



SERN

General Assembly 2023

**11-12 MAY 2023
Cervia**



COMUNE
DI CERVIA

LOCAL GREEN DEALS
CITY PLANNING AND CLIMATE ADAPTATION

**The importance of the
ecological network in
climate change**

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Municipality of Cervia

The Regional Law (art. 21)



The Emilia Romagna Regional Law 24/2017 "REGIONAL RULES ON THE PROTECTION AND USE OF LAND" has a new approach in the design of the strategy, giving great importance to the territorial equipments in relation to climate change and the critical issues of the built territory. In particular, the allocations are aimed at:

- reduce greenhouse gas emissions
- fully manage the water cycle
- reduce noise and electromagnetic pollution
- maintain the permeability of soils
- mitigate the heating effects
- separate collection of waste
- reduce seismic, hydrogeological, hydraulic and flood risks

Ravenna - The Municipal Strategy

The Primary Ecological Network

1. Core areas (public)

- **Primary ecological ganglia:** 
 - Wooded areas: San Vitale Pinewood, Punta Alberete, Valle Mandriole, Foce del Reno, Venne di Bellocchio, Sacca di Bellocchio and Bellocchio Pinewood, Piallassa Baiona, Piallassa dei Piomboni, Punta Marina Pinewood, Classe Pinewood
- **Secondary ecological ganglia:** 
 - Dunes subject to vegetational dynamism
 - Lakes, reservoirs and streams

2. Stepping Stones (Biodiversity Hotspot)

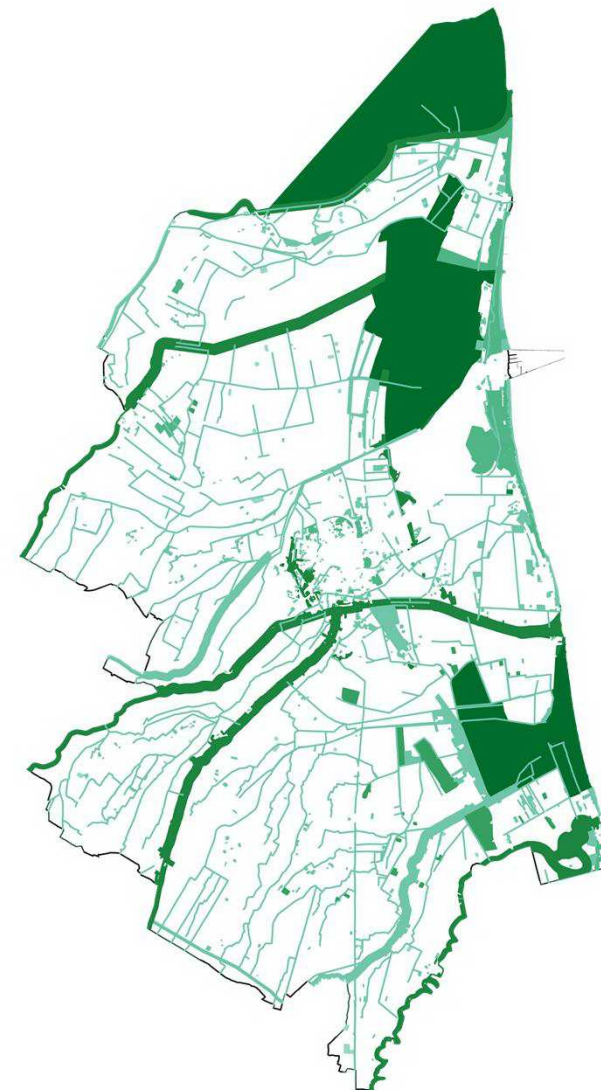
- **Public:**
 - Former quarries
 - Isolated wooded area
 - Hedges and rows
 - Ex-bathtub
 - Public parks
- **Private:**
 - Private ecological issues

3. Ecological corridors:

- river parks
- Consortium Channels
- The network of tree-lined roads
- Beach
- Panoramic road
- Green connections

Rete Ecologica

-  Confine Comune di Ravenna
-  Matrice Primaria
-  Connessione Primaria
-  Gangli Primari
-  Matrice Secondaria
-  Connessione Secondaria
-  Gangli Secondari
-  Filari e siepi
-  Alberature monumentali
-  Attraversamenti
-  Stepping stone
-  Corona Verde
-  Zone di particolare interesse paesaggistico e ambientale (Art. 3.19 PTCP)




The Secondary Ecological Network

1. Buffer area

- Field of major landscape

2. The ecological issue

- Agroforestry crown 
- Field with high agricultural productive vocation

- monumental trees 
- Interferences (Practicability, areas already developed in way "incongruous" regarding the context, etc...)
- Elements related to fruition ("Pinetali Houses", etc...)
- cycle network

Integrated water cycle

- Purification
 - Purifiers
 - Spillways
 - projects for the separation of networks

