

October  
2023  
Modena

# GRAFTING CITIES

Cultivating

our common future



# WORKSHOP

## Rewriting the adaptation narrative

Thursday 19 October | 15:00 – 16:45 | Camera di Commercio, Modena



# Agenda

- Welcome & introduction
- Adaptation CA projects and EU policy
- Challenge presentation Modena
- Co-creation & pitches
- Closing



# Ways of working

- Pressure cooker style
- Every idea is a good idea
- You can disagree, but be considerate
- I will guide you and keep the time
- If anything is unclear, please ask

Have fun!





# Objectives

- Up to date with CA projects & EU policy on adaptation
- Solutions identified for Modena's challenges
- Being inspired and energized!

# Adaptation: Climate Alliance's work

## PROJECTS



## WORKING GROUP

The Working Group Adaptation is having a facelift!

Want to be part of it?  
Give us your contact details

or write directly to  
[adaptation@climatealliance.org](mailto:adaptation@climatealliance.org)



# EU adaptation strategy

Adopted in October 2021

**European Union to become climate resilient by 2050**

- Smarter, swifter and more systemic, and to step up international action
- **Systemic:**
  - Integrating into macro fiscal policy
  - Nature-based solutions for adaptation
  - **Local** adaptation action

**Progress report** expected October 2023.



**Climate  
ADAPT**

SHARING ADAPTATION  
INFORMATION  
ACROSS EUROPE

A **platform** with a comprehensive database of European, national and regional adaptation planning.

- **EU Policy** & latest national news
- Tools
  - Adaptation support tool
  - Urban adaptation viewer
- European wide **case studies**







# EU Nature restoration law

Adopted by EU parliament (July 2023)

## Restoring ecosystems for people, nature and the climate

- Restore at least 20% of the EU's land and maritime areas by 2030
- No net loss of **green urban spaces** by 2030 and a **minimum of 10% tree canopy** cover in European cities by 2030
- Etc.

Currently in **trilogue** negotiations



# Heat

## Deadliest natural disasters by year excluding epidemics and famines

2018	4,340	2018 Sulawesi earthquake and tsunami
2019	1,593	Cyclone Idai
→ 2019	3,951+	2019 European heat waves
2020	6,511	2020 South Asian floods
2021	2,248	2021 Haiti earthquake
→ 2022	24,501	2022 European heatwaves
2023	59,259	2023 Turkey–Syria earthquakes

Source: wikipedia



# Modena's presentation

Francesca Poli, Simona Rotteglia, Marina Malossi



October, 19th  
2023  
Modena

# REWRITING THE ADAPTATION NARRATIVE MODENA CHALLENGE

Cultivating

our common future





186.307



automotive industry / motor valley



food economy through intense farming and agriculture



A1 highway



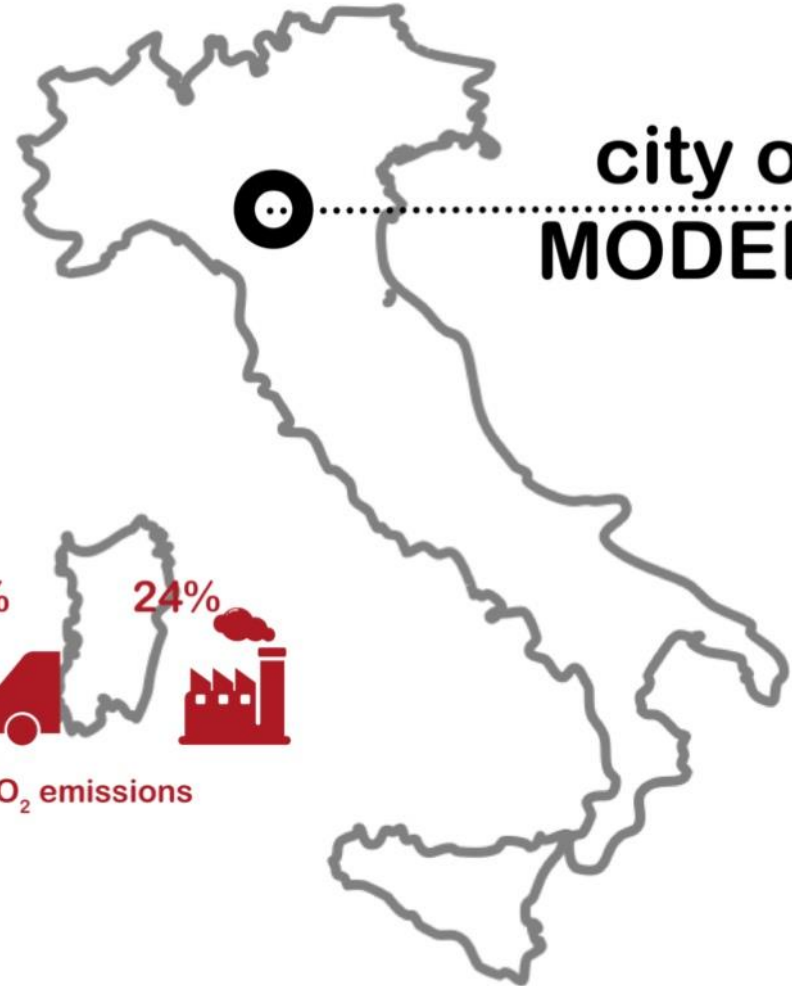
via Emilia



HS train



EuroVelo 7



city of  
**MODENA**



extreme meteorological events



37%



36%



24%

greenhouse / CO<sub>2</sub> emissions

# EMILIA ROMAGNA / floods



FLOOD IN MAY 2023 / 300-400 mm of rain [= 300 lt x 1 sqm] / in 1 week the amount of 6 months of rain



# EMILIA ROMAGNA / floods

FLOOD IN MAY 2023 / 21 rivers flooded / 35 municipalities with flooding / 250 landslides / 9 confirmed deaths



EMILIA ROMAGNA / extreme heat

HEAT WAVES SUMMER 2023 (25<sup>th</sup> August) / T max record: Bologna 39,2°C / Ferrara 38,8°C / Modena 37,8°C




A photograph showing three elderly individuals sitting outdoors. They are all using white paper to fan or cool their heads, indicating extreme heat. The person on the left is a woman with short brown hair wearing a leopard print top. The middle person is a man with white hair wearing a light blue shirt. The person on the right is a man with white hair wearing sunglasses and a light blue shirt. The background is slightly blurred, showing what appears to be a building facade.

