Centro nazionale per la prevenzione e il Controllo delle Malattie

CLIMACTIONS

Ministero della Salute

# Interventi urbani per la promozione della Salute

**Francesca de'Donato e Paola Michelozzi**

Dipartimento di Epidemiologia del Servizio Sanitario Regionale - Regione Lazio

DEP Lazio
Dipartimento di Epidemiologia
Servizio Sanitario Regionale
Regione Lazio

SISTEMA SANITARIO REGIONALE
ASL ROMA 1

REGIONE LAZIO

DEP Lazio

# CLIMACTIONS: enti partners


- UO1 DEPLAZIO **(Coordinatore)**
- UO2 ISS - **Dipartimento Ambiente e Salute**
- UO3 **Servizio Sovrazonale di Epidemiologia ASLTO3**
- UO4 **Università Roma Tre, Facoltà Architettura**
- UO5 ARES **Puglia**
- UO6 **Regione Liguria**
- UO7 **Istituto per la Ricerca e l'Innovazione Biomedica (IRIB) Palermo -** Consiglio Nazionale delle Ricerche (CNR)
- UO8 Agenzia Sanitaria e Sociale Regionale **Emilia-Romagna**
- UO9 Dipartimento Osservatorio Epidemiologico**, Regione Sicilia**

***DURATA PROGETTO: 24 mesi ; maggio 2020-aprile2022***

## CITTA' IN STUDIO:

Torino
Genova
Bologna
Roma
Bari
Palermo

## INDICATORI ESPOSIZIONE:

- inquinamento (PM10/NO2)
- Temperatura (UHI)
- **verde urbano**
- Stato socio-economico

## MISURE DI MITIGAZIONE

**Riduzione UHI**
**Pianificazione territorio**
**edilizia urbana**
(verde/albedo)

- **Interventi mobilità sostenibile**
  inquinamento

## EFFETTI SULLA SALUTE

- Temperatura
- Inquinamento

**Progetto**

BEEP

## DEFINIZIONE SCENARI

Interventi riduzione
Temperatura

- Interventi mobilità e riduzione Inquinamento
- Implementazione verde urbano

## HIA- Health Impact Assessment

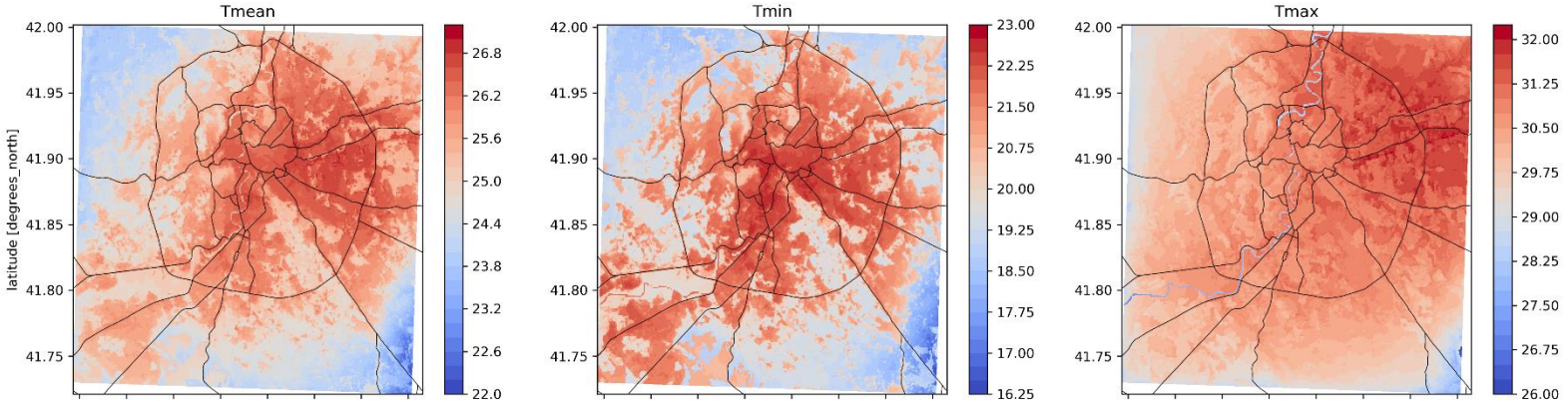
- Temperatura
- Inquinamento
- **verde urbano**

