

How can we adapt our cities to climate change?



LIFECITYADAP3

The first thing...
What is climate change?



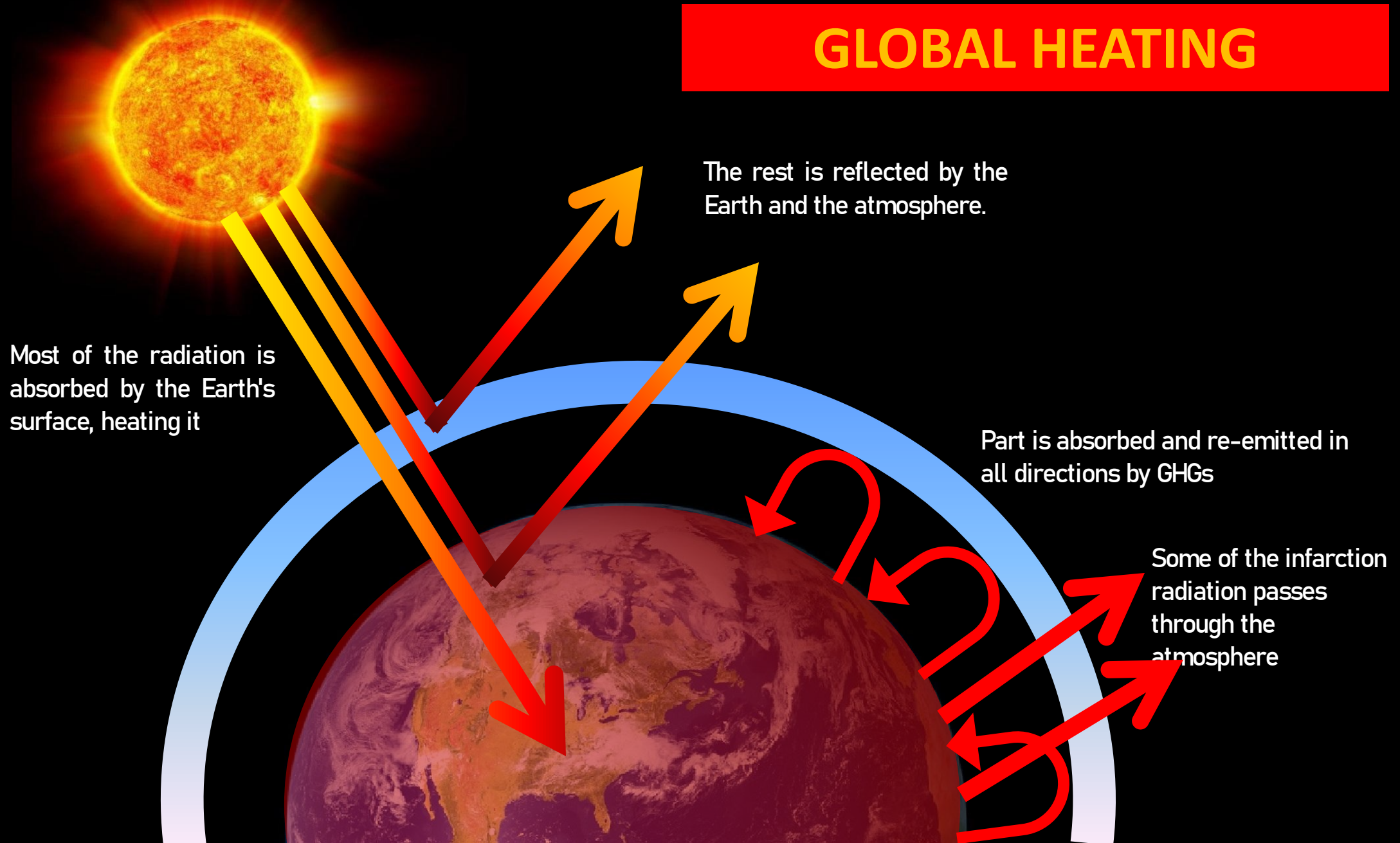
GLOBAL PROBLEM

