07 FALL 2023

CITYCLIM UPDATES

FALL 2023

THIS ISSUE

DELIVERABLES

We have prepared several business and sustainability related deliverables (D7.5, D8.6, D1.5) that conceptualise the time after the project runtime, in order to build a great foundation for future exploitation and uptake of the CityCLIM framework and its services.

WHAT HAVE WE WORKED ON?

During the past months, we have demonstrated the current status and progress of our project to the European commission and received great feedback on our progress and reporting. We have adjusted our reports accordingly and submitted the corrected deliverables and after the summer break, went back to work on the next scheduled tasks.

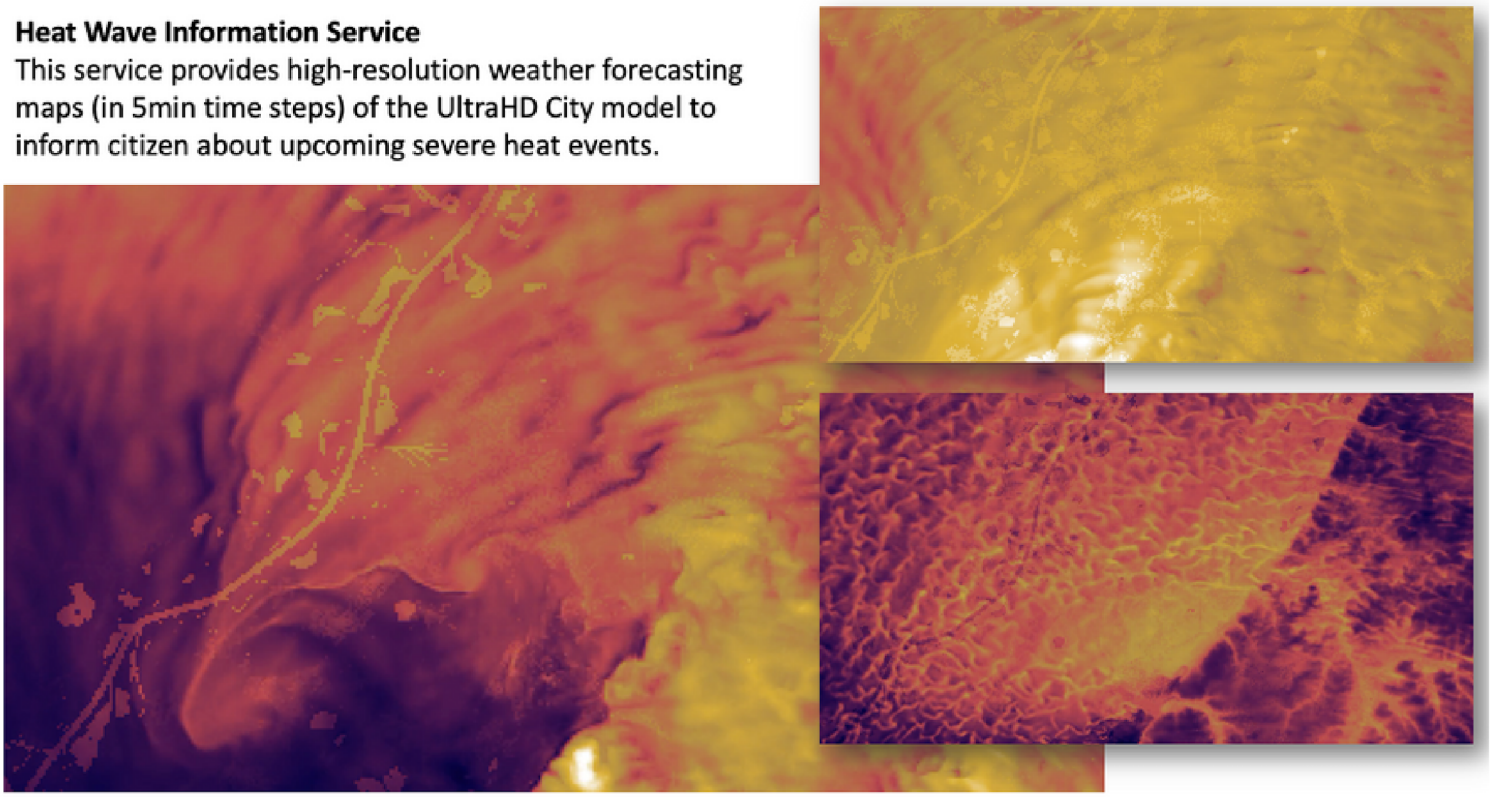
For that, we came together for a General consortium meeting in one of our Pilot cities: Thessaloniki! Our very friendly hosts made it a wonderful and effective experience, with lots of work done and even visiting some of the weather station measuring sites personally and getting to know the city.