CLIMACTIONS

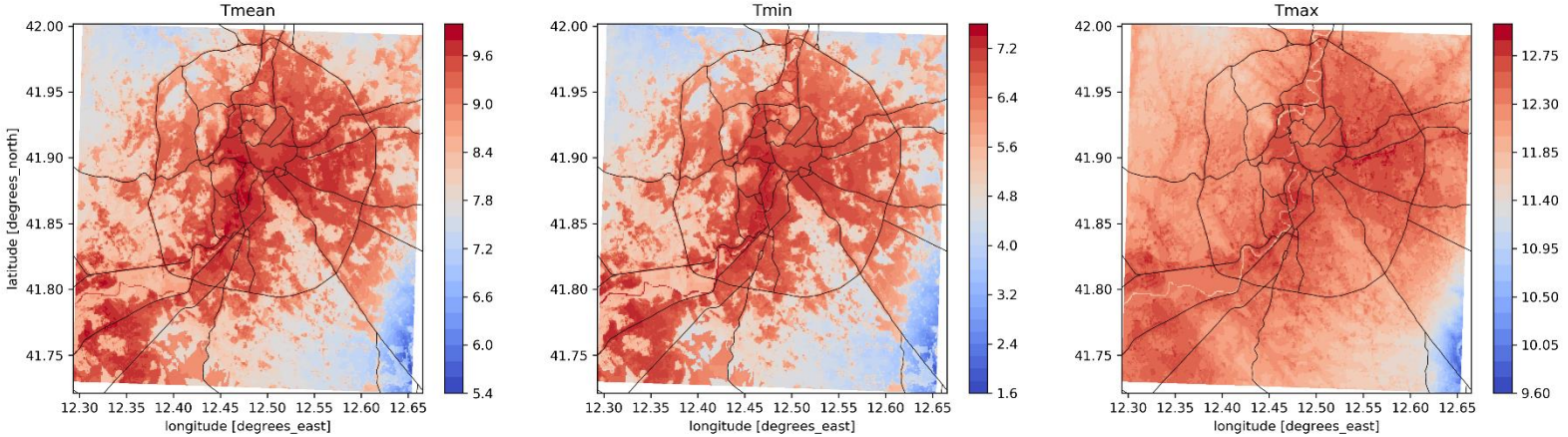
D/EP/Lazio

# COPERNICUS Temperatura e Isola di calore urbano alta risoluzione 100x100m

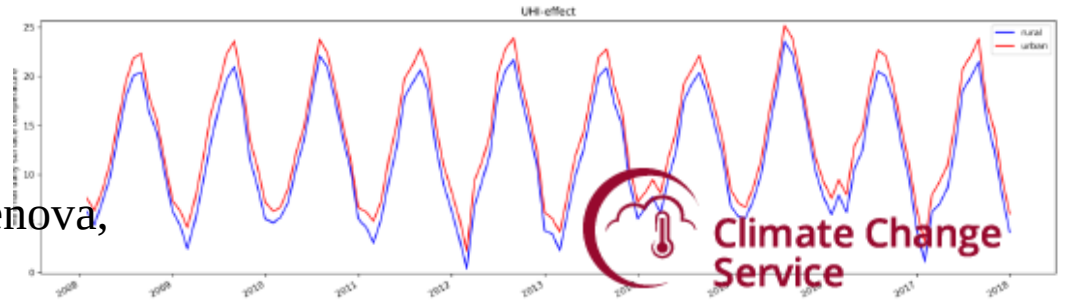
Roma estate




