



EU | Local actions to address extreme heat in Hajdúböszörmény (HU), Maribor (SI), Weiz (AT), and Worms (DE) as part of the Ready4Heat project

Factsheet prepared by Indriany Lionggo (IEECP) | September 2025

Background and objectives

Rising temperatures, with more frequent and prolonged heatwaves, pose increasing health risks, leading to higher rates of heat-related illness and death. While heat stress affects many, certain groups are especially vulnerable, including the elderly, chronically ill, people with physical or mental impairments, infants, children, pregnant individuals, the homeless, those in inadequate housing, socially or economically disadvantaged groups, outdoor workers, and sportspersons. To address this, a **heat-health action plan** seeks to protect the population during extreme heat, reduce illness and mortality, ease pressure on the health system, raise awareness of heat-related risks and preventive measures, and ultimately strengthen **population resilience to heat**.

Global warming comes with more frequent and intense heat waves. Cities in central Europe need to adapt but many still lack efficient strategies and action plans to protect their citizens from heat. The [Ready4Heat](#) project helps them to introduce tested **short-, medium- and long-term measures** with a focus on the most urgent issue: sudden heat waves. The project makes proven and tested measures such as heat warning systems accessible to all cities and helps them to adopt these quickly.

The aims to set up Heat and Health Actions Plans and make proven and tested measures such as heat warning systems accessible to the cities and helps them to adopt these quickly. Furthermore, the pilots set up local networks of concerned groups to support each other and tackle the heat problem. These are primarily older and very old people, people with chronic illnesses and impairments, but also children and pregnant women as well as people working outside. The Action Plans carry out various pilot actions, which benefit these vulnerable groups, among others:

- Development of cooling green “urban islands” (municipality of Hajdúböszörmény),
- Shading and cooling of a playground through the use of a green pergola (municipality of Maribor),
- The environmentally friendly cooling of rooms in a retirement home (city of Weiz), and
- The involvement of stakeholders within an urban area to build an active network (city of Worms).

Key features

1. Strategy and action plan concept

- Establish objectives and vision
- Check resources: time, staff and funding
- Building the HHAP on the basis of existing concepts and strategies
- Building (political) support



2. Creation of heat maps

- Identification of heat-vulnerable areas (heat hot spots)
- Stakeholder participation and networking
- Preparation of the heat-health action plan
- Establishment and continuation of the heat action plan
- Public relations
- Evaluation of the project implementation

3. Citizen engagement workshops

- **Hajdúböszörmény:**
 - Nine workshops held for target groups (pregnant women, professionals with children, chronically ill/disabled people, elderly in need of care, outdoor workers, and a final event).
 - Key needs: more green/shaded spaces, fewer paved surfaces, water playgrounds, night ventilation in schools, and addressing energy deficiencies in buildings.
 - Common request: tailored information on heat risks through awareness campaigns.
 - Participants mapped suggested locations for green islands and tree-lined areas.
- **Maribor:**
 - Ten workshops, mostly hosted within stakeholder institutions (kindergartens, schools, health care centres).
 - Around 80 participants (42 institutional representatives, 13 general public/media, 25 municipal departments).
 - Ideas included: expanding green spaces, shaded benches, neighbourhood support for elderly living alone, and ensuring at least one air-conditioned room in institutions (e.g. kindergartens, elderly homes).
- **Weiz:**
 - Ten workshops with diverse stakeholders (city administration, retirement homes, kindergartens, seniors' associations, emergency services, province of Styria, social organisations, environmental advisory board, and companies), plus a final workshop.
 - Short-term measures: shaded seating, updated city maps highlighting water dispensers, volunteering schemes such as "heat buddies."
 - Long-term measures: more urban greenery (tree planting), updated energy regulations prioritising heat protection in refurbishments.
 - Proposal for awareness-raising campaign via regional media.
- **Worms**
 - A "Hitzetelefon" warning system supports older adults living alone during heatwaves.
 - Co-creation workshops were held in senior homes, kindergartens and community centres, enabling stakeholders to identify heat impacts (e.g., overheating in play areas) and propose practical improvements like shading and adjusted ventilation.
 - Training session of "**Garten und Streuobst**" for outdoor workers, gardeners, orchard owners—sharing sun-safety best practices.
 - "**Cool bleiben für Gruppen**" (aimed at sports clubs and trainers, advising on safe hydration, scheduling and activity adaptations during heat).

