

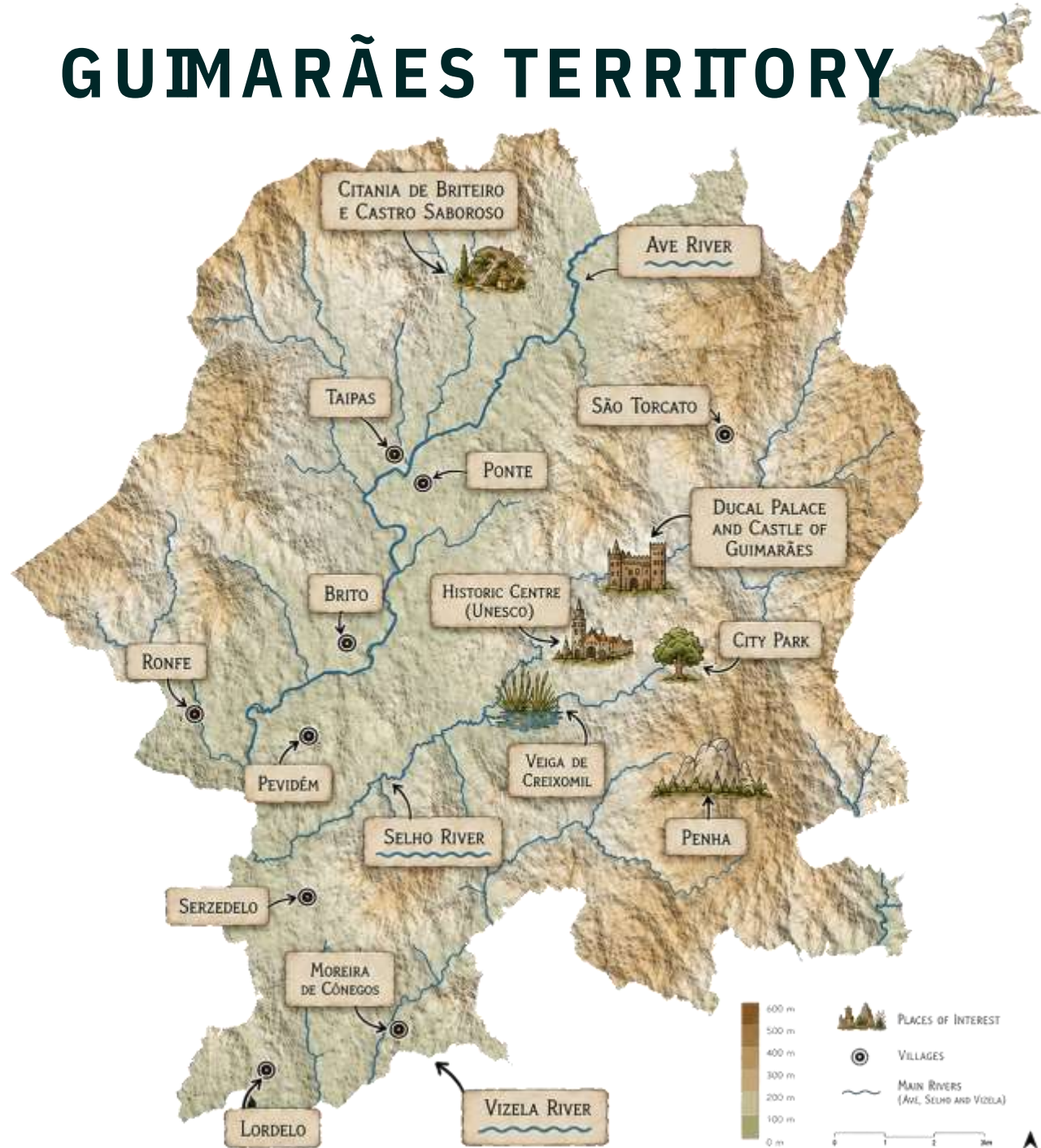
An aerial photograph of a river with a bridge and surrounding trees. The river is dark blue, and the bridge is a light grey concrete structure with a reddish-brown railing. The trees are lush green and yellow-green, indicating a mix of deciduous and evergreen species. The text 'Laboratório da Paisagem' is overlaid in a bright green color, with a stylized arch symbol between the words 'da' and 'Paisagem'.