Rete Ecologica

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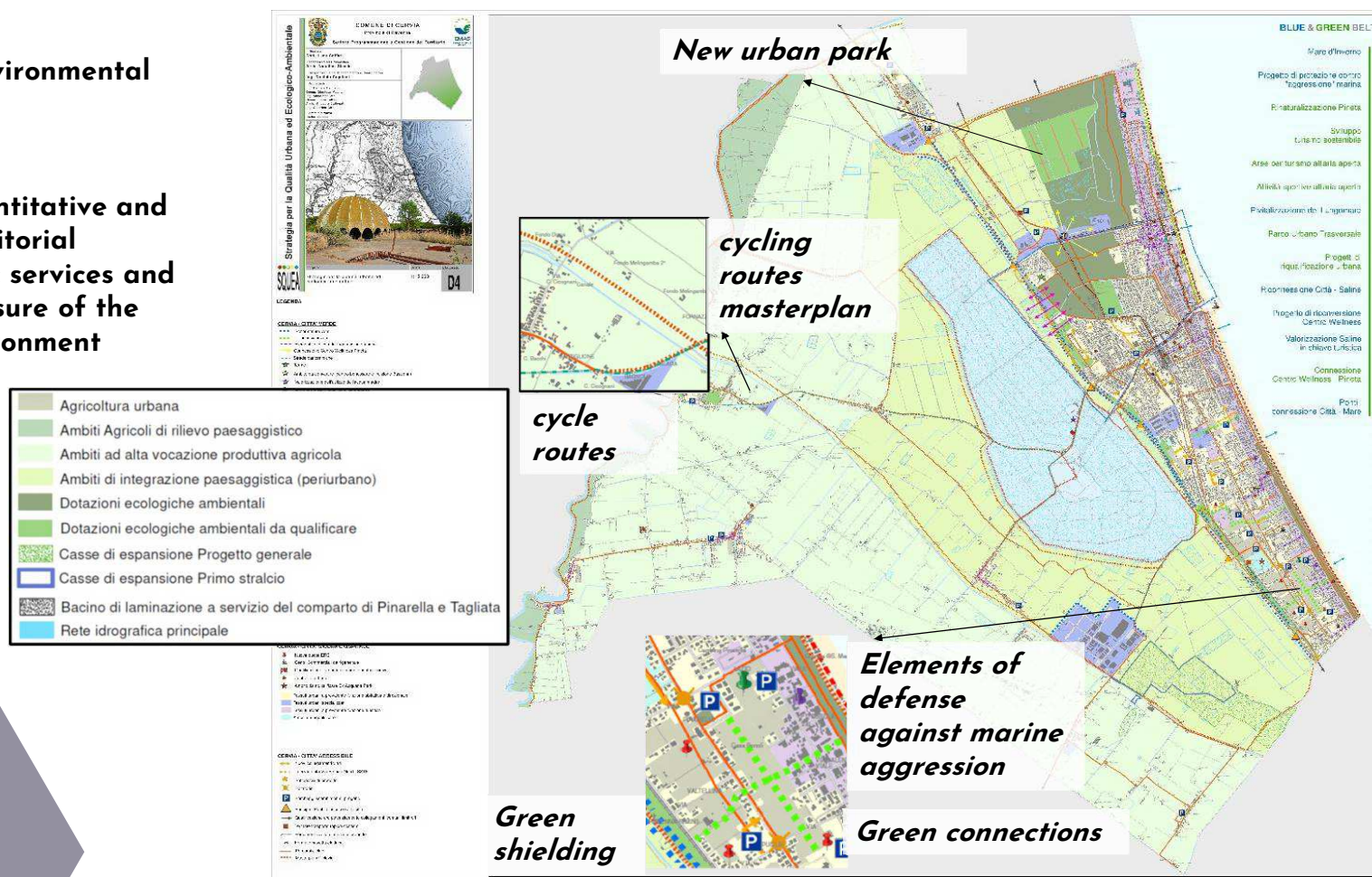


Cervia - The Municipal Strategy

Strategy for Urban and Ecological-Environmental Quality (SQUEA)

General objectives relating to the quantitative and qualitative levels of the system of territorial equipments, infrastructures and public services and to the degree of reduction of the pressure of the settlement system on the natural environment

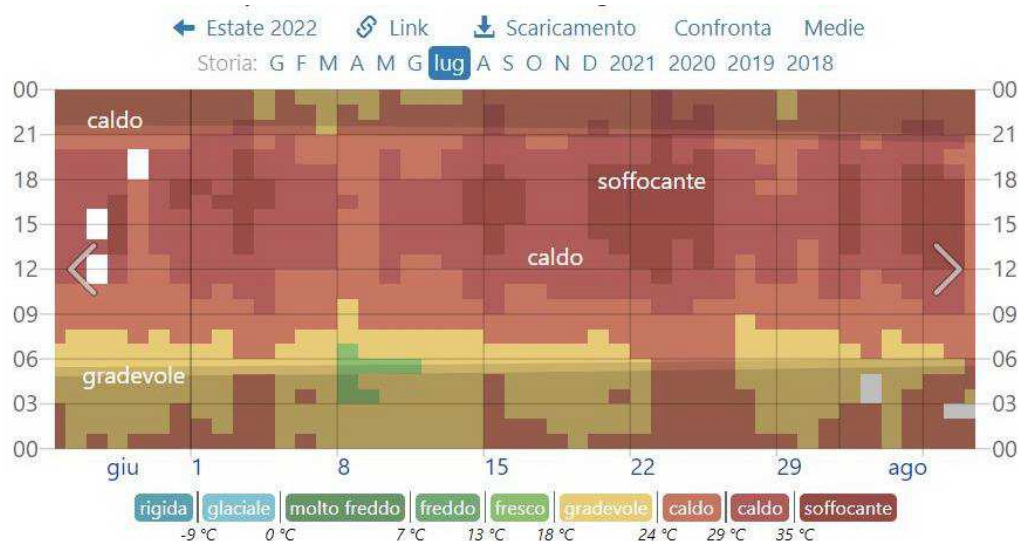
- Actions that increase the resilience of the territory