4. Pilot actions

- **Hajdúböszörmény**
 - Creation of **47 green islands** at 23 locations in public areas and around public buildings.
 - Locations selected using **heat maps** and citizen engagement input.
 - Features include benches under shaded wooden plant structures, with additional trees planted for long-term shading.
- **Maribor**
 - Construction of two pergolas in kindergartens.
 - One to protect the south-facing part of a building, the other to shade a sandbox.

- Use of local wood and testing of two plants (kiwi vs. white Isabella vine) for effectiveness.
- **Weiz**
 - Investment in feasibility study for solar-assisted cooling systems.
 - Pilot installation at a nursing home.
 - Monitoring of operation and energy data to compare with other cooling methods.
- **Worms**
 - Establishing long-term awareness structures on heat and health.
 - Pilot tests the sustainability of a heat protection network with relevant actors.
 - Goal: develop and implement a district concept for heat reduction in a highly affected city area.

Implementation

In order to develop a comprehensive HHAP that involves local actors and includes activities for the different target groups, a structured approach is recommended. This requires an investment of time, human and financial resources. Human and financial resources can be scarce, especially in small and medium-sized or financially weak municipalities. The preparation of a heat action plan also requires both technical and methodological know-how.

Check funding opportunities

In recent years, the topic of adaptation to climate change has been increasingly included in public funding programmes. We therefore recommend to at first examining funding opportunities, e.g. for the promotion of an adaptation manager or specifically for the preparation of a HHAP. For this purpose, it makes sense to contact the relevant advisory centres and institutions, as well as funding agencies.

External support

When preparing a HHAP, we recommend seeking external support for technical and methodological assistance throughout the entire process of preparing the HHAP. In the context of the project “Hitze Sicher/Worms”, the City of Worms received technical and methodological expertise and support from the project partners in all phases of the preparation and the initial implementation of the plan. We recommend contacting municipalities that are already working on the preparation of a HHAP or have prepared one already and ask them about experiences with external offices or institutions to support the preparation. In order to be able to conduct various on-site events and workshops during a comprehensive preparation of a HHAP, it is useful that the external support is not located too far from the municipality. Although many events are now conducted online or hybrid, in our experience it is valuable to hold on-site meetings to enable personal contact and exchange with the actors involved.

Define clear responsibilities

At the municipal level, a project leader for the preparation of the plan is needed. This can be a person from the environmental sector (e.g. from the climate protection or adaptation management) or from the health sector (e.g. from the health department). It also makes sense to have a joint project management in order to use synergies between the departments of climate adaptation and health.

The HHAP project manager is (as “caretaker”) responsible for the preparation of the plan, keeps track of the concept and the details, maintains contacts with the actors, both within the city and externally, takes care of public relations, invites to workshops and events and is in charge of the (potential) steering committee described below. The project manager answers e-mail enquiries, is available for telephone enquiries and much more. Without such a caretaker, a HHAP cannot be created and successfully implemented in the following years. It is recommended that the project management is located within the administration in order to be able to for example send out official

municipal invitations, to be accessible etc. In this way, the different actors and the population can gain more confidence in the organisation and implementation of the HHAP.

The creation and implementation of a HHAP also requires the support of several steering committee such as the city administration, the mayor and political party representative, the local/ regional medical services, water and energy divisions/ providers, local water and sanitation divisions, healthcare divisions, social care divisions, education divisions, citizen/ disaster protection units, urban planning/ development divisions, public relation and communication divisions, climate/ adaptation divisions.

Budget (or other cost data)

The project itself is funded by the EU under the Interreg CENTRAL EUROPE programme. The financial framework allocated for short-, medium- and long-term municipal measures from the annual budget (investments, developments, salaries, wages). Financial assessment for the gradually implementation according to yearly municipal budget around EUR 250.000.000 annually. Funding programmes from a federal body that finances the development of climate adaptation plans of welfare organisations. This includes the facilitation of the grant application writing through climate expert consultation paid by the city as well as cooperation with local universities.

Below is the detailed funding resources in every pilot city of Ready4Heat:

1. City of **Hajdúböszörmény** (Hungary)

- The plan highlights the legal and policy framework, which enables funding via:
 - National environmental protection and climate adaptation programs.
 - EU structural and cohesion funds, especially those linked to energy efficiency, climate adaptation, and public health.
 - Municipal co-financing, often in partnership with regional authorities and health institutions.

2. City of **Maribor** (Slovenia)

- Financing options include:
 - Municipal budget lines (especially for green infrastructure and adaptation measures).
 - EU projects and cross-border programs (e.g. Interreg, Horizon Europe) targeting urban climate adaptation and health protection.
 - National climate adaptation support schemes (Slovenian Ministry of the environment/health).
 - Cooperation with private partners and public utilities to integrate measures into existing investments.