# EMILIA ROMAGNA / extreme heat

HEAT WAVES SUMMER 2023 / 2003 +2,7°C / 2022 +2,2°C / 2023 +1,8°C compared to 1900


# MODENA / challenges and ambitions




The city of Modena has been involved in climate change, energy and sustainability issues for many years through diverse **local actions** and participating to **numerous networks** and **international initiatives**.

Thanks to the commitments to the Covenant of Mayors first, and the Covenant of Mayors for Climate and Energy later, the City of Modena is setting its path **to reduce carbon emissions** and **draft an adaptation plan** to combat climate change.

# MODENA / climate strategies



Comune di Modena



**PUMS 2030**  
Piano Urbano  
Mobilità Sostenibile  
Modena

*Relazione di Piano*

Versione Approvata - Luglio 2020



Comune di Modena

**PAESC**  
ANNO 2020  
MODENA



**PUG**  
PIANO URBANISTICO GENERALE

Sindaco  
Gian Carlo Muzzarelli

Assessora a Urbanistica, Edilizia, Politiche Abitative, Aree Produttive  
Anna Maria Vandelli

Direttrice Generale  
Valeria Meloncelli

Dirigente del Settore Pianificazione e Gestione del territorio e RUP  
Maria Sergio

PUG | Approvazione



**PUG MODENA – ELENCO ELABORATI**

ASSUNZIONE Delibera C.C. n° 86 del 29/12/2021	ADOZIONE Delibera C.C. n° 78 del 22/12/2022	APPROVAZIONE Delibera C.C. n° 46 del 22/06/2023
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Comune di Modena

# SECAP 2018-2030



## TIMELINE

**2009** baseline

**2010** Covenant of Mayors

**2011** SEAP approval

**2018** SEAP monitoring

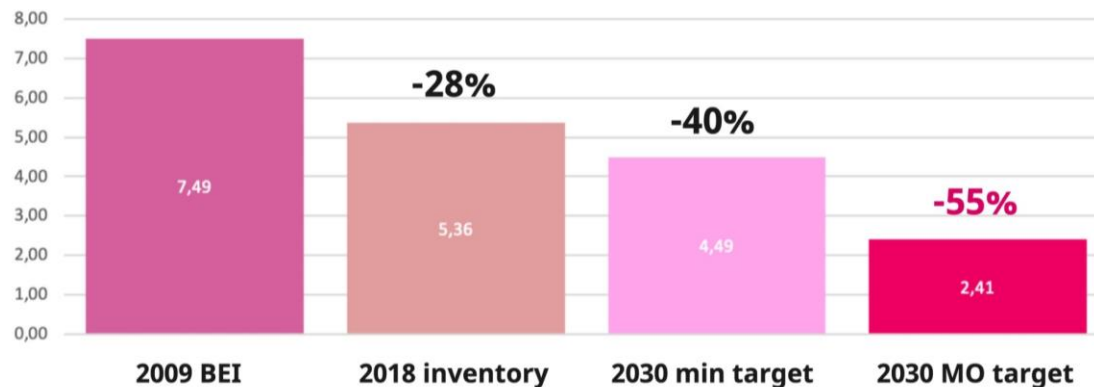
**2019** Covenant of Mayors for Climate and Energy