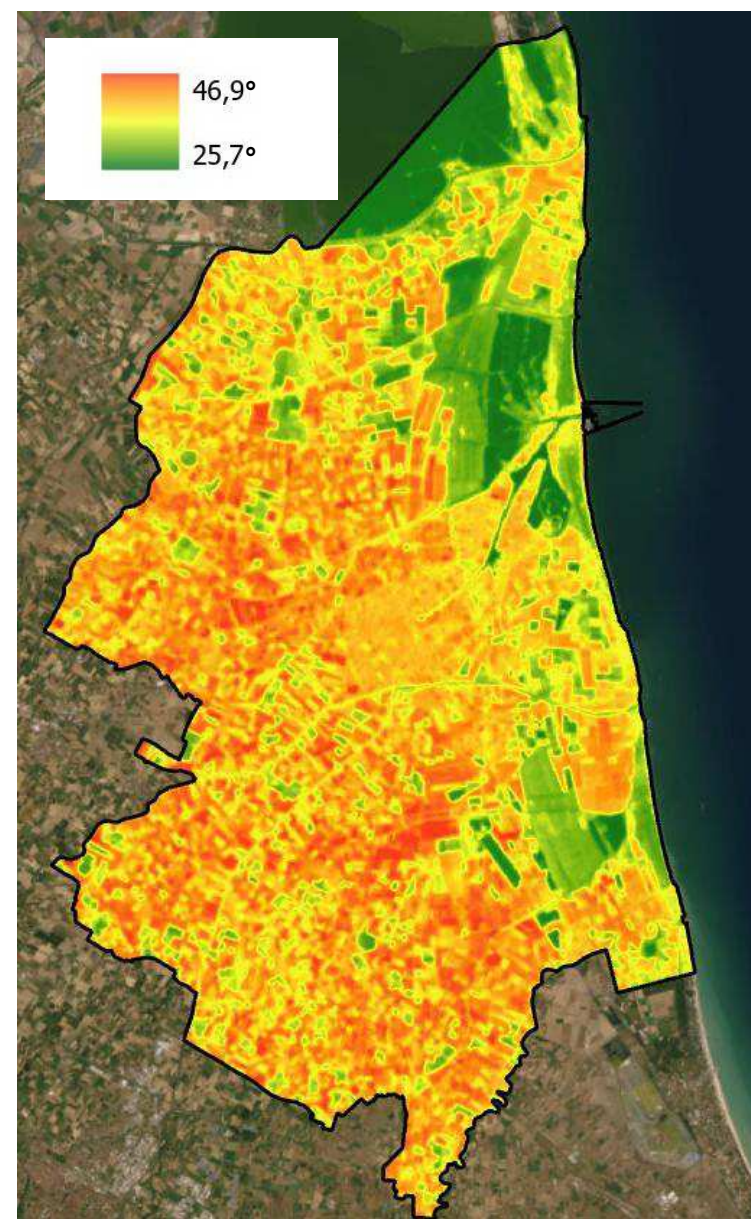
Ravenna - Large scale analysis

For the construction of a cognitive framework it is possible to make a large-scale analysis of the surface temperature to know the criticism of the territory about urban heat islands. Starting from this data it is possible to design the ecological networks and see the effects that these ecosystem services bring to the landscape.

Hourly temperature in July 2022 in Ravenna

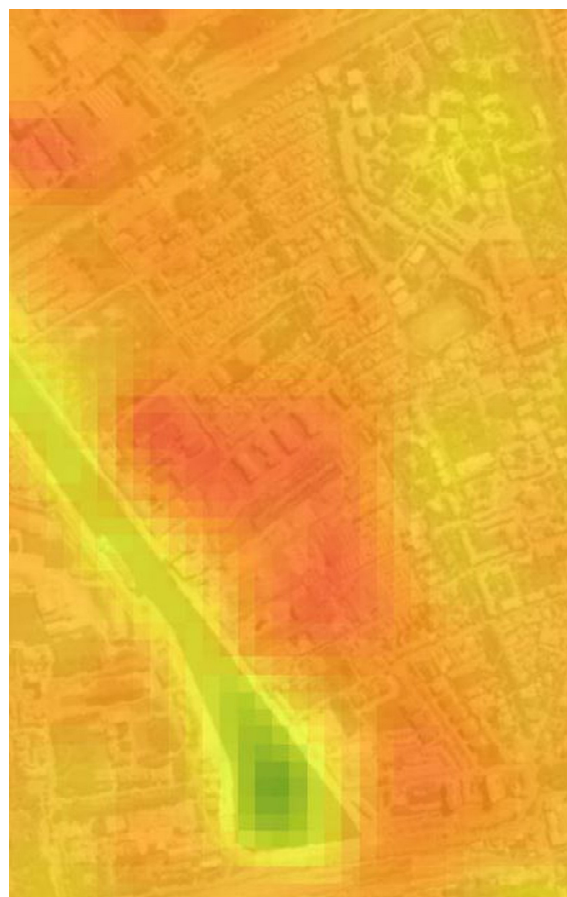
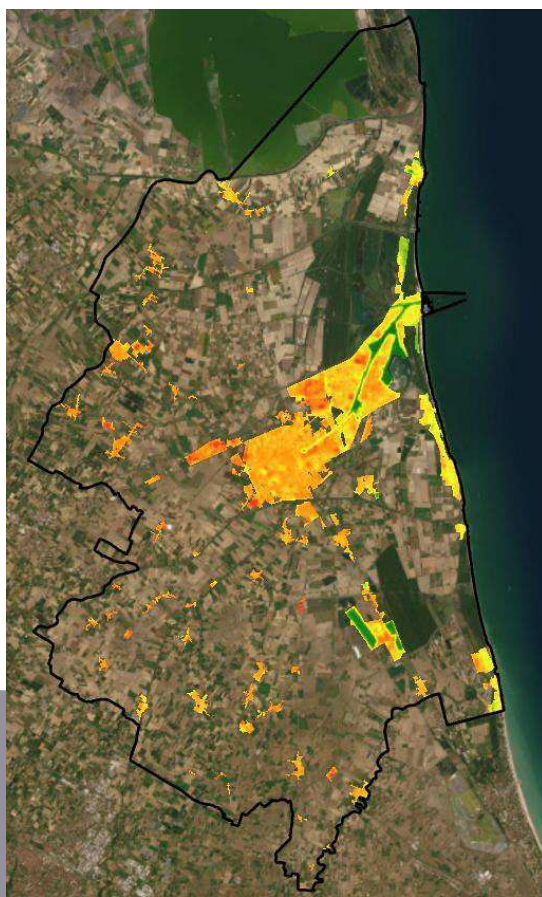
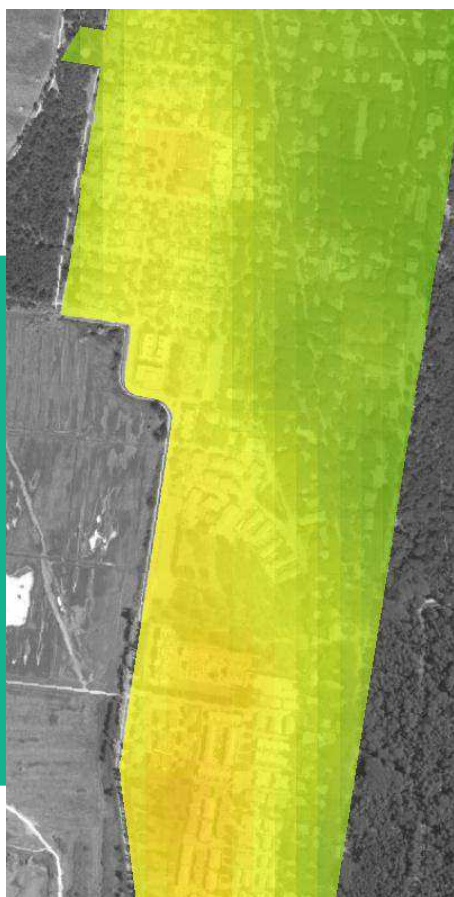
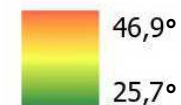


