PROMOTING BIODIVERSITY IN MINING RESTORATION PROCESSES: LAFARGEHOLCIM CONTRIBUTES TO THE RECOVERY OF POLLINATOR SPECIES IN SPAIN

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CEMBUREAU
The European Cement Association

OBJECTIVE

To deal with the population loss of bees and, in turn, contribute to the restoration of its quarries, LafargeHolcim Spain has opted for an innovative system in which granivorous birds and bees play a fundamental role. Specifically, the company is working on the recovery of swarms of wild bees, currently in regression, as a lever for pollination and the promotion of natural biodiversity within the restoration plans of its quarries. The purpose of this project is to promote pollination, as well as natural biodiversity, within the ecological restoration of quarries.

CONTEXT

Pollination of animals plays a vital role as a regulator of ecosystem services, according to a report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). About 80% of flowering plants are pollinated by animals, mainly insects. But in the specific case of bees, the Food and Agriculture Organization (FAO) warns that almost 10% of the population faces extinction in Europe, due to the combined effects of climate change, intensive agriculture, pesticides, biodiversity loss and pollution. Both birds and insects are key elements of LafargeHolcim's restoration plans, since they act as bioindicators of the quality of the environment and favor the pollination and dispersal of seeds.

SOLUTIONS

Aware that both birds and bees act as bioindicators of the quality of the environment and contribute to the dispersal of seeds, LafargeHolcim has opted to install hives for wild bees in its Salt del Llop quarry (Sagunto, Valencia) and hives for honey bees in Yepes-Ciruelos quarry (Toledo, Castilla-La Mancha). In other cases, such as in Alba Jerez I (Jerez de la Frontera, Cadiz) and Montcada i Reixac (Barcelona, Catalunya) quarries, the company has opted for enabling and offering the space to local beekeepers who encounter in the quarries open habitats, which are especially well-suited for their activity. In addition, native herbaceous species are planted, previously going through a selection process to ensure they correspond to the preferences of the most abundant groups of pollinating insects.

In the case of the beehives installed in Yepes-Ciruelos and Salt del Llop, so-called "environmental beekeeping" is practiced, as they are not honey beehives, but rather an innovative tool that prioritizes the welfare of the bees and the recovery of the wild swarms. This way, the typical stress to which the producing colonies are subjected is minimized, an essential condition for these insects to increase the amount of seeds in the plants. Usually, the seeds are spread by wind and water, as well as by birds and mammals, but only a small percentage manages to find the propitious conditions to germinate and grow. Therefore, it is of great interest to introduce pollination stations in the areas of the quarries to be restored, since they increase the quantity of total seeds and accelerate the process of naturalization.

LafargeHolcim, in collaboration with various conservation and scientific entities (ACER, PLEGADIS, UAH_FIRE, BRINZAL), observed that adapted quarry environments show a high attraction capacity for certain birds. Diverse communities were detected, among which birds raptors such as the eagle owl or the common kestrel, corvids such as the jackdaw, pigeons, various species of sparrows, the three species of collaloba present in the Iberian Peninsula and other birds such as the sapper and bee-eater, which dig their nests in stockpiles and sandy materials present in the quarries. For this reason, birdlife management in these spaces present an opportunity to recreate locally scarce habitats, as by carrying out specific reforestation, birds function as an effective seed dispersal engine.

OUTCOMES

LafargeHolcim is reinventing the traditional models of restoration by incorporating in its industrial management conservation objectives aligned with those of the European Commission's Natura 2000 network, and defending the importance of reconciling mining activity with rehabilitation work. The company's goal is to leave mining areas with more biodiversity than they had before activity.

In order to measure the results of these initiatives, LafargeHolcim counts on tools such as the BIRS (Biodiversity Indicator & Reporting System), developed together with the International Union for the Conservation of Nature (IUCN). BIRS is a simple valuation tool that allows employees responsible for mining operations on the ground to determine the level of risks and opportunities for biodiversity in a given quarry, as well monitor its evolution year after year. Also, together with Ecoacsa, LafargeHolcim is working on a tool based on international criteria (CICES) to assess the ecosystem services that the company generates through quarry rehabilitation.

PARTNER

ACER, PLEGADIS, UAH_FIRE, BRINZAL

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