ADAPTATION TO CLIMATE CHANGE OF SCHOOLYARDS IN CASTILLA Y LEON (SPAIN)

The program

The Foundation of Natural Heritage of Castilla y Leon has been developing a program of adaptation to climate change for public schools during two years (2021–2023), together with the Regional Departments of Environment and Education of the Junta de Castilla y Leon.

This program has been financed by REACT-UE (funds supporting the response of the EU to the COVID-19 pandemic and its social consequences, to prepare for a green, digital and resilient recovery of the economy).

The actions of the program aim to achieve a significant and exemplary transformation of the outdoor spaces of educational centers, through renaturation actions, in order to a bigger adaptation to climate change.

During the month of September 2021, the Call for Expressions of Interest was made for the participation in this Program of Climate Adaptation by the different agents, where the actions can have an budget of between €50,000 and €150,000 per educational center.

The 293 applications presented were analysed taken into account different criteria of evaluation and prioritization. These criteria have included the sustainability of the project in the long term, the climatic vulnerability of the center, the commitment of school and the viability of the project that must guarantee that no damage is caused to the environment. Also, a territorial criteria has been taken into account, so that the project contributes at the development of a policy of territorial equilibrium between urban and rural areas.

Finally, the Evaluation Commission selected 65 applications, in different locations of Castilla y León, to get a proportionated distribution and representative throughout territory of the region.

Objective

The program includes the implementation of different green infrastructures and the transformation of playgrounds school into a greener and more sustainable center, using solutions based on nature, which not only will improve the resilience at effects of climate change, but also to contribute at the increase of biodiversity, the development of a food strategy, and the improvement of the health of the students.

The solutions are including the creation of small biodiversity groves, fruit trees, bush plantations and vegetable beds, orchards, vegetable covering of perimeter fences, small ponds and planters, installation of composters, pollinator hotels and nest boxes, improvement of the permeability of the soil, increase in the wooded area, creation of islands of vegetation, inclusion of sustainable drainage systems or planting of bushy and climbing species, among others.

In addition, the department of education will use this project to contribute at the compliance with the 2030 Agenda and will develop a program for the didactic use of the interventions in the schoolyards and their adaptation to climate change, a program of training of teachers who participate in the project, as well as, action to monitor and assess the development and results of the project.

The projects must comply with the objectives of resilience and adaptation to climate change, a greater degree of participation of the school community and a commitment for the regular and future use of schoolyards as a space of learning, since that the projects will permit at schoolchildren the enjoyment of an environment suitable for their development and to contribute to their duty to preserve it. A natural environment is a very interesting tool for working on children's attention, which positively influences about the evolution of students, providing them with natural elements to interact and improve their motor skills.

Agents

Non-university educational centers of the Community of Castilla y Leon of public ownership of Early Childhood, Primary, Secondary Education, Vocational Training, and Special Education Centers are the agents which are designing and implementing these actions of adaptation to climate change at their schoolyards.

Example

We´re attaching, as example, some pictures of adaptation actions done in the schoolyard of “Cristobal Colon” public school located in Valladolid:

FRUIT TREES



ORCHARDS, SMALL PLANTERS

ORCHARDS, SMALL PLANTERS

Next steps

A network and virtual workshop is being created to share best practices and knowledge about actions of naturalization at schoolyards, among different agents and educational centers.

This online “sharepoint” will be the way to communicate the information about indicators for the follow-up and monitor of actions of renaturalization and impact results of the transformation of the courtyard school, as well as the compliance with the objectives and the methodology established.

The indicators are the following:

- Increase in the permeable surface (permeable soil with or without vegetation) (m^2).
- Decrease in the average temperature of playground school (+/- ºC), where the temperature will be measured at different locations to be representative of different types of action.
- Increase in the courtyard school area covered by trees (crowns) (m^2), where the vertical projection of the treetops by species is measured.
- Increase in the area with shadow projection by artificial elements such as pergolas, awnings or others (m^2), where the flat projection on the ground covered will be measured, both in the pre-existing ones and in the projected ones.
- Increase in the percentage of green area per student (m^2/student), including orchards.
- Increase in the biodiversity (no. of plant species) associated to new plantations, disaggregating by trees and shrubs, and where the balance of biodiversity will comply with the Santamour tree biodiversity rule (%).