DISCUSSION PUBLISHERS
Research Center · Open Access Edition

Integrating Urban Heat Assessment in Urban Plans

Leyre Echevarra Icaza, Andy van den Dobbelsteen, Frank van der Hoeven

Discussion Research ID	DPR-2026-1467
Year	2016
Field	Environmental Science
DOI	10.3390/su8040320
Author ORCID	0000-0002-2423-5694
Licence	CC-BY
Original source	Sustainability
Permanent link	https://discussionpublishers.com/research/718fbc57-7679-46df-82a0-8291d6184220
Publisher	Discussion Publishers discussionpublishers.com

Republished by Discussion Publishers under the original CC-BY licence. Copyright remains with the original authors; please cite the original work.

Cite as: Leyre Echevarra Icaza, Andy van den Dobbelsteen, Frank van (2016). Integrating Urban Heat Assessment in Urban Plans. Dis

Abstract

The world is increasingly concerned with sustainability issues. Climate change is not the least of these concerns. The complexity of these issues is such that data and information management form an important means of making the right decisions. Nowadays, however, the sheer quantity of data is overwhelming; large quantities of data demand means of representation that are comprehensible and effective. The above dilemma poses questions as to how one incorporates unknown climatologic parameters, such as urban heat, in future urban planning processes, and how one ensures the proposals are specific enough to actually adapt cities to climate change and flexible enough to ensure the proposed measures are combinable and compatible with other urban planning priorities. Conventional urban planning processes and mapping strategies are not adapted to this new environmental, technological and social context. In order come up with more appropriate urban planning strategies, in its first section this paper analyzes the role of the urban planner, reviews the wide variety of parameters that are starting to be integrated into the urban planners practice, and considers the parameters (mainly land surface temperature, albedo, vegetation, and imperviousness) and tools needed for the assessment of the UHI (satellite imagery and GIS). The second part of the study analyzes the potential of four catalyzing mapping categories to integrate urban heat into spatial planning processes: drift, layering, game-board, and rhizome.

Keywords: urban heat island, urban planning, land surface temperature, albedo, vegetation, imperviousness, cli

Full text

The complete text of this work is hosted by its original publisher.
Read it via the Discussion Publishers page:
https://discussionpublishers.com/research/718fbc57-7679-46df-82a0-8291d6184220
Original record: https://doi.org/10.3390/su8040320
DOI: https://doi.org/10.3390/su8040320