Roma inverno

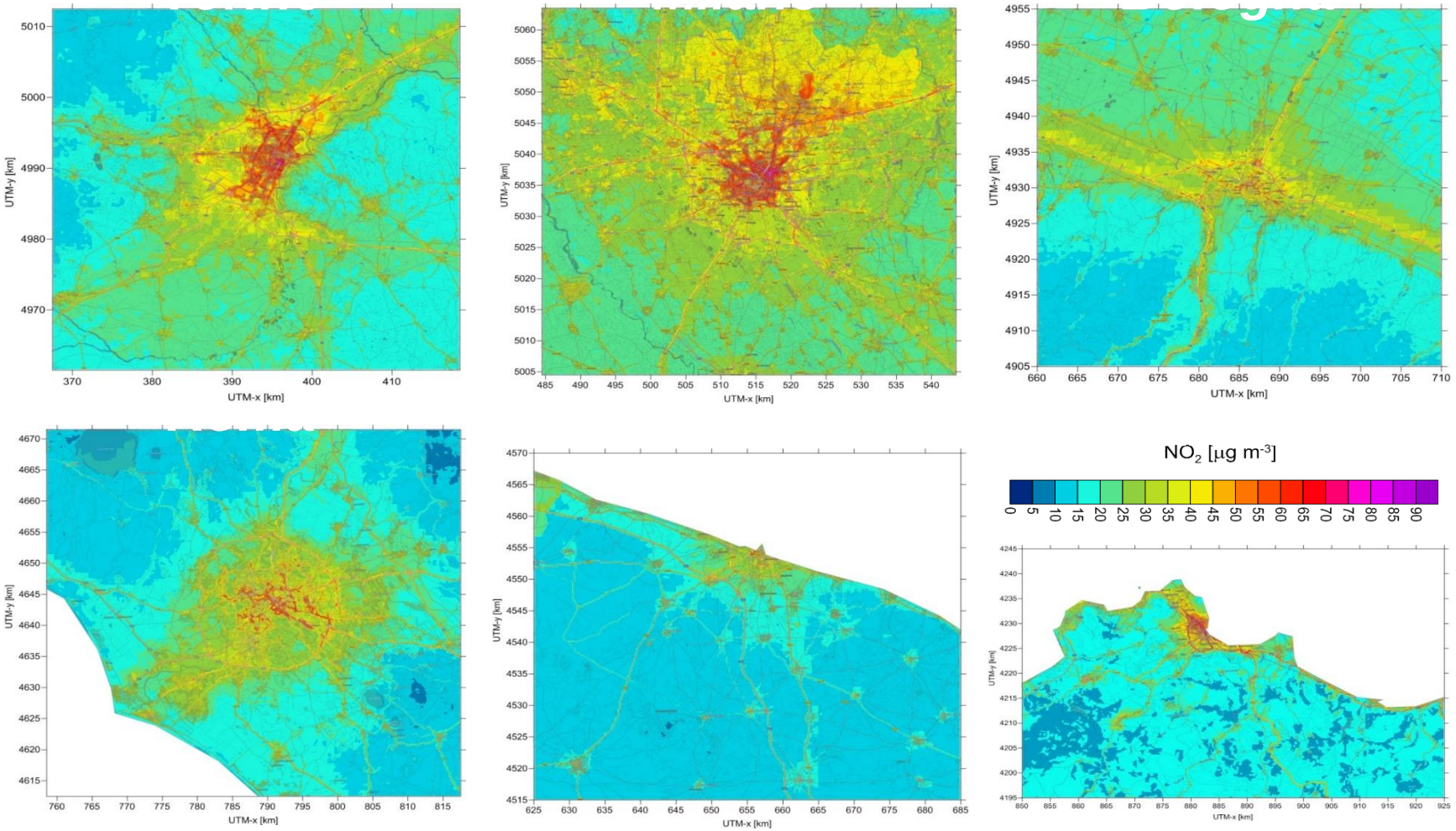



- Periodo 2008-2017
- Dati orari
- variabili: Temp, RH, velocità del vento
- Città: Roma, Torino, Bari, Bologna, Genova, Palermo



