Accepted Manuscript

Title: Relating microclimate, human thermal comfort and health during heat waves: an analysis of heat island mitigation strategies through a case study in an urban outdoor environment

Authors: Ferdinando Salata, Iacopo Golasi, Davide Petitti, Emanuele de Lieto Vollaro, Massimo Coppi, Andrea de Lieto Vollaro

PII: S2210-6707(16)30474-7

DOI: http://dx.doi.org/doi:10.1016/j.scs.2017.01.006

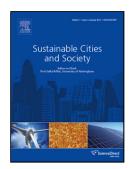
Reference: SCS 565

To appear in:

Received date: 10-10-2016 Revised date: 6-1-2017 Accepted date: 13-1-2017

Please cite this article as: Salata, Ferdinando., Golasi, Iacopo., Petitti, Davide., Vollaro, Emanuele de Lieto., Coppi, Massimo., & Vollaro, Andrea de Lieto., Relating microclimate, human thermal comfort and health during heat waves: an analysis of heat island mitigation strategies through a case study in an urban outdoor environment. Sustainable Cities and Society http://dx.doi.org/10.1016/j.scs.2017.01.006

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Relating microclimate, human thermal comfort and health during heat waves: an analysis of heat island mitigation strategies through a case study in an urban outdoor environment.

Ferdinando Salata^{1,α}, Iacopo Golasi^{1,β}, Davide Petitti^{1,γ}, Emanuele de Lieto Vollaro^{2,δ}, Massimo Coppi^{1,ε}, Andrea de Lieto Vollaro^{1,ζ}

- ¹ Department of Astronautical, Electrical and Energy Engineering (DIAEE) Area Fisica Tecnica, Università degli Studi di Roma "Sapienza", Via Eudossiana 18, 00184 Rome, Italy;
- ² Department of Architecture Università degli Studi "Roma TRE", Largo Giovanni Battista Marzi, 10, 00154 Rome, Italy;
- αCorresponding author: Ph.D. Ferdinando Salata Phone: +390644585661; Fax. +39064880120; Email: ferdinando.salata@uniroma1.it
- β Ph.D. st. Iacopo Golasi Phone: +390644585661; Fax. +39064880120; Email: <u>iacopo.golasi@uniroma1.it</u> γ Ing. Davide Petitti Phone: +390644585661; Fax. +39064880120; Email:

petitti.1447501@studenti.uniroma1.it

- $^{\delta}$ Ph.D. Emanuele de Lieto Vollaro: Phone: +390657332492; Fax. +39064880120; Email:
- emanuele.delietovollaro@uniroma3.it
- ε Prof. Massimo Coppi: Phone: +390644585725; Fax. 064880120; Email: massimo.coppi@uniroma1.it
- Prof. Andrea de Lieto Vollaro, Phone: +390644585720; Fax. +39064880120; Email:

andrea.delietovollaro@uniroma1.it

Highlights:

- Heat waves and human health;
- Urban microclimate mitigation during the summer;
- Microclimate simulations of an area located in the center of Rome through ENVI-met V 3.1;
- Thermal perception analysis through the Mediterranean Outdoor Comfort Index (MOCI);
- Resilience strategies to the Urban Heat Island (UHI) effect.

Download English Version:

https://daneshyari.com/en/article/4928142

Download Persian Version:

https://daneshyari.com/article/4928142

<u>Daneshyari.com</u>