

Postcard from Barcelona

I4C Adaptalab, Paris
29 November 2023

aquí

impetus4change.eu

 [@I4C_eu](https://twitter.com/I4C_eu)



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**Barcelona
Supercomputing
Center**

Centro Nacional de Supercomputación



AMB

**Àrea Metropolitana
de Barcelona**

From Barcelona with Love

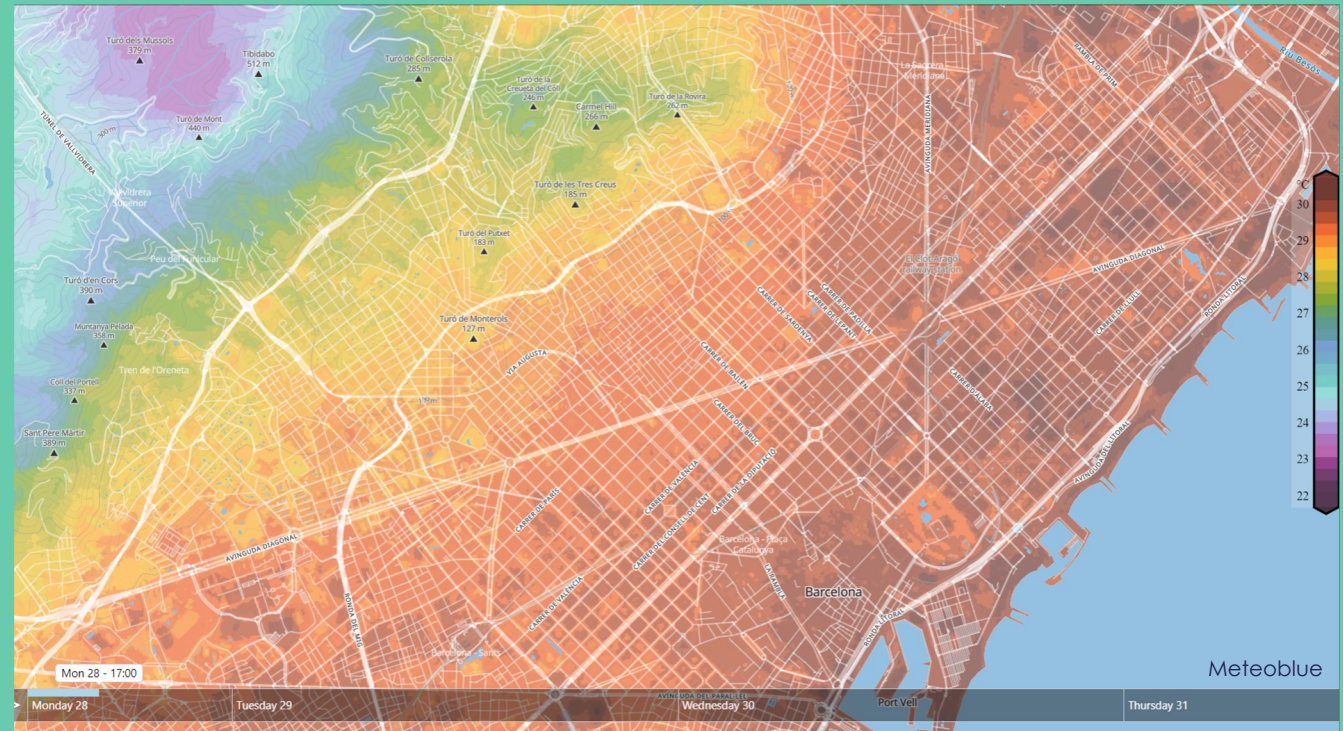
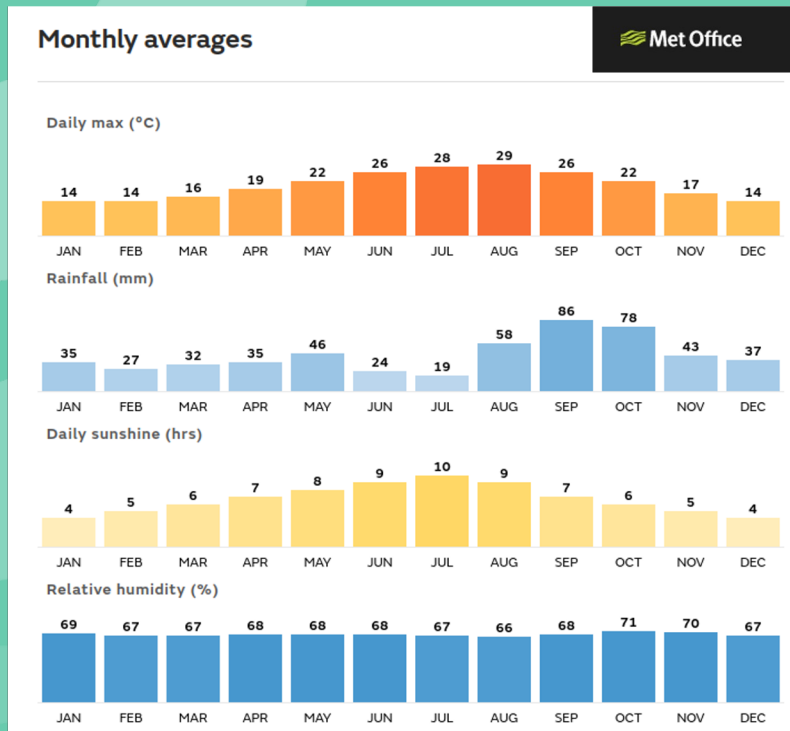
An aerial photograph of Barcelona, Spain, showing a dense urban landscape with numerous buildings and red-tiled roofs. The Sagrada Família cathedral is prominent in the center, surrounded by a large crowd of people. The city extends to the coast, with the sea visible in the distance under a clear sky.

