

Bird Feeders for Forest Regeneration

“GHIANDATOIA”, AN INNOVATIVE NATURAL-BASED SOLUTION.

When we think of reforestation, we usually think of planting new trees. This is one possibility, but it is neither the only nor the best option. Alongside selecting tree planting to enhance biodiversity and selective management of damaged vegetation to increase resilience, a key component of the intervention is the enhancement of natural seed dispersal processes. Wind, water, and... animals. How can wildlife become an active partner in forest regeneration, accelerating ecological succession in a way that is both effective and led by nature? The answer lies in the “Operazione Esperia” project and its “Ghiandatoia” (bird feeder).

FIRST TRIALS IN ITALY: “OPERAZIONE ESPERIA”

After the devastating wildfire of August 2024, the forest landscape of Esperia (a municipality in Central Italy) was left deeply degraded: 140 hectares of forest and shrubland were destroyed, exposing soils to erosion, disrupting ecosystems, and threatening long-term ecological stability. From this crisis, however, a regeneration project was born: “Operazione Esperia”.

The “Operazione Esperia” for the first time combines traditional forestry practices with innovative ecological approaches. Alongside selecting tree planting to enhance biodiversity and selective management of damaged vegetation to increase resilience, a key component of the intervention is the enhancement of natural seed dispersal processes. This is where the “Ghiandatoia” – a specially designed bird feeder – plays a central role.

WHEN WILDLIFE BECOMES AN ACTIVE PARTNER IN FOREST REGENERATION

Developed and patented by the association GUFO ETS, the Ghiandatoia is not a simple feeder, but an ecological tool designed to support ornithochory, the dispersal of

seeds by birds and other wildlife. The structure allows seeds – mainly acorns and berries collected from nearby forests – to remain viable for long periods, making them accessible to birds that naturally transport and hide them across the burned area. Through this mechanism, wildlife becomes an active partner in forest regeneration, accelerating ecological succession in a way that is both effective and led by nature.

The Ghiandatoia is specifically designed to enhance the ecological role of the Eurasian jay (*Garrulus glandarius*), a key ornithochorous species in Mediterranean and temperate forests. Jays are known for their capacity to collect large numbers of acorns and other seeds for later consumption, a significant proportion of which remain unrecovered and successfully germinate. By providing a concentrated and continuous supply of viable native seeds, the Ghiandatoia amplifies this natural dispersal mechanism, increasing seed transport distance and deposition in degraded forest areas. This interaction reinforces the jay’s function as an ecosystem engineer. De facto jays are a kind of “special volunteer” in this operation.

Between the 2025-2027 seasons, around 300,000 seeds will be made available through four Ghiandatoie installed across the affected area. The seeds are collected and treated with the support of the Botanical Garden of Rome and the Monti Aurunci Regional Park, ensuring the use of native species adapted to local environmental conditions.

Operazione Esperia demonstrates that effective ecological restoration can be achieved through low-impact, cost-efficient, and nature-based approaches. When grounded in scientific knowledge, supported by community engagement, and aligned with natural ecological processes, even extensively degraded landscapes can recover toward structurally complex and resilient ecosystem states.



A PRACTICE TO BE SPREAD IN OTHER REGIONS

Managing, restoring and increasing the European forest coverage, this is what the Belgian company Sylva Nova is all about (www.sylvanova.eu). Thanks to its European network of partners in countries where it provides technical and financial support to landowners, Sylva Nova has often contributed to forest restoration projects in Italy. It is in this context that some of its forest engineers participated in the Esperia project and now intend to deploy this innovative technique in other regions.

A first bird feeder has already been installed in Hornechuelos, Spain, as part of a project to restore a degraded Dehesa habitat; a second one has been set up in La Roche, Belgium, as part of a large-scale forest restoration project following a bark beetle attack. Sylva Nova, which brings together the worlds of business and forestry for the benefit of shared resilience, welcomes the development of such a practice based on working with living adjuvants.

COLLABORATIVE PROJECT

The project could be implemented thanks to a collaborative framework involving civil society organizations, scientific expertise, and local administrations. Driade ODV plays a central coordinating role, overseeing project design, volunteer mobilization, and on-site implementation of restoration activities. GUFO ETS (Gruppo Universitario Faunistico Ornitologico) provides scientific and technical expertise. Local administrations, the Municipality of Esperia and the Regional Natural Park of the Aurunci Mountains, ensure institutional support and regulatory compliance. Sylva Nova provides technical and financial support.