Time temperature marked with different color bands shading indicates night and civil twilight



Ravenna - Large scale analysis

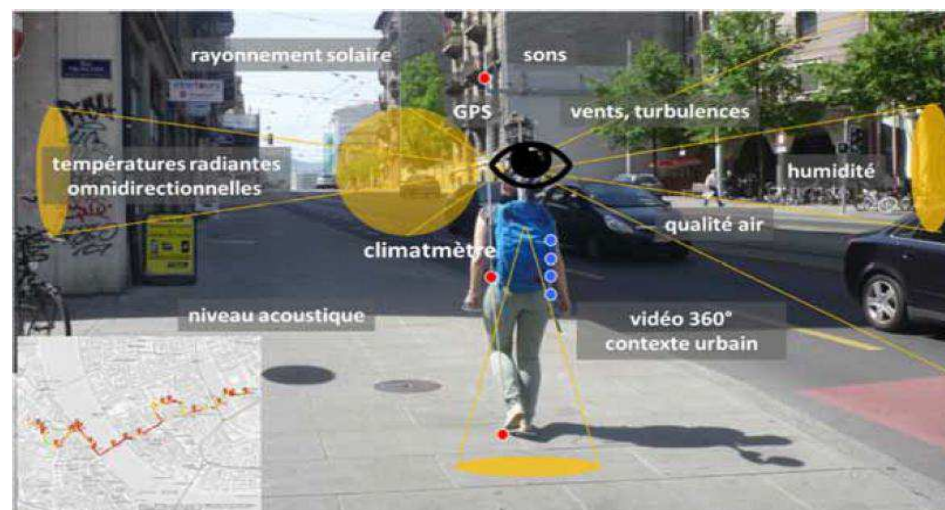
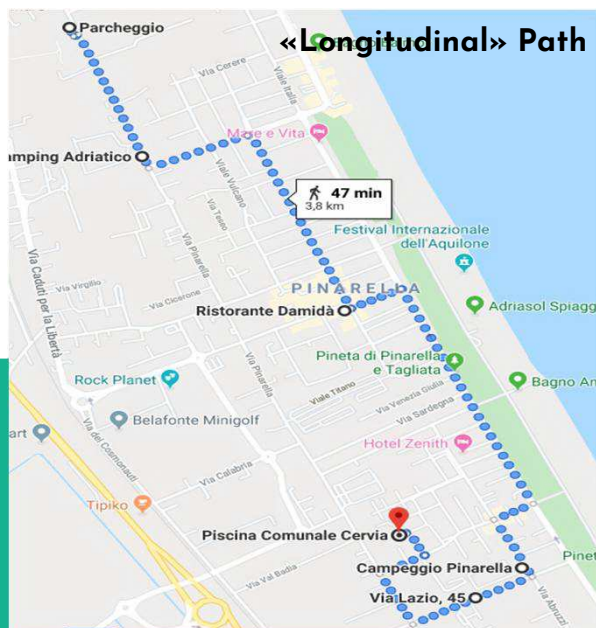
It's possible to make more specific insights in small critical points to go on a detail scale



