



MANAGING FALLOW LANDS TO CONSERVE THE IBERIAN STEPPES



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The Iberian steppes: a singular landscape in danger of disappearing

In terms of the conservation of European biodiversity, the value of the Iberian steppes is incalculable. These open landscapes are the result of centuries of human land use based, above all, on dry cereal cultivation and extensive sheep grazing. The ecological importance of these landscapes can be appreciated if we analyse the role they play in the conservation of certain European birds. For example, these steppes harbour the world's largest population of great bustards and Europe's largest numbers of its smaller relative, the little bustard. Furthermore, they are home

to 90% of the European Union's pin-tailed and black-bellied sandgrouse, as well as the strongest European populations of both lesser kestrel and Montagu's harrier. Not to be forgotten are the small-game species such as brown hare and red-legged partridge that depend on these open landscapes or the dozens of plants and invertebrates that thrive there, many of which are endemic to Spain. Finally, like other herbaceous environments, well-managed steppe habitats capture and store CO₂ in the soil and so play a key role in **mitigating the effects of climate change**.



Sadly, these habitats are being transformed at an alarming rate due to agricultural intensification, the planting of tree crops and, more recently, the construction of solar and wind farms. In many areas, traditional agricultural methods are being abandoned and former croplands are being overrun by encroaching scrub and forest. **No other habitat in Spain is undergoing such a drastic transformation.** As a result of these changes, the Spanish population of little bustards has fallen dramatically by over 50% in recent decades. Similar declines have been detected in other steppe birds, with falls of 25–50% noted in Spanish populations of pin-tailed and black-bellied sandgrouse, lesser kestrel and Montagu's harriers. These figures reflect the decline in steppe bird populations, which are relatively easy to estimate, and it is likely that similar regressions are occurring in steppe plant and invertebrate populations whose conservation statuses are poorly known. Excessive cultivation and overgrazing in these landscapes release tonnes of the CO₂ stored in the soil into the atmosphere.

SUMMARY

Spain is home to the largest area of steppes in the European Union.

These open habitats have been moulded by centuries of human activity and today are home to many threatened species, as well as plentiful small game. They help mitigate the effects of climate change by fixing atmospheric CO₂ in the soil.

These steppes are being destroyed faster than any other Iberian ecosystem, which is provoking a catastrophic decline in many wild animal and plant species and the release of tonnes of CO₂ into the environment.



Spain is home to the most extensive area of steppes in Europe, which are being lost faster than any other habitat.

An effective strategy: fallow management

Urgent measures need to be taken in light of the destruction of this enormously valuable landscape if we are to ensure that our highly threatened steppes can be conserved and restored. It is essential that, as part of any project to conserve steppe habitats, agricultural activities are maintained to safeguard the employment they provide for many people in rural areas. One of the most effective and tried

and tested ways of conserving this way of life is to manage fallow as a means of preserving habitat for specialist steppe species. Traditionally, fallow land is agricultural land that is set aside and left unsown to help restore the nutrient balance in the soil and control the spread of weeds. Another traditional technique is the planting of nitrogen-fixing leguminous plants that help give the soil a 'rest'. Spanish



OUR AIM

To restore priority areas of Iberian steppes—one of the most threatened habitats in Europe—by managing ecologically highly valuable fallow in collaboration with local farmers, public administrations and businesses.

farmers have been managing fallow land as an agricultural technique for centuries and in doing so have inadvertently generated one of the largest areas of steppe habitats in Europe. Nevertheless, this type of agricultural land use is being lost or being replaced by the so-called 'white fallow', which consists of stripping all plant cover and the consequent loss of much of the ecological value of the land. By comparison, cereal landscapes that preserve enough areas of fallow with good plant cover help guarantee the survival of much of the biodiversity associated with our steppe habitats.



Appropriate management of fallow is the best tool for ensuring the survival of our steppes and, at the same time, for maintaining agricultural activity in rural areas.

Combining science and economics to benefit biodiversity and farmers

Most Spanish farmers have abandoned the custom of preserving areas of fallow due as much to the bizarre economic incentives they are offered as to the modern agricultural techniques that have been popularized in Spain in recent years. Reversing this trend will mean confronting a double challenge: re-establish techniques of agricultural management that no longer form part of many farmers' modus operandi and do so in a way that does not provoke any financial hardship. In the first case, sufficient scientific and agricultural knowledge exists regarding how fallow

management can help restore steppe environments. In Lleida, the Forest Science and Technology Centre of Catalonia and the Catalan government are currently managing in an environmentally sustainable fashion 4,000 ha of fallow land and have had notable successes in the recovery of steppe birds and other species that inhabit these open spaces. Our aim is to apply this scientifically robust experience to other steppe areas in Spain and increase the role it plays in the conservation of fallow lands in a visible and measurable way.



Our work consists of planning, funding and evaluating the maintenance of ecologically highly valuable fallow lands.



In the second case, we also hope to take advantage of grants for sustainable agriculture, donations from private foundations and environmental compensation agreements to offer farmers financial incentives to set aside areas of fallow of great ecological value. It is important to remember that the management of fallow land does not mean that agricultural land will be abandoned; rather, the land will be managed using scientific criteria to ensure the continuity of agricultural activity and safeguard the employment opportunities it offers. In this way, we hope to restore one of Europe's most valuable landscapes and, at the same time, generate economic prospects and guarantee employment for our farmers.

Our steppes are home to the largest population of Montagu's harriers in Europe, as well as the continent's strongest populations of both great and little bustards and pin-tailed and black-bellied sandgrouse.

OUR METHODOLOGY

Identify priority areas for conserving steppe landscapes using little bustard and pin-tailed and black-bellied sandgrouse as indicator species.

Identify organizations potentially interested in financing the conservation and restoration of these areas.

Reach agreements with farmers and landowners to finance the management of ecologically valuable fallow land.

Manage fallow land once agreements have been reached.

Monitor scientifically the results of our work both in economic and ecological terms using as indicators bird, plant and invertebrate populations, and farmers' incomes.

Use the results of our evaluations to improve our methods and adapt them to the singularities of each area.

Extend our work into other areas.



Fundación Global Nature: leaders in the conservation of agricultural habitats

Fundación Global Nature has been promoting the conservation of biodiversity in agricultural environments for three decades, during which time it has undertaken projects with regional governments, town councils, farmers' associations, stock-raisers, hunters, private businesses and research centres aimed at reaching collaborative solutions that combine ecological restoration and local development. We have teams established in steppe habitats in areas such

as Tierra de Campos, Bardenas Reales, Llanos de Cáceres and Castilla-La Mancha. The presence of these experienced teams on the ground, together with our network of contacts with local authorities, farmers, businesses and other important groups, as well as high-quality scientific assessment of fallow management, enables us to manage thousands of hectares of fallow land and help restore large areas of steppe habitats.



Our foundation works with farmers, town councils and scientists to ensure the appropriate management of steppe habitats.



EXPECTED RESULTS

Within 5–7 years we hope to achieve the following:

- ✓ Manage over 5,000 ha of ecologically high-quality fallow land to generate optimum habitat for steppe birds and other species associated with these environments.
- ✓ Benefit directly over 250 farmers in at least three autonomous regions.
- ✓ Generate robust data regarding the recovery of seriously endangered populations of steppe birds.
- ✓ Communicate these results effectively to all participating people and organizations to encourage others to collaborate in the future.



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