

# BeBrit Extreme Heat Risk Project City Case Study

## ABOUT THE CITY OF BRASÍLIA

Brasília is known for its modernist architecture and UNESCO World Heritage status. Despite its planned urban structures and green spaces, Brasília faces key climate challenges. The endangered Cerrado biome could see temperature rises of up to 5.5°C and rainfall drops of 45% by the century's end, increasing drought, deforestation, and fire risks in urban areas. Water security has long been a concern in the capital, and is worsened by recent extreme droughts and heatwaves, which strain resources. In 2023, driven by El Niño and global warming, Brasília experienced nine unexpected heatwaves. With current federal climate policies deemed insufficient (Climate Action Tracker, 2022), Brasília must take action to understand and address heat risk.

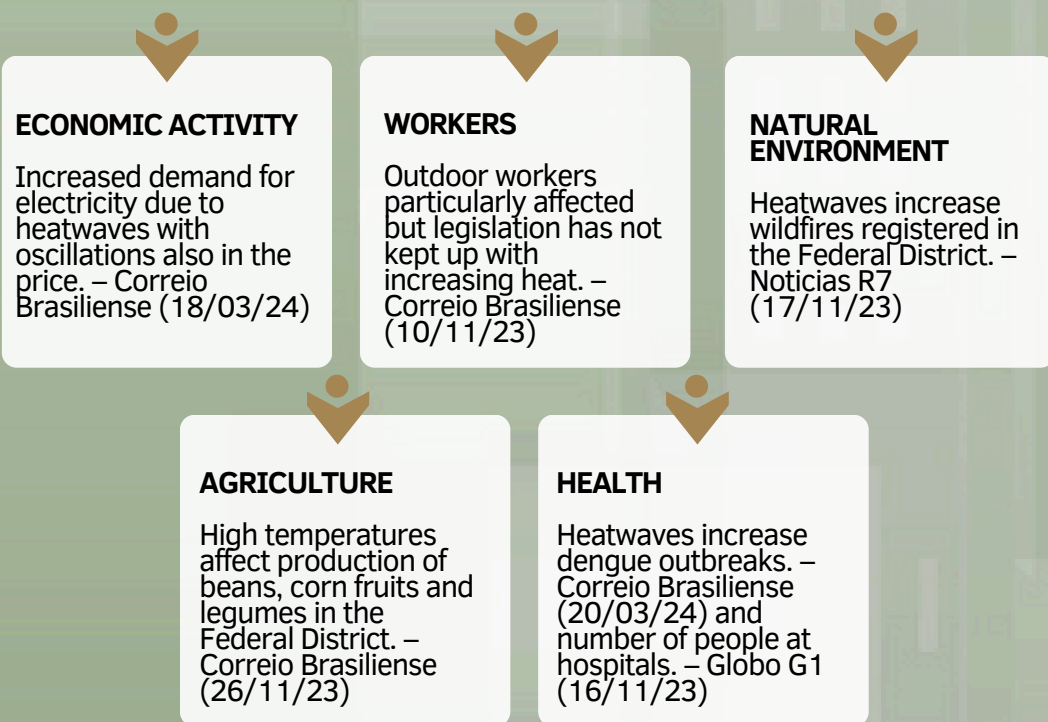


● Brasília, DF  
Brazil's capital and third most populous city with 2.8 million inhabitants



Photo Source: Ramon Buçard on Unsplash

## HEAT IMPACTS SEEN ACROSS SECTORS



## UNDERSTANDING HEAT RISK: AREAS FOR IMPROVEMENT

● The city lacks tools and city-level assessments such as urban heat island (UHI) maps, vulnerability assessments, heat thresholds, heat risk planning and seasonality of heat waves.

## CITY ACTIONS TO REDUCE IMPACT

● 5 of 18 city actions to reduce the impact of extreme heat identified, including: Apps, Community participation, Car free zones, communication and outreach to citizens.

## POST-HEATWAVE EVALUATION

● Currently there are no post-heatwave evaluations to systematically review planned actions and assess outcomes of actual events to pinpoint areas of improvement.

## CITY READINESS FOR HEAT RISK - EXAMPLES

- Potential Danger
- Danger
- High Danger

### City Master Plans

Territorial Master Plan (Plano Distrital de Ordenamento Territorial - PDOT) establishes 4 categories of forest conservation - important considering role of forested areas in reducing heat.

### Building Codes

Thermal Performance of Building Standards (ABNT 2005) offer guidelines of home constructions per climatic zone with info on ventilation, shading and thermal conditioning per season.

### Heat Alerts

Interactive heat wave maps emitted by INMET National Institute of Meteorology based on 3 color-coded levels. Citizens can then sign up to receive alerts from the local civil defense authority with directives on how to stay safe.



To go further into the Brasilia Case Study, discover lessons learned and find links to resources