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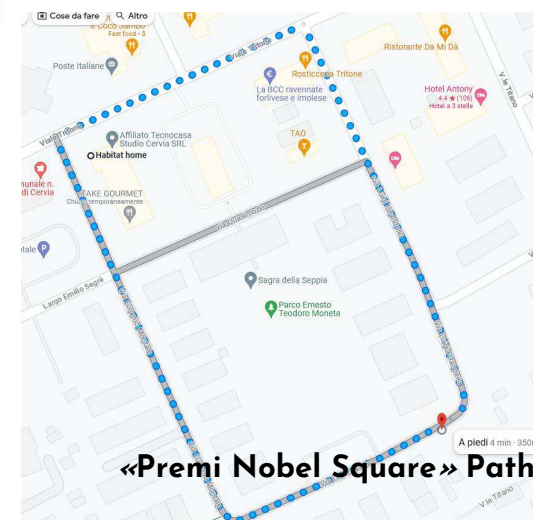
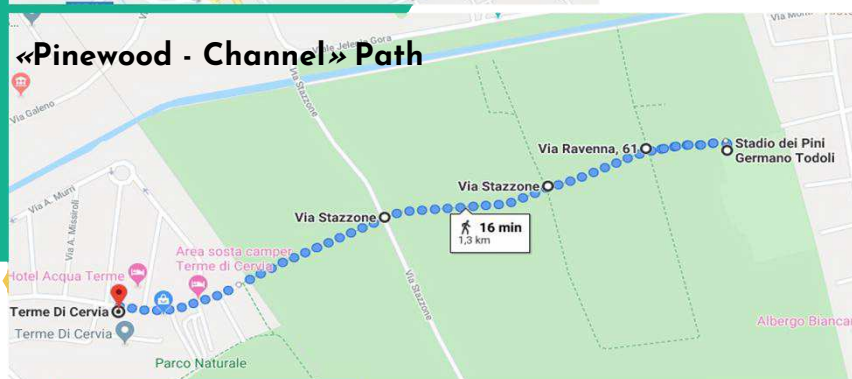
LOCAL GREEN DEALS - CITY PLANNING AND CLIMATE ADATAPTION

Cervia - Small scale analysis - Detail on microclimate



MICROCLIMAMETRO

effect of floor or side coverings, the vegetation impact, the effectiveness of shading devices, etc. The results obtained offer valuable guidance for researching point-oriented solutions for the citizens' welfare

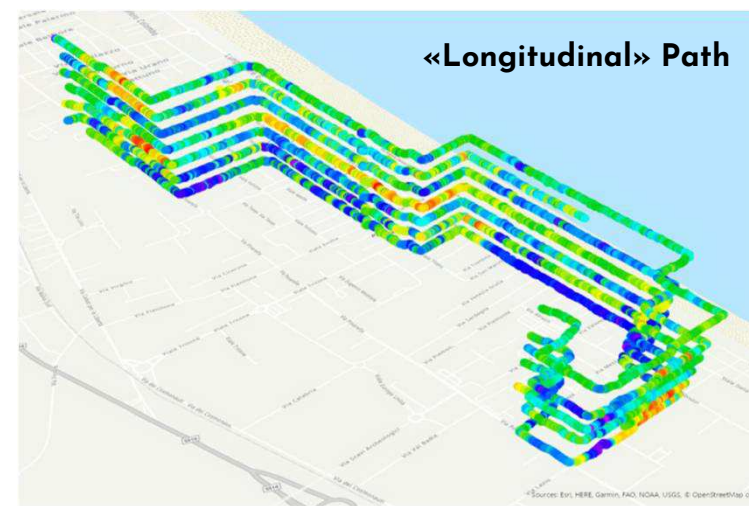


highlighted **"hot spots"** and **"cool spots"** (places more resistant to heat), as well as areas whose climatic comfort depends mainly on the time of day

