

# Public Health Adaptation Strategies to Extreme weather events – PHASE

*EU Health Programme*

Kick off meeting  
10-11th May, EAHC Luxembourg  
DROSBACH BUILDING, Room A3/043

## Background

Climate change is changing the frequency and intensity of extreme weather events (EWEs) in Europe

Several actions are being undertaken toward heat and cold spells, forest fires, floods, but in many cases there is limited evidence of their effectiveness and on vulnerability indicators

A cross national collaboration at the European level to harmonize strategies and policies to reduce health impacts is needed

Overall, public health priorities are to enhance awareness on health risks and improve preparedness measures and target plans to specific subgroups to reduce inequalities between countries

## Previous EU project

Project	End	Topic	Focus
APHEIS - Air Pollution and Health: A European Information System	2001	surveillance on the effects of <b>air pollution</b> on public health	Public health
HEAPSS - Health effects of air pollution on susceptible subpopulation	2003	Short-term effects of <b>air pollution</b>	Research
AIRNET - A thematic NETwork on air pollution and health	2004	Basis for public health policy related to improving <b>air quality</b>	Public health
PHEWE - Assessment and Prevention of Acute Health Effects of Weather Conditions in Europe	2006	Short-term effects of <b>heat</b> and <b>cold</b>	Research
MEDIGRID – Mediterranean grid of multi-risk data and models	2006	framework of <b>multi-risk</b> assessment	Risk assessment
cCASHh - Climate change and adaptation strategies for human health	2007	Adaptation to <b>climate change</b>	Public health
ENHIS - Implementing Environmental and Health Information System in Europe	2007	policy relevant information on exposure to <b>environmental hazards</b>	Public health
EuroHEAT - Improving Public Health Responses to Heat Waves	2007	Public health responses to <b>heat waves</b>	Public health
NOMIRACLE - Novel methods for integrated risk assessment of cumulative stressors in Europe	2009	transfer of <b>pollutants</b> between environmental compartments	Research
FLOODSITE – Integrated flood risk analysis and management methodologies	2009	strategies for sustainable <b>flood</b> mitigation and defence	Risk management
ENSEMBLE - based predictions of climate changes and their impacts	2009	Prediction system for <b>climate change</b>	Research
HYDRATE - Hydrometeorological data resources and technologies for effective flash flood forecasting	2010	Flash <b>flood</b> forecasting	Forecasting
HENVINET - Health and Environment Network	2010	Impact of <b>climate change</b> and <b>air pollution</b> on allergy/asthma	Research
FIRE PARADOX - An innovative approach of Integrated Wildland Fire Management regulating the wildfire problem by the wise use of fire: solving the FIRE PARADOX	2010	Integrated <b>fire</b> management	Risk management

