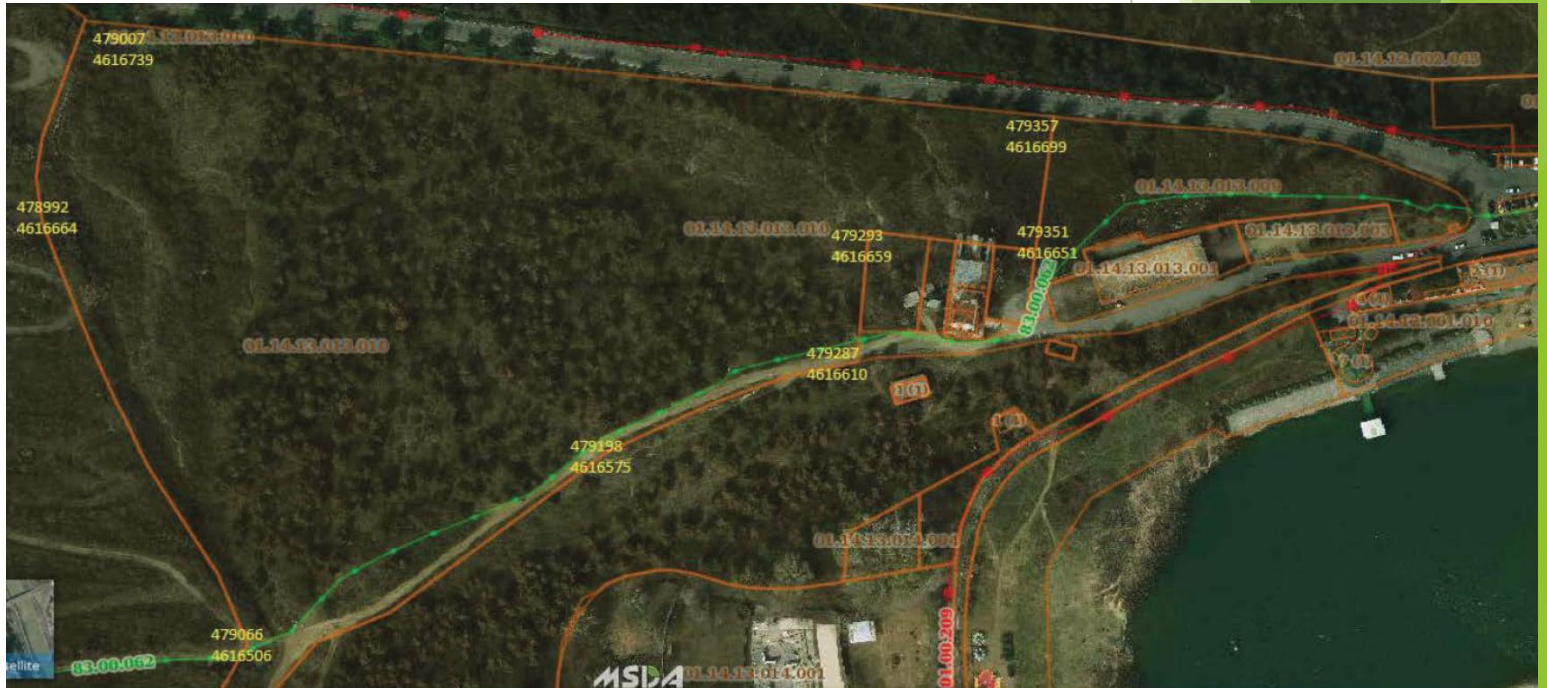
- ✓ Total natural regeneration encouragement activities should be carried out - over 794 ha.





## ❖ Forest Recovery Measures Taken During 2019-20

- ✓ Former artificial forest was established near Turtle Lake over 6.9 ha and 7600 seedlings of different species were planted.
- ✓ Latter artificial forest was established near Zhinvali street, in Nadzaladevi District over 5.7 ha and 9460 seedlings of different species were planted.
- ✓ Among the species there were maples, ashes, hackberries, pines, cedars, almonds and etc.
- ✓ Maintenance plan has been developed according to which on-going inspections and maintenance are required during 4 (four) year.
- ✓ The main goal of the project is to preserve the existing units of forest cultures placed on difficult terrain, as well as to restore and plant the area with saplings.









## ❖ Natural Regeneration During 2019-20

- ✓ The measures were carried out within the memorandum formed between GIZ and Tbilisi City Hall.
- ✓ Municipal Service for Environmental Protection shares the German model for forest restoration, which involves replacing artificially planted cultures with naturally originated deciduous species.



- ✓ Main purpose is to transform artificially planted forest into forests of natural origin which can be more resistant to negative environmental factors such as climate change, pests, diseases, etc.
- ✓ Relevant actions were taken across 30 ha at Kojori, Khudadovi forest, Krtsanisi and Tskneti forest districts.
- ✓ Activities included fencing, cutting dead and affected trees, removing thorn bushes and preparing soil.

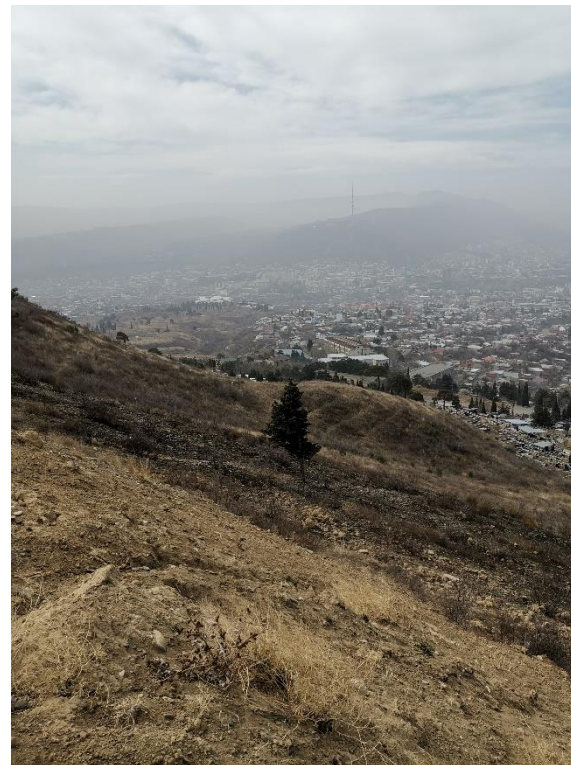






## ❖ Upcoming Projects

- ✓ Actions regarding the natural regeneration encouragement on 30 ha are being planned in 2021.
- ✓ Forest restoration/regeneration activities over 12 ha are being planned in 2021. In particular:
  - i. Near Makhata mountain territory on 6.6 ha.
  - ii. Near Tbilisi sea territory, next to the Z.Tsereteli monument "Chronicle of Georgia" on 5,4 ha.