«Saltpan - City Center» Path



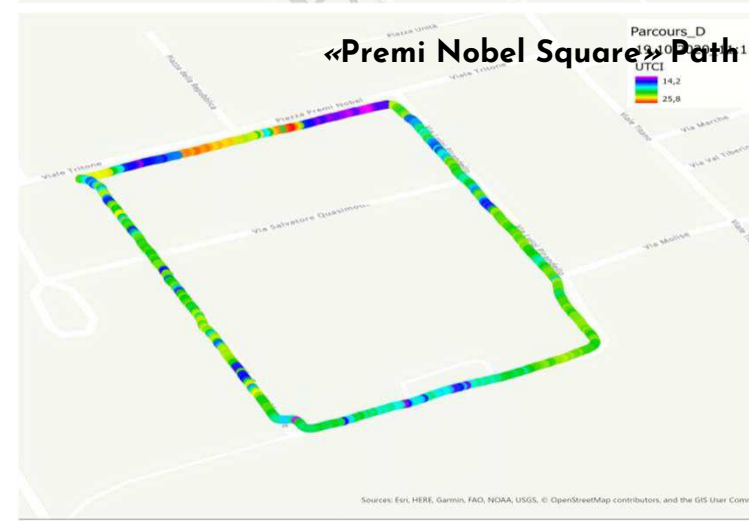
«Longitudinal» Path



«Pinewood - Channel» Path



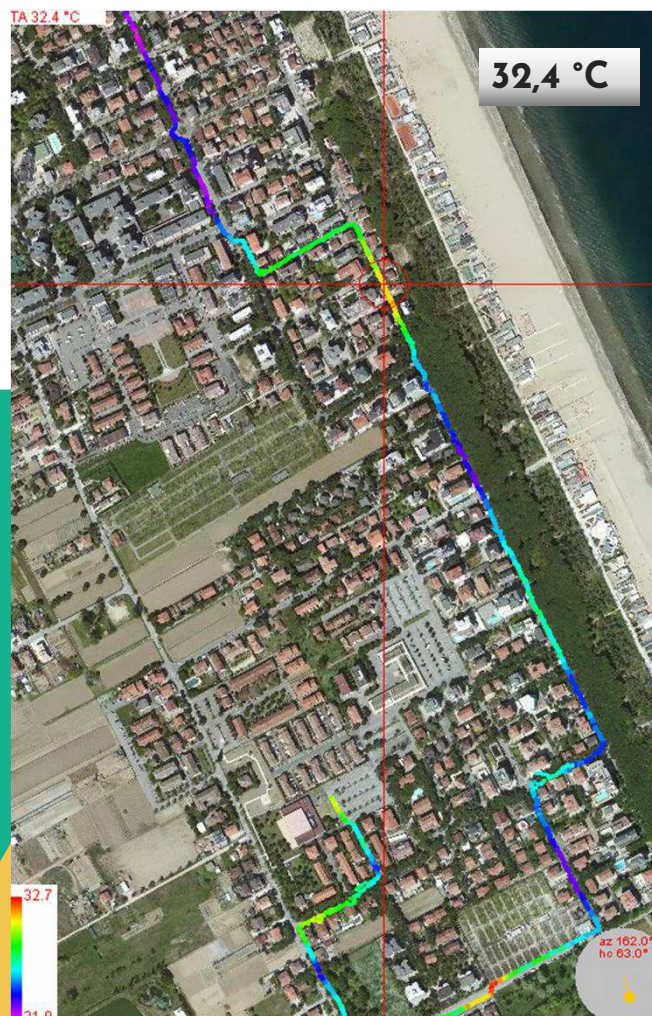
«Premi Nobel Square» Path



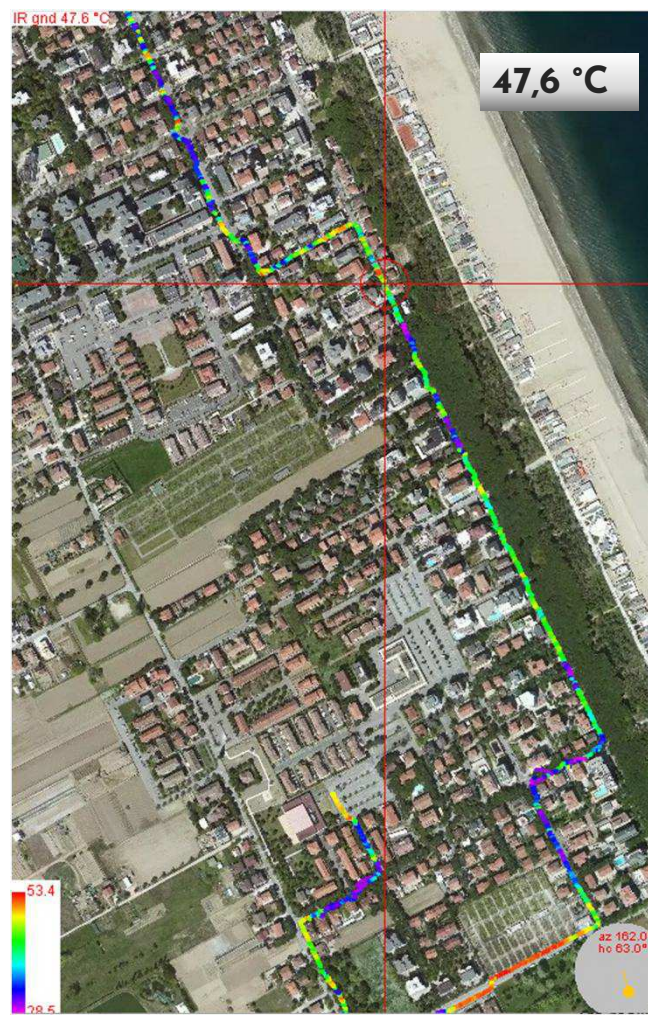
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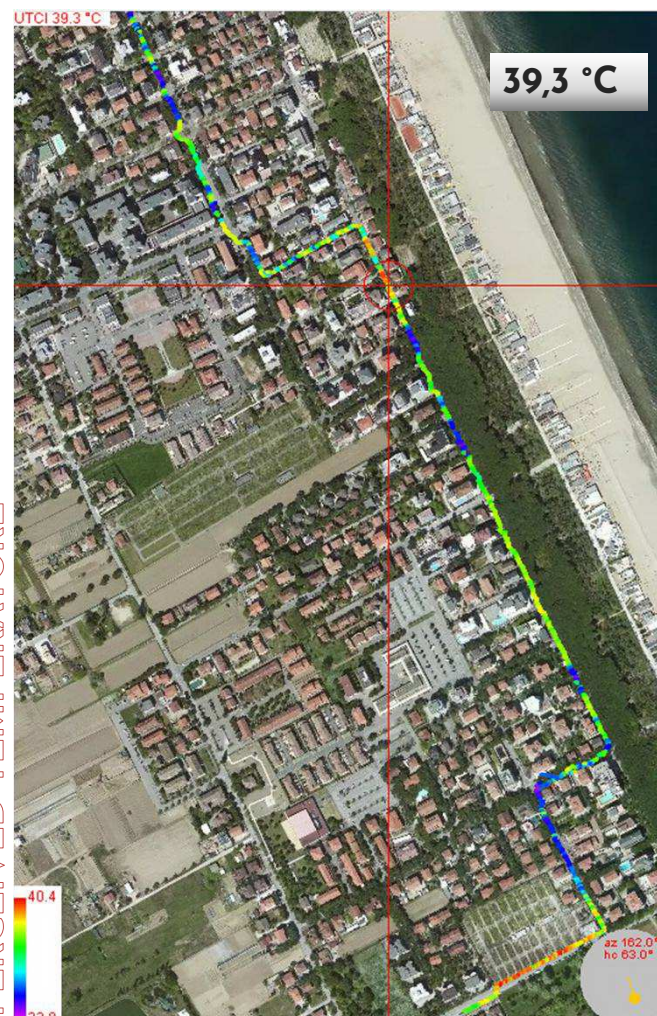
AIR TEMPERATURE