THE GREATEST CHALLENGE TO
WHICH HUMANITY FACES IN ALL
ITS HISTORY



GREEN EFFECTS

GLOBAL HEATING

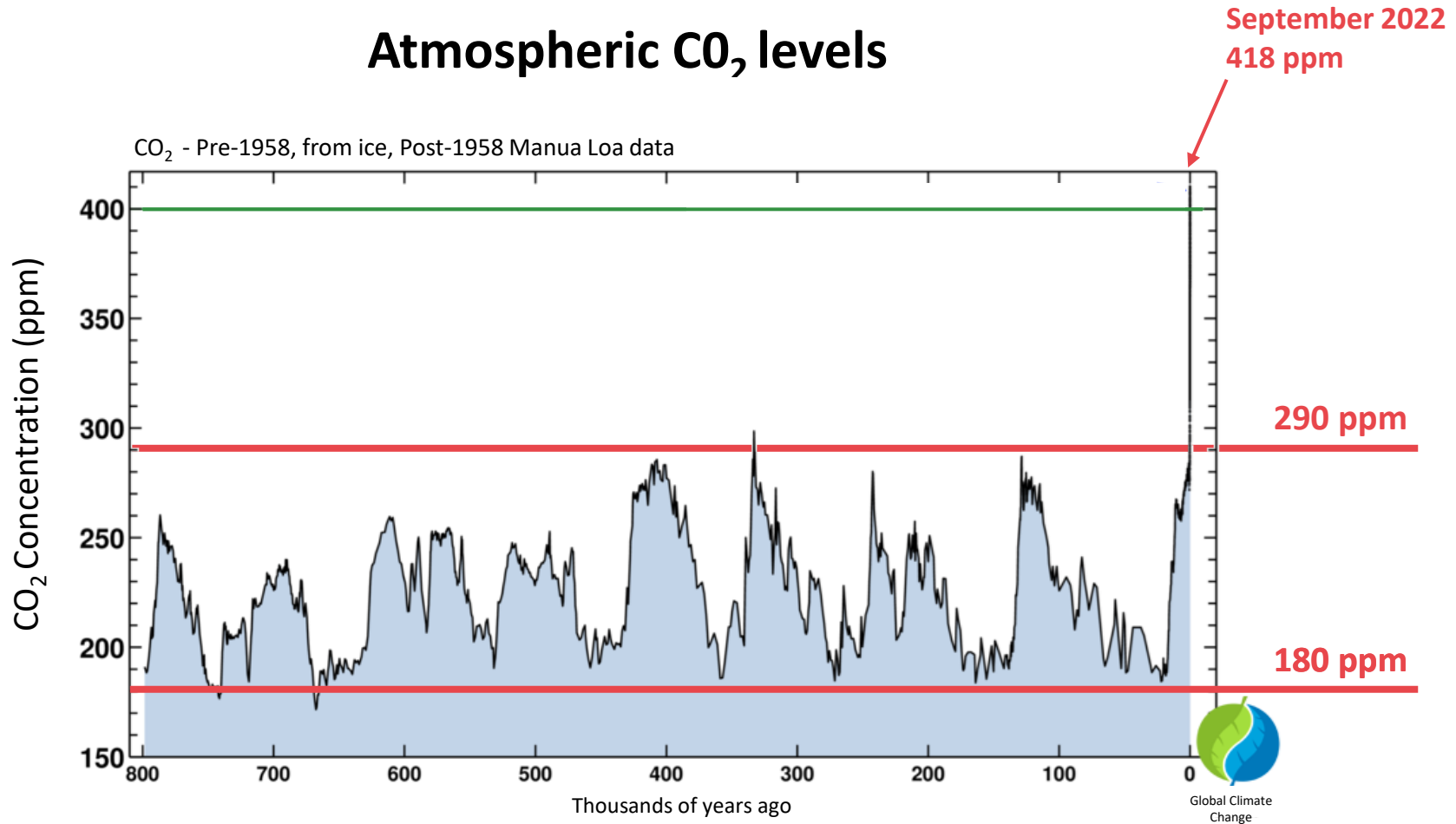


We talk about climate
change, but