*A city of pristine architecture,
From the grand art to the miniature,
Beauty on parade,
Not a charade,
A doorway to relics,
A home of theatrics,
A host of grand events,
Chauffeur-ing everyone to pleasurable moments,
A city under the kiss of heaven,
An abode with you is a creative leaven.*

by Thompson Emate

Barcelona's climate

- Hot, dry, summer Mediterranean climate
- Urban heat island effect and varied geography exacerbate localised temperature extremes



Observed climate changes

Long standing awareness of heatwaves and vulnerability:

Home > [European Journal of Epidemiology](#) > Article

Socioeconomic position and excess mortality during the heat wave of 2003 in Barcelona

Mortality | Published: 18 October 2006 | 21, 633–640 (2006)

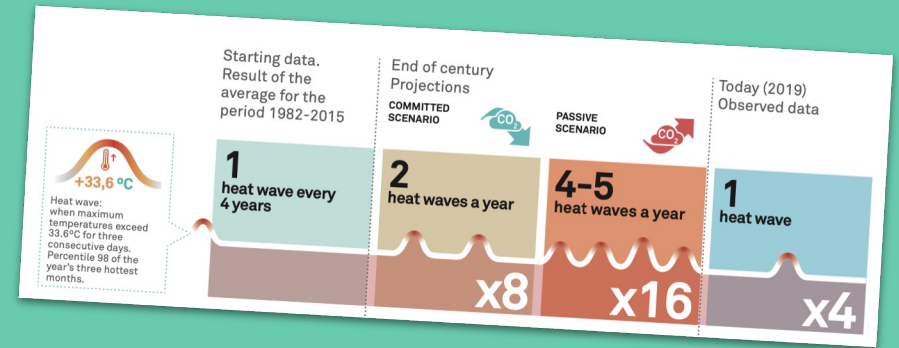
Key recent events include the ongoing 2 years drought with empty reservoirs

Catalunya sofre la mayor sequía de su historia y sin lluvias a la vista

La racha seca acumula ya 31 meses, muy superior al último gran episodio registrado entre 2005 y 2008, y el 50% del territorio catalán se ha visto afectado de forma persistente