SOIL TEMPERATURE



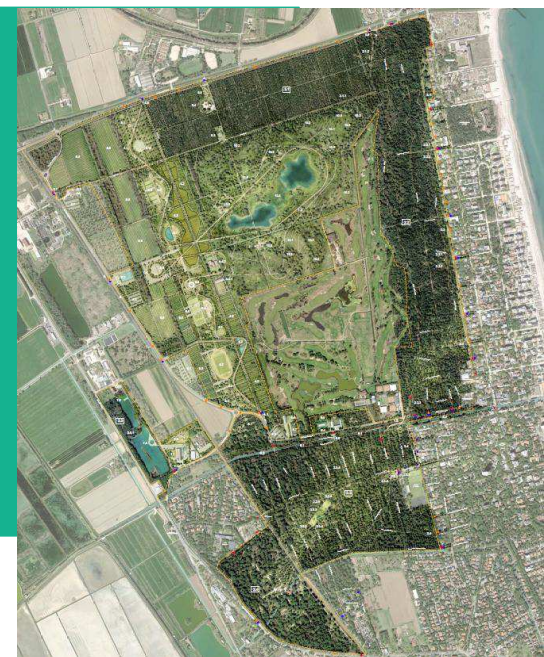
PERCEIVED TEMPERATURE



Bassona Urban Park

Cervia aims at the requalification of natural areas and to do that announces a notice of competition for the project of the new urban park, in the northern part of the city, among the seaside, the saltpan, the pinewood and the town.

The area is about 400 hectares and the winner project includes the reconstruction of part of the pinewood destroyed in 2019 due to a huge waterspout when more than 2.200 plants fell (about 3 hectars).



The project is primarily aimed at the construction of a large public park where to develop different themes:

- the pinewood;
- the new public park;
- the renovation of existing buildings;
- accessibility;
- climate change adaptation and mitigation strategies



STRENGTHENING OF ECOLOGICAL COMPLEXITY



CERVIA PINWOOD

2019

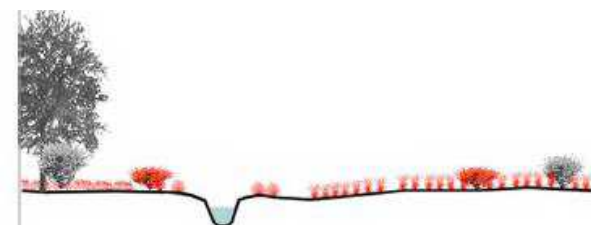


2044



BASSONA PARK

2019



2044



RENOVATION OF EXISTING BUILDINGS



GOALS:

- pursue the re-functionalization of existing containers, owned by the municipality, so that they can operate in synergy with the park and the valuable activities already installed;
- provide for the conversion of the municipal warehouse in a tourist-recreational key, as part of an environmental recovery project of the nearby abandoned quarry and its water surface (equal to about 11 hectares);

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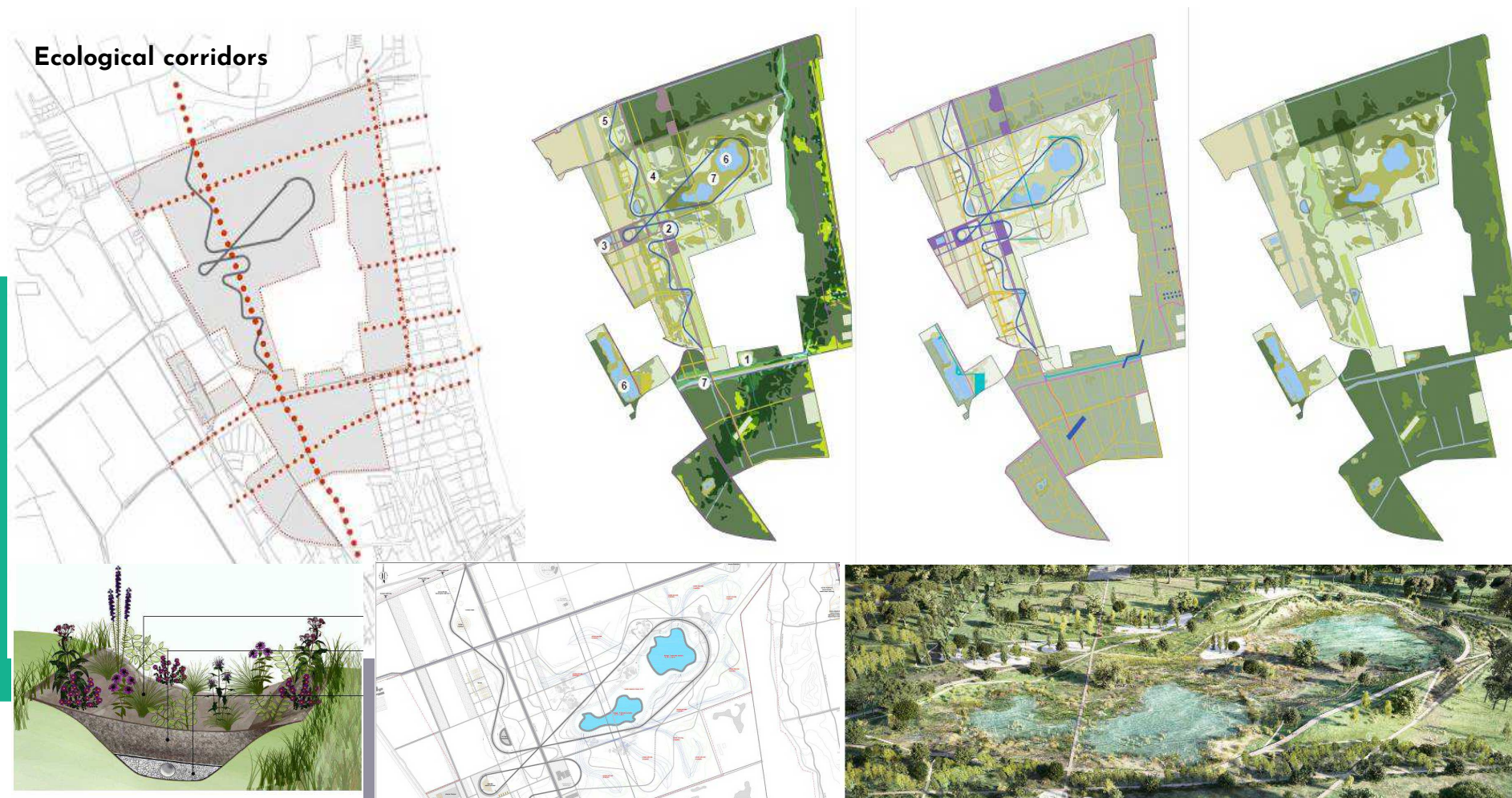
ACCESSIBILITY