Laboratório da Paisagem

GUIMARÃES, PORTUGAL

TERRITORY

GUIMARÃES TERRITORY





D. AFONSO
HENRIQUES
STADIUM

DUCAL PALACE
AND CASTLE

GUIMARÃES
CITY HALL

OLIVEIRA
SQUARE

TOURAL
(SQUARE)

HISTORIC CENTRE

ARTS AND CREATIVITY
PLATFORM

ALAMEDA DE
SÃO DAMASO

COUROS AREA



CITY CENTER







GUIMARÃES CASTEL AND DUCAL PALACE



CITY PARK AND COMMUNITY GARDENS



PENHA MOUNTAIN



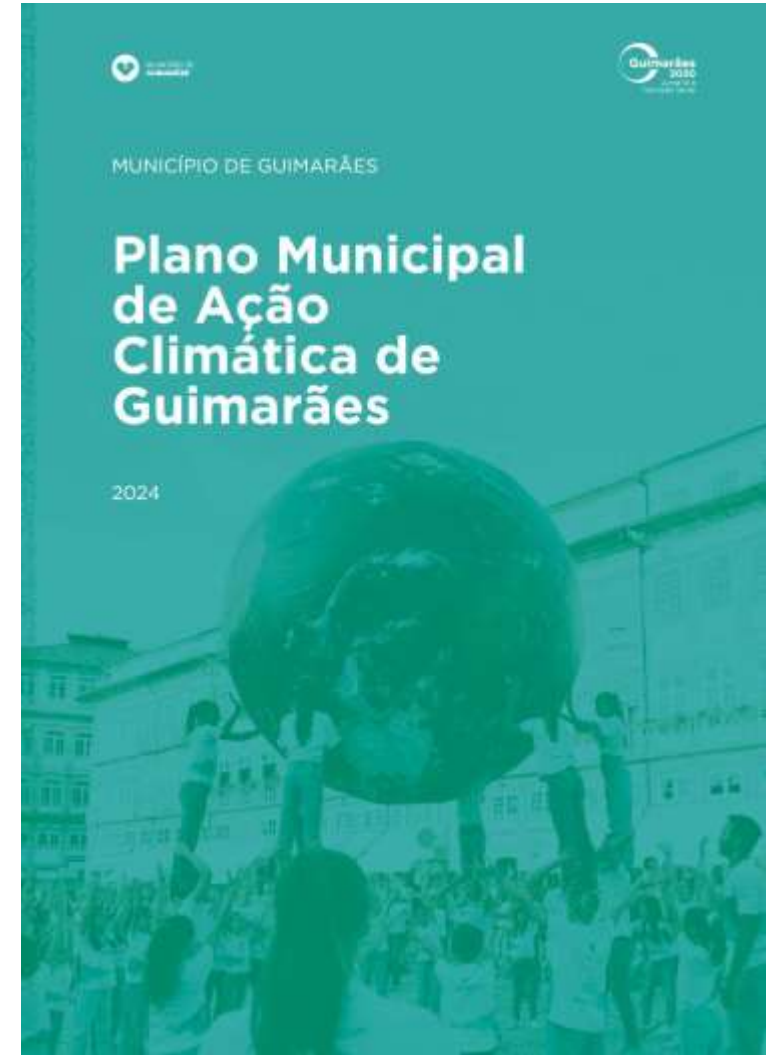
CLIMATIC CHARACTERIZATION