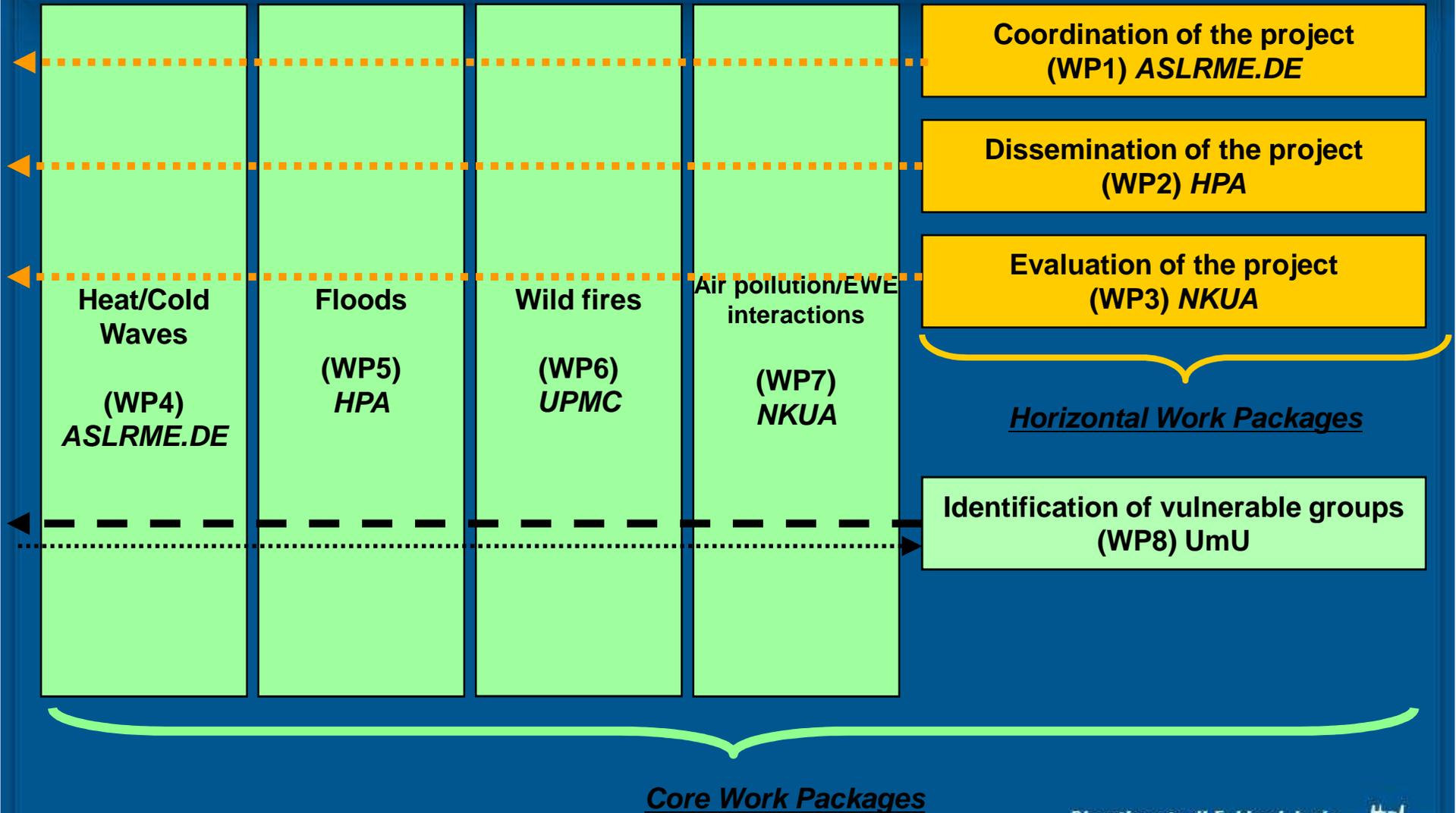
## PHASE key features

- Focus on Public health
- To identify vulnerable subgroups most at risk of the health impact of EWEs
- To develop tools to improve prevention efforts, identifying effective interventions and targeted to vulnerable population subgroups

## General objectives

- to provide national and local governments, health and social services with a **framework of tools** to improve **preparedness** and help **mitigate** the impact of EWEs on health, taking into account local health care systems and infrastructure characteristics in EU
- to increase **population and institution awareness** on the health risk associated to EWEs
- to increase **efficiency and effectiveness of warning systems and prevention measures** for EWEs through evaluation
- to **target prevention activities** to specific vulnerable population subgroups

# Work Packages



# Project's Partners

## Main partner

Dept of Epidemiology Regional Health Service Lazio, Italy  
(ASLRME.DE)

## Associated partners

Health Protection Agency, UK (HPA)

National and Kapodistrian University of Athens, Greece  
(NKUA)

Université Pierre et Marie Curie - Paris 6, France (UPMC)

Umeå University, Sweden (UmU)

Centro Superior de Investigación en Salud Pública, Spain  
(CSISP)

National Institute for Health and Welfare, Finland (THL)

National Institute of Environmental Health, Hungary (NIEH)

## Collaborating partners

WHO Regional Office for Europe (WHO)

Institut de Veille Sanitaire, France (InVs)

Italian Department Civil Protection (IDCP)

## Specific objectives

1. To improve preparedness/response to **heat waves and cold spells** in the EU (WP4)
2. To improve preparedness/response to **flooding** in the EU (WP5)
3. To improve preparedness/response to **wild fires** in the EU (WP6)
4. To evaluate the **synergistic impact** of air pollution, EWEs and wild fires on health (WP7)
5. To identify **vulnerable** groups to each EWE (WP8)
6. To foster a **science-policy interface** (WP2,WP4-7)

## Common approach

1. Identify research gaps on health effects of EWEs, prevention (warning systems, surveillance systems, response activities)
2. Through case-studies, evaluate the impact of EWEs on health, and evaluate the performance of warning systems and effectiveness of prevention activities, where available evidence is scarce
3. Identify population subgroups vulnerable to specific EWEs
4. Develop a framework of tools and guidelines for the prevention of health effects of EWEs

## Overall expected outcomes

To provide **key information** for the development of guidelines for prevention of health effects of EWEs based on results in terms of effect estimates, the identification of vulnerable subgroups and at risk areas, and from case-study evaluation of warning systems and prevention activities

To provide **tools to improve best practice of emergency and public health prevention actions** on the basis of the political, social and cultural context, as well as the organisation and management of health and environmental institutions, and in the long term, **mitigate the expected EWE health impacts** due to future climate change