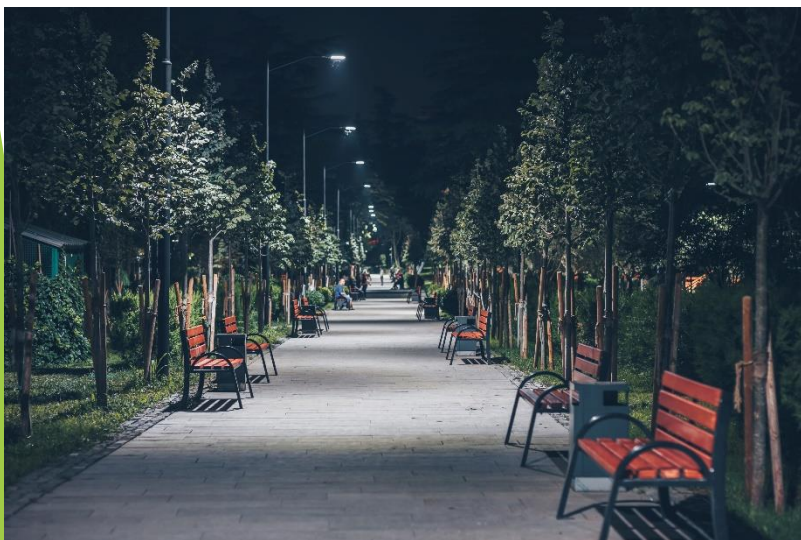
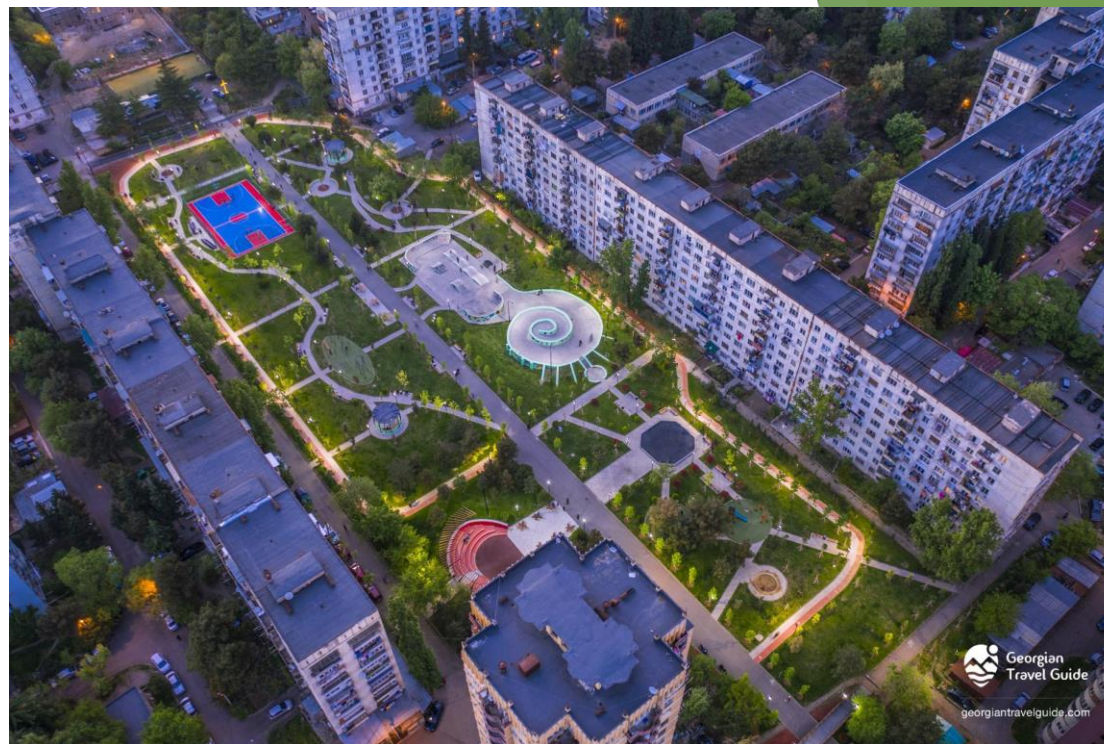
## ❖ Urban Greening

- ✓ Selection of species that are suitable for the landscape and climate of the municipality (such as Xerophytes and fast growing plants) is the main principle of urban greening in Tbilisi. Therefore the list of trees that should be planted in the urban areas of Tbilisi was approved by the government decree of February 8, 2018 №05.14.147.
- ✓ Since 2018, 74 411 trees have been planted all over the municipality urban areas;
- ✓ One of the main principle of urban greening indicates requirement of irrigation systems due to physiologically dry habitat. According to this, irrigation systems have been installed at about 150 locations within Tbilisi since 2018. Major purpose of arranging this kind of systems is the ability of taking full care of existing and future green spaces.
- ✓ Different species of trees are being planted all over the municipality. In particular: Norway maple, Field maple, Red maple, Deodar cedar, Atlas cedar, Deodar cedar 'Aurea', European ash, narrow-leafed ash, raywood ash, Silver Linden, Oriental plane, black locust, Wax-leaf privet, Leyland cypress, fruitless mulberry, Sweetgum, Japanese zelkova, Maidenhair tree, Cherry plum, Southern magnolia, Judas-tree, European nettle, field elm.
- ✓ The main requirements for trees that should be planted:
  - I. Tree must be healthy;
  - II. Height of the tree should exceed 3.5 meters;
  - III. Trunk should be straight;
  - IV. Each side of crown should be symmetrically developed;
  - V. Crown diameter should not be less than 70 cm;
- ✓ The main aim of planting tall trees is to get well-developed green spaces in a short period of time, which should play a key role in improving the quality of the city environment, as well as the aesthetic and ecological condition and raise the level of human well-being living Tbilisi.



