

# Conservation and Sustainable Management of Turkey's Steppe Ecosystems

## PRISTINE STEPPES OF ŞANLIURFA

"Conservation and Sustainable Management of Turkey's Steppe Ecosystems" is a GEF-funded project, aiming at improving conservation of Turkey's steppe ecosystems through effective protected area management and mainstreaming steppe biodiversity conservation into production landscapes.

Covering about 32 million hectares, which equals to nearly 40% of the country, steppes are one of the most ecologically important and vulnerable ecosystems in Turkey. Some of the country's well-preserved and intact steppe ecosystems occur in Şanlıurfa. They are globally significant and unique, hosting rich plant and butterfly species and a high number of globally threatened birds, mammals, amphibians and reptiles.

### Big Mammals

The steppes are home to large mammal fauna of the area such as Goitered Gazelle (*Gazella subgutturosa*), Striped Hyena (*Hyaena hyaena*) and Lynx (*Lynx lynx*). Unfortunately, most of the steppes in Central and Southeastern Anatolia now occur in isolated areas, which also causes the loss of connectivity between wildlife and steppes. It is vital to implement buffer zones and wildlife corridors for the continued existence of wildlife in this area.



### Great Bustard

The site is also an important wintering area for the Great Bustard (*Otis tarda*), a globally threatened migratory bird.



### Harran Lizard

The Harran Lizard (*Acanthodactylus harranensis*) is currently found only near the ruins of the ancient city of Harran in Şanlıurfa. This species does not tolerate intensive agriculture practices such as excessive use of pesticides, which occurs in the fields surrounding the historic site.



### Sociable Lapwing

Another important species in the area, the Sociable Lapwing (*Vanellus gregarius*), is a highly threatened species with an extinction risk at global scale. The species is declared critically endangered and it relies on steppes of Şanlıurfa during the migration period.



### Genetic Resource of Legumes

The area holds the globally significant genetic resources of some plant species including wild Chickpea (*Cicer pinnatifidum* Jaub. & Spach), wild Lathyrus (*Lathyrus cicera* L.), wild Lentil (*Lens orientalis* Boiss.).



