



How does the **urban environment** impact on health and wellbeing of people?

The European research cluster aims to understand the impacts of urban environment on the health and wellbeing of people



The projects that form the European Health Cluster have received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement, No. 945307 (eMOTIONAL cities), No. 945238 (ENLIGHTENme), No. 945105 (HEART), No. 945095 (RECETAS), No. 945391 (URBANOME), No. 945097 (WELLBASED).

Where you live affects your health & wellbeing. The urban environment matters!

Three quarters of the European population live in cities, where there are significant health disparities among citizens. These may be related to **health determinants**: where citizens live, work and eat; income levels and education; the walkability of their neighbourhoods; air quality; and the **access to and quality of health services** within a city.

Where you live in a city can **determine your wellbeing**. Modifying urban environments and developing urban policies and practices can advance health. Policies can use **targeted interventions** acting on health determinants to achieve healthier urban environments.

Supported by the **European Union's Horizon 2020 Research and Innovation programme**, the six research projects forming the **Urban Health Cluster (UHC)** aim to deepen research on the interactions among **health determinants and urban environments on people's health and wellbeing**. The evidence generated will **provide input to the design of policies and strategies to achieve healthier cities**.

URBAN HEALTH CLUSTER: 6 Horizon 2020 projects collaborating to address different aspects of urban environment on health & wellbeing



eMOTIONAL
Cities

Mapping the cities through the senses
of those who make them

Built and natural environments relate with human senses and shape emotions, decisions, and thus wellbeing and health. **eMOTIONAL Cities** studies how the **natural and built environment**, as well as the **social fabric**, shape the **neural system** underlying **human cognitive and emotional processing**, with a perspective that also incorporates age, gender and vulnerable groups' specificities.

Inappropriate lighting exposure negatively affects our **circadian rhythm** hence impacting on our health and wellbeing. **Light** shapes urban spaces and social life, comfort at home or in public spaces. **ENLIGHTENme** assesses the impact of **indoor and outdoor lighting** on health and wellbeing with a special focus on older people.



HEART
Healthier Cities
through Blue-Green
Regenerative Technologies

Urban Green and water (Blue) areas can improve mental and physical health by alleviating daily stress, stimulating social cohesion, physical activity, and reducing exposure to air pollutants, noise, and excessive heat. **HEART** aims to assess the effects of **the nature-based, Blue- Green Solutions (BGS)** on public health and wellbeing in European cities providing evidence of its impact on people's health in urban environments.

Loneliness is a growing public health concern worsened by the Covid pandemic, that affects 30 million European adults. **RECETAS** studies how **Nature-Based Social Prescribing (NBSP)**, a group-based social intervention that specifically include access to nature to facilitate social interactions and reduce feelings of loneliness, can promote **quality of life** help combat loneliness and improve **the health and mental wellbeing** among vulnerable people in cities.



RECETAS
TESTING ACTIONS FOR SOCIAL
PRESCRIBING IN NATURAL SPACES



URBANOME
Urban health, wellbeing, liveability

URBANOME aims to promote **urban health, wellbeing and liveability**, through systematically integrating health concerns in **urban policies** and the activities of **urban citizens**, based on comprehensive evidence on **environmental health determinants**, its spatial distribution in the city and its impact among different population group.

Energy poverty is a complex urban challenge with negative impacts on health affecting 54 million Europeans. It abounds in **inequalities** from **living conditions** and **social determinants**. **WELLBASED** addresses the impact of different **urban programmes** aimed to alleviate **energy poverty** and their effects on **mental, physical health and wellbeing** of vulnerable populations.



The URBAN HEALTH CLUSTER Strategy

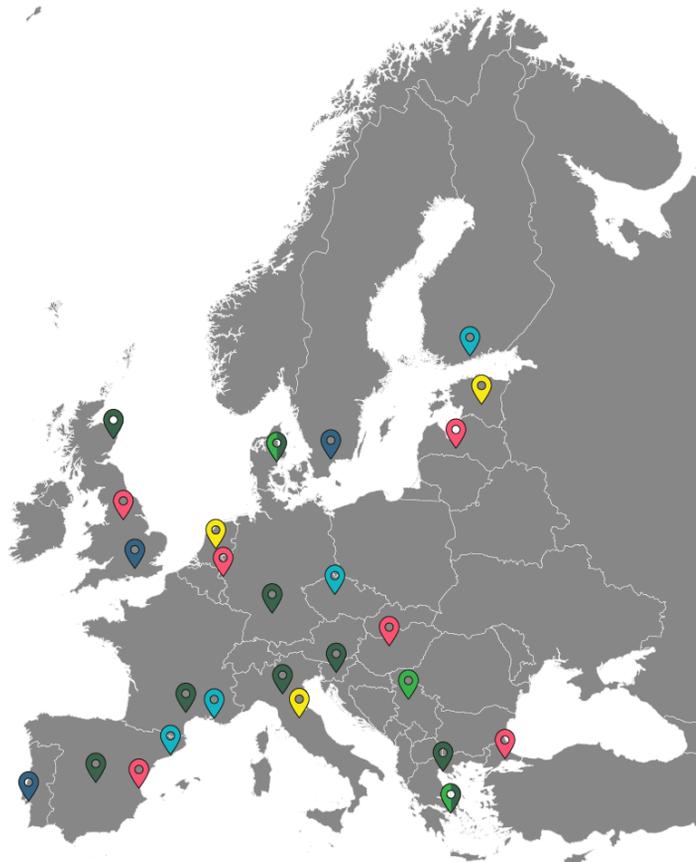


1. The URBAN HEALTH CLUSTER builds on robust evidence for policymaking that stems from research through experiments, urban and city labs as well as studies across Europe and overseas.