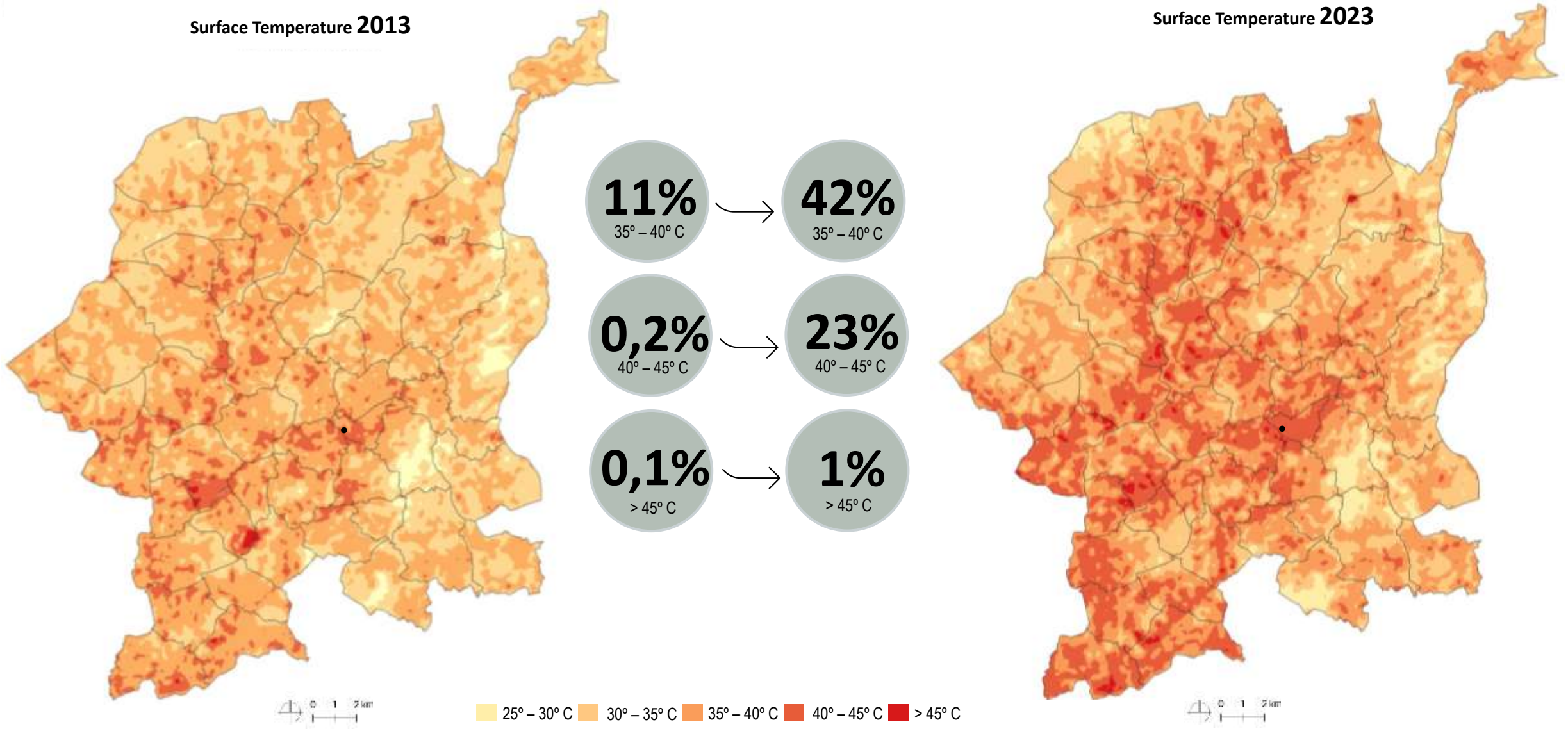
- Increase in temperature
- Higher frequency of extreme heat events
- Lower number of extreme cold events



- Decrease in precipitation
- Fewer intense precipitation events



CLIMATIC CHARACTERIZATION



CLIMATIC CHARACTERIZATION



SHADE + EVAPOTRANSPIRATION



Shade and transpiration cool the surrounding environment.

LOWER SURFACE TEMPERATURE



Result: cooler surfaces and less urban heat.

