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Distance to cool spots, a practical design guideline for heat resilient urban areas

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In the Netherlands municipalities are searching for guidelines for a heat resilient design of the urban space. One of the guidelines which has recently been picked up is that each house should be within a 300 meter of an attractive cool spot outside. The reason is that houses might get too hot during a heat wave and therefore it is important that inhabitants have an alternative place to go. The distance of 300 m has been adopted because of practical reasons. This guideline has been proposed after a research of the University of Amsterdam of applied sciences and TAUW together with 15 municipalities.

To help municipalities to take cool spots into account in their urban design the national organization for disseminating climate data has developed a distance to coolness map for all Dutch built up areas. This map shows the cool spots with a minimum of 200 m² based on a map of the PET for a hot summer day (2*2 m² spatial resolution). Furthermore the map shows the walking distance for each house (via streets and foot paths) to the nearest cool spot.

This map helps as a starting point. Because not all cool spots are attractive cool spots. A research in 2021 showed what further basis and optional characteristics those cool spots should have: e.g. sufficiently large, combination of sun and shadow, benches, quiet, safe and clean. In fact those places should be attractive places to stay for most days of the year.

With the distance to attractive cool spots municipalities can easily see which areas lack attractive cool spots. The distance to cool spot maps is therefore a way to simplify complex climate data into an understandable and practical guideline. This is an improvement as compared to using thresholds for temperatures and thresholds for duration of exceedance of those temperatures in a guideline.: Municipalities like this practical approach that combines climate adaptation with improving the livability of a city throughout the year.