To set the foundations for development of a **network between local and international institutions** (Research Units, Civil Protection, Ministry of Health, Environmental Agency, local health and social services) for reducing the impact on health of extreme events in the EU

## Overall expected outcomes

To reduce EWEs-related health impact based on the identification of vulnerable subgroups, the definition of local risk maps and exposure patterns

To improve, citizens health standards and quality of life by tailoring prevention activities towards individuals at high risk in the EU

To be in contact with other EU projects, international organizations (WHO, health protection agencies outside Europe, especially in the US) and the project officer

To promote a Science-policy Interface

# Project outcomes differentiated in categories proposed by Nutbeam D.

## Health promotion outcomes

- Definition of public policies, health promotion activities toward EWEs (WP4-6)
- Increase efficiency and effectiveness of prevention measures (WP4-7)
- Definition of tools to improve preparedness/help mitigate the impact of air pollution (WP7)
- Definition of methods to identify vulnerable population subgroups to EWE (WP8)
- Definition of specific prevention strategies targeted to vulnerable subgroups (WP8)
- Develop a network of policy makers/stakeholders at national/crossnational level (Science policy interface)
- Stakeholders participation in workshops on results of project (Science policy interface)

## Intermediate health outcomes

- Increase in population/institution awareness in the impact of EWEs and about targeting health care to vulnerable subgroups (WP4-8)
- Increase knowledge and awareness of policy makers (Science policy interface)

## Health outcomes

- Reduction in the impact of EWEs on mortality/morbidity, especially in vulnerable subgroups of population (WP4-8)
- Promote evidence-based prevention policies (Science policy interface)

## Science-policy Interface

Improve the interface between scientific research and policy-making institutions

Establish a network of policy makers and researchers, also from countries not directly involved in PHASE project

Improve communication of results

Ensure an efficient policy-maker uptake of evidence produced and the development of adequate measures to improve preparedness and adaptation to EWEs

## Project deliverables

- Technical and financial reports (WP1)
- Dissemination tools (WP2)
- Evaluation reports (WP3)
- Framework of tools to improve preparedness/response to specific EWEs (WP4-6)
- Synergies between air pollution, extreme weather events and wildfires (WP7)
- Identification of population subgroups vulnerable to different extreme weather events (WP8)
- Science-policy interface (WP2, WP4-6)

# Milestone time table WP1-3

## WP1 - Coordination

- Working protocol and Steering Committee Establishment (M6)
- Interim technical and financial reports (M12, M24)
- Steering Committee and plenary meetings (every 12 months)
- Technical and financial final report (M36)

## WP2 - Dissemination

- Promotional leaflet (M3)
- Development of website (updated monthly) (M6)
- Dissemination plan updated every 6 months (M7)
- Workshop for stakeholders on results of project (M36)

## WP3 - Evaluation

- Evaluation procedures protocol (M6)
- WP Evaluation - Questionnaire (M6, every 3 months)
- Website evaluation (M30)
- Evaluation outcome report (every 12 months)

## Milestone time table WP4-5

### WP4 - Prevention of health effects of heat waves and cold spells

- Literature review of health impact of heat waves/cold spells (M12)
- Overview of warning systems/prevention plans for heat/cold in EU (M12)
- Case study evaluation of warning systems/prevention measures (M24)
- Indicators for monitoring of health impact of heat/cold spells (M30)
- Tools/guidance to improve preparedness/response to heat/cold (M36)

### WP5 - Adaptation tools to prevent the health effects of flooding

- Literature review of health impact of flooding and overview the existing tools for flood response and health resilience (M12)
- Guidance and evaluation of the health risks/benefits of flood minimisation and resilience structures (M24)
- Workshop in the UK with stakeholders from the project partners (M30)

Final WP report (M33)

Tools/guidance to improve preparedness/response to the impact of floods (M33)



## Milestone time table WP6-8

### WP6 - Prevention of health effects of wild fires

Literature review of health effects of wild fires (M12)

Delivery of databases on wildfires and health indicators (M12)

Global inventory on emissions from satellite data (M24)

Estimates of health impact of wild fires in selected EU cities (M30)

Framework of tools to improve preparedness/response to wildfires (M36)

### WP7- Synergies between air pollution, EWEs and wild fires

Delivery of database (M12)

Report/publication on how EWEs and wild fires change the composition of air pollution (M24)

Report/publication on air pollution and EWEs synergy (M30)

Report/publication on air pollution and wild fires synergy (M30)

### WP8 - Identification of vulnerable sub groups to EWEs

Systematic literature review (M12)

Overview of existing selection procedures in EU countries (M24)

Case studies for identification of vulnerability factors (M30)

Protocol for selection of vulnerable subgroups for EWE's (M30)