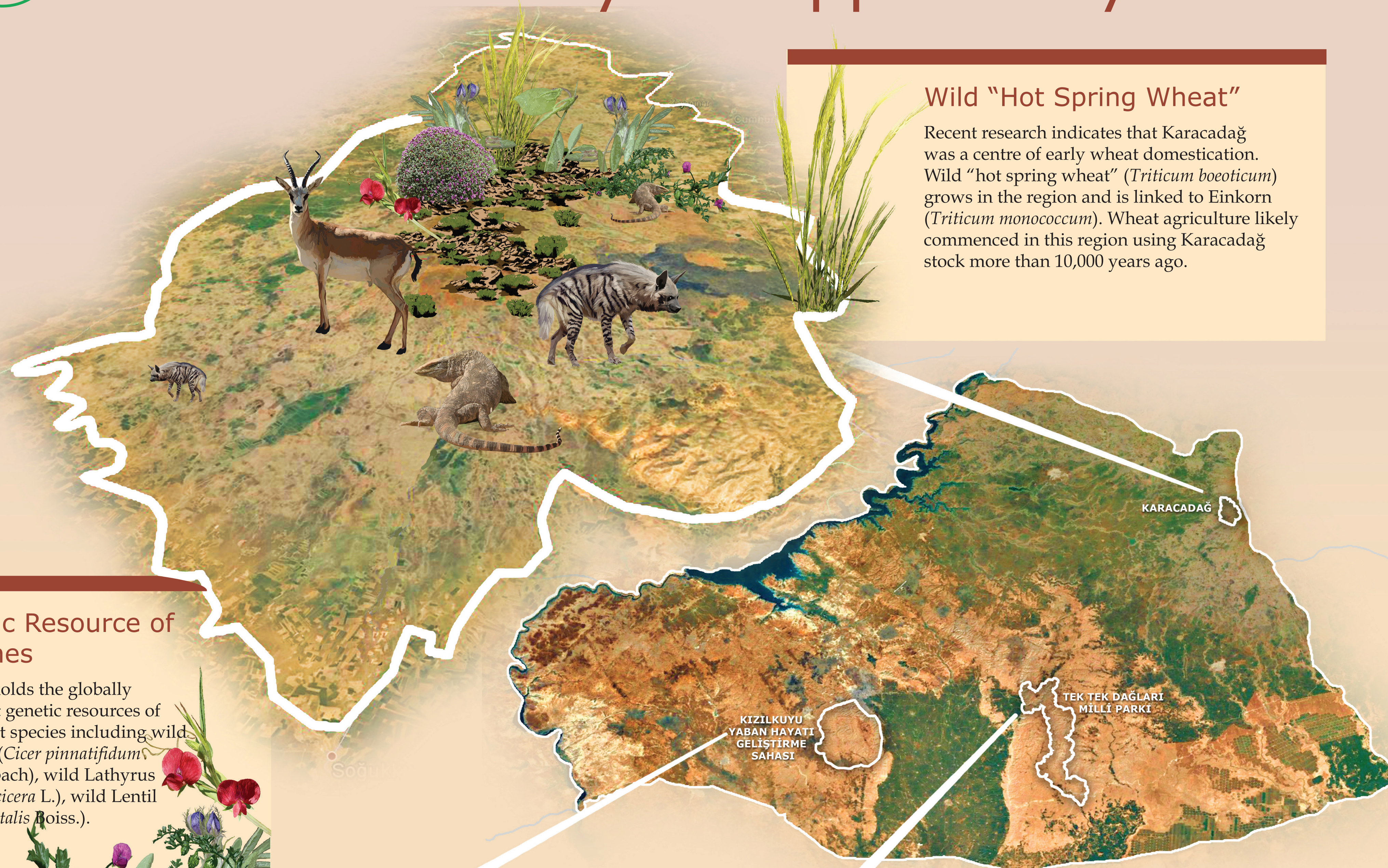
### Goitered Gazelle

There is nothing that represents lively biodiversity of Şanlıurfa's steppes better than goitered gazelle (*Gazella subgutturosa*). The steppes in this region are home to Turkey's only remaining population of free-ranging goitered gazelles, representing the western fringe of this species. Gazelles depend upon large intact steppes, functioning as a living indicator of healthy steppes.