**2021** SECAP approval (4th February)



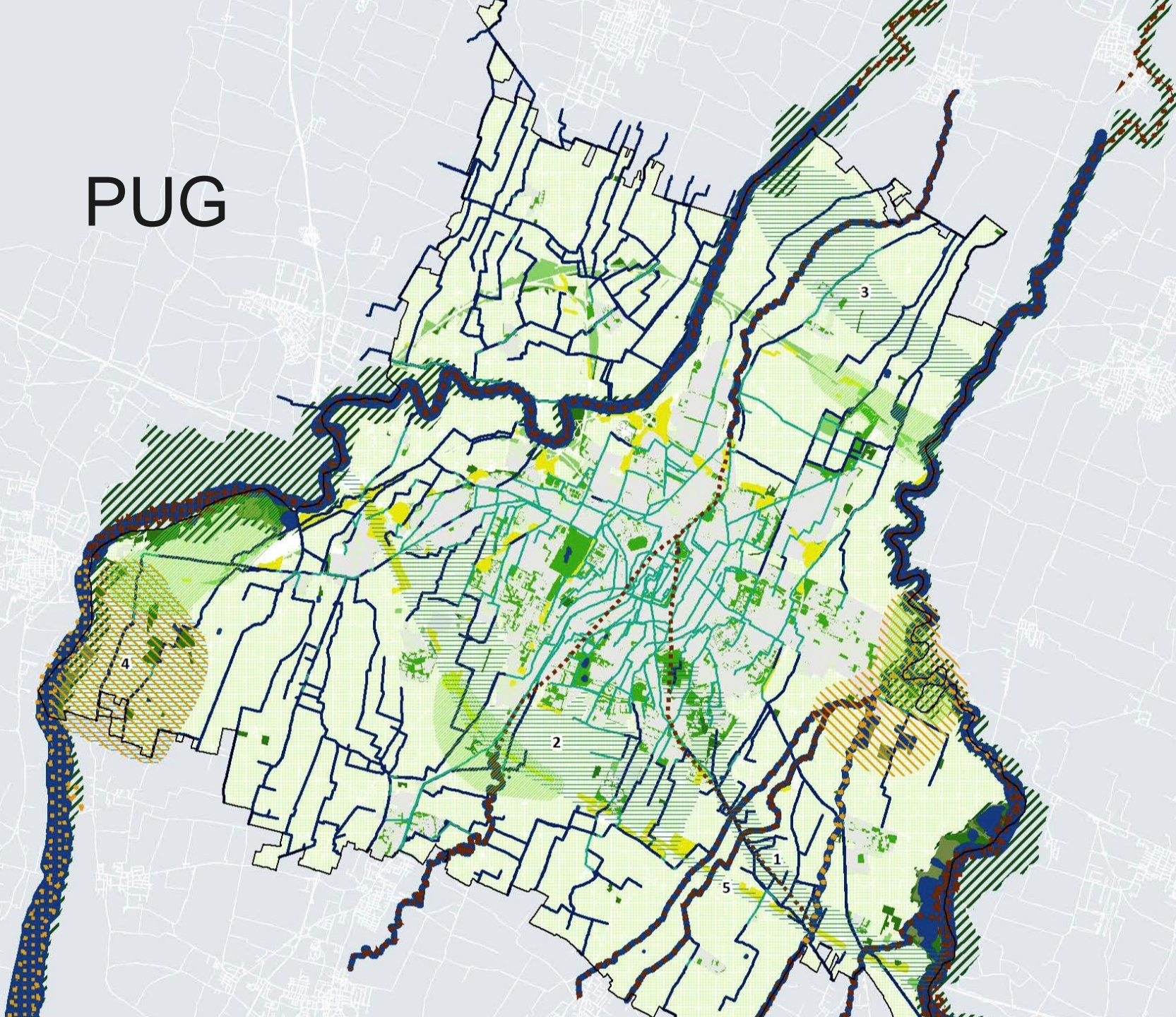
## GOAL -55% BY 2030

191.081 inhabitants - 680.921 tCO<sub>2</sub> - 3,75 tCO<sub>2</sub>/inh



«Sustainable  
mobility  
and green&blue  
infrastructure  
for a smart,  
healthy  
and inclusive city  
by 2030»

# PUG



## Progettualità strategiche di rilevanza ecologico - ambientale

- nuovi boschi
- nodi complessi della rete ecologica

## Progettualità di paesaggio

- 1 ecologico-fruttiva Vaciglio- Panaro
- 2 paesaggio periurbano
- 3 ecologico-fruttiva SE-PA
- 4 complessa Parco rurale
- 5 miglio agroalimentare

## Infrastruttura blu

- reticolo idrografico e specchi d'acqua
- canali coperti
- stato ecologico acque sufficiente (ARPAE 2018)
- stato ecologico acque non buono (ARPAE 2018)

## Infrastruttura verde

- verde urbano
- aree boscate
- aree di futura forestazione
- forestazione urbana
- altre aree non sigillate

## Altri elementi da potenziare e mettere in rete

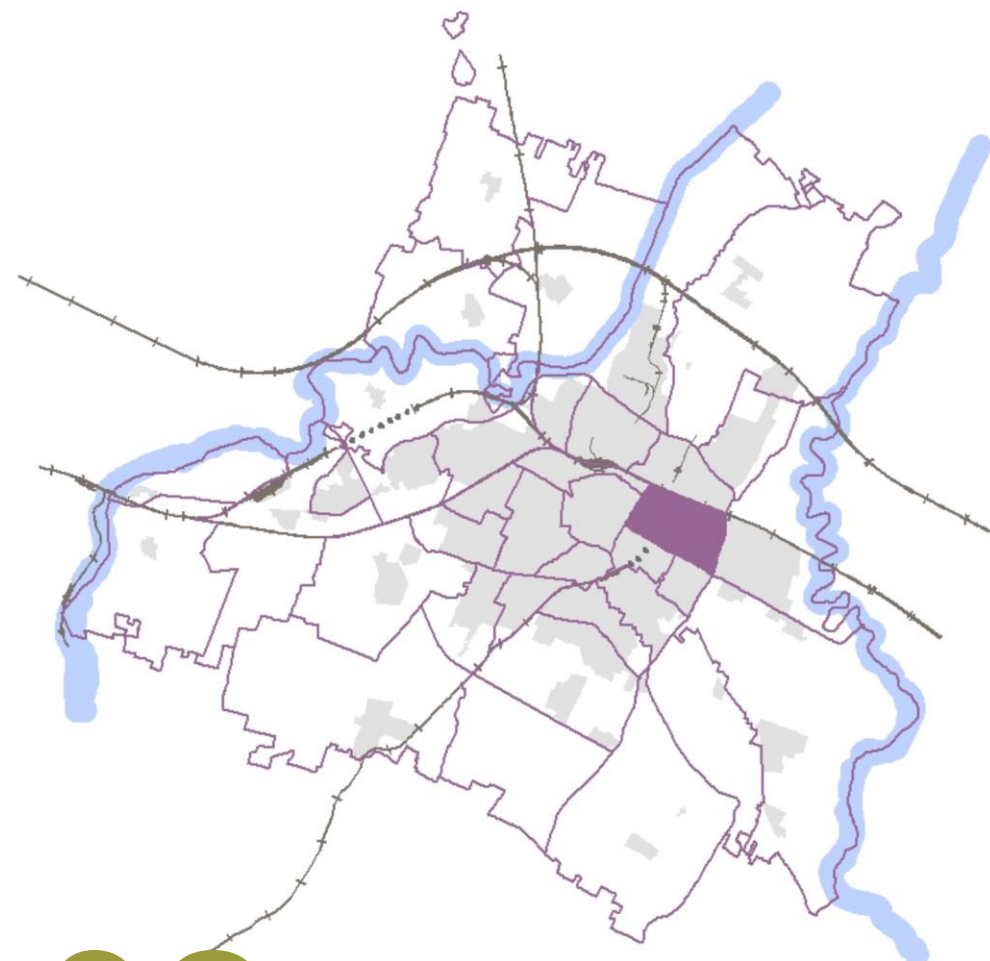
- nodo ecologico
- aree perifluviali di Secchia e Panaro

# CASE STUDIES



01

VILLAGGIO ARTIGIANO



02

SAN LAZZARO

# VILLAGGIO ARTIGIANO / case study

01



The Artisan Village is a **manufacturing district** located in the first outskirts the city that was **built during the postwar period of World War II** from an audacious political intuition.