## ❖ Rehabilitated Urban Parks

- ✓ Gldani Park, located at VI micro-district, between 7<sup>th</sup> and 20<sup>th</sup> blocks;
- ✓ Vaso Godziashvili Red Garden;
- ✓ Varketili Square, located at III micro-district, near 325<sup>th</sup> block;
- ✓ Veterans Leisure Park;





## ❖ Park Enhancement and Arrangement Projects in 2020-21

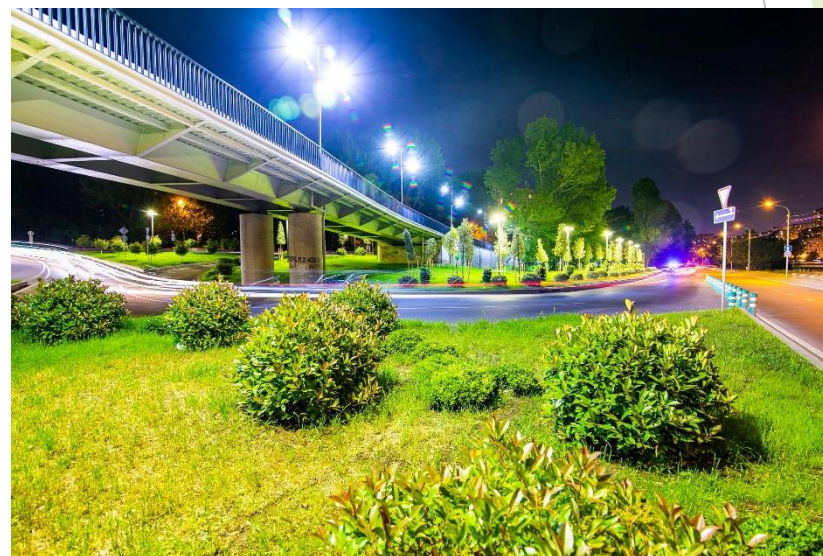
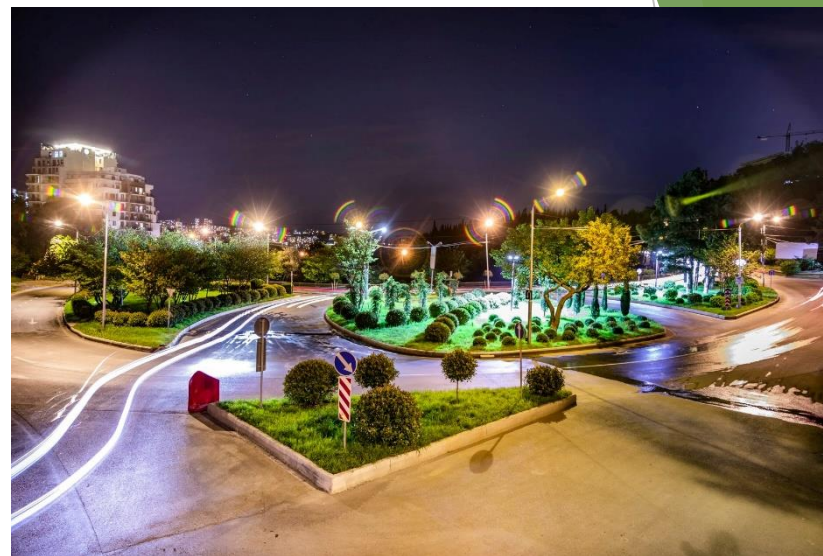
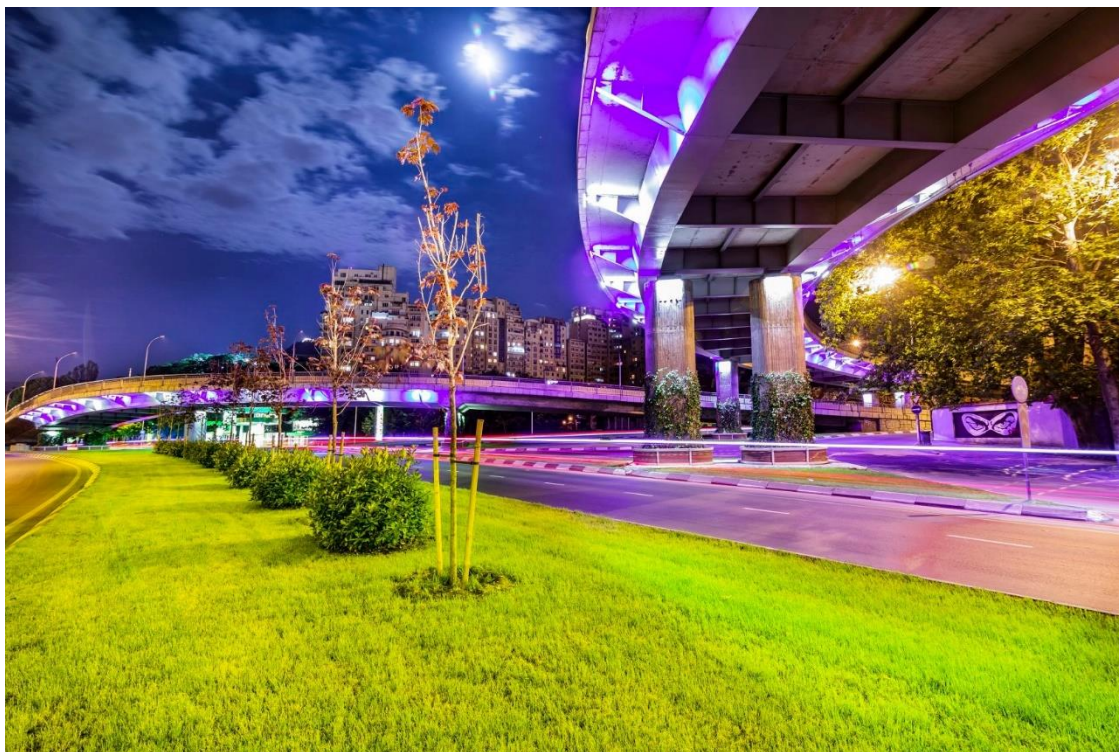
- ✓ Temka Gorge (25 ha)
- ✓ Dighomi Park (15 ha)
- ✓ Gldani Park around small lake (3.7)
- ✓ Varketili Gorge (3 ha)
- ✓ Vake Park Rehabilitation (34 ha)





## ❖ Traffic Islands

- ✓ Traffic islands have been created at about 60 locations within Tbilisi since 2018.