# Inquinamento atmosferico (NO2) Risoluzione 250m (2013-2015).

BIGDATA in Epidemiologia ambiEntale ed occuPazionale

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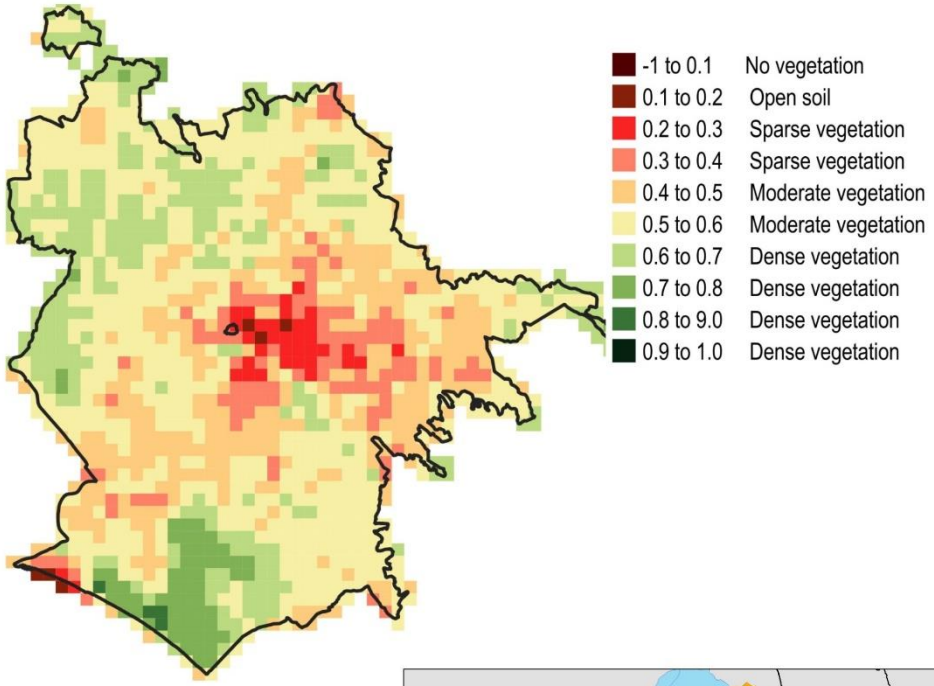
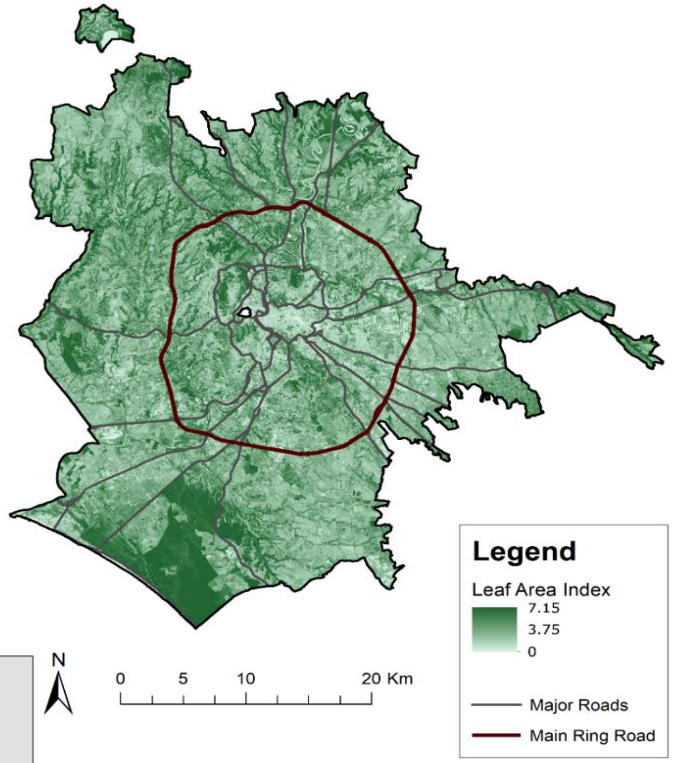
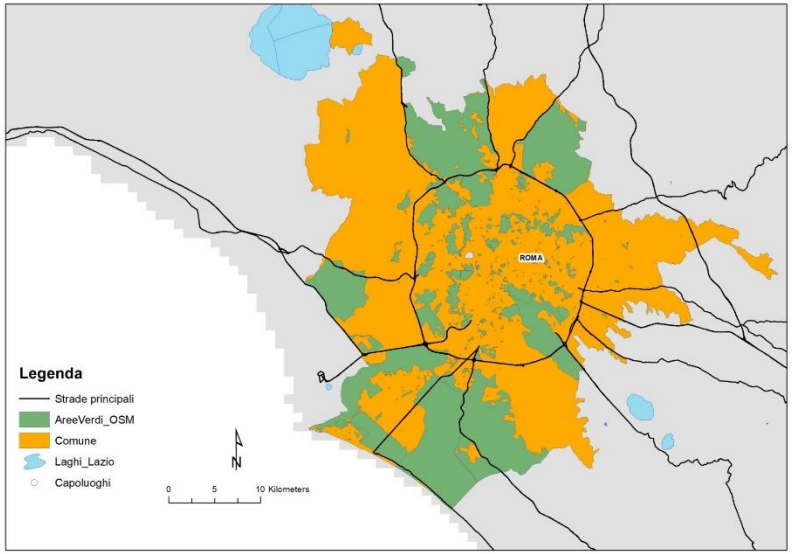
# Indicatori di esposizione nelle città : es. Roma, aree Verdi




