DemirEnerji

WELLBASED
Energy Poverty, Health and Wellbeing and Urban Policy

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General & Introductory Training in Horizon Europe (Webinar) (GIT-9)
Horizon Europe Strategic Plan 2021-24 & WP for Cluster 1: Health

CLIMATE
VOLUNTEERS
İKLİM GÖNÜLLÜLERİ

WELLBASED

Improving health, WELLbeing and equity by evidence-BASED urban policies for tackling energy poverty

Multidisciplinary expertise:

- Scientific partners
- R&D Centres & Universities (6)
- Energy/Environment/Urban Development Agencies & Organisations (3)
- Public/local Administrations (7)
- Companies-SMEs (1)
- National/Int'l EU Networks/Associations, Civil Society Organisations (2)

19 partner
7 pilots/7 countries
Total Budget: 5,107,771 €

Figure 1. Consortium overview

Impact on Health and Wellbeing

- Energy poverty as main challenge for European welfare systems and beyond, feeding from inequalities, derived from living conditions and social determinants, with a direct and negative impact on health and wellbeing, mainly in urban contexts.

- Respiratory diseases, heart attacks, stroke and mental disorders (stress, anxiety, depression), among other health problems.

- Complex problem that requires multi-dimensional approach and solutions
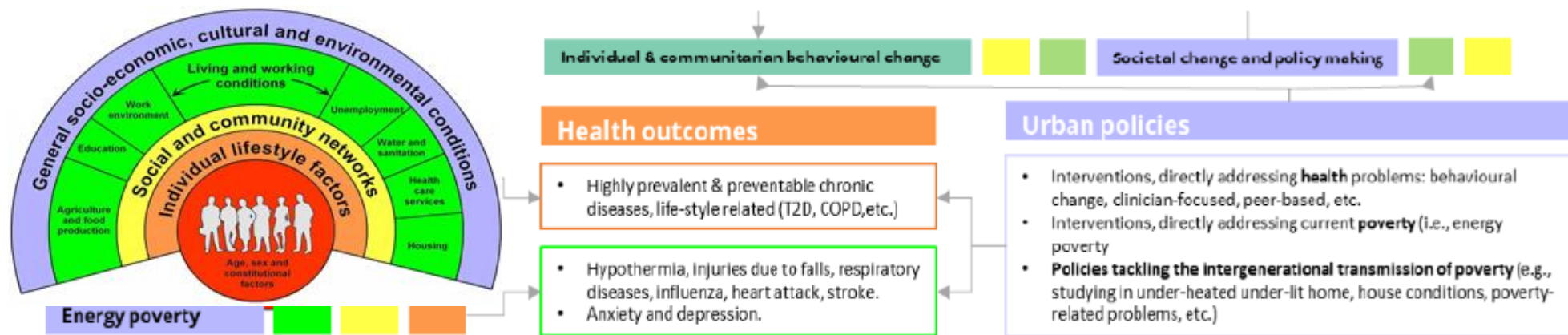

Figure 2. Links between health, wellbeing and energy poverty

Main Objective

- To design, implement and evaluate a comprehensive urban programme to reduce energy poverty and its effects on citizens' health and wellbeing, built on evidence-based approaches, easily adaptable and transferable to different European realities (welfare and healthcare models)

WELLBASED

Pilot cities of Wellbased

1. Valencia (Spain)
2. Heerlen (The Netherlands)
3. Edirne (Turkey)
4. Jelgava (Latvia)
5. Leeds (UK)
6. Obuda (Hungary)

Specific Objectives

Design and Implement

1-To design a comprehensive <u>urban programme to reduce energy poverty</u> and its effects on health and wellbeing based on existing evidence, adaptable and transferrable to different European realities.

2-To foster the <u>implementation of urban planning</u> that considers health as a horizontal challenge.

Analysis and Evaluation

3-To <u>evaluate the short and mid-term effects</u> of the programme on specific health conditions and wellbeing indicators.

4-To analyse the <u>social and gender determinants</u> linked to the intervention and its effects.

Specific Objectives

Scaling-up and public policies

5-To determine the <u>cost-effectiveness</u> of the proposed programme in the cities and compare its outcomes in the relevant dimensions

6-To develop <u>policy recommendations</u> to reduce energy poverty in cities and keeping sustainable high levels of urban health and quality of life.

Tools for evidence generation from 6 pilots

7-To establish a <u>systematic data collection framework</u> and <u>data platform</u> on urban health which will enable better analysis and informed decision-making on urban health issues.

Specific Objectives

Sustainability, income generation

8- Analyse possibility to exploit open data generated by the project to generate new business models for local SMEs.

Mobilisation and awareness

9- Roll out a campaign to sign the "Wellbased Manifesto". Cities determined to combat energy poverty and improve the health and wellbeing of their citizens are invited to demonstrate their commitment, by signing the manifesto.