The main upcoming tasks are concerned with getting the Climate Services ready for the Full Prototype, that requires a lot of work together with the pilots: gathering and subsequently implementing user feedback for the Administration Services, but also developing the missing features of the UltraHD as well as the frontend of the Citizen Climate Services. Besides that, we were working on putting together handbooks for interested cities to provide a first set of information on CityCLIM, what it stands for and how it can be used by a city to adopt effective mitigation strategies agains climate change related adversities. Read our latest news in this issue and stay connected!

THE ULTRAHD CITY MODEL

Heat Wave Information Service

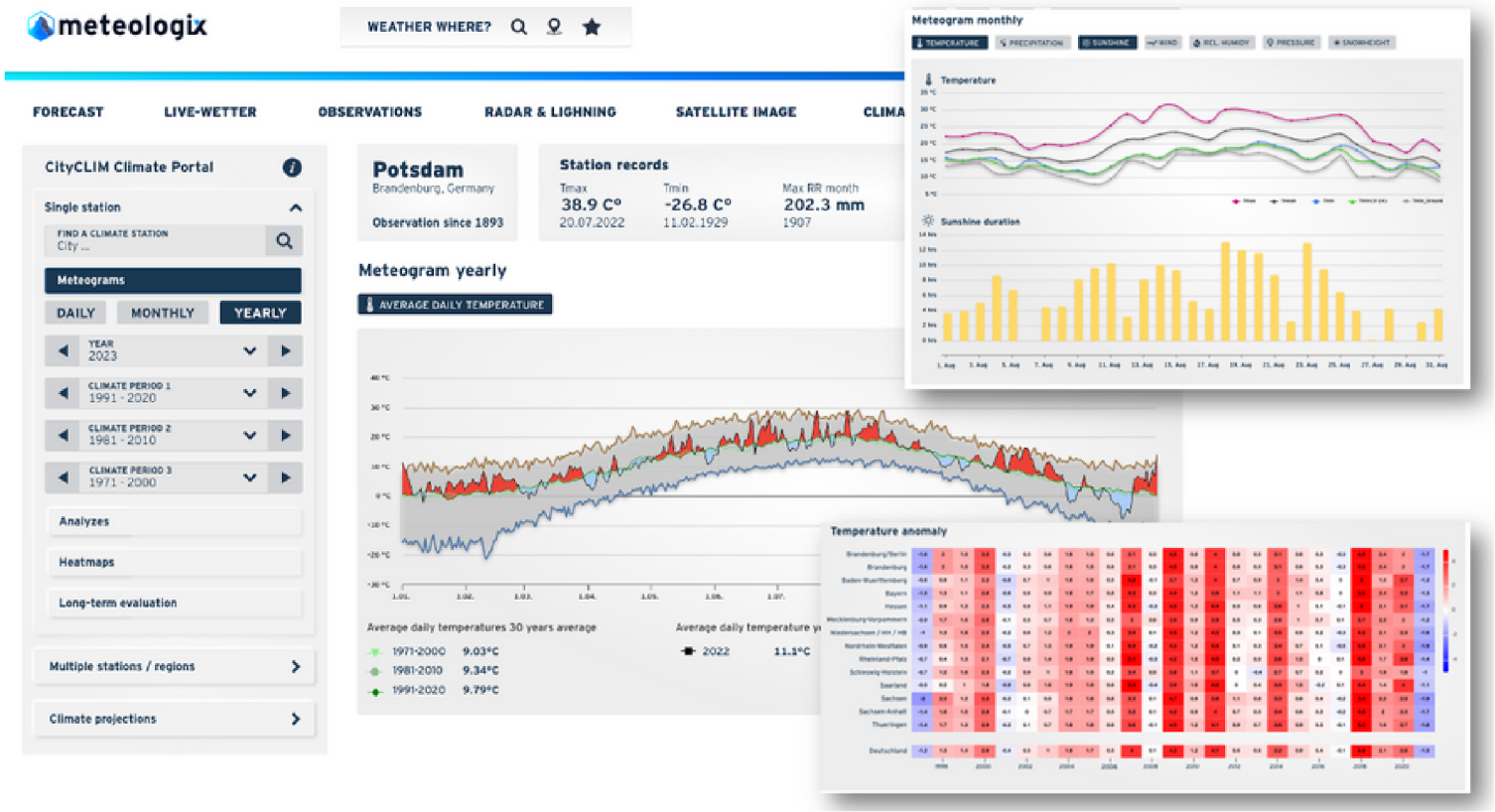
This service provides high-resolution weather forecasting maps (in 5min time steps) of the UltraHD City model to inform citizen about upcoming severe heat events.