connections between the park, the town of Milano Marittima, the Natural Park, the salt pans and the existing structures within the intervention and in the immediate surroundings, adopting solutions that pursue sustainable mobility



MITIGATION AND ADAPTATION TO CLIMATE CHANGE

Ecological corridors

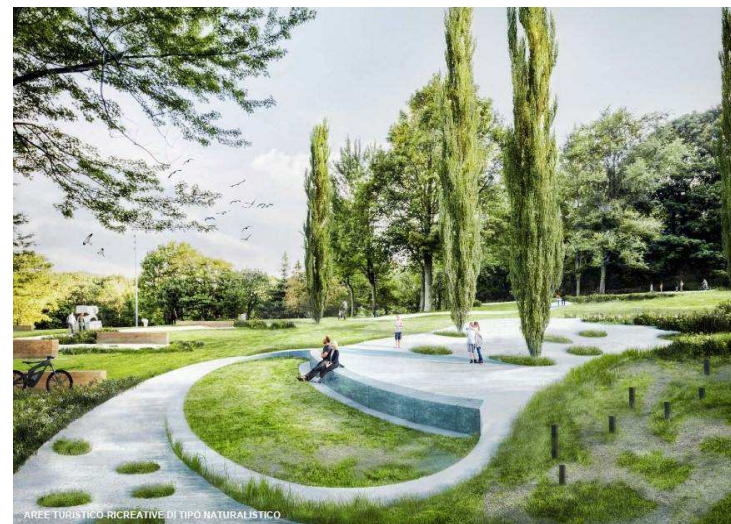
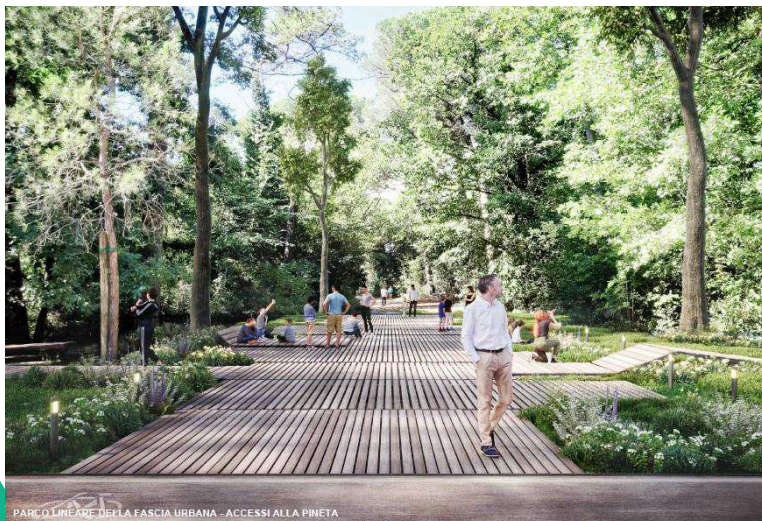


- provide design solutions that consider the different natural and environmental value of the surrounding areas, providing suitable connections depending on the different landscape connotations
- Adaptation to climate change
- Urban comfort
- Resilience of the urban system
- Connection between landscapes
- Enhancing environmental value

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LOCAL GREEN DEALS - CITY PLANNING AND CLIMATE ADATAPTION

How the park
is expected to
be in the
future...





Today the last generation of town planning adheres to the principles of
European Green New Deal

...and then...

- assumes among non-negotiable invariants **mitigation** and **climate adaptation**
- aims at the concepts of **resilience** and **antifragility**
- becomes the subject of a plurality of experts from different fields of **scientific research**



IDENTITY

CULTURE

KNOWLEDGE