**Verde Urbano NDVI**

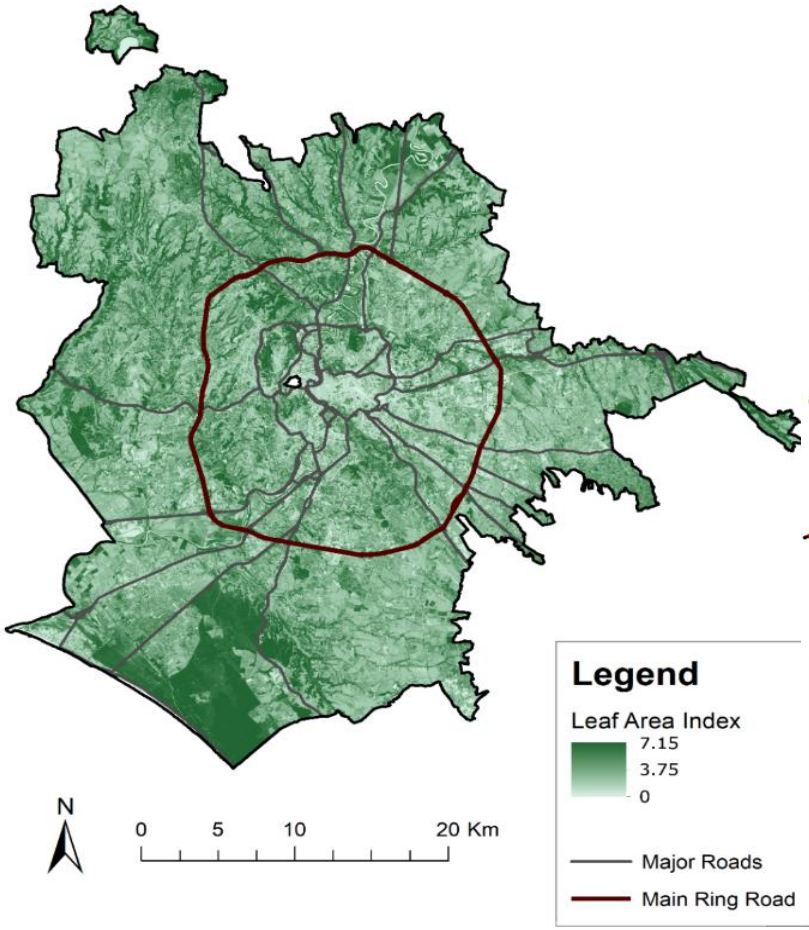


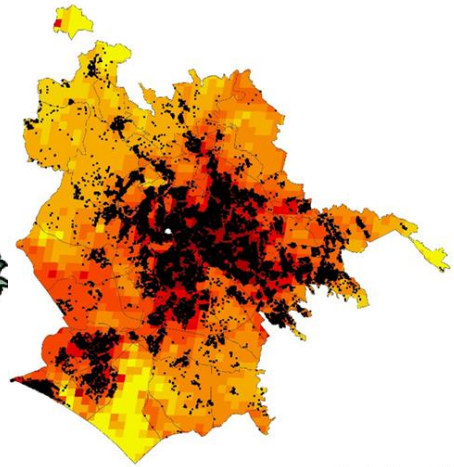

**Verde Urbano (LAI, Leaf Area Index : esposizione individuale, Buffer di 300 m intorno all'indirizzo di residenza**

# Verde ed esposizioni ambientali in prossimità della residenza

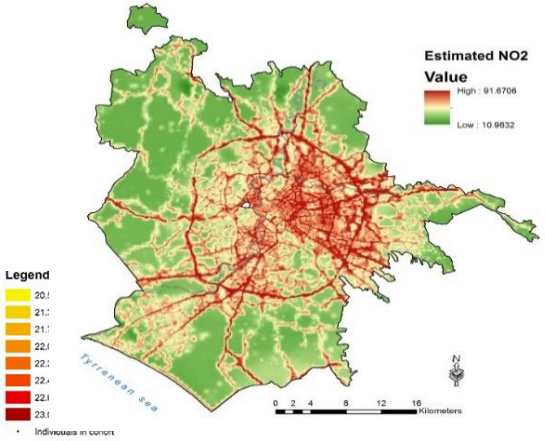
**Verde Urbano (NDVI e LAI, Leaf Area Index**