THANK YOU FOR ATTENTION !



*Giga Gigashvili*

Head of Municipal Service for Environmental Protection





# **Green Infrastructure and Sustainable Mobility in Hermosillo, Mexico**

**Guadalupe Peñúñuri**

General Director of the Municipal Institute for Planning, Municipality of Hermosillo





H. AYUNTAMIENTO DE  
**HERMOSILLO**  
2018 - 2021

IMPLAN

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

# Collaborative **Climate Action:** **Experiences** from Local Leaders



# LA NUEVA NORMALIDAD TIENE 4S

#MovilidadSaludable

#MovilidadSegura

#MovilidadSustentable

#MovilidadSolidaria





# MODAL SPLIT IN THE CITY OF HERMOSILLO

2003



0.3% Motorcycle

24.0% Pedestrian

1.5% Bicycle

28.6% Public Transport

44.5% Car



# CLIMATE CHANGE : GREENHOUSE GAS EMISSIONS

# COMPLETE STREET MODEL



Existen cinco categorías de proyectos emergentes:

Ampliación  
de área peatonal:  
banquetas y calles.



Ciclovías  
emergentes: carriles  
exclusivos y confinados  
para bicicletas.



Reducción  
de la velocidad:  
controles y  
pacificación del tránsito



Reuso del  
estacionamiento:  
con propósitos  
mercantiles o para evitar  
saturación.



Supermanzanas:  
gestión de barrios  
para reducir volúmenes  
de tránsito.