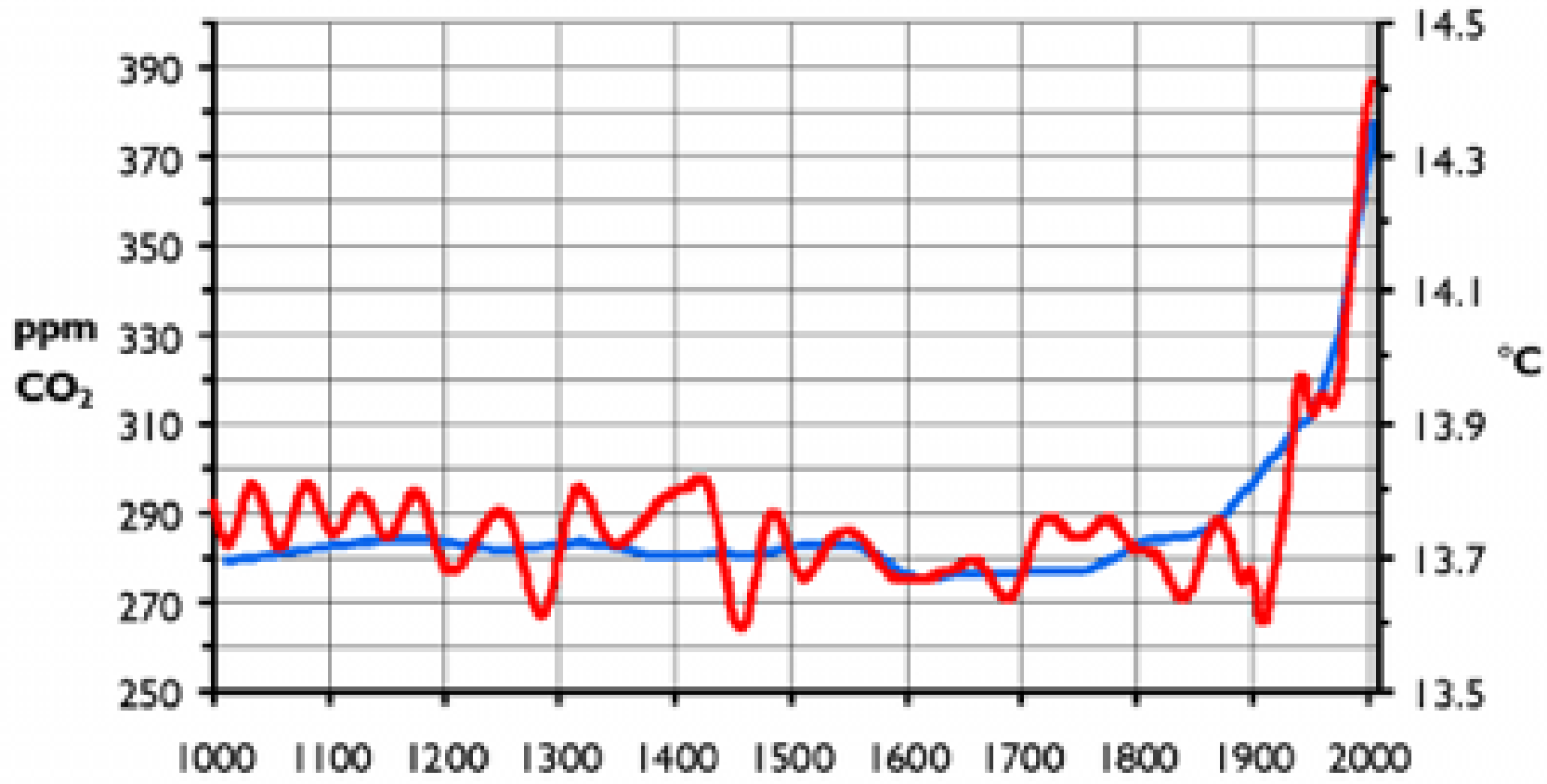


How is the climate **changing**?

Atmospheric CO₂ levels



Climate change (CC)





And then...

What are the greenhouse gases?

