RESEARCH PROGRAM:
Climate, environment and health (SG-CEH)

Policy Brief | Project SG-CEH-04

Public consultation and citizen mapping on green spaces and their role in public health: Extreme heat in Mexico City

Country: Mexico
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The challenge

The increase in the frequency and intensity of heat waves associated with climate change poses a growing risk to urban public health. In Mexico City (CDMX), although no deaths from heatstroke are officially reported, there is a high prevalence of symptoms associated with extreme heat, such as dehydration, fatigue, irritability, and dizziness, which are not adequately reflected in health statistics. This underreporting limits the capacity for preventive response and territorial planning, particularly in contexts of socio-spatial inequality and unequal access to green spaces.

What was done

- A climate and health baseline was established for the municipalities of Iztapalapa and Benito Juárez, including the identification of heat waves and cases of morbidity associated with extreme heat.
- Surveys were conducted on social media and in public spaces (n≈640) to document symptoms, preventive behaviors, and the use of green spaces.
- Community workshops on participatory mapping were held at PILARES centers, where citizens identified thermal risk zones, green spaces in use, barriers to access, and areas needing improvement.
- Workshops and dialogue sessions were organized with health, environmental, and risk management officials to compare results and explore opportunities for intersectoral coordination.

Main findings

- Heat waves are concentrated primarily in the eastern part of Mexico City, including Iztapalapa and Benito Juárez, with a sustained increase in the number of days with extreme temperatures in recent years.
- The population reports a high prevalence of symptoms associated with extreme heat, despite the absence of official records of heatstroke-related mortality.
- Green spaces are perceived as key thermal buffering areas, but their use is limited by factors such as insecurity, lack of maintenance, and distance from homes.
- There are marked territorial inequalities in access to green infrastructure: Iztapalapa has a considerably lower index of green spaces per inhabitant than Benito Juárez.
- Coordination between the health and environment sectors is limited and predominantly reactive, with little preventive integration based on territorial evidence.

The approach

The project adopted a transdisciplinary approach integrating climate science, public health, urban planning, and citizen participation. Through participatory mapping and community consultation, the project sought to link social perceptions of extreme heat with climate, epidemiological, and green infrastructure data, generating territorially explicit and socially relevant evidence for decision-making.

Impact and application

The project's results provide concrete inputs for:

- Guiding local policies on adaptation to extreme heat from a public health and climate justice perspective.
- Prioritizing the identification, rehabilitation, and maintenance of green spaces as critical infrastructure for risk reduction.
- Strengthen early warning systems and risk communication at the community level.
- Support decision-making through vulnerability mapping and integrated assessments that can be utilized by city districts, the health sector, and civil protection agencies.

Key lessons

- The population's perceptions and daily experiences are fundamental to identifying risks that are overlooked by traditional information systems.
- Green spaces play a strategic role in adapting to urban heat, but they need to be explicitly integrated into health policies.
- Citizen participation and social mapping strengthen ownership of knowledge and improve the relevance of public interventions.
- Moving toward preventive governance of extreme heat requires sustained intersectoral coordination mechanisms based on local evidence.

Key message

Extreme heat is already affecting the health of the urban population in Mexico City, although its impacts remain underreported. Integrating green spaces as critical infrastructure for health and climate adaptation, alongside citizen-generated information, enables the identification of areas of greatest vulnerability, the prevention of health risks, and the guidance of more equitable and effective intersectoral decisions in the face of increasing heat waves.

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