Work Flow

7 WP's , 48 Months

Phase 1. Design urban programme to reduce energy poverty and its effects on health and wellbeing.

Phase 2. Implement the urban programme in pilots.

Phase 3. Evaluation and policy recommendations.

Phase 4. Research and exploration of new business models and alternative ways of financing the urban health interventions aimed at tackling energy poverty.

1 Project Management

2 Definition of the urban programme framework and adaptation

3 Pilots preparation and implementation

4 Evaluation and data analysis

5 Policy recommendations, scale-up and transferability

6 Dissemination, Communication, City engagement and exploitation

7 Ethical and data protection issues

Wellbased work flow

1

Design of the urban programme

2

Implementation of the urban programme to tackle energy poverty

- Analysis of public policies on health and energy implemented by partners countries
- Comparative study at European level of current policies and their impacts
- Systematic review of the existing interventions in Europe to reduce energy poverty
- General framework of the urban programme adapted for each pilot
    - concrete urban programme to face energy poverty
    - indicators
    - gather, use, generate and make available data.
    - Randomised controlled trial design

6 Pilot cities different context in terms of country topology and city characteristics, geography, culture, social and health service approaches

1. Valencia-Spain
2. Heerlen-Netherlands
3. Leeds-UK
4. Edirne-Turkey
5. Obuda-Hungary
6. Jelgava-Latvia

WP3: Pilots preparation and implementation

- Ethical approval
- Appointing local pilot site coordinators
- Signing of a "Urban Local Alliance Agreement"
- Training

WP 2: Definition of the urban plan framework and adaptation

3

Evaluation and policy recommendations

WP4: Evaluation and Data Analysis

- *Realist evaluation approach*
- Evaluation of the intervention
- Health and wellbeing measures
- Energy efficiency evaluation
- Cost-effectiveness
- Policy recommendations

WP5: Policy recommendations, scale-up and transferability

4

Research on new business models

WP7: Ethics and Data Protection

WP1: Project Management

WP6: Dissemination, Communications, City engagement and Exploitation

Work Flow

Main challenges

- Building knowledge: review of evidence and literature for energy poverty interventions, policies and impact on health.

- Design of the urban programme and its adaptation through co-creation by each + social determinants of health + health in all policies approach + tackle health inequalities

Work Flow

Main challenges continued...

- 6 Pilots: Recruitment strategies (at least 125 intervention + 125 control group per pilot), deployment and type of interventions to test, ethics and data protection in different legal frameworks in-out EU, vulnerable target populations involved.

Components		
1	Smartwatch (steps, movements, GPS...)	
2	Movement and activity light sensor (PIR)	
3	Air Pressure, temperatura and humidity	
4	Air quality sensor CO + CO2	
5	Edge mini-PC with screen, WiFi, Bluetooth5 BLE, ZigBee3	
6	Health monitoring devices: home control peak flow, pulsioxymetry, blood pressure and sleep quality	

Pilot sites						
ES	NL	TR	LV	UA	UK	HU

	Description
Socio-health energy audits	To assess the participant's home energy situation related to energy use, consumption, appliances, etc. outlining all of the specifics
Empowerment activities	To improve the energy situation and the health of the individual by providing advice on energy efficiency and on keeping comfort and wellbeing within the household (micro-efficiency at home).
Bill support (optimization of bills/ contracts)	To reduce the amount of money spent in energy bills.
Information and awareness raising campaigns	To help individuals and communities become aware of important issues that can affect their energy behaviour and their health
Community actions	To develop collective interventions: creation of local committees, community-support networks, roundtables, help-groups, local councils, not involving only the individual but his/her community or neighbourhood.

			LV	UA		
ES	NL	TR	LV	UA	UK	HU

	Description
Digitally supported behavioural change	To use digital technologies in supporting behavioural change.

Intervention/actions foreseen in the pilots to reduce energy poverty

Technical components for data gathering at home, including devices for digitally supported behavioural change interventions

Work Flow

Main challenges continued...

- Evaluation: dealing with diversity of interventions,

- different sources of information (health questionnaires, HER, energy consumption, city data etc.) and data collection, quantitative and qualitative data.