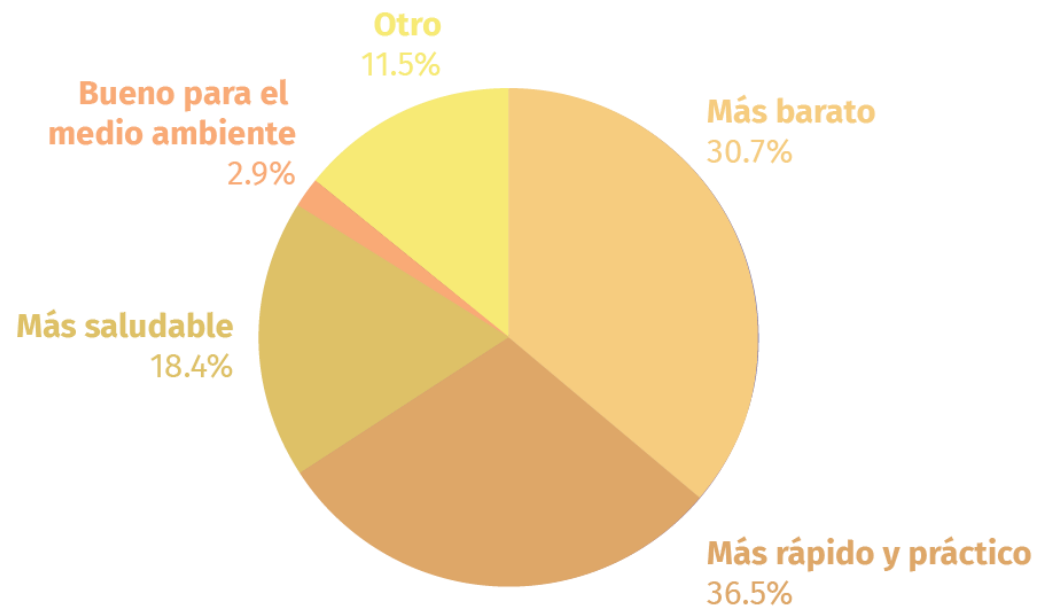




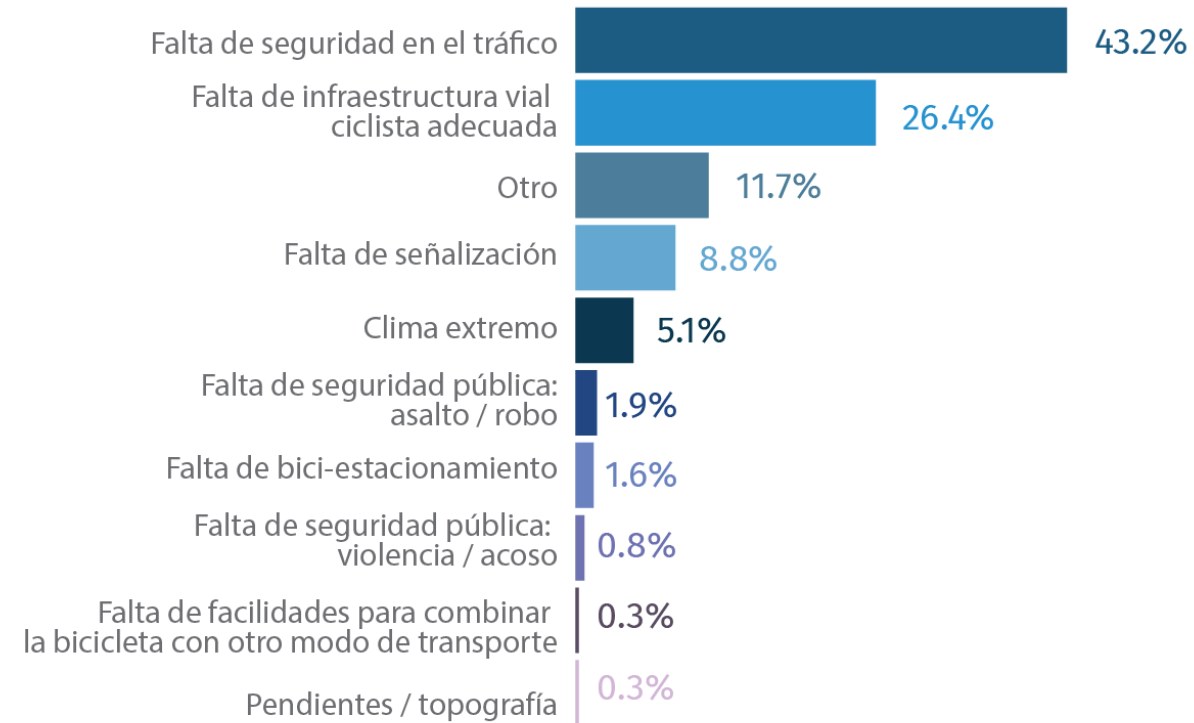




## Principal motivo usar la bicicleta



## Principal dificultad enfrentada



# POP-UP BIKE LANES

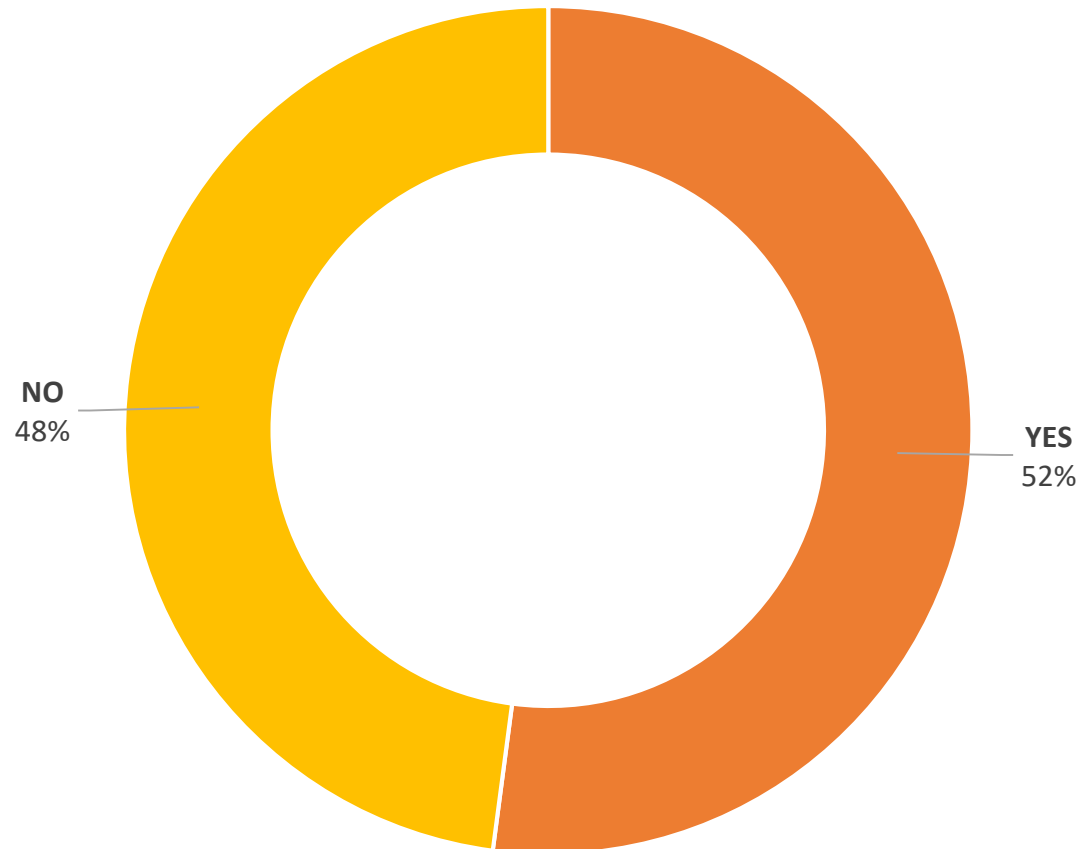
Movilidad  para Hermosillo



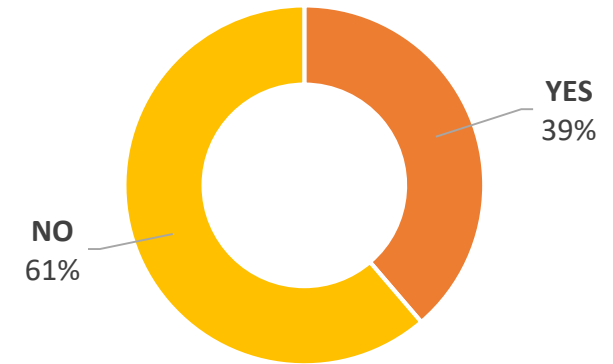


## Potential modal shift in public transport users

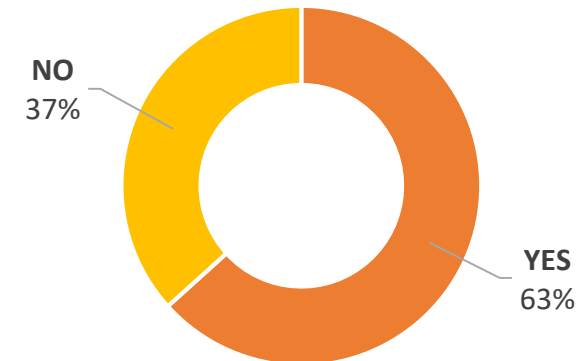
¿Would you be willing to change from public transport to bicycle if we had safer bike paths ?