C

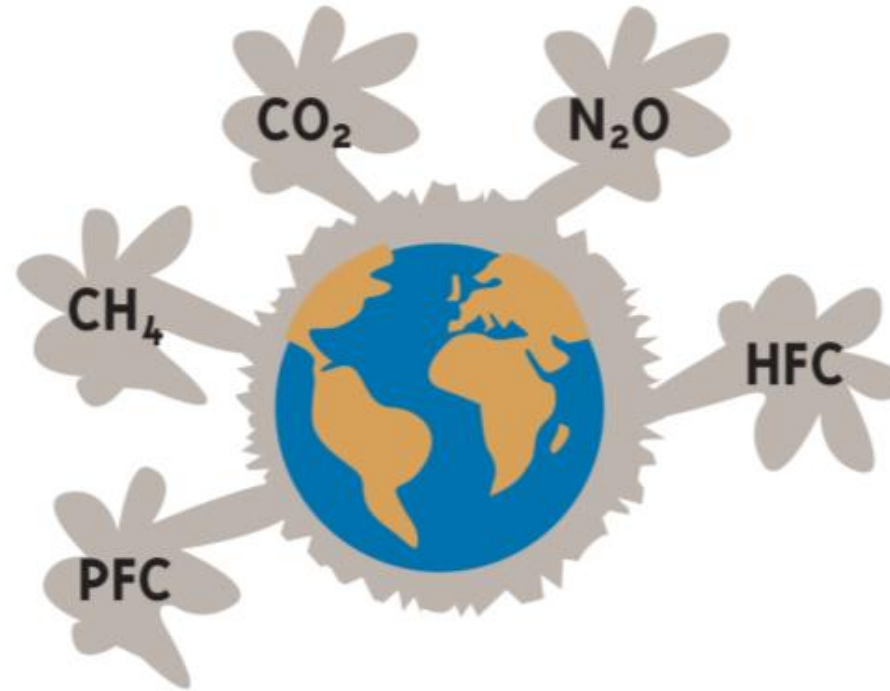
O

2



Greenhouse gases (GHGs)

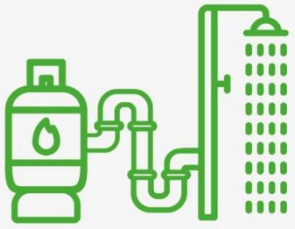
- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)





and... what **is the impact** of
energy use?

Impacts of energy use



70
g CO₂

Showering by heating the water with natural gas



90
g CO₂

Showering by heating the water with electricity



420
g CO₂

Bathing by heating the water with electricity



2
Kg CO₂

Use of the smartphone for a one year



6
g CO₂

Washing heads



320
g CO₂

Bathing by heating the water with natural gas



60-80
Kg CO₂

Manufacturing a smartphone



12
Kg CO₂

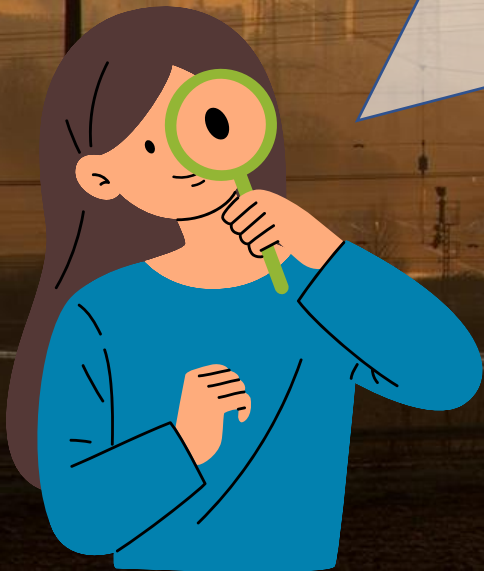
A 100 km journey by car



17.000
Kg CO₂

Manufacturing a medium-size car

Do you notice the
consequences of
climate change in
your lives?



Evidence of climate change





Evidence of climate change



Evidence of climate change



A fast-moving process



**Are governments
acting?**




Paris CC Conference (COP21)



Agreement:

