

## CASE STUDY

### REPORT

How are UIA projects contributing to building resilient cities, adapting to the climate emergency?

### PROJECT

GBG\_AS2C - Blue, Green & Grey\_Adapting Schools to Climate Change

📍 Barcelona, Spain

### TOPIC

Climate adaptation

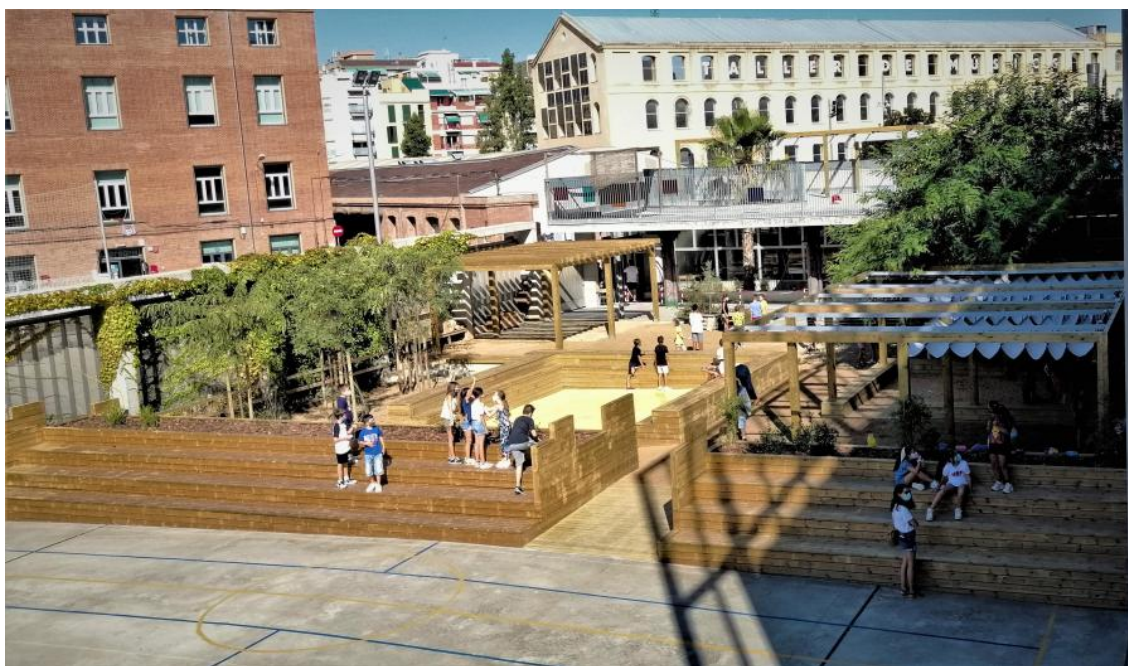
EDIT 14 JUNE 2022

## GBG-A2CC Barcelona

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# Green Blue Grey Solutions for Adapting to Climate Change



GBG\_AS2C project offers climate shelters

Barcelona is a compact city of 1.6 million inhabitants with a hot and humid climate. In the warm period of the year, the city is exposed to an excessive heat burden that is expected to increase in the following years due to the increased frequency, duration, and intensity of heatwaves as a result of climate change.

The GBG\_AS2C project promoted an innovative adaptation plan in support of climate resilience through the conversion of schoolyards to cool islands (termed Climate Shelters) with a mix of blue (incorporation of water points of different types in the courtyards), green (more shadow spaces and greenery in the courtyards), and grey (interventions on the buildings and use of permeable materials) measures.

The project is implemented in the context of Barcelona's Climate Plan, which promotes the transformation of communal spaces as a climate change tackling strategy. The project applied a participatory process for co-designing along with the educational community, the interventions per Climate Shelter. The spatial environmental, climatic, urban, and social characteristics of Barcelona were accounted accordingly.

The project developed a new green sector in the shape of Climate-friendly urban planning. It also has a strong

pillar on urban health, by means of reducing the concentrations of air pollutants and improving thermal comfort both indoors and outdoors. To this end, it considerably supports city resilience to climate extremes.

The implementation of the project was affected by covid-19 restrictions taken that it is strongly related to the school system. Difficulties related to the need for multiple procurement processes for its technical interventions part. A governance system enabling inter-municipal cooperation was established, leading to the effective implementation of the project's work packages, including the on-time completion of the technical interventions.

The output of the project so far, is a network of 30 Climate Shelters dispersed all over the city, a fact that demonstrates its strong upscaling potential and is considered a strong asset for climate resilience to increased air temperatures and heatwaves. Finally, a thorough monitoring and evaluation plan has been developed in support of the assessment of the performance of solutions and interventions.

#### Partnership

- Barcelona City Council
- Public Health Agency of Barcelona - sectoral agency
- Barcelona Consortium of Education
- Barcelona Cycle of Water - Public Service Provider
- Barcelona Institute for Global Health - Higher Education and Research Institute
- Institute for Environmental Science and Technology UAB - Higher Education and Research Institute
- Vila Olímpica School

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