The Heat-Wave Information Service has been advanced by implementing adaptive color scaling for the UltraHD temperature modelling output. This enables the user to see much more detailed changes in the temperature forecasts and more structure in the forecasted heat patterns.

THE CITIZEN CLIMATE INFORMATION SERVICES

Polished UX-centred mockups for the Citizen Climate Information Service have been crafted and data endpoints are prepared to create this frontend for meteologix.com to be used by the public very soon for exploration of vast historical data sets.



THESSALONIKI MEETING

The Consortium was able to meet at the Pilot regions administrative head quarters in Thessaloniki. Besides the regular updating over done and to be done tasks, the venue allowed to create a great working atmosphere that resulted in several smaller work-shops preparing the next steps and clarifying technical and conceptual questions.

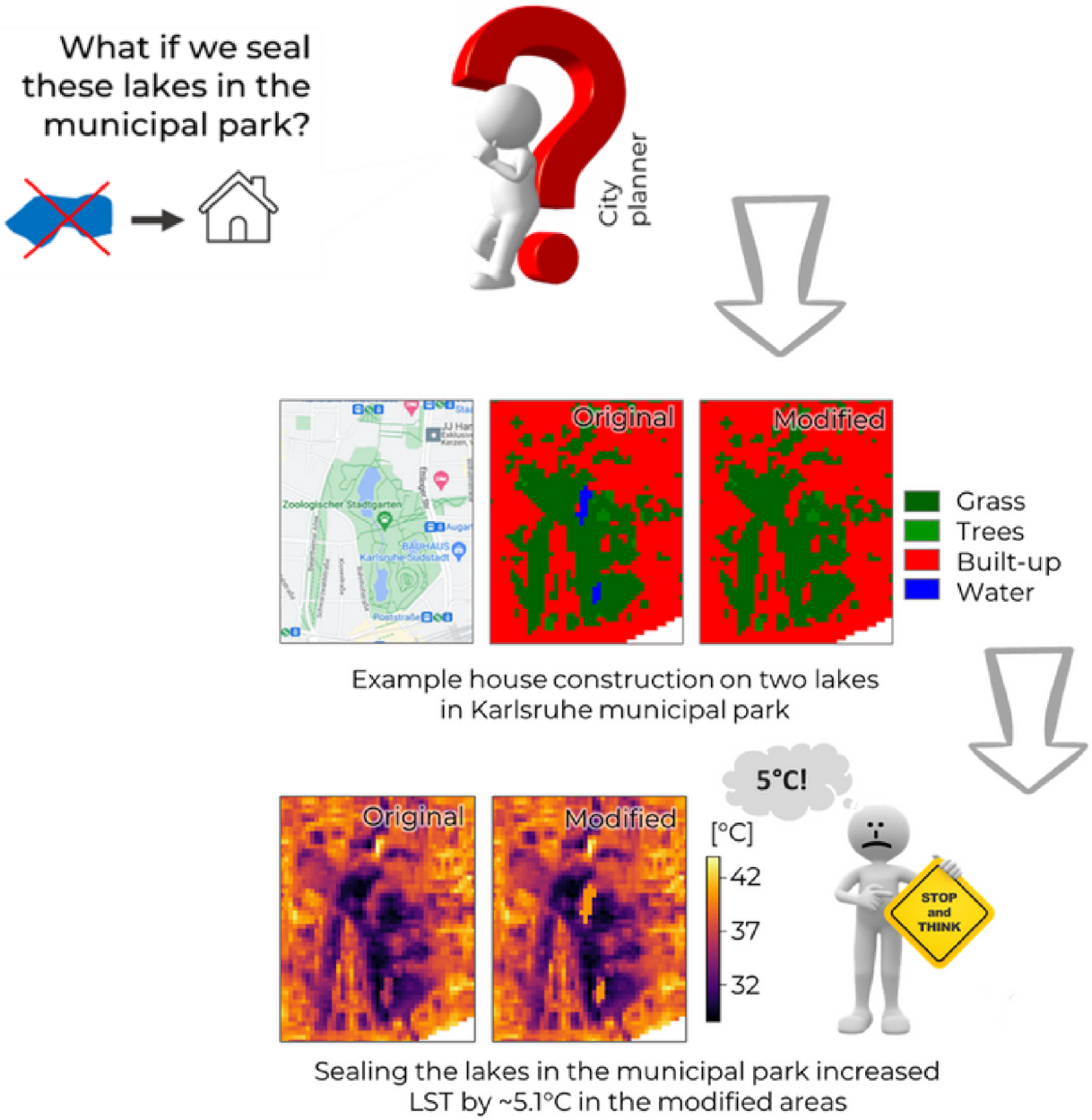
WEATHER SENSOR INSTALLATION THESSALONIKI