It was the first **model of industrial site** in Italy: an area that sits **in-between the city and the countryside**, and that ties together **life and work**, know-how and industry, production chain and local community.



[Photo by Google Earth]



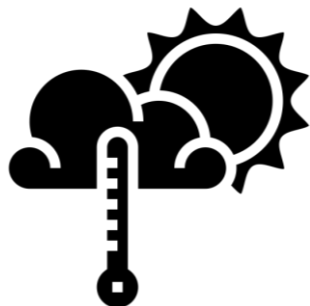
# VILLAGGIO ARTIGIANO / facts and figures



4.408 tot population  
395 children 0-18  
941 elderly over 65



110,07 ha tot surface  
52% public spaces / 48% private surfaces  
25% green areas = 273.504 mq  
25-50% unsealed areas  
05 IQ quite poor soil quality index



36°C max air temperature in summer (\*)  
53°C max surface temperature in summer (\*)

(\*) estimated data from EnviMet simulations REBUS LAB Emilia-Romagna Region

0 m<sup>2</sup> green urban

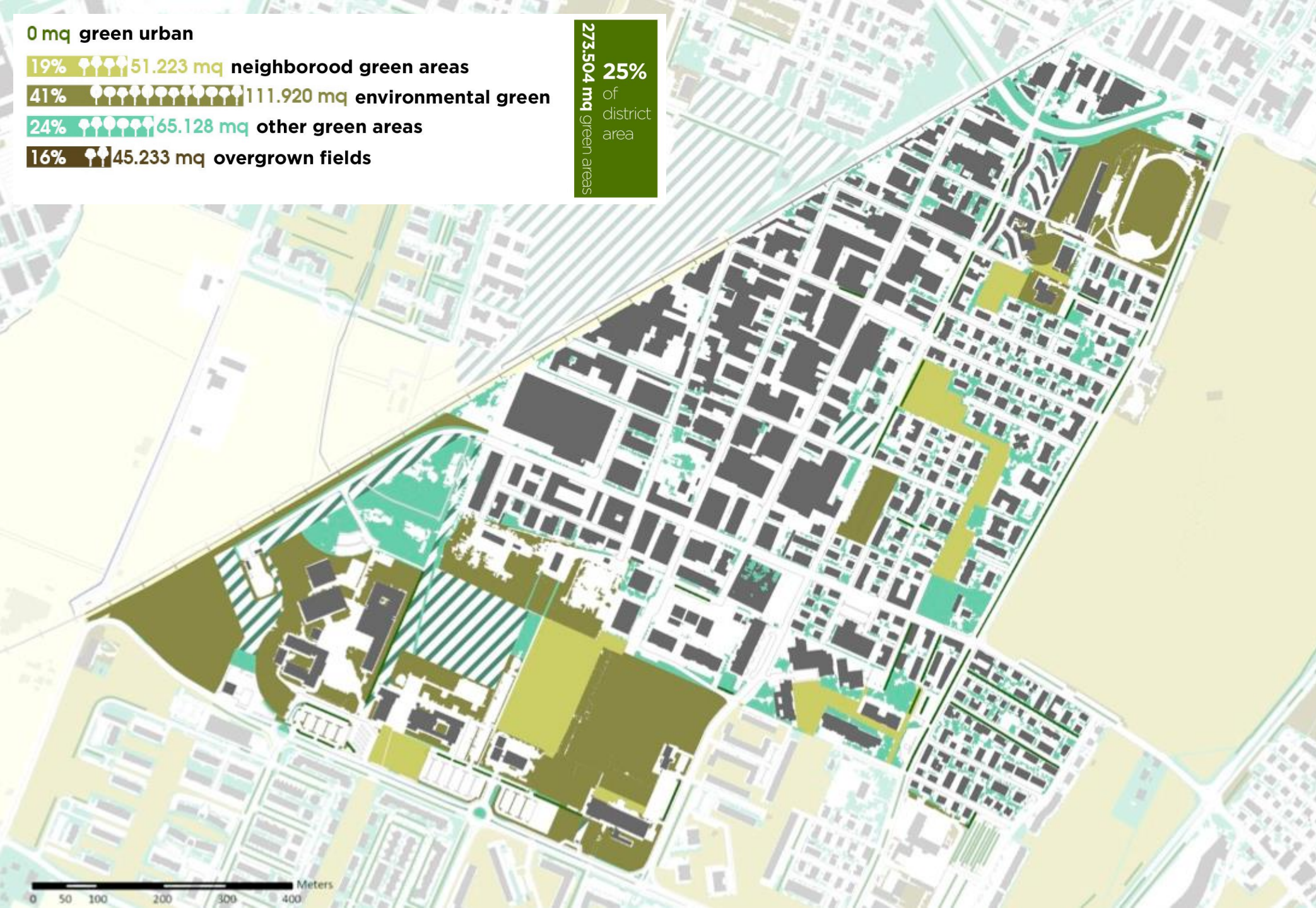
19% 51.223 m<sup>2</sup> neighborhood green areas

41% 111.920 m<sup>2</sup> environmental green

24% 65.128 m<sup>2</sup> other green areas

16% 45.233 m<sup>2</sup> overgrown fields

273.504 m<sup>2</sup> green areas  
25%  
of district area



**Green spaces fruition**

- urban park
- neighborhood park
- green area

**Ecological-environmental comfort**

- ecological-environmental equipments
- public wastelands
- other permeable soils
- tree-lined rows
- rural territory



↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

↑ 10 m

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[Photo by REBUS LAB Emilia-Romagna Region]



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[Photo by REBUS LAB Emilia-Romagna Region]