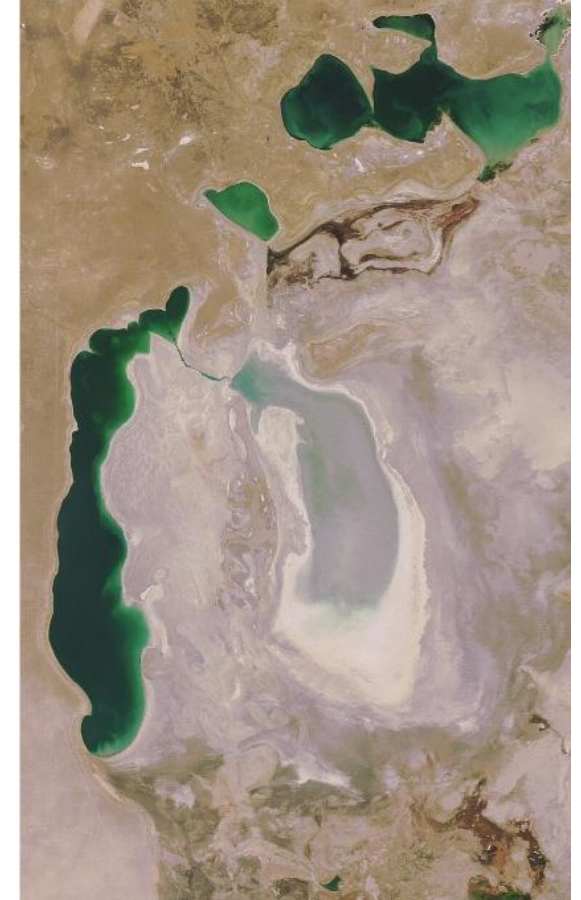
Preventing a climate change that was expected to be dangerous by means of a global action plan limiting the increase in the global temperature of the planet to 1,5°C (2°C maximum) above pre-industrial levels.



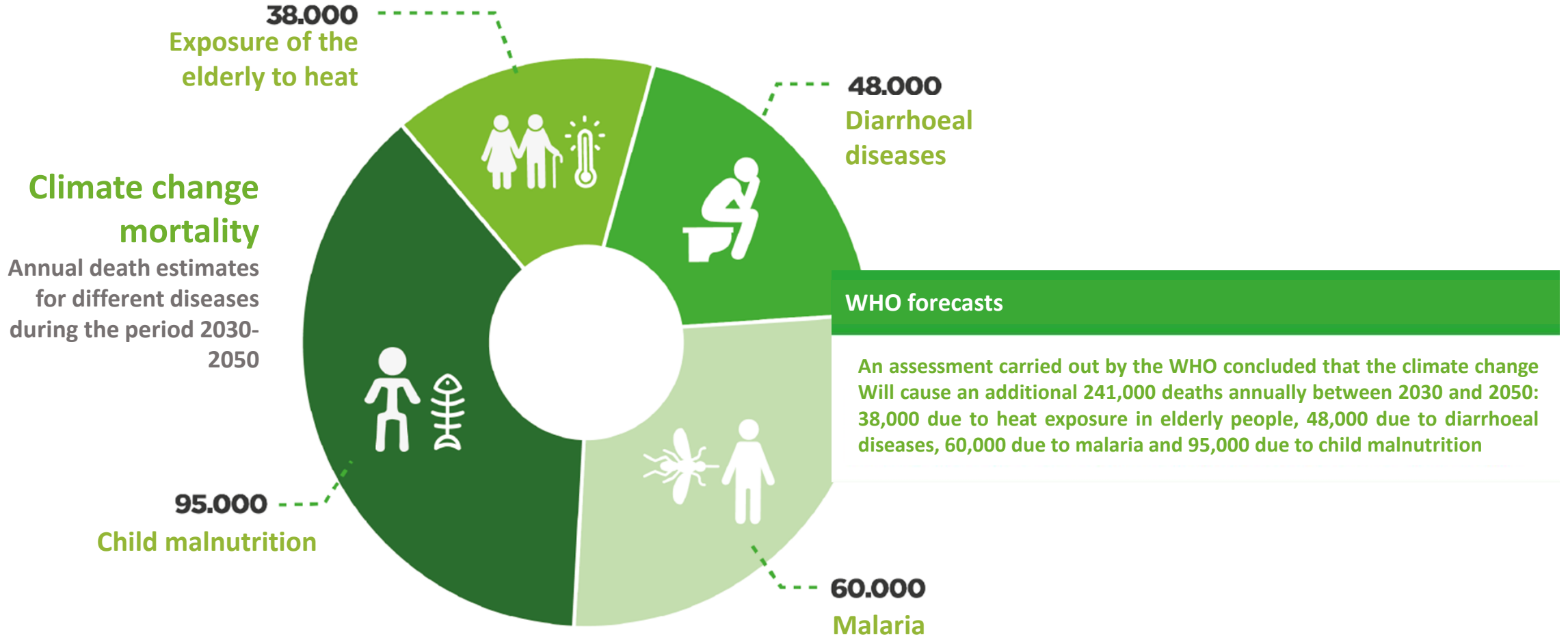
A photograph of a traffic jam on a multi-lane road. Several cars are visible, with thick exhaust smoke rising from their tailpipes, filling the lower half of the frame. In the background, there are traffic lights and road signs. One sign indicates 'NORTH SOUTH' directions for '85' (Highway 85), with arrows pointing left and right. Another sign shows a left-turn lane. The sky is clear and blue. A white speech bubble with a blue border is centered over the image, containing the text: 'Does climate change affect us? How?'. The words 'climate change' are in blue, while the rest of the text is in black.