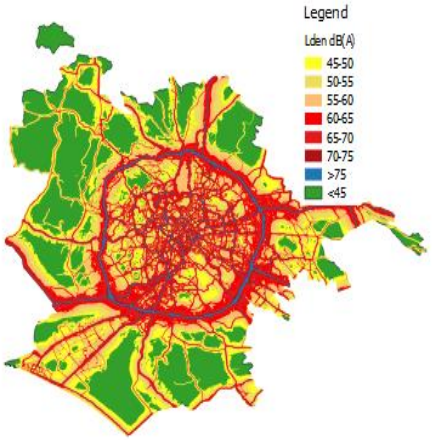

**Temperatura**



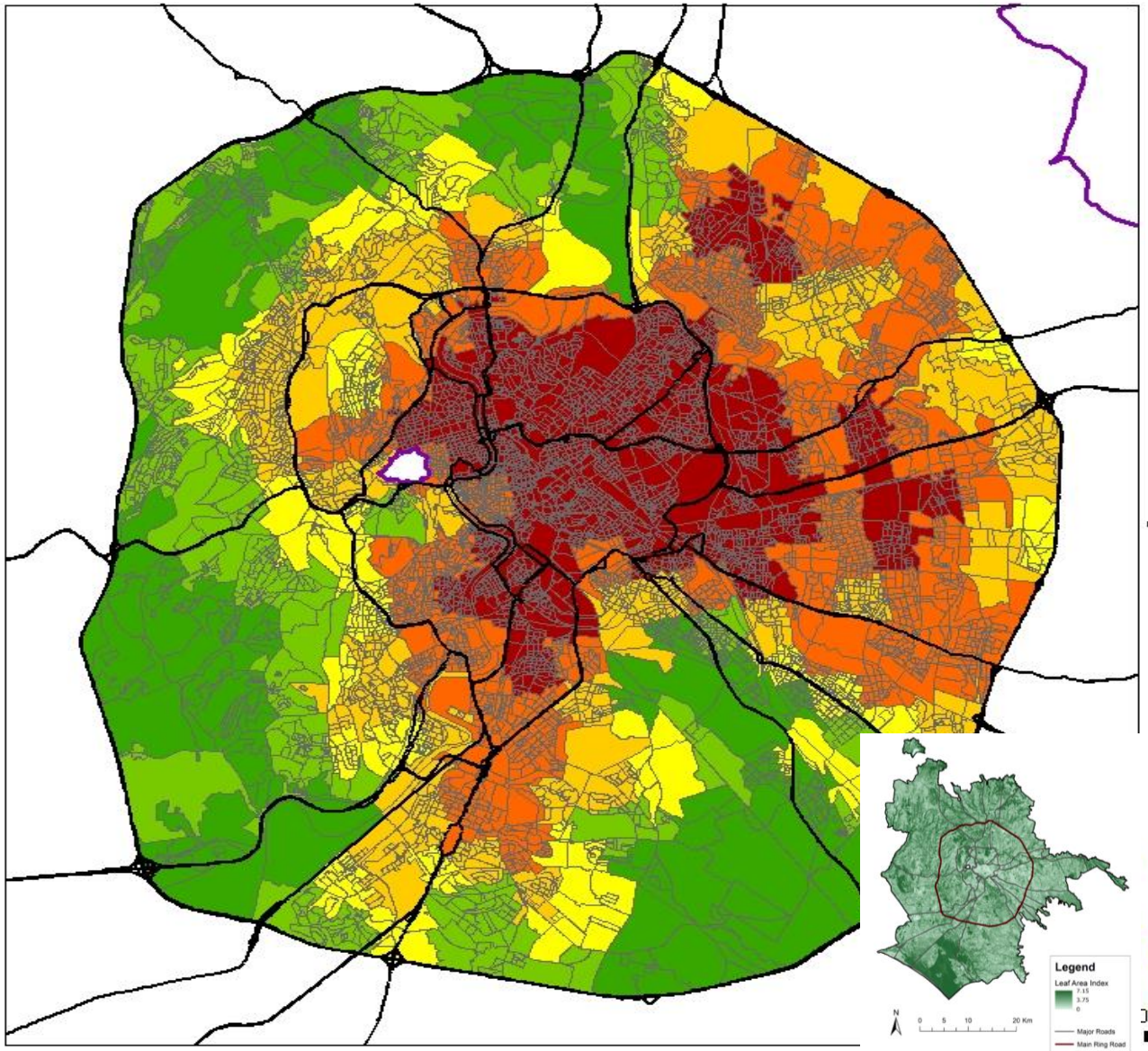
**$NO_2$**

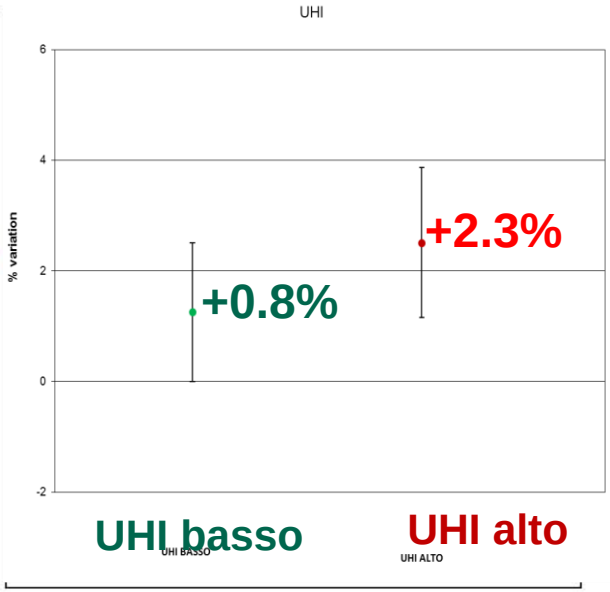



**Rumore**



# Isola di calore urbano e mortalità










N

*(de'Donato et al, 2016)*

0 2 4 6 8 Kilometers

# Il verde urbano riduce la mortalità e l'incidenza di malattie cardiovascolari tra i residenti a Roma

Research

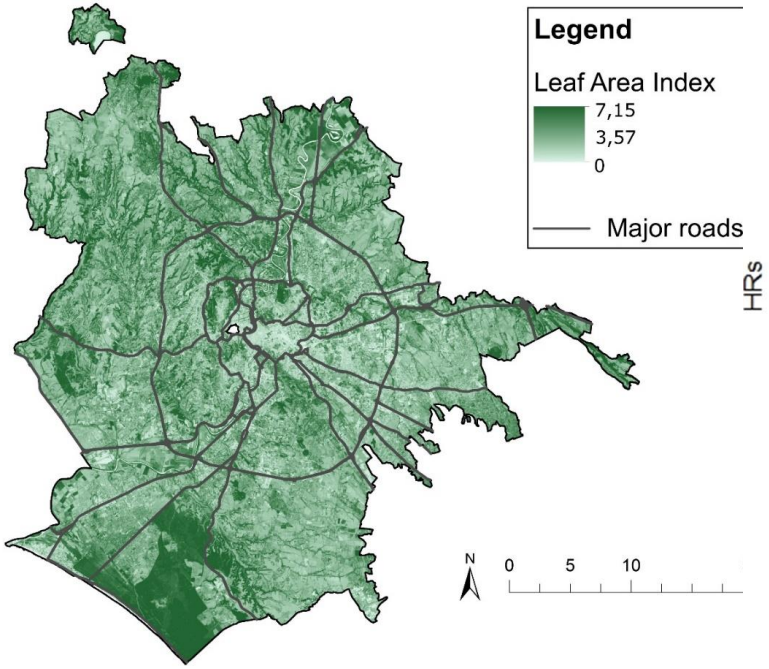
A Section 508–conformant HTML version of this article is available at https://doi.org/10.1289/EHP2854.

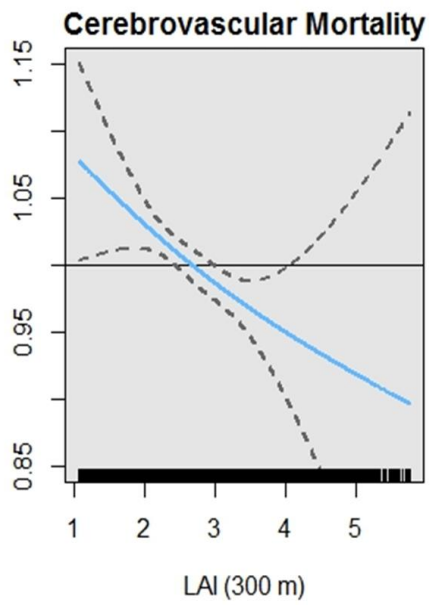
## Exposure to Residential Greenness as a Predictor of Cause-Specific Mortality and Stroke Incidence in the Rome Longitudinal Study

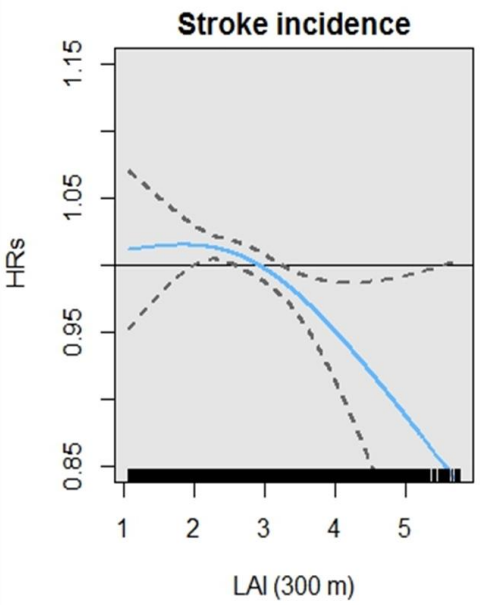
*Riccardo Orioli,[1,2,3] Chiara Antonucci,[1] Matteo Scortichini,[1] Francesco Cerza,[1] Federica Marando,[4] Carla Ancona,[1] Fausto Manes,[4] Marina Davoli,[1] Paola Michelozzi,[1] Francesco Forastiere,[1] and Giulia Cesaroni[1]*

[1]Department of Epidemiology-Regional Health Service, ASL Roma 1, Rome, Italy
[2]Hygiene and Public Health Service, Local Health Authority, Merano, Italy
[3]Department of Public Health and Infectious Diseases, Sapienza University of Rome, Rome, Italy
[4]Department of Environmental Biology, Sapienza University of Rome, Rome, Italy

# Exposure to surrounding greenness, cause specific mortality and stroke incidence in Rome




**HR= 0.96**
(0.93-0.98)

**HR=0.97**
(0.95-0.99)

***(Orioli et al. 2019)***

# Verde urbano e salute dei bambini

› Int J Environ Res Public Health. 2019 Jul 12;16(14):2497. doi: 10.3390/ijerph16142497.