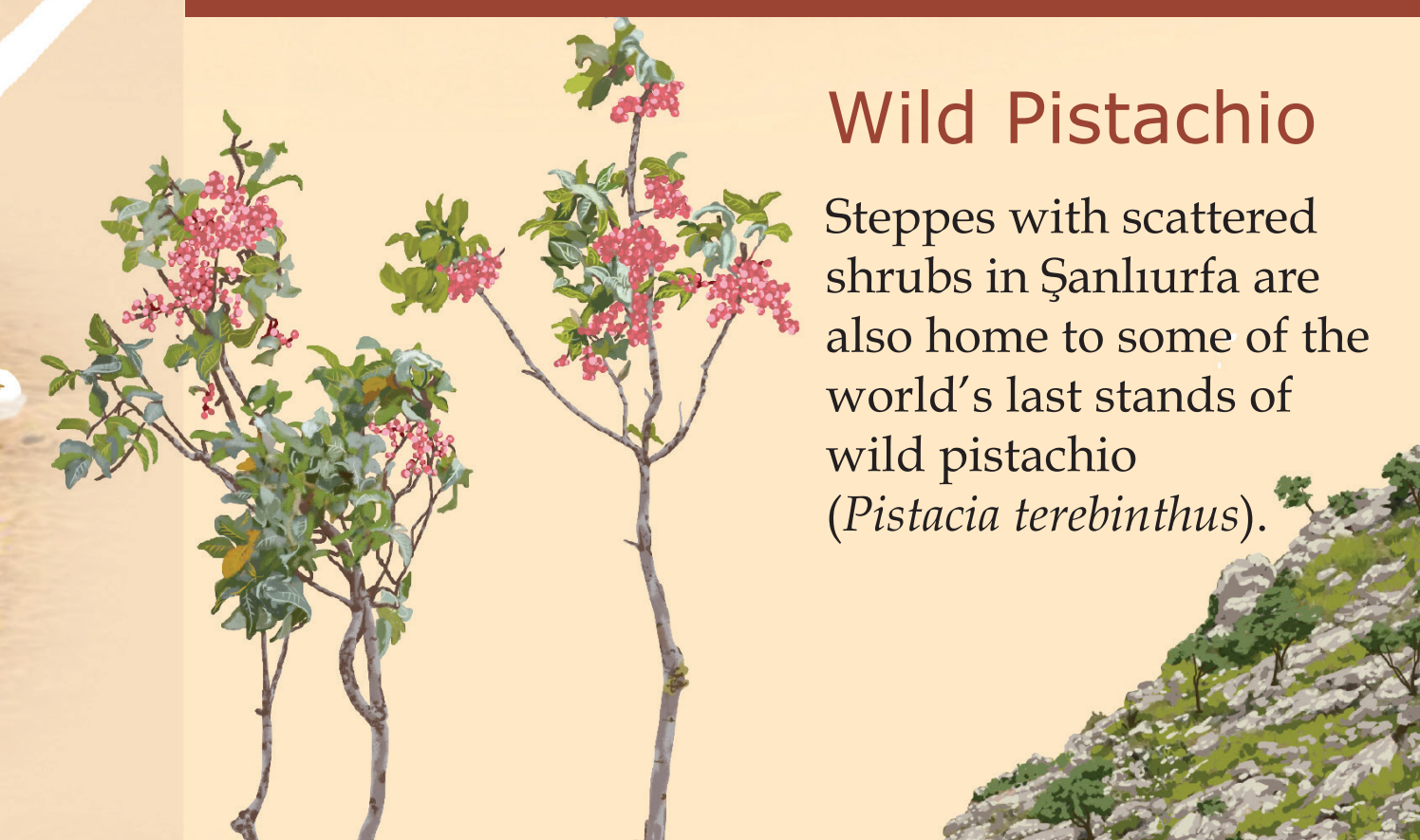
### Wild "Hot Spring Wheat"

Recent research indicates that Karacadağ was a centre of early wheat domestication. Wild "hot spring wheat" (*Triticum boeoticum*) grows in the region and is linked to Einkorn (*Triticum monococcum*). Wheat agriculture likely commenced in this region using Karacadağ stock more than 10,000 years ago.



### Wild Pistachio

Steppes with scattered shrubs in Şanlıurfa are also home to some of the world's last stands of wild pistachio (*Pistacia terebinthus*).



### Enormous Lizards

Very timid and harmless, the Desert Monitor (*Varanus griseus*) is a rare species in danger of extinction.





## PROTECTING THE STEPPE OF ŞANLIURFA

Şanlıurfa is located in Southeastern Anatolia in a large and productive plain between two large rivers, namely Tigris and Euphrates. About 250,000 hectares of Şanlıurfa are considered as steppe ecosystems with approximately 50,000 hectares in protected areas. These steppes are part of globally significant Akçakale Steppes and Ceylanpınar Key Biodiversity Area, which are some of the last remaining, well-preserved and biologically diverse steppe ecosystems in Turkey and Europe.

With the project, "Conservation and Sustainable Management of Turkey's Steppe Ecosystems", steppes of Şanlıurfa will be conserved through effective protected area management. Steppe biodiversity conservation will be mainstreamed into productive landscapes in cooperation with national authorities, farmers, pastoralists, universities, research institutions and civil society organizations to secure livelihoods of communities by improving the conditions of steppes.



### Karacadağ Steppes

Karacadağ is an extinct volcano. It has outstanding steppe flora diversity. There are 534 plant species representing 269 genera and 66 different families. More than 32 endemic species have been discovered within Karacadağ. Numerous species are rare or endangered. Besides, wild "Hot Spring Wheat" (*Triticum boeoticum*) linked to Einkorn (*Triticum monococcum*) grows in the region.