3. City of **Weiz** (Austria)

- Measures are tied to the Austrian National and regional heat protection plans, which can mobilize federal and provincial funds for health protection, awareness campaigns, and infrastructure adaptation.
- Implementation can also be supported through:
 - Municipal budget allocations for greening, shading, and cooling infrastructure.
 - EU co-financing (e.g. Interreg Central Europe, LIFE) – the Ready4Heat project is already an example of this.
 - Integration into spatial and infrastructure investment plans.

4. City of **Worms** (Germany)

- Initial development of the Heat action plan was funded by the Federal Ministry for the environment (BMU) under the “Adaptation to Climate Change – Municipal lighthouse projects” program.
- For long-term implementation, Worms requires:
 - An annual municipal budget dedicated to structures and measures, including the heat alarm system.

- Ongoing financing through municipal departments, steering committee decisions and integration into urban development and climate adaptation concepts.
- Additional financing may come from national adaptation programs, EU projects (e.g. Interreg's) and cooperation with health/social institutions.

Results and impacts

Thermal protection measures in the short term (acute measures during heatwaves), medium term (preparedness and awareness), and long term (heat-sensitive urban development):

1. Municipality of **Hajdúböszörmény**

- Short-term action: immediate acute extreme heatwave action plan
 - Communicate the heat alert with recommendations
 - Monitoring morbidity and mortality
 - Opening and communicating cool and chilled buildings, provision of drinking water, vapour gates
 - Support for organisations working with deprived people living alone
 - Extending early assistance services
- Medium-term action: strategic action plan for heat emergency prevention (preparedness and awareness)
 - Health awareness development and widespread dissemination
 - Thermal protection education for vulnerable focus group workers
 - Providing drinking water in public areas, operation of vapor gates
 - Network and consulting services for outdoor workers
 - Information campaign on the possibilities of building with good thermal properties
- Long-term action: Sustainable Living Action Plan for Climate Protection and Liveability (urban development and lifestyle)
 - Afforestation, care of urban trees, tree planting, landscaping
 - Supplementing the building ordinance with architectural solutions with good thermal properties
 - Analysis and planning of urban climate (urban climate) with green elements
 - Development of sustainable transport sectors and multimodal transport
 - Promoting an active lifestyle and increasing the fitness of the population
 - Shading and air-conditioning of educational institutions
 - Support for home placement of garden rainwater collection pots

2. Municipality of **Maribor**

- Short-term or emergency measure: warnings, communication, shade and cooling
 - Warnings and communication heat warning system
 - Publicly accessible spaces for cooling during heat waves
 - Temporary shading and cooling for outdoor public areas
 - Drinking water in public spaces
 - Guidelines for the protection of vulnerable groups during heat waves
- Medium-term actions: awareness, capacity building and resilience building
 - Raising awareness among the population
 - Education and training
- Long-term measures: buildings
 - Urban planning
 - Improving the insulation of buildings
 - Indoor cooling
 - Planting of new trees to increase greening
 - Urban greening plan and reduction of concrete surfaces and shading

- Water saving
- Rooftop solar power plants and energy storage
- Monitor increases in morbidity and mortality during heat waves.

3. City of **Weiz**

- Short-term measures
 - Public Awareness Campaigns
 - Educational Outreach
 - Promoting hydration
 - Heat resistant clothing and sunscreen advice
 - Cooling tips for homes
 - Cooling techniques
 - Targeted support for vulnerable groups
 - Emergency communication channels
- Medium-term measures
 - Increasing drinking water access
 - Creating shaded spaces
 - Cooling stations
 - Public mapping of cooling spots
- Long-term measures
 - Sustainable urban design
 - Heat-resilient infrastructure
 - Water integration
 - Mandatory green space regulations

4. City of **Worms**

- Short-term action
 - Heat alarm system with different warning levels (German Weather Service – DWD)
 - Rapid communication of alerts to the public and institutions
 - Establishment of “cool places” and shaded/rest zones
 - Distribution of water and support in everyday life during heat events
 - Specific assistance for vulnerable groups (elderly, care facilities, homeless, outdoor workers)
- Medium-term action
 - Information campaigns on health risks of heat and prevention
 - Training for institutions and staff working with vulnerable groups (care, daycare, schools)
 - Development of communication channels and stable stakeholder networks
 - Integration of heat protection into existing health and social services
 - Regular monitoring and evaluation of heat-related health impacts
- Long-term action
 - Urban planning guidelines for climate-adapted design
 - Integration of shading, ventilation corridors, and greening in urban development plans
 - Checklists for heat reduction in building development, planning and construction phases
 - Expansion of urban green and blue infrastructure (trees, water elements, permeable surfaces)
 - Establishment of a permanent working group on climate-adapted urban development
 - Sustainable renovation and adaptation of public buildings to improve cooling capacity