### WOMEN



### MEN







**Green** Infrastructure



# Gray Infrastructure



# Gray Infrastructure



# Green Infrastructure









# **Green** Infrastructure Design Guidelines Manual for Mexican Municipalities

## Technical Standard of **Green** Infrastructure in Hermosillo



H. AYUNTAMIENTO DE  
**HERMOSILLO**  
2018 - 2021

**IMPLAN**





# Urban Applications





# PALETA VEGETAL HERMOSILLO



H. AYUNTAMIENTO DE  
**HERMOSILLO**  
2018 - 2021

## IMPLAN

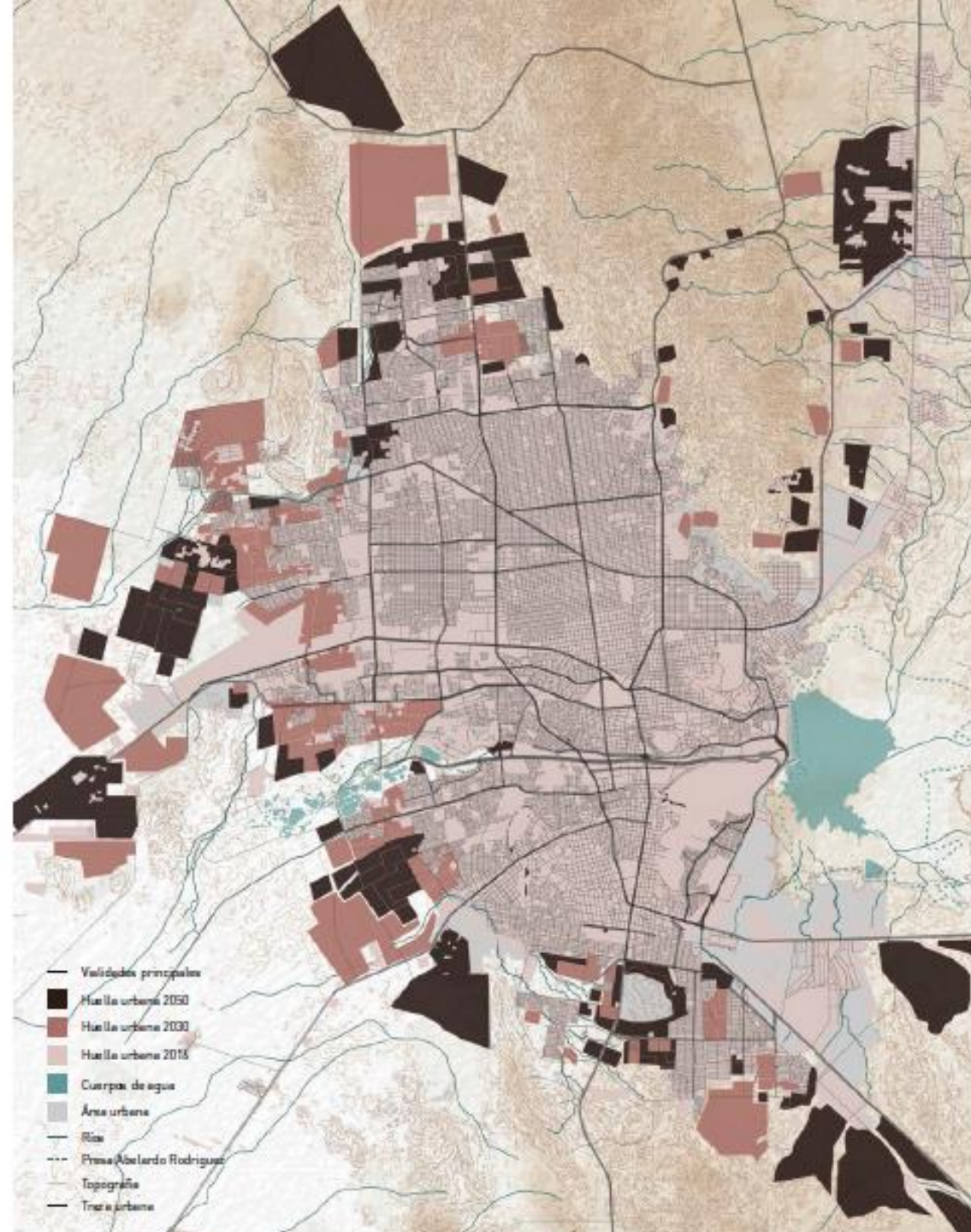




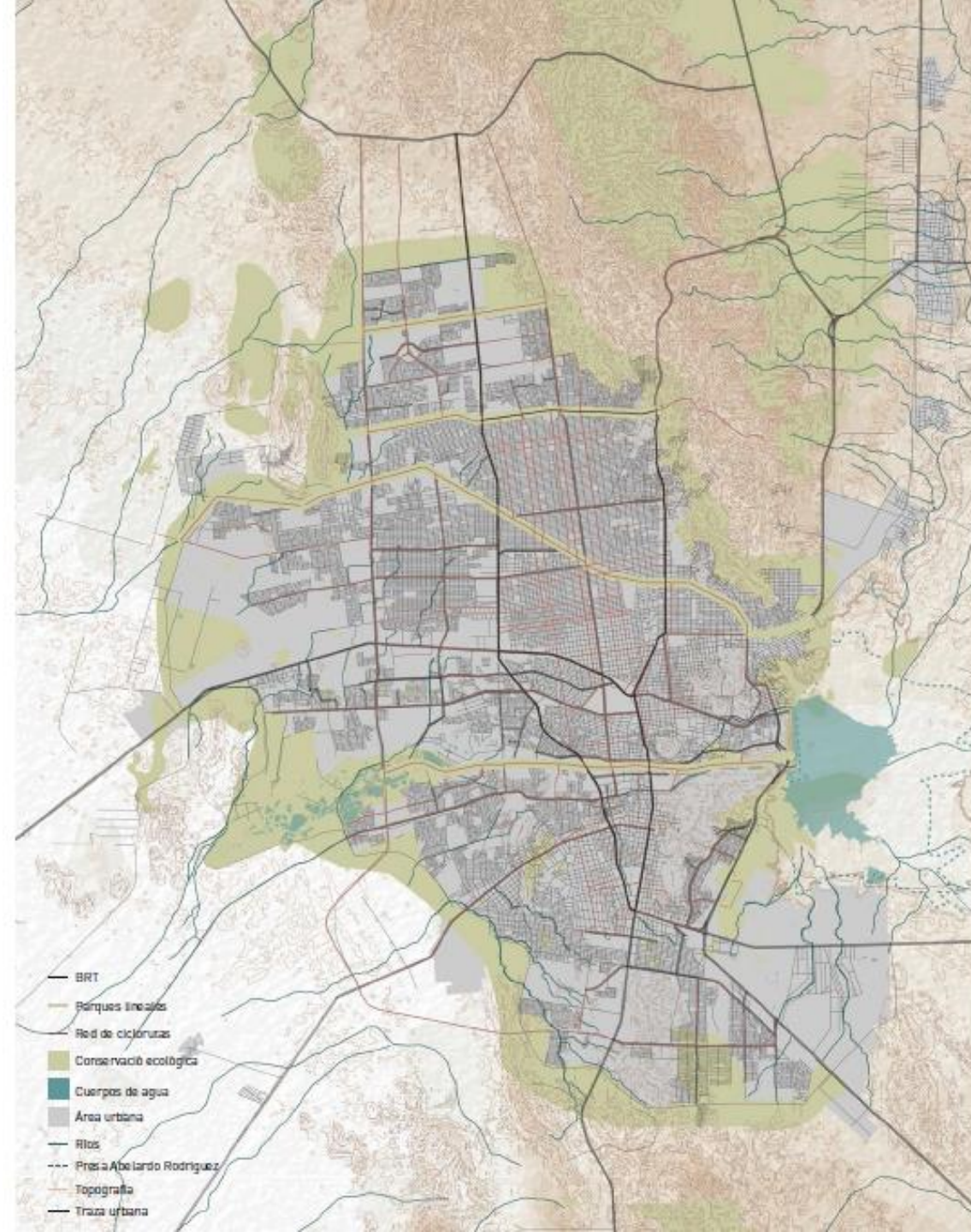
# STRATEGIC PLAN OF GREEN INFRASTRUCTURE

Multifunctional criteria

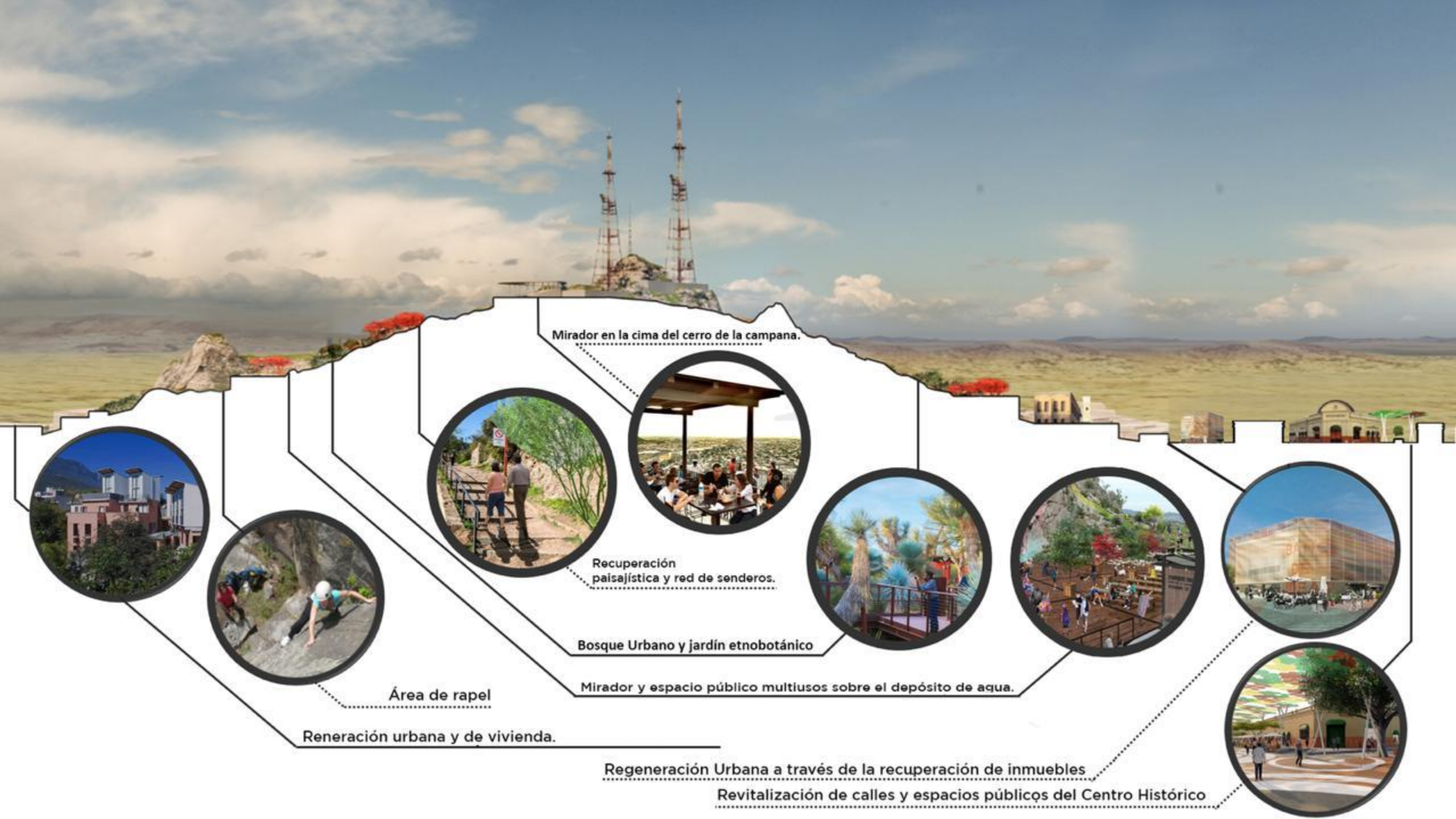












Mirador en la cima del cerro de la campana.

Recuperación  
paisajística y red de senderos.

Bosque Urbano y jardín etnobotánico

Mirador y espacio público multiusos sobre el depósito de agua.