TREE SPECIES

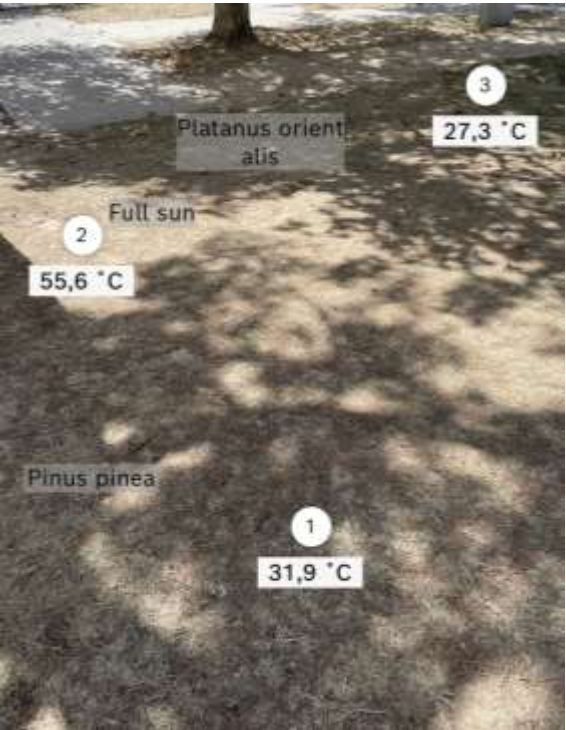


Different species provide different cooling effects.

CANOPY SIZE & DENSITY



Larger and denser canopies provide more shade and cooling potential.



