Additional information	
References	

6.42 Days with temperature >90th percentile (TX90p)

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Days with temperature >90th percentile (TX90p)	Natural and Climate Hazards
Description and justification	Nature-based solutions can support climate change adaptation by reducing local ambient air temperature. They can also provide insulation from cold and/or shelter from wind. By moderating the urban microclimate, green infrastructure can support reduction in energy use and improved thermal comfort (Demuzere et al., 2014).
Definition	Percentage of days during which the maximum daily temperature (TX) exceeds the 90th percentile (TX90p) threshold of the daily maximum temperature (%)
Strengths and weaknesses	+ Straightforward assessment of heatwaves occurrence - Requires statistical tools and judgement
Measurement procedure and tool	Ambient air temperature can be assessed through continuous monitoring of temperature, near the NBS intervention area, and evaluation of the maximum daily temperature before and after NBS implementation. Evaluating the effect on the heatwave reduction by assessing the daily temperatures produces more accurate results that monthly averages, which tend to "lose" the small changes that are crucial for several domains, such as health and agriculture (Alexander *et al.*, 2006). The TX90p defines the occurrence of the extremely hot days falling above the 90th percentile (1/10th of the sample) allowing the evaluation of the *extent* of the extreme temperatures changes (Alexander *et al.*, 2006). The TX90p is evaluated as $$TX_{ij} > TX_{in}90$$ where

	TX_{ij} – daily maximum temperature on day *i* in period *j* $TX_{in}90$ – calendar day 90th percentile centred on a five-day window for the base period 1961-1990
Scale of measurement	Plot to district scale
Required data	Automated continuous monitoring of ambient air temperature
Data input type	Quantitative
Data collection frequency	Annually; at minimum, before and after NBS implementation
Level of expertise required	Low – for continuous temperature monitoring; Moderate – when using the statistical tools
Synergies with other indicators	Directly contributes to evaluation of the *Warm spell duration index* indicator and is closely related to *Daily temperature range* indicator
Connection with SDGs	SDG 3 Good health and well-being, SDG 11 Sustainable cities and communities, SDG 13 Climate action
Opportunities for participatory data collection	Participatory data collection is feasible through direct temperature measurements if these are not automated
Additional information	
References	Alexander, L. V., Zhang, X., Peterson, T. C., Caesar, J., Gleason, B., Klein Tank, A. M. G., ... & Tagipour, A. (2006). Global observed changes in daily climate extremes of temperature and precipitation. *Journal of Geophysical Research: Atmospheres*, *111*, D05109. Demuzere, M., Orru, K., Heidrich, O., Olazabal, E., Geneletti, D., Orru, H., Faehnle, M. (2014). Mitigating and adapting to climate change: Multi-functional and multi-scale assessment of green urban infrastructure. *Journal of Environmental Management, 146*, 107-115. ETCCDI. (2009). *Climate change indices*. Available from: http://etccdi.pacificclimate.org/list_27_indices.shtml