### Kızilkuyu Wildlife Reserve

Kızilkuyu was declared a wildlife development area in 2006. With an average elevation of 600 meter and highest elevation at 764 meter, Kızilkuyu encompasses about 20,000 hectares.

Kızilkuyu currently has approximately 200 free-ranging gazelles, even though the herd's capacity to extend habitat range is constrained by surrounding urban and agricultural development. There is a gazelle breeding station in the center of the protected area.

Kızilkuyu is one of the most important stopover sites for the critically endangered sociable lapwing (*Vanellus gregarius*). The site is also an important wintering area for Great Bustards (*Otis tarda*). Other species of conservation concern are the Pin-tailed Sandgrouse (*Pterocles alchata*), the Cream-Colored Courser (*Cursorius cursor*) and Montagu's Harrier (*Circus pygargus*).



### Tek Tek Mountains National Park

The TekTek Mountains were declared a national park in 2007. The protected area covers 20,000 hectares with a hilly topography, located between the Harran and Viranşehir Plateaus. The elevation varies between 500 and 750 meters. Part of the Irano-Turaniaphyto geographic region, Tek Tek is defined as "forest steppe" and hosts an array of endemic species. This includes one of the world's last remaining wild pistachio forests. There are 2,800 ha of turpentine pistachio (*Pistacia terebinthus*) shrubland in the area.



## PROTECTING TURKEY'S STEPPES

Steppes, covering approximately 40% of the country, are one of the most ecologically important and vulnerable ecosystems in Turkey. Şanlıurfa hosts a substantial percentage of Turkey's intact steppe ecosystems, yet those areas are highly threatened by habitat loss, lack of practices conserving the biodiversity, and climate change. The cumulative impact of these threats is causing the deterioration of biodiversity at a fast pace; about 75,000 hectares of natural steppes have been lost since the 1970s. The " Conservation and Sustainable Management of Turkey's Steppe Ecosystems in cooperation with national authorities along with farmers, pastoralists, universities, research institutions and organizations of the civil society.



The main goal of the project is to improve the conservation of Turkey's steppe ecosystems through effective protected area management and mainstreaming steppe biodiversity conservation into production landscapes.

### Empowering Local Communities

The project is ultimately designed to empower local communities and secure their livelihoods. Pastoralists are among the main inhabitants of steppe regions and they usually rely on public-owned pasturelands. The project will help rural communities to work collaboratively with partners while deepening their understanding on environmental issues that have a direct impact on their livelihoods.

### Expanding Protected Areas

The project aims at creating a new protected area in Karacadağ steppes and enhancing biodiversity within the pilot sites. This requires improving the conservation of currently degraded steppe lands, while reducing the degradation rate which peaks due to urbanization or conversion of steppes into agricultural lands, resulting in the loss of steppe biodiversity.

### Setting Institutional Frameworks for Landscape Level Conservation

The project will make improvements on -the-ground and at policy level that can create models for scaling up practices that could advance sustainable management and conservation of steppe ecosystems in Turkey.

<b>Project title</b>	Conservation and Sustainable Management of Turkey's Steppe Ecosystems
<b>Executing partners</b>	<p>General Directorate of Nature Conservation and National Parks Ministry of Forestry and Water Affairs of Turkey Söğütözü Cad. No: 14/E Ankara Tel: +90 312 207 50 00 www.milliparklar.gov.tr</p> <p>General Directorate of Plant Production Ministry of Food, Agriculture, and Livestock of Turkey Eskisehir Yolu 9. km Lodumlu, Ankara Tel: 0312 287 33 60 www.tarim.gov.tr/BUGEM</p>
<b>Implementing agency</b>	<p>Food and Agriculture Organization of the United Nations Sub-regional Office for Central Asia İvedik Cad. No: 55 Yenimahalle / Ankara Tel: +90 312 307 95 00 www.fao.org/Europe Email: fao-tr@fao/org</p>
<b>Duration</b>	4 years
<b>GEF Focal Area</b>	Biodiversity