GREEN WAYS

GUIMARÃES

GREENWAYS

TERRITORIAL COHESION

ECOLOGICAL CONNECTIVITY

LANDSCAPE INTEGRATION

GREEN INFRASTRUCTURE

RECOVERY AND REHABILITATION OF RIPARIAN GALLERIES

PUBLIC PARTICIPATION

NATURAL AND HISTORIC HERITAGE

61

KM

3

RIVERS

27

PARISHES



GREENWAYS



GREENWAYS



GREENWAYS



DISTRIC C

GUIMARÃES

DISTRIC C



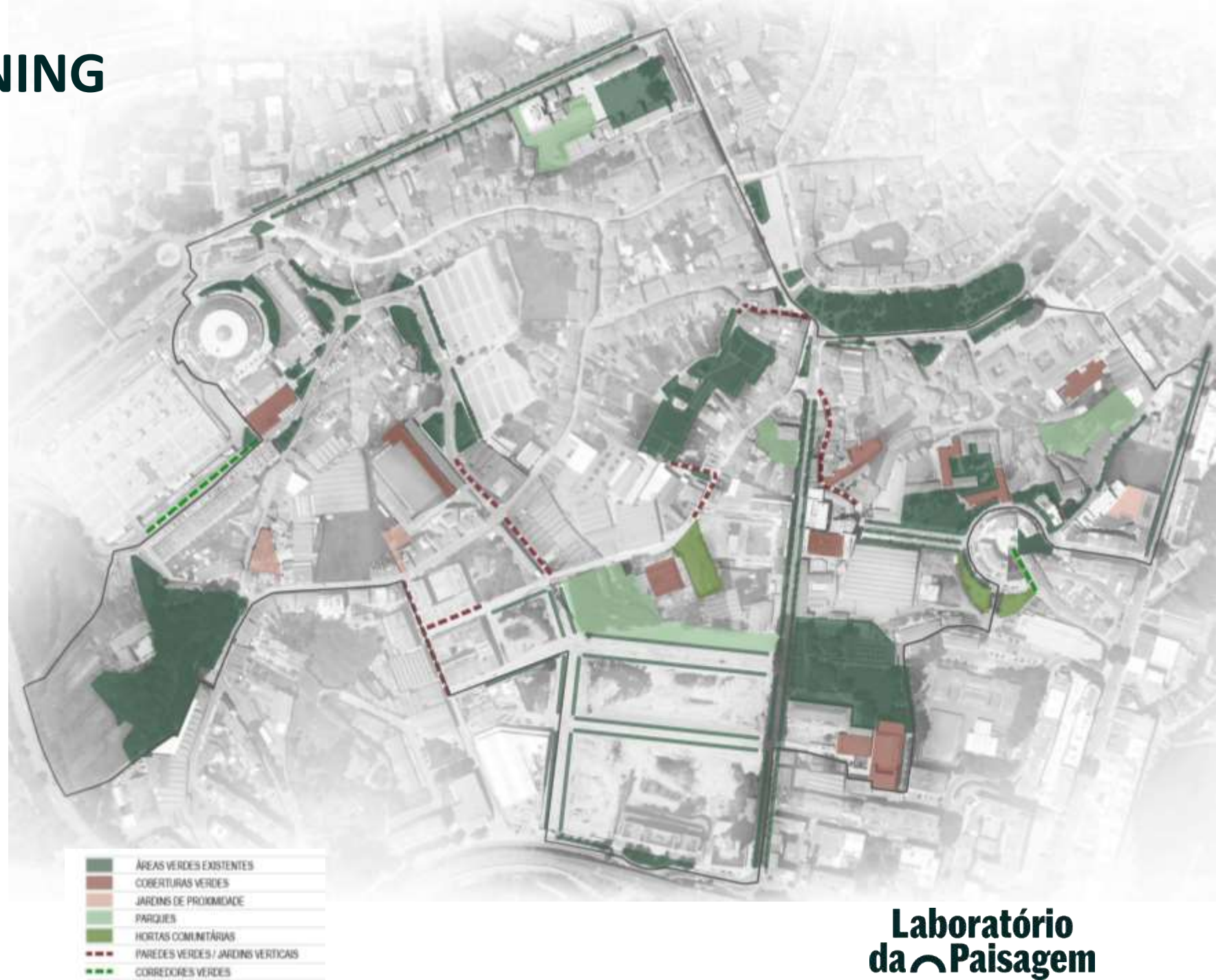
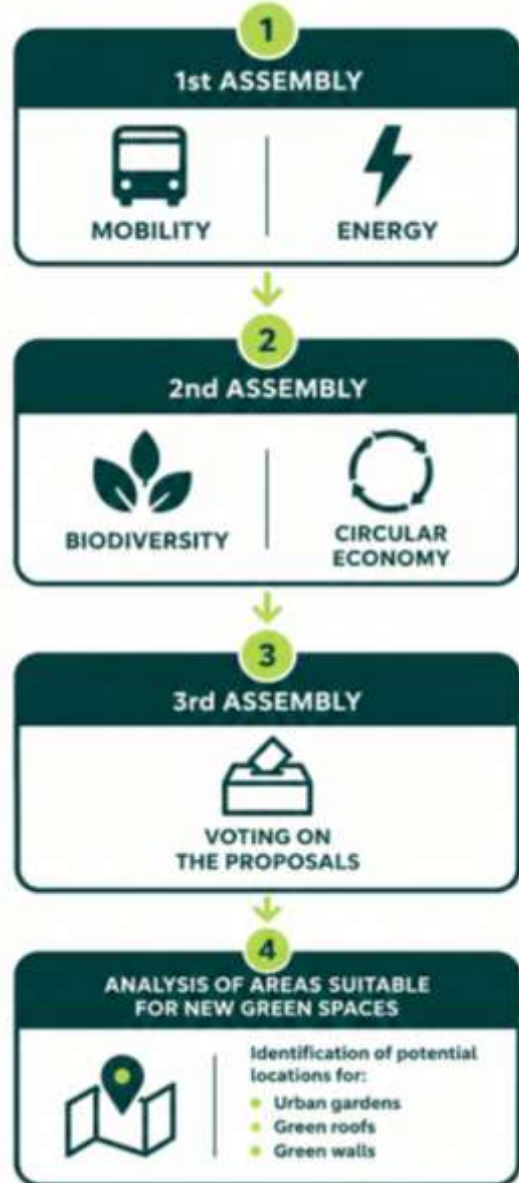
CARBON
NEUTRALITY