Lessons learnt

The most effective approaches included directly contacting stakeholders, leveraging personal and professional networks, and collaborating with a strong local NGO that had established connections and expertise. Workshops benefited from skilled facilitators and engagement with local micro-communities, such as seniors' clubs, proved valuable. However, companies that have workers working outdoors and doctors were not responsive due to lack of interest, time constraints and limited feedback, whereas elderly care workers, nurses, and professionals working with children and pregnant women were engaged more successfully.

Deep local involvement proved essential, as co-creation workshops and advanced trainings enabled frontline groups such as multipliers and key actors working with the vulnerable groups to adopt practical solutions quickly. This participatory approach not only built trust and ownership but also ensured that heat adaptation measures addressed real community needs effectively.

Funding support drives real action, as shown in Worms where guidance to specialised programmes ensures climate adaptation isn't limited by budgets, while keeping institutions engaged and decisionmakers motivated to sustain efforts within the heat protection network.

Regular updates to the Heat Action Plan are vital. Annual reviews integrate new scientific insights and lessons from recent heat events, ensuring measures such as enhanced buddy systems and advanced training modules — remain effective, practical, and responsive to evolving climate challenges.

Sources

All information taken from the outputs of the Ready4Heat project on <https://www.interreg-central.eu/projects/ready4heat/>

Interview with Mrs. Katja Karba, Project manager at Razvojna agencija Sinergija d.o.o. (Development agency Sinergija Ltd)

Online interview on Thursday, 2 October 2025.

Where does the original idea of the scheme come from?

Started in the city of Worms (Germany), the first city to start with HHAP a few years before the project was awarded in 2022. The regional funds and Climate Alliance from Frankfurt have been the main resources, as well as the city, they have developed their own method to engage with the stakeholders, communicate with external parties. Interreg project happened, and the idea was to scale up the HHAP to other pilot cities. Generalise the structure and define methods to be applicable to more EU cities.

What have been the main difficulties encountered in developing or implementing the scheme?

The difficulties of HHAP development were to engage stakeholders and lack of enthusiasm to the topic, especially from organisations that are employing the outdoor workers. Also surprisingly, the doctors in public health centres never responded to the workshop on HHAP. However, to the project's surprise, the stakeholders such as kindergartens, pensioners associations, pregnant women, and a few healthcare centres were very much enthusiastic about the topic and very welcoming. Soon after that, the authorities such as mayors and city departments are providing their political supports in the topic too knowing that this is an opportunity to make the cities resilient.

What success factors would you have identified?

The elderlies and pregnant women were very active and added their recommendations in the HHAP development process. The workshops and the trainings have different activities that focuses on different vulnerable groups. The HHAP strategies have been adopted by the city council with the major support and the communication materials are tailored for every type of the vulnerable groups, such as simple text for deaf people, visuals on how to protect themselves. Establishing the stakeholder in Germany is another success story with its operational, liveable

structure in the city and they have an active (sub)working groups implementing various measures, among which is also a heat warning system called heat phone. Slovenian, Austrian and Hungarian pilot cities have a city heat warning system that is connected to the national data which is being operated by the national environment/weather forecast agencies.

What have been the main changes in the scheme in recent years?

All pilot cities are thinking about the measures and funding resources to further explore the measures. The topic is hot, has political credit and it would increase the voting numbers of political parties.

Are there further developments planned? Or what would be the main challenges for the coming years?

One of the Interreg cross border programme project (Slovenia-Italy) is establishing heat warning system for Gorizia and Nova Gorica cities which could be applied further to the new cities. Additionally, some Ready4Heat partners have applied for funds in empowering the public health institutions. Currently it is also the idea/ need on targeting the vulnerable groups in the rural areas and how to equip them with the digital tools to cope with heat waves. They have been long forgotten, and the focus shift will be different from urban to rural. The funds will be searched in the frame of fourth Interreg CE call that will start in a few days, but nothing is concrete now. Furthermore, the next challenge is also combining green and blue infrastructure, it is quite difficult but considering the political support from the cities, we hope this will be received well by the stakeholders.

If you could go back in time, what would you do differently?

Get more fundings to implement the measures, start working on short- and medium-term actions, awareness raising, campaigns and clearer actions for the vulnerable groups.