Does **climate change** affect us?
How?

- Increase in temperatures
- Sea level rise
- Water scarcity, drought and desertification
- Floods
- Food shortages
- Extreme weather events



Health implications



A stylized illustration of a person with black hair, wearing a green jacket, reading a blue book. The person is positioned in the lower-left foreground. The background is a landscape with a golden field in the foreground and a dark, stormy sky with heavy, grey and blue clouds. A large, light blue speech bubble with a dark blue outline is positioned in the upper-middle part of the image, containing the text "How can we fight climate change?".

How can we fight
climate change?

Combating climate change



MITIGATION TAKES UP THE CAUSES OF CLIMATE CHANGE AND **ADAPTING** THEIR IMPACTS

Climate change mitigation

Actions to **reduce** and **limit** GHG emissions

ENERGY EFFICIENCE



INCREASED USE OF RENEWABLE ENERGIES




ELECTRIFICATION OF INDUSTRIAL PROCESSES



EFFICIENT TRANSPORT (ELECTRIC PUBLIC TRANSPORT, BICYCLES, ETC)



CARBON TAX AND EMISSIONS MARKETS



Adaptation to climate change

Actions to **reduce vulnerability** to CC



SAFER LOCATIONS OF FACILITIES AND INFRASTRUCTURE WORKS



LANDSCAPE RESTORATION AND REFORESTATION (FORESTS)



RESEARCH AND DEVELOPMENT ON POTENTIAL DISASTERS, TEMPERATURE BEHAVIOR, ETC.



FLEXIBLE AND DIVERSE FARMING TO BE PREPARED FOR NATURAL DISASTERS



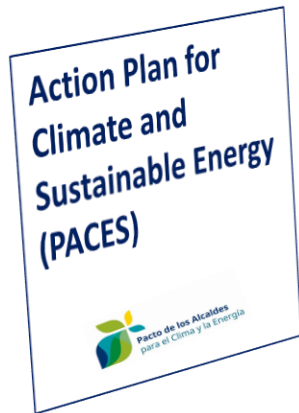
PREVENTIVE AND PRECAUTIONARY MEASURES (EVACUATION PLANS, HEALTH ISSUES, ETC.)



A person's hands are visible holding a rectangular piece of brown corrugated cardboard against a clear blue sky. The cardboard has the words "THINK global" written on the top line and "ACT Local" on the bottom line in a thick, black, hand-painted font. The word "THINK" is in all caps, "global" is in lowercase, "ACT" is in all caps, and "Local" is in lowercase. The sign is held horizontally and centered in the frame.

THINK global
ACT Local

Local initiatives. The Covenant of Mayors



ATTENUATION
Accelerate the decarbonisation of our territories

ADAPTATION
Strengthen our capacity to adapt to the inevitable impacts of climate change

SAFE, SUSTAINABLE AND AFFORDABLE ENERGY
Increase energy efficiency and the use of renewable energy

Collaborate towards a shared vision for 2050





The importance of **COLLABORATION**

It's a challenge for **everyone**

The LIFE CityAdaP3 project

Local Adaptation to Climate Change through Public-Private Collaboration and Corporate Social Responsibility

Improving adaptation to climate change in the urban environment, making use of financing schemes based on a public-private partnership with the participation of local companies

Implement Local Adaptation Plans (PACES) under the Covenant of Mayors for Climate and Energy



