Project ACRONYME: CoolCitySpots

PROJECT TITLE: Action for mitigation of urban heat islands effect

Application: LIFE Programme, Climate Action sub-programme:
https://ec.europa.eu/easme/en/section/life/life-climate-action-sub-programme

Priority area: Climate governance and information

Problem addressed:

The urban heat islands notion has been of interest to the scientific community since the 19th century, but it is less known to the common public. This phenomenon manifests itself in the increased temperature of urbanized areas compared to rural areas. In urbanised and densely populated areas the temperature may increase by as much as 10^{o}C compared to surrounding areas.

According to many studies this process, along with the progressive climate change and increased urbanisation of large areas, will accelerate leading to health problems of the population living in cities as well as the progressive deterioration of the natural component of urbanized areas (the disappearance of plants and animals that do not tolerate high temperatures and associated lack of water on one hand and the invasion of alien species on the other). Urban heat islands phenomenon itself also contributes to the acceleration of the process of climate change, mainly through the increased emission of thermal radiation, limiting the movement of air masses or accelerated water outflow leading to desertification of urban areas.

Project idea description:

The CoolCitySpots project leads to limiting the impact of urban heat islands on climate change and quality of life in urbanized areas. This goal will be achieved through **two strategic objectives**:

Strategic objective I: education and information to highlight the causes urban heat islands phenomenon and its impacts on climate change and quality of life and biodiversity in cities.

Strategic objective II: solutions for mitigation the effects of urban heat islands

Main activities

Activities for Strategic Objective I:

1. Education and Information campaign.

The activity will include workshops, seminaries, lectures and other events aiming at dissemination knowledge about urban heat islands and their impact on quality of life and climate change. Target group will include kids and adults, enterprises, local authorities and other related entities.

2. Augmented reality educational game development and dissemination.

Development and dissemination of the game which uses augmented reality technology for the purpose of education about the problem of urban heat islands and finding solution to mitigate their negative impact.

3. Citizen science application for real-time monitoring of urban heat islands.

Application of the idea of citizen science for the real-time monitoring and mapping of urban heat islands in cities. The knowledge gathered in this phase will be used to implement Strategic Objective II (Activity 1).

4. Creation of Educational Centre

In this activity the project of Educational Centre (indoor and outdoor) will be prepared and implemented in the existing space of Poznan Science and Technology Park. The Centre will be designed to educate school groups as well as individuals in the field of urban heat islands (causes and impacts), climate change, air quality, blue-green infrastructure and biodiversity in cities.

Activities for Strategic Objective II:

1. Application and monitoring of chosen blue-green infrastructure solutions in cities.

The activity will include choosing the best solutions to implement them in chosen "hot spots" identified in Activity 3 (Strategic Objective I) for mitigating the negative impacts observed on the site. Several parameters will be monitored in constructed sites, e.g.: temperature, humidity, biodiversity, endurance for weathering. Also cost-effectiveness will be assessed.

2. Microgrants for blue-green infrastructure application in cities

Citizens, private companies, local communities and self-governmental entities will be motivated to implement blue-green infrastructure and other related solutions through the system of microgrants for local-scale activities. Applicants will be encouraged to implement the best practices identified in previous actions of the CoolCitySpots project (Activity 1, Strategic Objective II).

Deadline for submission of proposals: 6th of October 2020, 16:00

Project Duration
Phase 1: 48 months

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Partners we are looking for:

We are looking for a partners in the field of:

- climatology, especially regarding: urban heat islands, climate change, air quality,
- city infrastructure: blue-green infrastructure, environmental-friendly architecture,
- game designing, programming, web designing, databases,
- designing and building of Education Centre,
- urban ecology
- designing and construction of blue-green infrastructure sites.