Legend:

-  eMOTIONAL CITIES
-  ENLIGHTENme
-  HEART
-  RECETAS
-  URBANOME
-  WELLBASED



2. The Cluster Projects test different interventions in experiments, pilots and labs

eMOTIONAL Cities

Real-life or virtual-indoor exposure to different **built, natural and social urban environments**, to capture people's **physiological and neurobiological responses** with mobile sensing technologies.

ENLIGHTENme

Large scale co-designed outdoor lighting interventions and specific indoor lighting exposure (**light therapy**) to evaluate effects on health and wellbeing and reconfigure domestic lighting.

HEART

Recommendations from medical providers to participants with metabolic, cardiovascular or respiratory diseases, to do **physical activities** in **natural environments and green zones** as well as visual exposure to **blue zones**.

RECETAS

Nature-based social prescription of contact to nature (white, blue and green zones) to alleviate loneliness, through **peer support groups** and **co-created community activities** in **natural spaces**.

URBANOME

Urban scale interventions via **co-creation processes** aiming to transform cities and/or city spaces; and **participatory individual-level interventions** to improve and promote **urban health, wellbeing and liveability** to enhance citizens' **lifestyle**.

WELLBASED

Interventions targeting health determinants to reduce energy poverty: **energy efficiency actions, community building and support activities, structural housing improvements and appliances replacement** among others.

3. The UHC projects collaborate in 6 horizontal topics of common interest through 6 Working Groups (WGs)



WG1 Science translation for policy and practice

Strategies to better translate scientific evidence from urban health research and innovation actions into up-to date and evidence-based policies to maximise wellbeing, public health and reduce inequalities.



WG2 Health determinants and urban interventions

Sharing evidence and practical knowledge on health determinants and urban interventions to better understand the underlying causes of urban health concerns and inequities, towards a “health in all policies” approach.



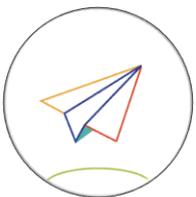
WG3 Data analysis and protection – digital platforms

Sharing data and ethics management strategies to support access to and exchange of health data for research and policy-making activities.



WG4 Urban issues and epidemics

Exploring further the relationship among urban parameters, health inequalities and epidemics to contribute to an innovative and visionary Strategic Research and Innovation Agenda for urban planning and preparedness against epidemic threats.



WG5 Dissemination, Communication and exploitation

Joint strategy to reach a wider European and International audience by presenting Cluster results and promoting partner collaboration in publications and conferences.



WG6 Citizen science approaches to urban health including ethics

Exploring how to involve citizens in urban health and wellbeing research, developing resources to support integrity, responsibility, and ethics to conduct of citizen science research.

From research to action: how urban health policies can improve health and wellbeing in European cities

The Urban Health Cluster will monitor multiple **health determinants** classified as follows:

Noise; Air quality; Weather*; Pollen; Natural environment; Land use; Transport infrastructure; Urban configuration**

General City Environment

Built & Living Environment

Outdoor lighting; Quality of Buildings; Green, Blue & White urban areas; Walkability & Bikeability; Indoor environment***; Indoor lighting; Energy (in)efficiency; Population density; Access to health services; Working conditions (employment, type of job); Safety & security of places; Education level

Neighbourhood attachment and environment; Connectivity (spaces for socialisation); Liveability

Social & Community networks

Lifestyle factors

Food; Time-activity patterns; Hours of sleep; Alcohol and drug consumption; Physical activity; Perception of public spaces

Sex & gender; Age; Functional status; Living status; Civil status

Demographic factors

Interventions will act on the above health determinants to support **UHC impact on health (physical and mental)**, thus **contributing to evidence based policy recommendations** in different domains.

*temperature, thermal comfort heat islands, local climate zones **form, morphology, size, density, etc.

***indoor temperature, air quality, noise.

Urban Health Cluster supporting policy domains

Results of interventions and monitoring of health determinants **will lead to policy recommendations**. The UHC aims to influence and enhance current policy domains at the EU level and **highlight the need for new approaches and policy domains**.

General City Environment

- **Energy poverty and right to energy**
- **Social inclusion:** EU Strategy on the rights of the child and European Child Guarantee
- **Mobility and transport:** sustainable and smart mobility
- **Clean air:** quality of air
- **Gender equality**
- **Urban environment:** Biodiversity Strategy, green infrastructure

Built and Living Environment

- **Urban environment:** urban planning and design, green spaces planning, technological tools for urban studies, lighting policies, nature based green and blue solutions, environmental regeneration.
- **Cities and urban development:** housing in cities, urban poverty.
- **Energy:** energy efficiency.
- **Food safety and nutrition:** safe, nutritious, high quality and affordable food.
- **Social protection and social inclusion:** active and healthy ageing

Social and Community Networks

- **Empowerment of individuals and communities:** on right to energy, mental and physical health promotion
- **Public health:** Improving health systems: social prescription and assets recommendation at primary health services.
- **Social protection and social inclusion:** active and healthy ageing

Lifestyle Factors

- **Public health:**
 - Healthier together initiative: health promotion, disease prevention and management of non-communicable diseases
 - Promoting good health: nutrition and physical activity, tobacco, alcohol.
 - Mental health

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