Combating CC through LIFE CITYAdaP3



Alcantarilla, España

Multimodal platform (pedestrian and cyclist) adapted to climate change



Lorquí, España

Consolidation and enhancement of urban heads



Molina de Segura, España

Ecological and multipurpose building. Adapted urban park. Adapted urban path



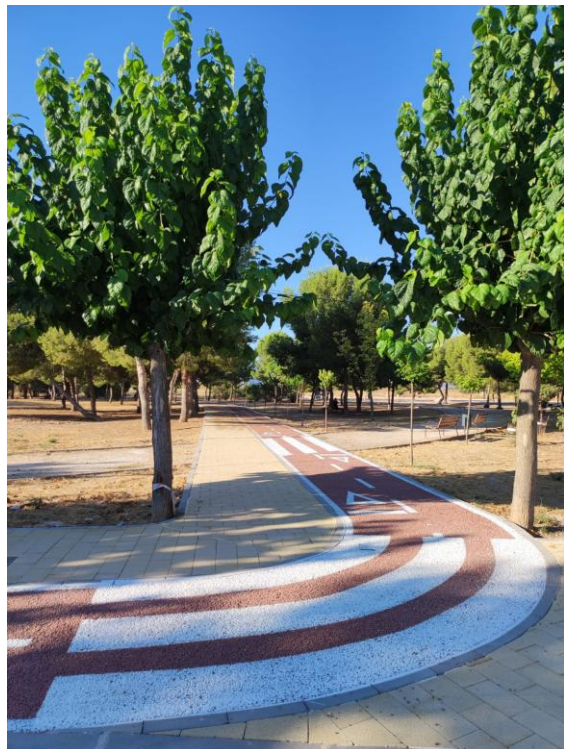
Reggio Emilia, Italia

Climate friendly parks. Urban reforestation in 4 parks

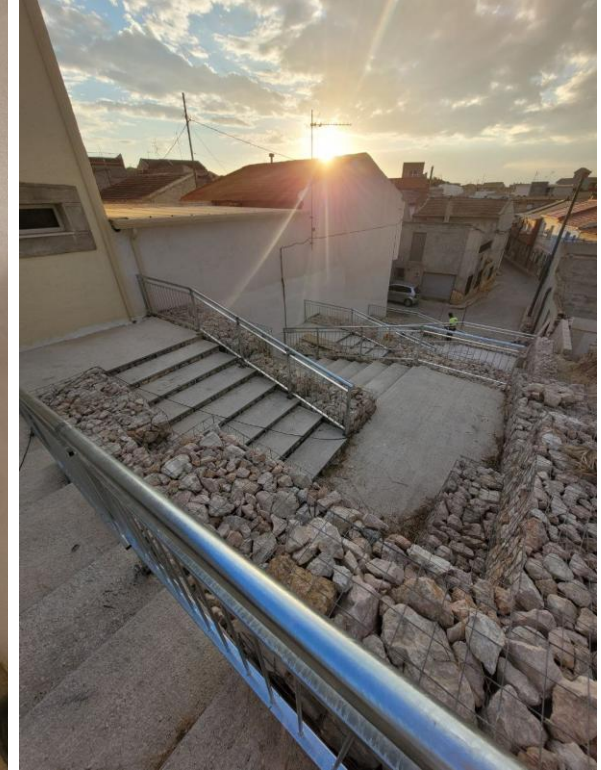
Pilot action in Sewer



- Priority axis
- Built platform

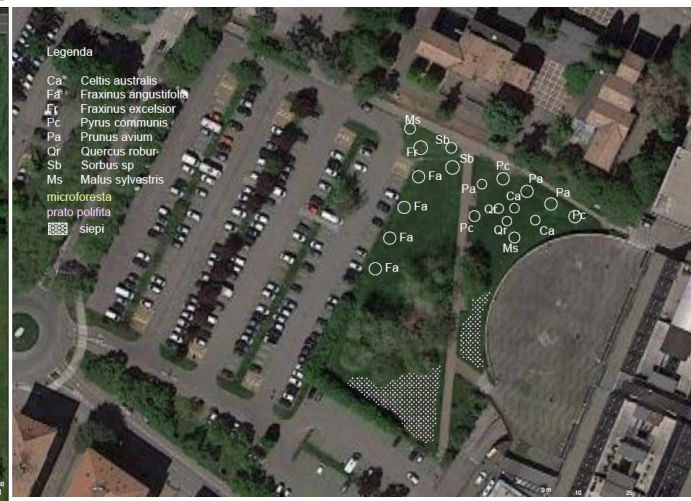