Área de rapel

Renovación urbana y de vivienda.

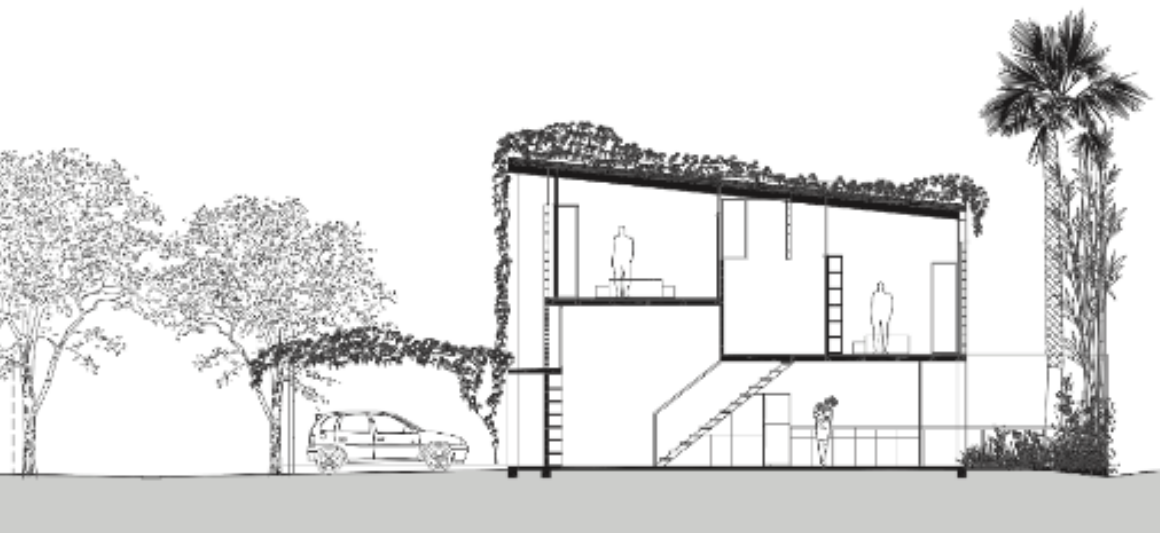
Regeneración Urbana a través de la recuperación de inmuebles

Revitalización de calles y espacios públicos del Centro Histórico





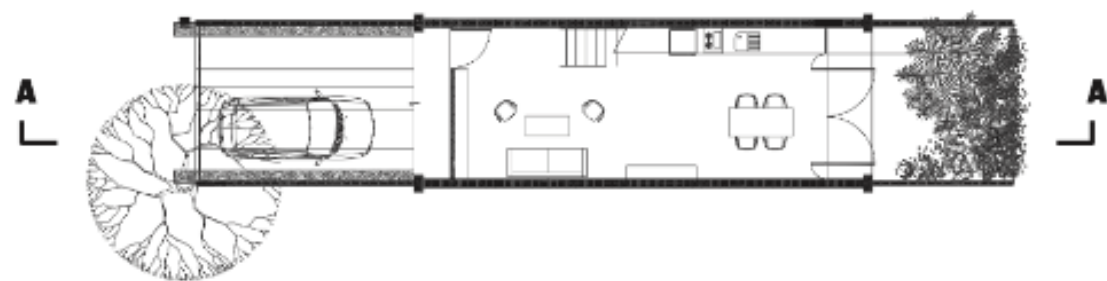




**section AA**



**first floor plan**



**ground floor plan**













# CONCURSO NACIONAL

## Infraestructura Verde en



### BASES DE CONVOCATORIA

Más información en:

[www.infraestructuraverdeyciudades.com](http://www.infraestructuraverdeyciudades.com) o [ivcaffenio@implanhermosillo.gob.mx](mailto:ivcaffenio@implanhermosillo.gob.mx)

## CAFFENIO REVOLUCIÓN

IVC-0002

Con el objetivo de construir edificios con un mayor compromiso en lo que corresponde al cambio climático, el proyecto "Caffenio Revolución" se enfoca en presentar una serie de propuestas de diseño en relación a la infraestructura verde, las cuales puedan servir como una pauta para futuros proyectos y como un apoyo en la concientización sobre el impacto ambiental para la población de nuestra ciudad.

### DISEÑO INTEGRATIVO

Para lograr soluciones más profundas y realistas en relación con el objetivo del proyecto, se trabajó con un sistema de diseño integrativo, donde cada propuesta busca solucionar 2 o más criterios de diseño; en este sistema se incluyen los 3 criterios básicos (energía, temperatura y agua) y se incluyeron 3 criterios más (calidad del aire, conciencia ambiental e integración al contexto), los cuales consideramos necesarios para un proyecto más eficiente y completo.



EFICIENCIA  
ENERGÉTICA



REGULACIÓN DE  
TEMPERATURA



GESTIÓN DEL  
AGUA



CALIDAD  
DEL AIRE



CONCIENCIA  
AMBIENTAL



INTEGRACIÓN AL  
CONTEXTO

### PROPUESTAS DE DISEÑO INTEGRATIVO





H. AYUNTAMIENTO DE  
**HERMOSILLO**  
2018 - 2021

**IMPLAN**



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# **Q & A session**

Please post your questions in the chat





# Wrap-up and Outlook

**Constanze Böning**

Project Director “Climate Policy Meets Urban Development”, GIZ

# Thank you for participating and see you in one of our next webinars!



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[https://twitter.com/giz\\_gmbh](https://twitter.com/giz_gmbh)



<https://www.facebook.com/gizprofile/>



# Further Links

## Case studies on collaborative climate action

- Study commissioned by BMU/CPMUD on [Multi-Level Climate Governance Supporting Local Action](#)
- CPMUD discussion paper [Recover green – Higher NDC-Ambition through Collaborative Climate Action](#)

## Further Information on climate projects in Tbilisi

- [Municipal Department of Environment Protection](#)

## Further Information on projects in Hermosillo

- [Municipal Institute for Planning Hermosillo](#)

## Report of the Coalition for Urban Transitions

- [Climate Emergency – Urban Opportunity](#)