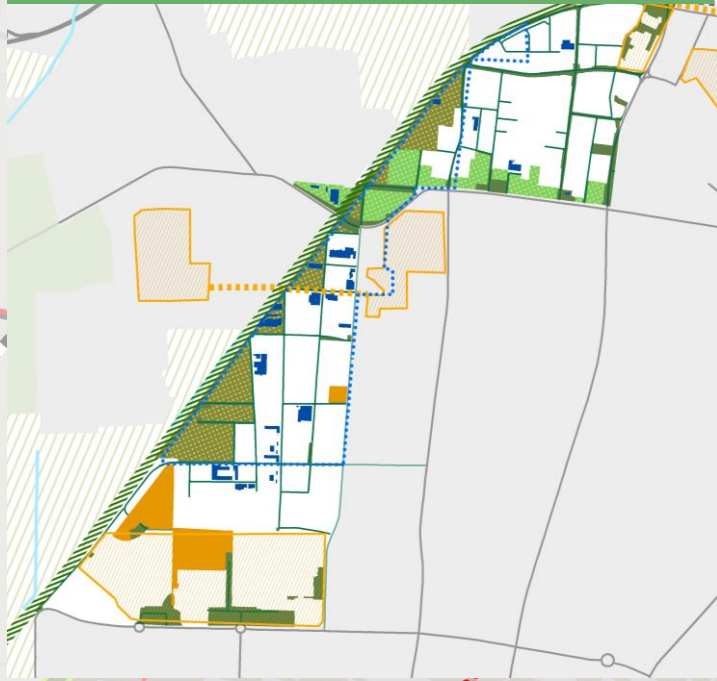


[Photo by REBUS LAB Emilia-Romagna Region]

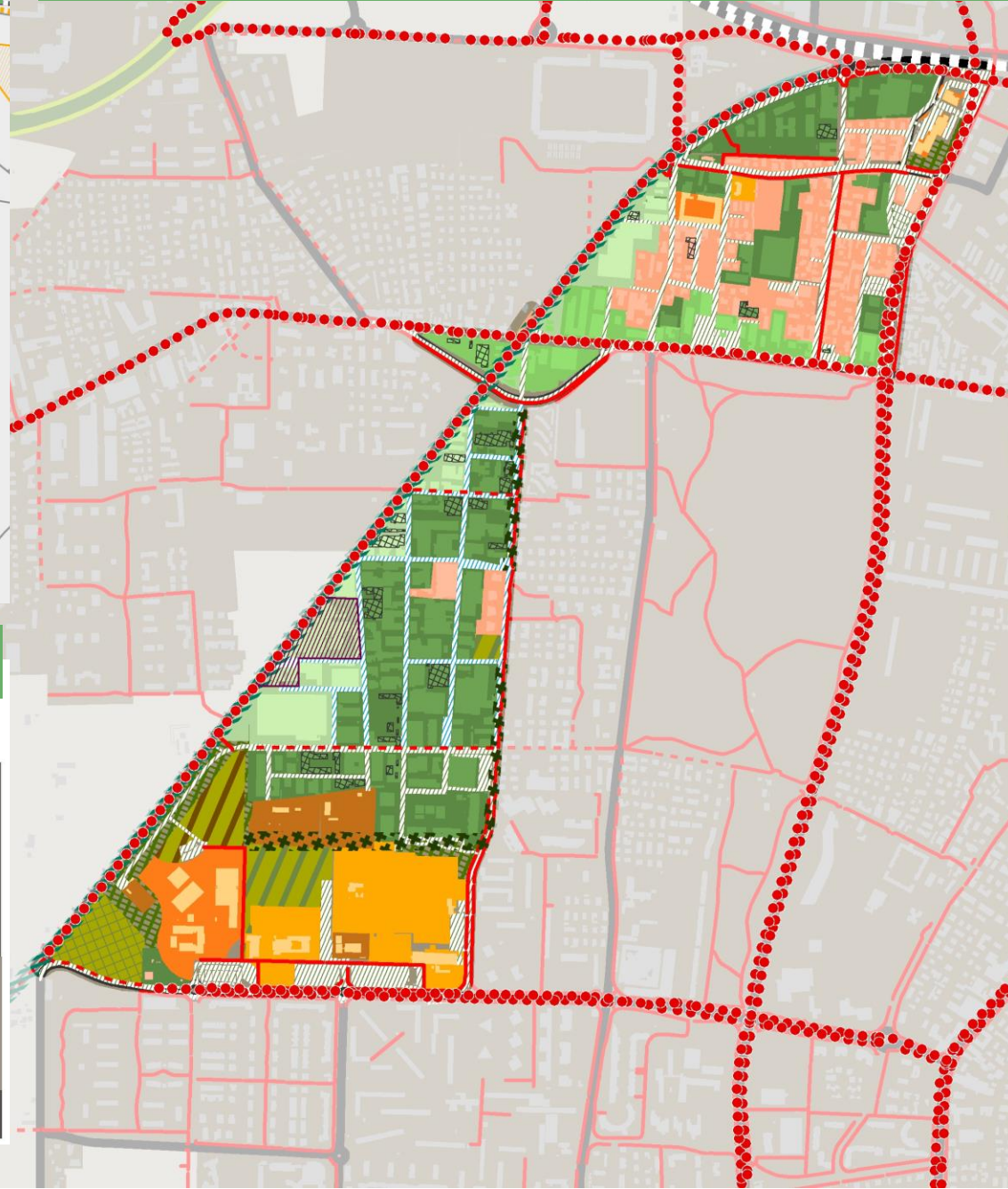


[Photo by REBUS LAB Emilia-Romagna Region]