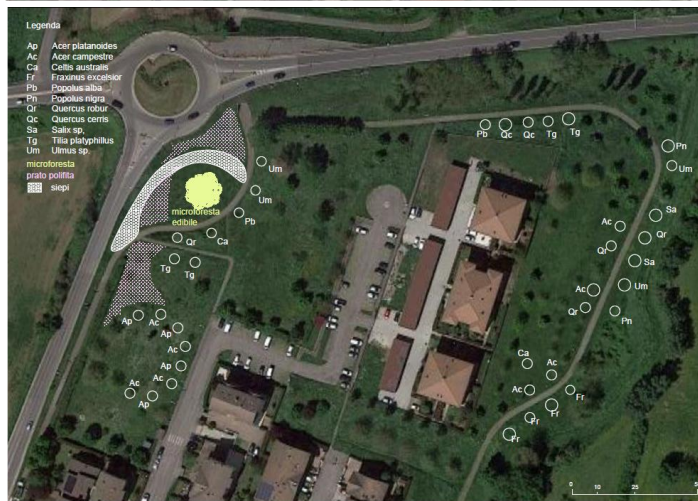
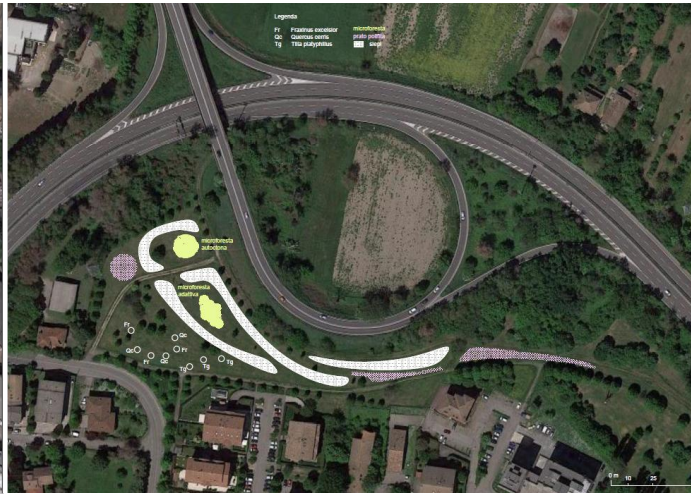
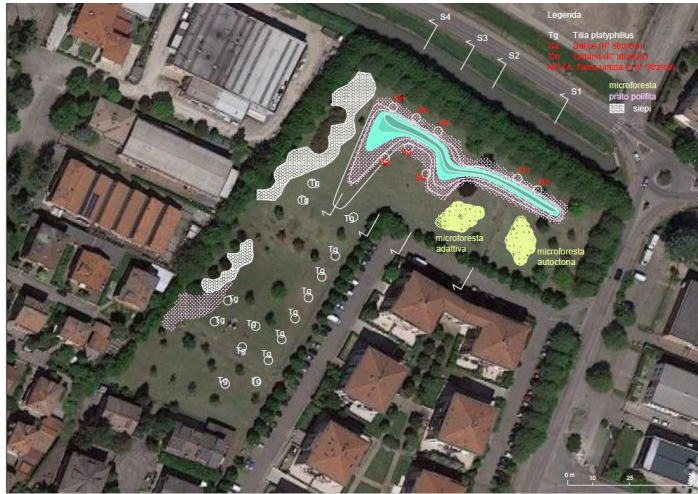


Pilot action in Lorquí



Pilot action in Molina de Segura





Micro foreste sperimentali



Siepi campestri



Prato stabile polifita



Filari



Cityad3 - Reggio Emilia LEAA - Luca Emanueli, Gianni Lobosco, Barbara Stefani

Now that you know the importance...

HOW CAN YOU CONTRIBUTE?

Mitigate at **home**, collaborate **locally** and share your **learning**



Together for a better future





LIFECITYADAP3