Ministero della Salute

CCM Centro Nazionale Prevenzione e Controllo Malattie

RIAS rete italiana ambiente e salute

NO2? No, thank you! A citizen science project in Italy

CITTADINI PER L'ARIA

NO2, NO GRAZIE!

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Environment and health: complex problems and different disciplines

Problems

- Multiple sources of pollution
- Different pathways of exposure: soil, water, air, food…
- Variable time of contamination
- Different age groups at contamination
- Population size (and size of the exposed groups)
- Socioeconomic status and environmental justice
- Occupational exposure
- Health Outcomes and data collection
- **Enviromental worries and media pressure**
- **distrust**

Disciplines

- Environmental Science
- Toxicology
- Laboratory & biomonitoring
- Statisticians
- Epidemiology
- Statistics
- Occupational Medicine
- Industrial Hygiene
- Medicine
- Public Health
- Comunication, Journalism and Law

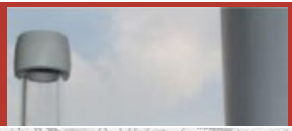
Citizen Science

Citizen science: FEATURES / STRENGTHS

- participation and direct involvement in the collection and analysis of data by an audience to take part to a project in collaboration with professional scientists

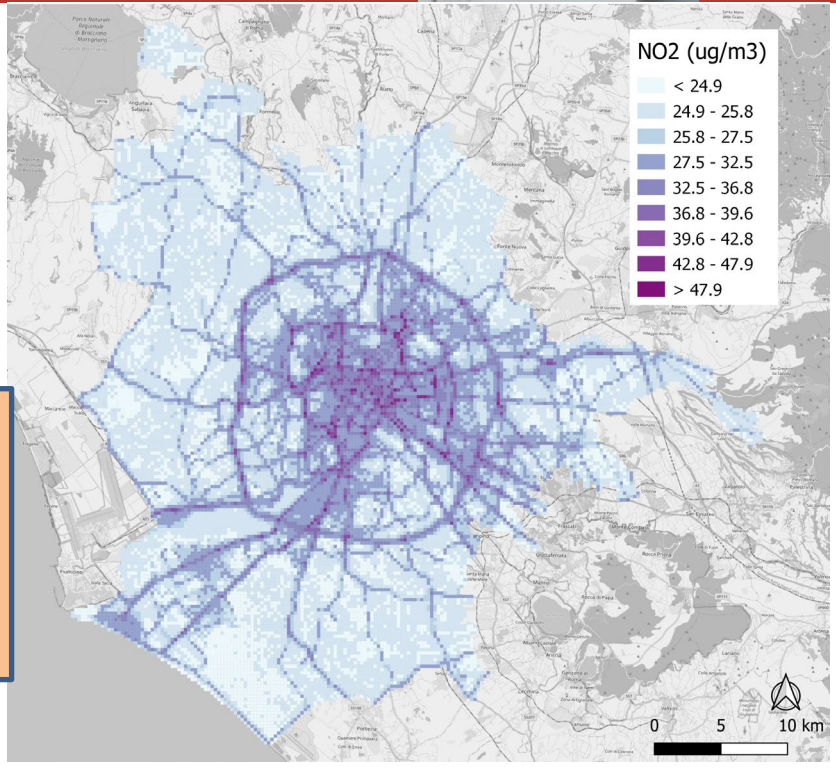
- systematic collection and analysis of data in collaboration with the public public dissemination of scientific knowledge
- growing citizens commitment
- increasing accountability of scientists in policy issues

Monitoring campaign «NO_2? No, grazie!»



CITTADINI PER L'ARIA

NO2, NO GRAZIE! Mappiamo i veleni nell'aria.



- NO2 Attributable deaths (counterfactual level 10 μg/m^3
- **3145 (CI95% 1543–4683)**
- almost 10% of annual death

Boniardi et al Environ Health. 2022
doi: 10.1186/s12940-021-00825-9.

Mean	SD	Min	Percentiles					Max
			5	25	50	75	95	
27.2	3.6	23.4	24.5	25.1	25.4	28.3	35.4	46.8

School streets

Discussion

Effective method to involve the population on the problem of air pollution. In the absence of "local" knowledge of pollution you can have a "false sense" of not needing to adopt measures for improving air quality

the 'scientists' (researchers, regulatory bodies) benefit from an extension of monitoring: eg. characterization of intra-urban variability / validation of low-cost samplers, comparison experimental data-modeling simulations; land-use regression LUR development)

Conclusion

The concept of citizen science captures the relationships between science and the public and allows the relationships to be talked about and debated.

It raises questions about what the public needs to know about science and how the scientific community can benefit from engagement with the public.

Capitalizing on these ongoing debates may provide new avenues for scientific study, as well as socially robust ways to meet the pressing challenges of risk, environment, and sustainability facing societies today.

https://www.oxfordreference.com/ verified oct 6, 2022

https://www.cittadiniperlaria.org/