## Public spaces, roads, identity heritage

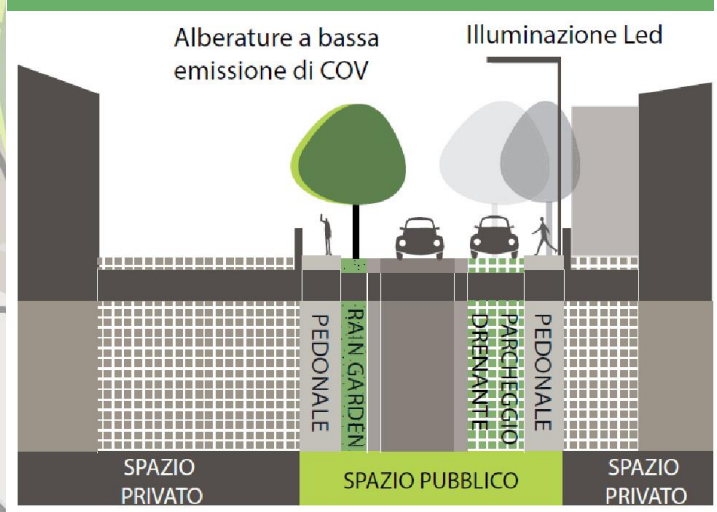


## Work space reactivation and residential areas liveability



- ### AZIONI DI STRATEGIA LOCALE
- Azioni diffuse**
- mitigazione dell'isola di calore: miglioramento energetico dei fabbricati e aumento della permeabilità dei lotti
  - riordino dei fronti prospicienti la via Emilia Ovest secondo regole relative ai fronti, spazi parcheggio e alle recinzioni
  - riordino dei fronti prospicienti la Diagonale
  - servizi urbani da connettere alla dorsale sulla Diagonale
  - mitigazione dell'impatto ambientale e percettivo dell'area per impianti tecnologici
  - servizi locali da valorizzare e connettere al tessuto produttivo
  - verde di quartiere da potenziare
  - verde pubblico incolto da attrezzare
  - verde incolto da valorizzare
  - manutenzione e potenziamento del verde ambientale di mitigazione
  - aree residenziali di possibile conflitto con aree produttive: incentivare la mitigazione
  - riassetto delle sezioni stradali per la realizzazione di marciapiedi, parcheggi permeabili e rain garden
  - aumento delle aree permeabili su strade e parcheggi compatibilmente alla qualità delle acque di dilavamento
- Azioni puntuali**
- attività in corso di trasferimento
  - edifici degradati da rigenerare e riattivare
  - mitigazione del conflitto funzionale: inserimento di quinte verdi
  - progetto di paesaggio sulla Diagonale: corridoio verde per la mobilità dolce
- Azioni di PUMS 2030**
- riassetto della sezione stradale per la creazione di dorsale ciclistica per favorire gli spostamenti veloci casa-lavoro
  - rete ciclopedonale esistente: manutenzione ed aumento della sicurezza
  - completamento della rete ciclopedonale

## Roads regeneration

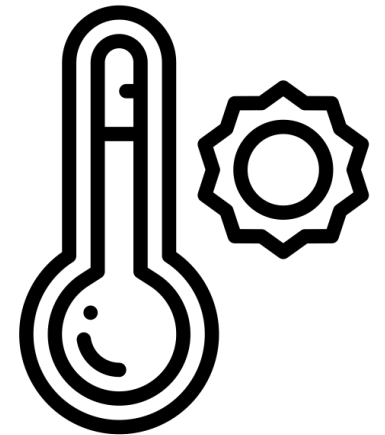




# VILLAGGIO ARTIGIANO / focus challenge

How can we deal better with  
**extreme heat?**

01



# SAN LAZZARO / case study

02



San Lazzaro is a **huge mixed-use district**, just adjacent to the city centre.

The first residential settlements dates in the 30s, the neighborhood intensely developed from 50s onward, and now it has a **varied social structure, but really active and cohesive**.

Thanks to its position and the public dotations that contains it's a really **strategic area**.



[Photo by Google Earth]