## The Modifying Role of Socioeconomic Position and Greenness on the Short-Term Effect of Heat and Air Pollution on Preterm Births in Rome, 2001-2013

Federica Asta [1], Paola Michelozzi [2], Giulia Cesaroni [2], Manuela De Sario [2], Chiara Badaloni [2], Marina Davoli [2], Patrizia Schifano [2]

Affiliations + expand

PMID: 31336970 PMCID: PMC6678295 DOI: 10.3390/ijerph16142497

› Environ Res. 2020 Oct 24;110358. doi: 10.1016/j.envres.2020.110358. Online ahead of print.

## Green spaces and cognitive development at age 7 years in a rome birth cohort: The mediating role of nitrogen dioxide

Federica Asta [1], Paola Michelozzi [2], Giulia Cesaroni [2], Manuela De Sario [2], Marina Davoli [2], Daniela Porta [2]

Affiliations + expand

PMID: 33131710 DOI: 10.1016/j.envres.2020.110358

*Ferrante et al. World Allergy Organization Journal* (2020) 13:100096
http://doi.org/10.1016/j.waojou.2019.100096

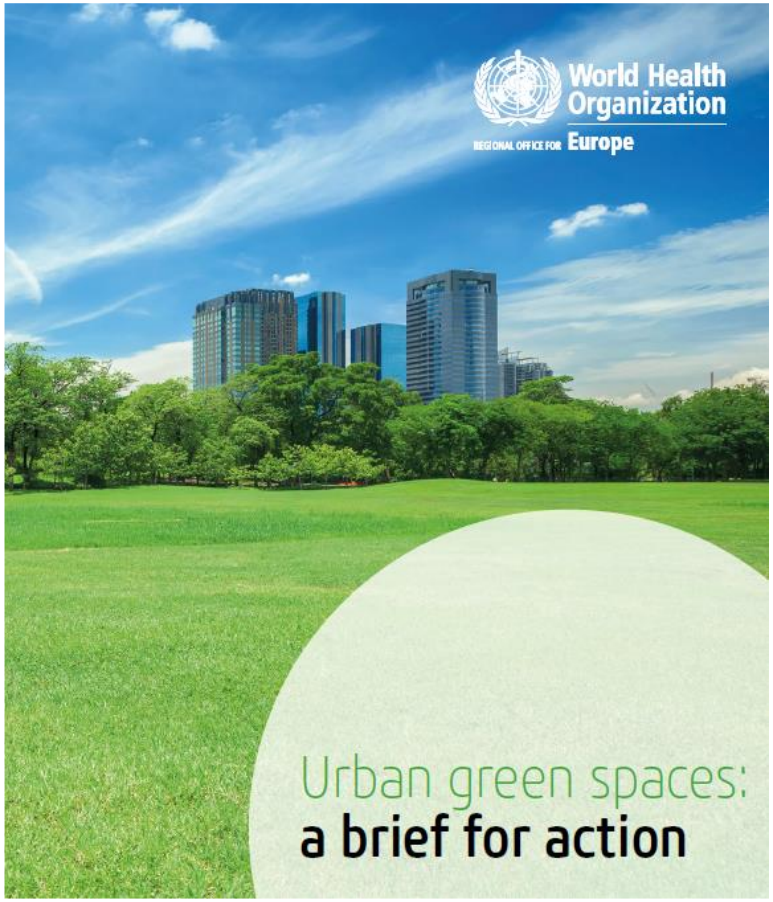
WORLD ALLERGY ORGANIZATION JOURNAL

Open Access

## The effect of residential urban greenness on allergic respiratory diseases in youth: A narrative review

Giuliana Ferrante[a], Federica Asta[b], Giovanna Cilluffo[c*], Manuela De Sario[b], Paola Michelozzi[b] and Stefania La Grutta[c]

# RIPRESA ECONOMICA in SALUTE





**Prescriptions and Actionables for a Healthy and Green Recovery**


***https://www.euro.who.int***

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