— Catalunya apuesta por bajar la presión de los grifos antes de los cortes de agua ante la sequía

ACN Barcelona — 16 de noviembre de 2023 -13:12h Actualizado el 16/11/2023 -13:13h



Heatwaves becoming longer, more frequent and more intense

Generalitat de Catalunya Departament de Territori i Sostenibilitat

Servei Meteorològic de Catalunya meteo.cat

SITUACIÓ METEOROLÒGICA DE PERILL PER CALOR

Avis per dissabte 14/08/2021
Emès: dissabte 14/08/2021 07:50 T.U.

PERILL MÀXIM CATALUNYA 6/6

LLINDAR REPRESENTATIU QUE ES POT SUPERAR A NIVELL DE CATALUNYA

Onada de calor

DISTRIBUCIÓ GEOGRÀFICA DEL FENOMEN DINS LA ZONA AVISADA

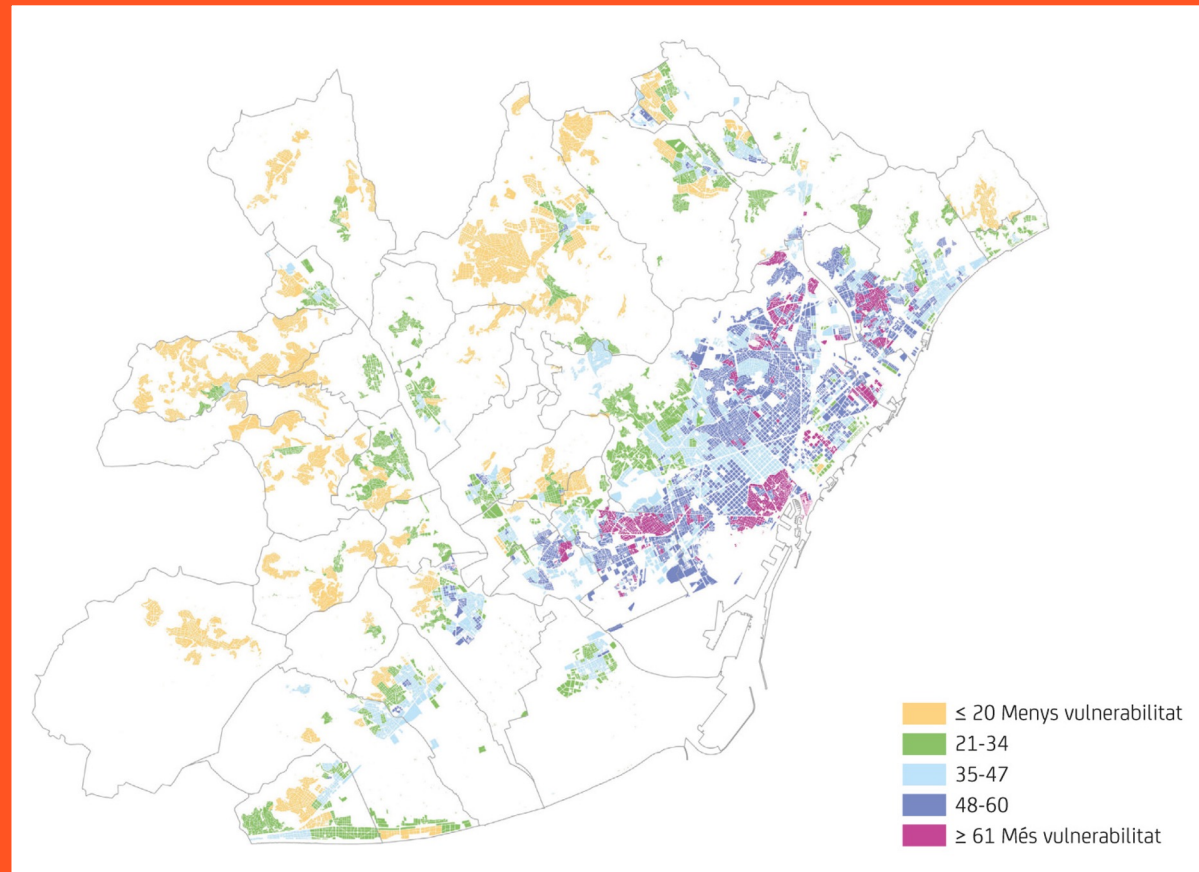
LOCAL EXTENS GENERAL

COMENTARI

SENSE PERILL (0) PERILL MODERAT (1-2) PERILL ALT (3-4) PERILL MOLT ALT (5-6)

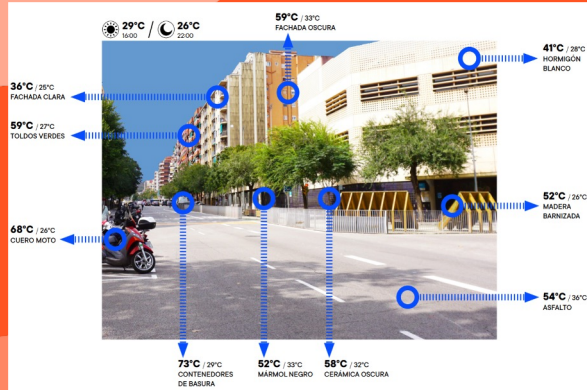
Recent work on climate vulnerability

Vulnerability to climate change index (IVAC)



Recent work on climate adaptation solutions

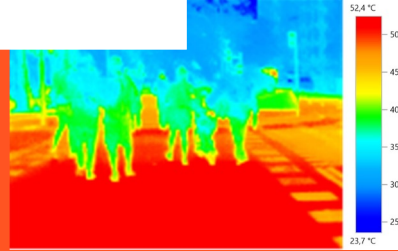
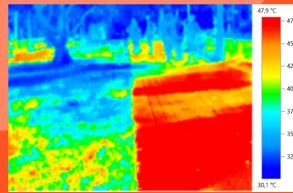
CALOR citizen science project - aquí.bcn



14/11/2023 - 13:21 h

Three projects to be tested to create temporary areas of shade in public space

Ajuntament de Barcelona



Urban Greening Interventions



https://ajuntament.barcelona.cat/ecologiaurbana/en/noticia/tres-propostes-a-prova-per-generar-zones-dombra-temporals-a-lespai-public_1340409

Examples of how Barcelona deals with heatwaves



Publicity and health warnings

Advice on coping mechanisms



Network of climate shelters (safe spaces to escape the heat)

Information that could help address climate impacts



Potential themes (from stakeholder discussions)

- heat / health
- droughts (longer term + seasonal - e.g. tree planting)
- forest fires
- thermal comfort in public space

Challenges with implementing adaptation solutions



- Downscale from territorial (climate data and projections) to local (implementation of projects).
- Different sectoral competences - sometimes there are problems in the transfer of data between public administrations, as well as format and time scale differences of base information.
- To bridge the gap to reach to the population target (for example inform about climate shelters, specially the most vulnerable people - low income, elderly people).
- How to communicate climate uncertainty to citizens.



Barcelona





Barcelona

An aerial photograph of Barcelona, Spain, showing a dense urban landscape with numerous buildings and a mix of architectural styles. The city is situated on a hillside, with the Mediterranean Sea visible in the distance. The sky is clear and blue.

With the Mediterranean sea and mountains at your footsteps, this city rich in modernist, classical, medieval and funky new architecture is a great attraction to tourists and ever-growing number of residents (1.7 million city, 3.X million in the metro area). Unsurprisingly, it is one of the most densely populated cities in Europe.

Excellent transport infrastructure, including bike lanes with weather just made for cycling, gives a feeling of a smaller town where you can easily reach any destination.

Still, the population density takes its toll on the city climate