- Baseline, intermediate, final, follow-up 6 months later

- Realist evaluation

- Cost-effectiveness
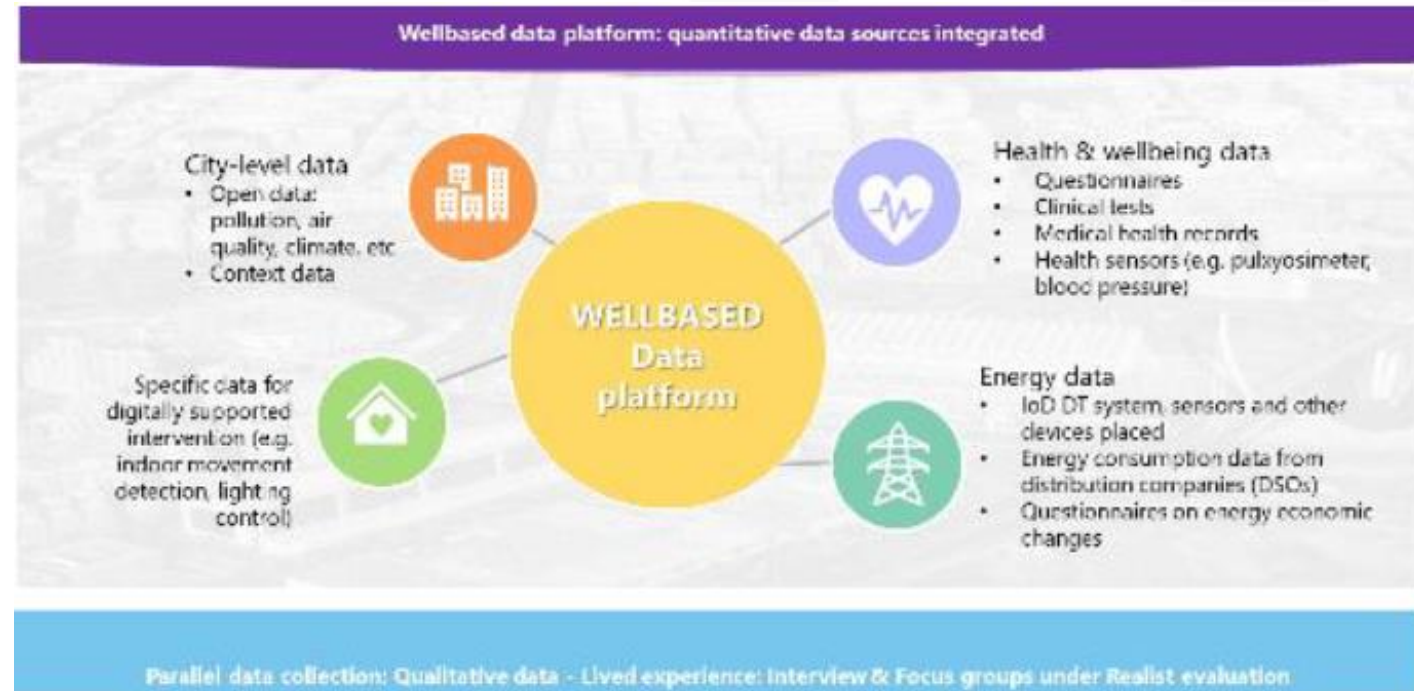
- Digital infrastructure to support (platform)

Figure 7. Data sources in the WELLBASED project

Edirne (Turkey)

- Edirne Central District
- 24 neighbourhoods
- Total population ~ 180.000 (2020 census)

Local Consortium :
Edirne Municipality, Demir Enerji, Zero Discrimination Association

Edirne

8 neigbourhoods where the city's Roma population are overwhelmingly located: Gazimihal, Menzilahir, Umurbey, Barutluk, Karaağaç, Yeni Imaret, Yıldırım Beyazıd, Yıldırım Hacı Sarraf
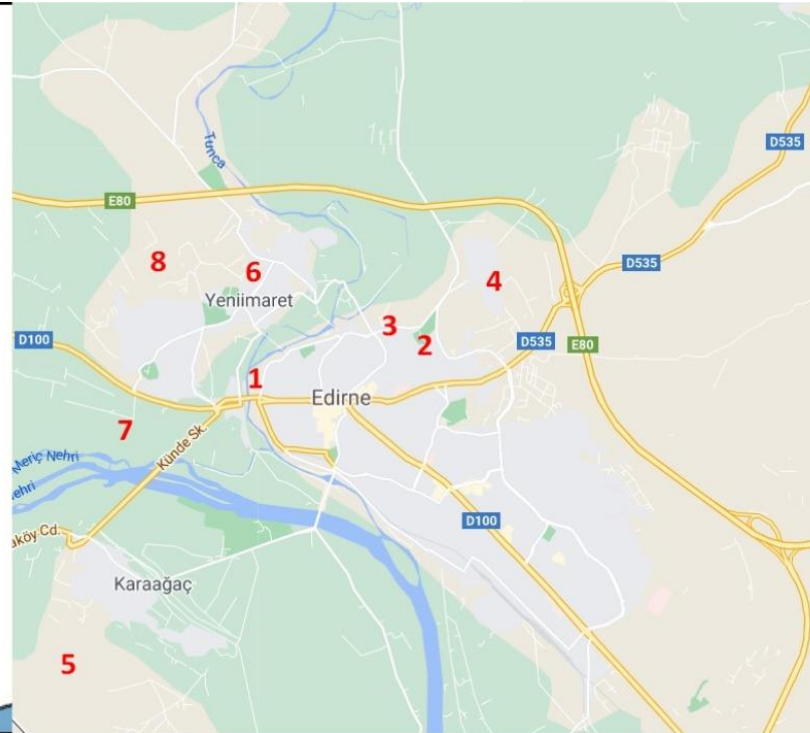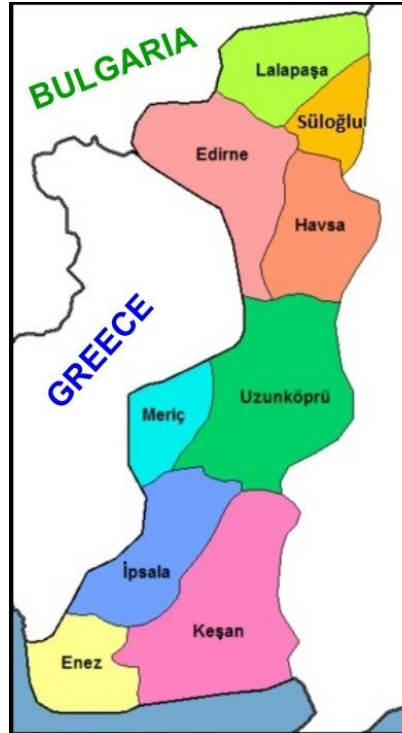
1 - Gazimihal