The installation of the last sensor was completed in September. The station was installed in the west of the city in a village named Kalochori, which is very close to the industrial area.
Kalochori is near to the sea, affected by sea breeze during the summer, characterized by a semi-urban infrastructure.

The Region of Central Macedonia has thus managed to install all required sensors in time for testing the MOS-based Heat Wave Information Services. Partners from Meteologix (MTL) are currently working on setting up a production environment for this services, so Thessaloniki can start the integration of the service in their environment to disseminate it to the public.

EO-BASED SIMULATION SERVICES

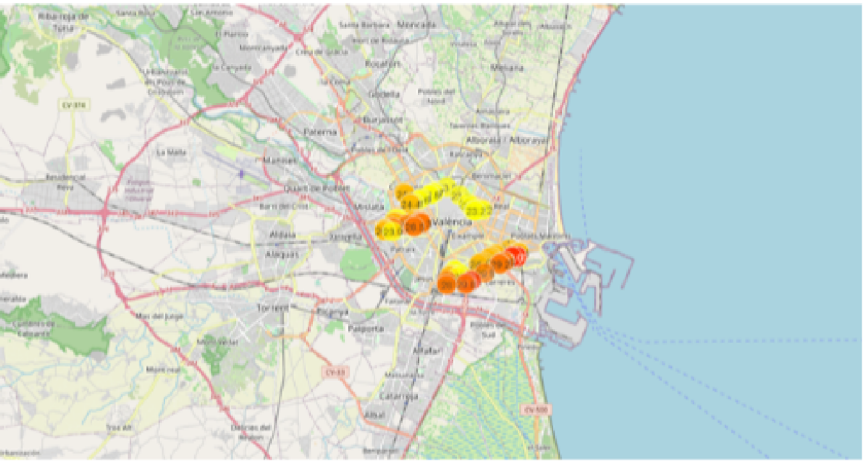
We are currently testing our tool to explore urban heat for modified urban configurations for the 4 CityCLIM pilot cities. The tool was developed for Valencia and Karlsruhe and is now extended with data from Thessaloniki and Luxembourg. In this course, we use stylized scenarios to explore the performance of the tool. Below is an example where the lakes in the Karlsruhe Stadtpark were sealed with buildings for which an increase in the surface temperature in these areas over 5°C was simulated.