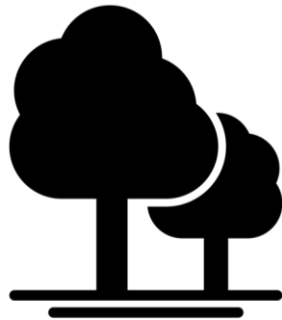
# SAN LAZZARO / facts and figures



14.968 tot population

1.861 children 0-18

3.479 elderly over 65



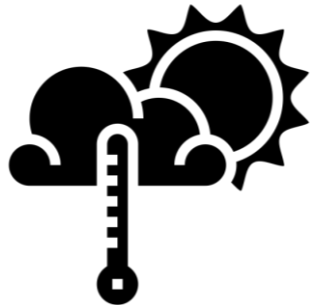
232,39 ha tot surface

55% public spaces / 45% private surfaces

30% green areas = 701.139 mq

≈ 30% unsealed areas

04 IQ quite poor soil quality index

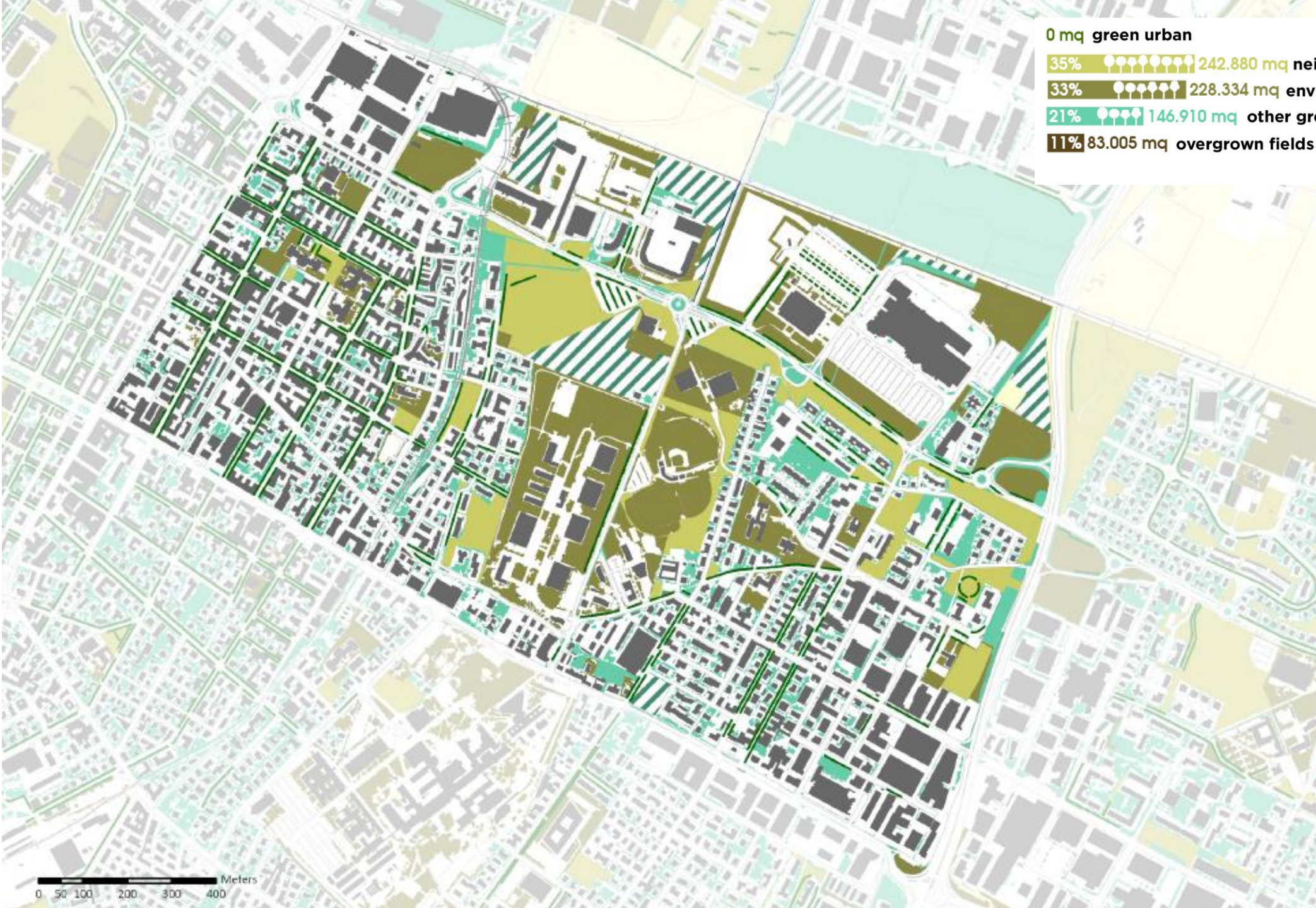


39°C max air temperature in summer (\*)

56°C max surface temperature in summer (\*)

Medium-high local flood risks (high critical level basin in the east area)

(\*) estimated data from EnviMet simulations REBUS LAB Emilia-Romagna Region



0 mq green urban

35% ●●●●●●●● 242.880 mq neighborhood green areas

33% ●●●●●● 228.334 mq environmental green

21% ●●●● 146.910 mq other green areas

11% 83.005 mq overgrown fields

701.139 mq green areas  
30% of district area

**Green spaces fruition**

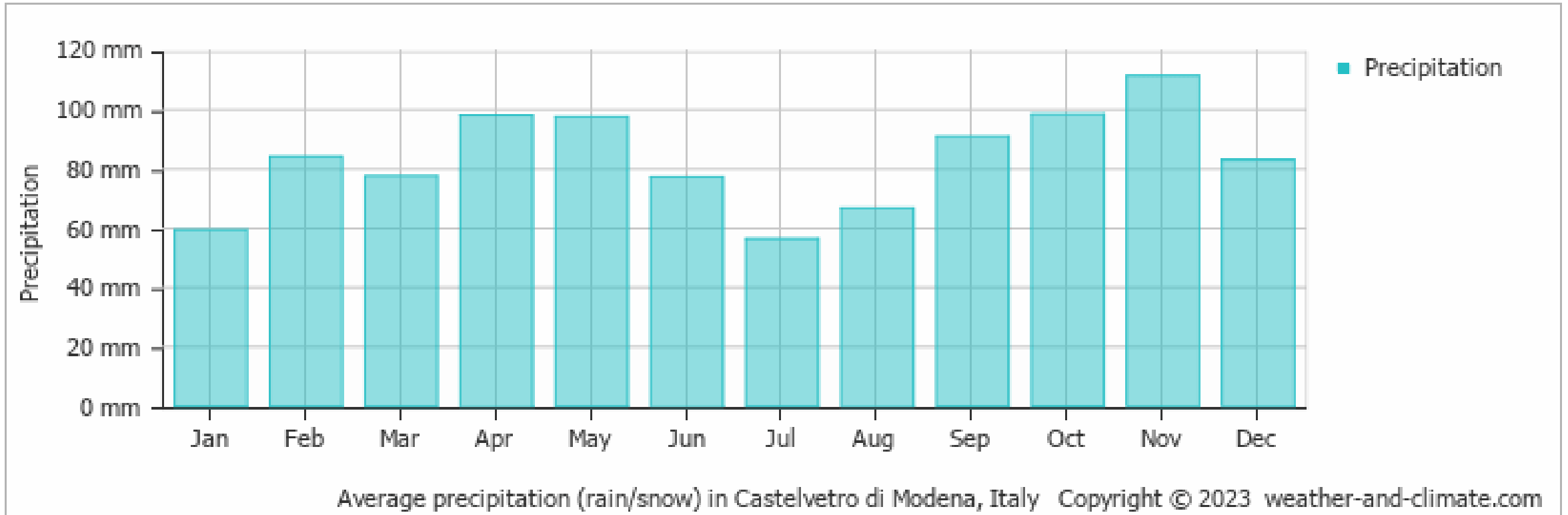
- urban park
- neighborhood park
- green area

**Ecological-environmental comfort**

- ecological-environmental equipments
- public wastelands
- other permeable soils
- tree-lined rows
- rural territory

0 50 100 200 300 400 Meters

# MODENA / Average rainfall





Via Amicizia

[Photo by Google Maps]





