



Lungs

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http://www.enve-lab.eu/



The climate exposome



Embracing complexity to seek simple solutions to EH problems





CC health challenges



Effects related to climate change

- Heat waves exceptional heat waves greatly surpass the benefits of reduced cold days
- Climate-induced increase of O₃ levels
- Climate-induced increase of the level of ultraviolet (UV) radiation
- Extreme weather events (floods, tsunamis, forest fires)
- Multimedia environmental contamination as a result of extreme weather effects
- Drinking water and food insecurity
- Increase in food-borne and water-borne diseases
- Increase in vector-borne diseases
- Increase in pollen and indoor airborne aero-allergens
- Impacted emotional and social well-being as a result of increased morbidity





CC health challenges





- Increased use of pesticides for protecting crops



Understanding common pathways of disease



enhanced by CC or enhancing susceptibility to CC





Main elements of an ABM **ENVELab**

1. Agents



3. Environment

Major types of agent environments



Cellular automata (von Neumann)

(GIS)



Network topology

Agents are objects with attitude! Flexible, interacting, autonomous



Main elements of an ABM 🥔 ENVELab 🛞





Increased PM levels due to biomass contribution

VFlab





ENVELab Intra-day PM exposure variability due to biomass contribution





Biomass contribution to PM10







Unequally distributed impacts





Period: December – mid-February



Thessaloniki, Greece



Source contributions to DTT activity





CC mitigation impacts PM size distribution and active surface – newer vs older vehicles





Joint Ministerial Decree







Time trend of PM pollution 🔗 ENVELab 🛞







ICARUS mobile app





Lungs





Bertold Brecht's Life of Galileo:

"The main objective of science is not to open the door to infinite wisdom but to roll back the boundaries of infinite error"

Thank you for your attention





www. icarus2020.eu/

www.enve-lab.eu

A connectivity perspective to environmental health