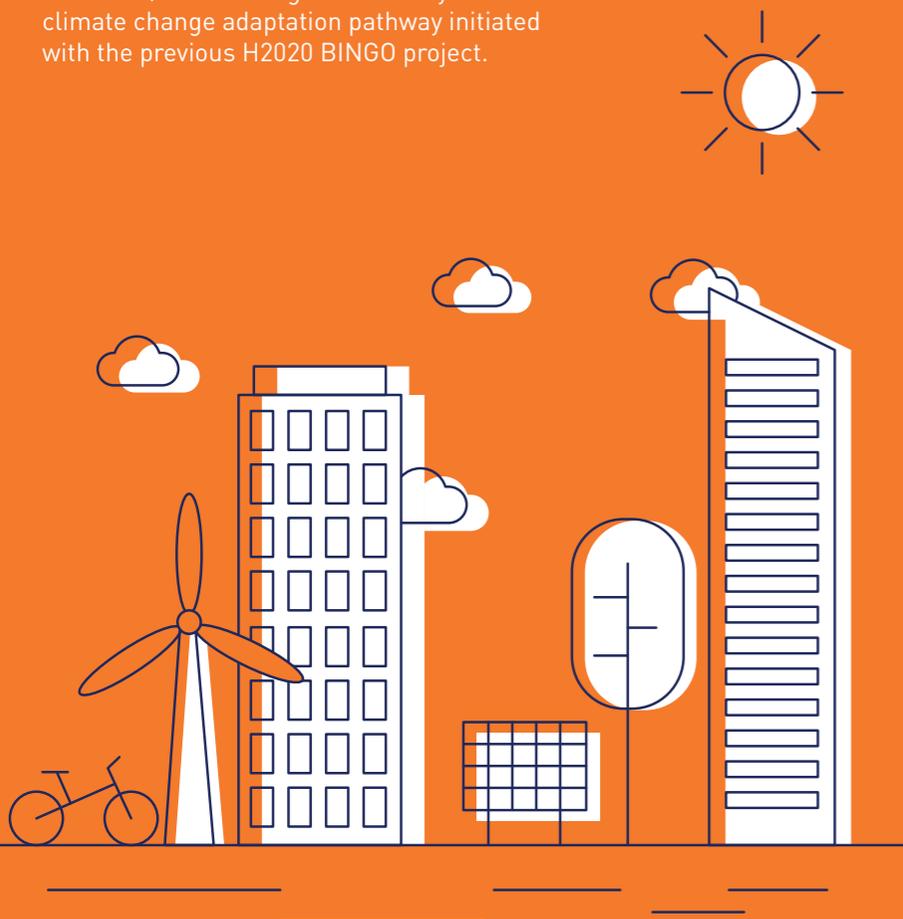


Context

Climate change is happening and projected to continue. Our cities are constantly facing different impacts derived from climate change such as floods, heatwaves and storm surges among others, which not only cause significant economic and human losses but also pose challenges to urban living.

Badalona, a Mediterranean city with more than 217.000 inhabitants, located in the eastern coast of Catalonia (Spain) has been selected as the pilot site for LIFE BAETULO project (Baetulo is the latin name of the roman founded city of Badalona) in order to give continuity to the climate change adaptation pathway initiated with the previous H2020 BINGO project.



Full name

Badalona Integrated Early warning system for multi-hazard and risk management to ensure urban climate change adaptation

Acronym

LIFE BAETULO

Budget

€1.237.554

EU contribution

€660.853

Duration

2,5 years (July 2020-December 2022)

Coordinated by

Aquatec (Suez Spain)



For more information, visit the LIFE BAETULO website life-baetulo.eu



An Integrated Early Warning System for climate change adaptation

Managing the multiple risks arising from: flooding, combined sewer overflows (CSO), storm surges, heat waves, cold waves, snowfalls, windstorms, forest fires and air pollution events.

Project partners



Ajuntament de Badalona



LIFE19 CCA/ES/001180
www.life-baetulo.eu



LIFE BAETULO solution

LIFE BAETULO is a pilot project where a novel technology, an Integrated (and multi-hazard) Early Warning System, is applied for the first time in a city, in this case in Badalona (Spain), with the objective of reducing the exposure and vulnerability of citizens and other urban assets to climate-related hazards by providing anticipated information and alarms that allows taking preventive actions (including operational actions) to minimize direct and indirect impacts and damages derived from climate change.

The Integrated Early Warning System of LIFE BAETULO consists of 4 main blocks:

- **Data gathering:** to predict and identify climatic hazardous events
- **Risk assessment:** stimulation of potential risks and impacts derived

Expected results

LIFE BAETULO will contribute to increase climate change adaptation of urban areas by providing an innovative tool (an Integrated Early Warning System), applicable and usable by any city or region facing climate hazards and aiming at:

- **Anticipate the adverse effects of climate change**, including forecasting and warning of all the climate hazards affecting urban areas
- **Minimize the exposure and vulnerability** of inhabitants, urban

from climate hazards such as water and velocity levels in streets due to flooding events, approximate duration of bathing waters' pollution events (due to CSO episodes), vulnerable areas of the city to windstorms, storm surges, etc.

- **Preparedness and response:** activation and automation of the (preventive and reactive) emergency protocols defined for each one of the climatic hazards.
- **Communication and dissemination:** dissemination of timely, reliable and understandable warning messages to authorities and public at risk in order to reduce the potential exposure and impacts of such climate hazards.

assets and the surrounding environment to the impacts of climate change

- **Take appropriate response actions** to prevent or minimise the damage that climate derived hazards can cause
- **Raise general awareness and capacity building** for citizens, administrations, politicians and businesses in the framework of climate change

LIFE BAETULO

Data gathering (data sources)



Current system status

- Water level in sewer system
- Water flows in the streets
- Bathing water quality
- Air pollution
- Sea level



Current weather

Temperature, humidity, rainfall, wind speed and direction, snow accumulation



Weather forecast

- Temperature (6 hours-8 days)
- Rainfall (2 hours-3 days)
- Wind speed (6 hours-10 days)
- Snow accumulation (6 hours-10 days)
- Sea level (1-2 days)
- Air pollution (1-3 days)
- Fire hazard (1 day)

Risk assessment (hazard and risk evaluation)



- Risk levels and alert thresholds
- Automatic hazard and risk maps

Preparedness and response



Emergency protocols for: heat waves, wind storms, air pollution, urban floods, CSOs, storm surges, cold waves, snowfalls and forest fires

Communication and dissemination



Warning levels based on trigger values



Vulnerable areas and elements to climate hazards (flood-prone streets, public facilities at risk, most vulnerable districts, etc.)



To local authorities: valuable information to support decision making processes, including complete emergency protocols of preventive and reactive actions, department in charge of the execution and action status.



To citizens: warnings, recommendations and relevant information to decrease exposure to climate hazards



Authorities and public at risk



Badalona City Council and all the action units involved in civil protection, public health, environment, local police, firefighters, etc.



Citizens (through app and other public communication channels)

LIFE
BAETULO