GREEN
INFRASTRUCTURE

HERITAGE
ENHANCEMENT

PUBLIC
PARTICIPATION

CONCEPTUAL PLANNING



GREEN BELT PROJECT

GUIMARÃES

GREEN BELT 1 & 2

7

PARISHES

30%

POPULATIN
BENEFITING

11

KM

735

HECTARES



GREEN BELT 3

34

PARISHES

74%

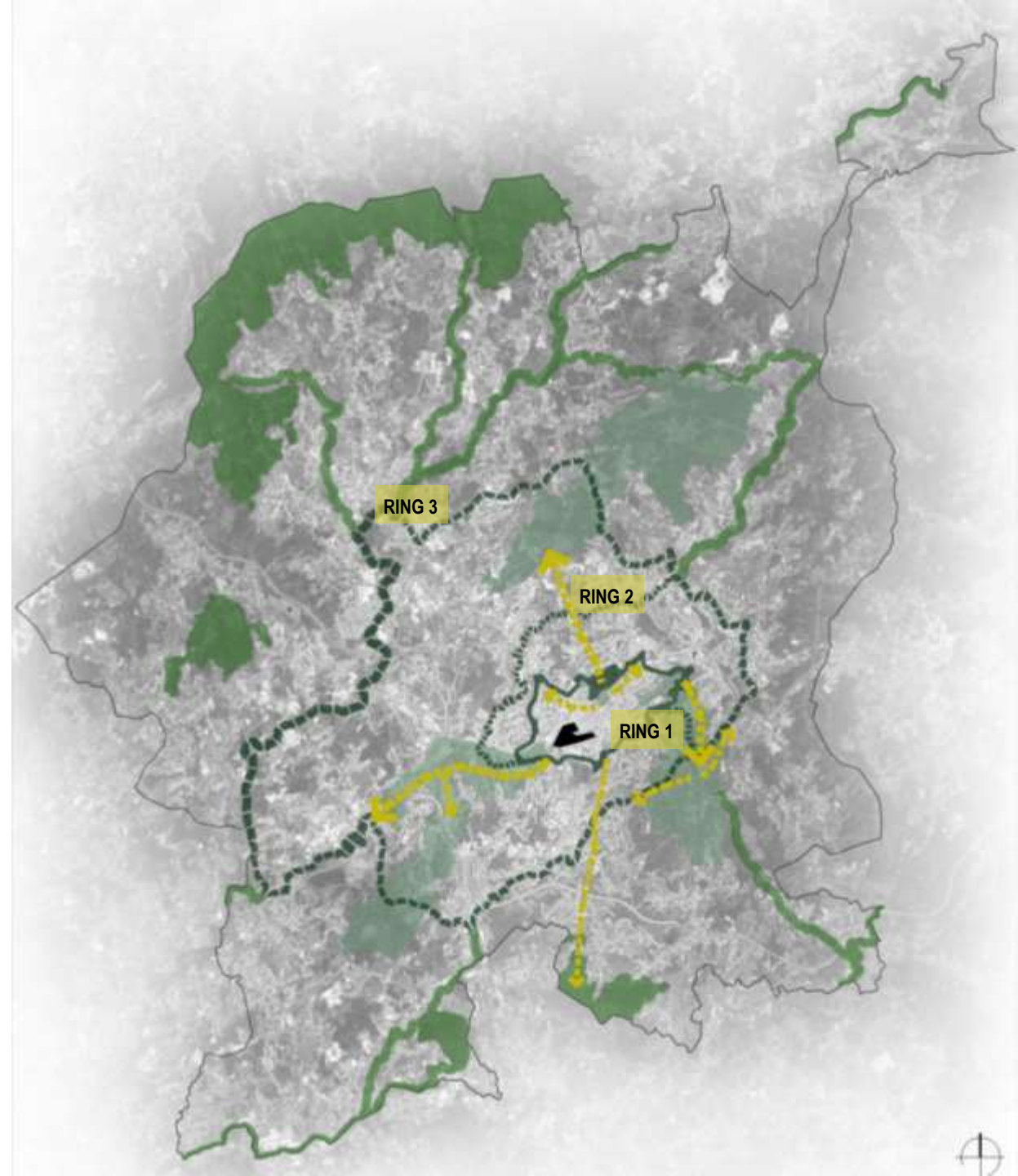
POPULATION
BENEFITING

42

km

1842

HECTARES





www.labpaisagem.pt

Laboratório
da Paisagem