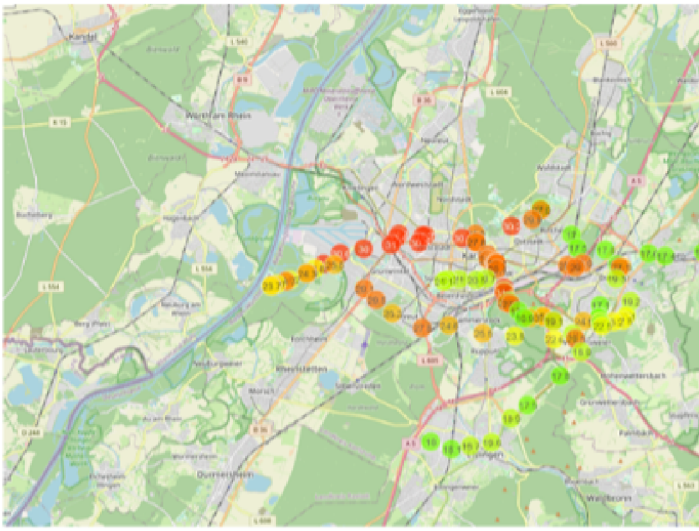
The engine is still being refined. In this course, for instance neighborhood effects should be better represented and the height structure of a city is considered.

CITZEN SCIENCE: MOBILE TRACKERS IN PILOTS

In Valencia, 20 weather enthusiasts have agreed to actively support the project by installing and maintaining 15 weather stations in their backyards or on their balconies. They are also using 10 mobile sensors to collect meteorological data in the city to get a detailed picture of, for example, small-scale temperature variations.



PICTURES DEPICT METEOTRACKERS (MOBILE TEMPERATURE TRACKERS) AND CITIZEN SCIENCE CAMPAIGN MEASUREMENTS IN PARTICIPATING PILOT CITIES



The contributions of all the citizen scientists in the four pilot cities are incredibly value to the CityCLIM project. They make it possible to collect meteorological data at larger, more detailed scales and longer periods than scientists can ever manage on their own. We would like to thank all the weather enthusiast in Karlsruhe, Valencia, Thessaloniki and Luxembourg who give their time and effort to collect meteorological data by bike in heat, rain, wind or other harsh weather conditions. The contributions of all the citizen scientists in the four pilot cities are incredibly value to the CityCLIM project. They make it possible to collect meteorological data at larger, more detailed scales and longer periods than scientists can ever manage on their own.

In Karlsruhe, 72 people showed interest in citizen science activities to measure meteorological parameters with a mobile sensor. To ensure an even coverage of the collected data, we selected the people mainly based on their routes. However, by sharing the equipment, we achieved a good gender distribution with 12 women and 13 men cycling. In Valencia, 20 weather enthusiasts have agreed to actively support the project by installing and maintaining 15 weather stations in their backyards or on their balconies. They are also using 10 mobile sensors to collect meteorological data in the city to get a detailed picture of, for example, small-scale temperature variations. In Thessaloniki, the campaign will start soon and more information will follow in the coming newsletter.

CITZEN SCIENCE & CITYCLIM WORKSHOP!

MEASUREMENT CAMPAIGN WITH TU-DRESDEN TO EXPLORE THE CITYCLIM CITIZEN SCIENCE FRAMEWORK WITH OTHER POTENTIAL PARTNERS.

The CityCLIM partner UFZ participated in a measurement campaign together with the TU Dresden. The aim was to investigate whether the urban forests established in the south-west of Leipzig between 2010 and 2018 are already influencing the climatic conditions in the adjacent residential areas, especially on hot days. CityCLIM supported the backpack measurements with mobile measurement platforms. The CityCLIM team collected a huge amount of meteotracker and sensebox data for further evaluating the sensor behavior and data quality. This assessment helps to ensure that only trustworthy data will be used for further data analysis.

Mark this event in your calendar!

This side event at the EU Regions and Cities Week will be on November 7, 2023.

We will speak about the CityCLIM Heat Sensation Map: Urban heat and temperature perception.

However, we will also provide you with a proper introduction to the whole CityCLIM framework and our goals and services that we aim to achieve in this project. Come and find out how CityCLIM can help you learn about mitigation and adaptation strategies agains climate change!

LINK TO THE EVENT AND REGISTRATION PAGE: HTTPS://REGIONS-AND-CITIES.EUROPA.EU/PROGRAMME/2023/SIDE-EVENTS/8758