2 - Menzilahır

3 - Umurbey

4 - Barutluk

5 - Karaağaç

6 - Yeni İmaret

7 - Yıldırım Beyazıd

8 - Yıldırım Hacı Sarraf

Edirne

- Socio-economically disadvantage groups (majority Roma population)

- Estimated population of the area(unofficial as ethnicity not indicated in census)

  ~ 20.000-25.000

Edirne

Retrofitting by municipality: before-after

Edirne
Socio-economic stratification of neighbourhoods

Roughly 3 categories :

- Good: 3 neighbourhoods, ~ 13.000 people, usually regular household income. Habitat conditions fair

- Medium: ~ 6.000 people , irregular household income mostly from waste circulation and re-valuation, city cleaning jobs. Habitat conditions; decrepit

- Bad: ~ 6000 people, economically depraved, very poor health and wellbeing indicators, many social problems, school attendance very low, domestic violence widespread, indebtedness and dependence on government hand-outs for subsistance. Habitat conditions ; dilapidated, ramshackle homes

Interventions will most likely be in the 3rd category neighbourhoods

Edirne: Planned/Foreseen interventions

- Physical renovation of homes for energy efficiency housing 125 people in selected neighbourhoods and buildings with full consent and participation (building retrofits, potential for using recycled building materials in retrofits, local job creation etc.)

- Identification of control households with same number of people through full consential procedures as above.

- Determination of baselines regarding public health and wellbeing, energy KPI's (energy audits for baselines and monitoring)

- Deployment of monitoring equipment and other techniques (Demand side management and behavioural change techniques)

- Information and awareness raising towards energy consciousness

Edirne: Selection and actors

- Houses with a total of 125 inhabitants will be selected (people per household varies)

- Same number will be selected for the Control group.

- Selection will involve (as much as possible) different age, gender and other determinants of socio-economic conditions

- Recruiting based on incentives, mainly lower bills, health benefits.

- Directly involved actors; local municipality, neighbourhood associations, social help and solidarity groups, neighbourhood administrative heads (muhtar)

Edirne: Supporting projects and strategies

- Edirne Municipality has included in its 2020-2024 Strategic Plan, specific mention of «*the aim to develop sustainable livelihoods in Roma neighbourhoods*» , which includes an assortment of measures from social cohesion to home improvement provisions. In previous Strategic Plans, the Municipality has already undertaken considerable work to this effect.

- The municipality has applied for the Dosta Prize in 2019 (prize instated by The European Alliance of Cities and Regions for Roma Inclusion)

- ROMACTED : EU and EC Collaborative Project involving multiple municipalities from Albania, Bosnia, Kosovo, North Macedonia, Serbia and Turkey. Edirne Municipality is one of the main participants of ROMACTED in Turkey, aiming to bring together local government and good governance together with grassroots participation.

ROMACTED Children's house events

Feeding into the WellBased Socio-Ecological Model
Design, Evaluation, Impact

Physical interventions, monitoring and Impact

- Monitoring energy performance, costs, comfort, air quality

- Individual health and wellbeing indicators (age, gender, other)

- Community health and wellbeing indicators

- Impacts on individual/community/social health and wellbeing

- Repercussions/lessons for social and urban policy on eradication of poverty

Thank you

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Baha KUBAN 👤

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