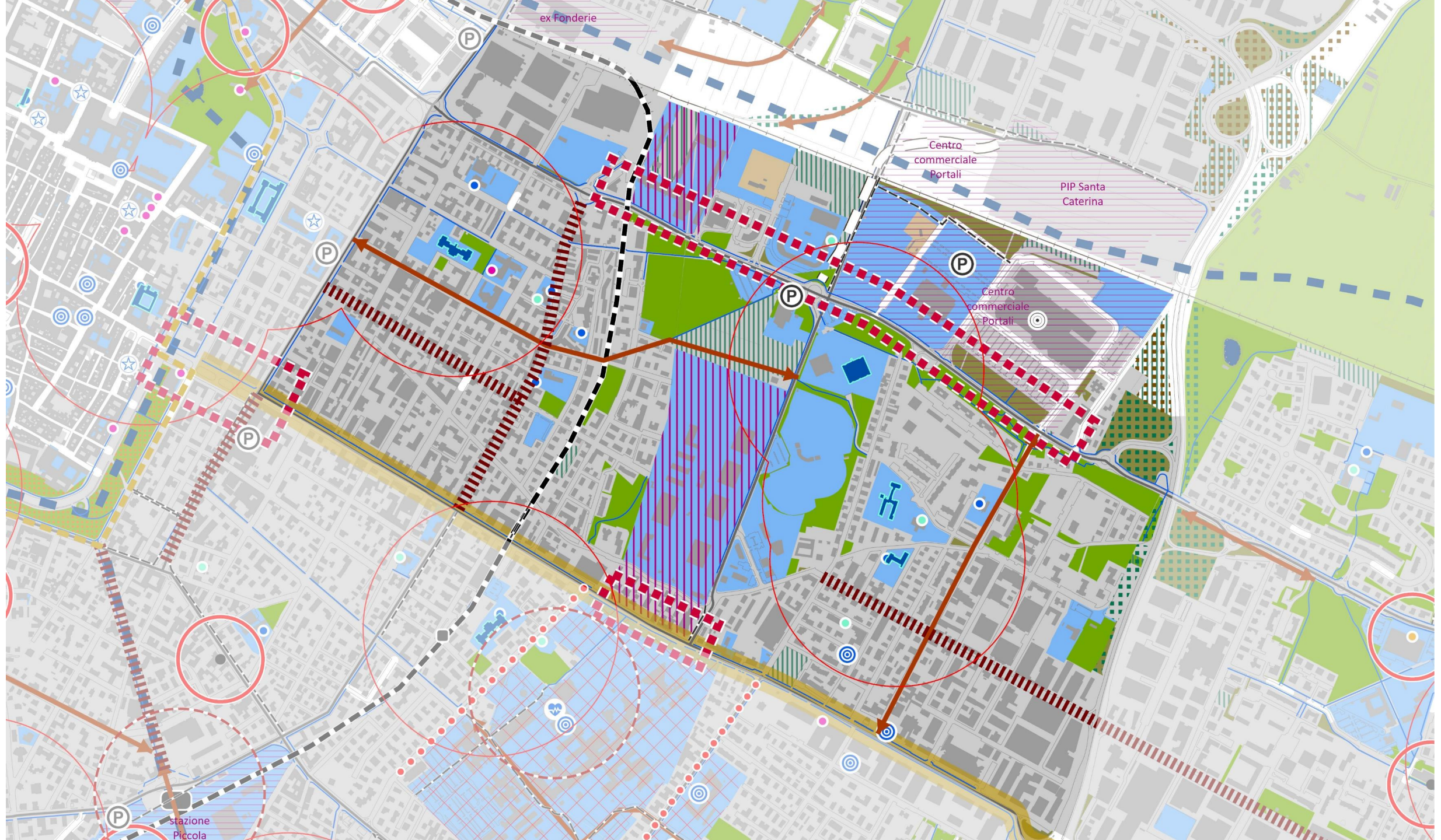


ia Giacomo

[Photo by Google Maps]



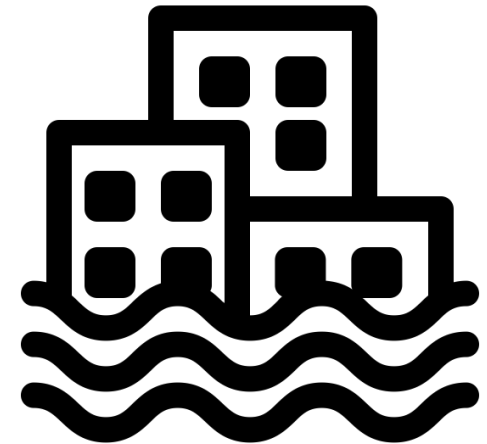
[Photo by Google Maps]



# SAN LAZZARO / focus challenge

02

How can we deal better with **heavy rain** (+ 200 mm) in San Lazzaro?





COMUNE DI MODENA

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Comune di Modena



**CLIMATE  
ALLIANCE**



ENERGYCITIES



Partner tecnico



## Co-creation exercise

How can **Villagio Artigiano** deal better with heat?

How can **San Lazzaro** deal better with heavy rainfall?

Groups will identify **concrete solutions** from three perspectives:

- Citizens & city representatives (10 min)
- Flora and fauna (10 min)
- Entrepreneurs and investors (10 min)

What **win-wins** can you identify? What **frictions** could arise?  
(10 min)

**Result**

**Prepare a  
pitch  
Max 2 minutes**



# Pitch

**Can you share what you came up with?**

Max 2 min.

00 : 02 : 00

Change Clock  
Type

Digital ▾

Duration: 00 ▾

02 ▾

00 ▾

# Thank you!

Hélène Rizzotti  
Alicia Göpner  
Max Beijneveld

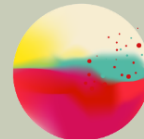
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Comune  
di Modena



**CLIMATE  
ALLIANCE**



ENERGYCITIES

