



Food and Agriculture  
Organization of the  
United Nations



## “Conservation and Sustainable Management of Turkey’s Steppe Ecosystems Project”

GCP/TUR/061/GFF

# THE ANCESTORS OF GRAIN

## PROTECT OUR WILD PLANT SPECIES; THE INSURANCE OF OUR FUTURE!



Triticum dicoccoides  
(Wild emmer wheat)

Şanlıurfa province is one of the first places to come to mind when steppes of Turkey are considered. Located within the Fertile Crescent where agriculture first started, Şanlıurfa steppes are home to ancestors of grain and many endemic plants.

The ancestral forms of species such as wheat, barley, lentil and chickpeas are still naturally distributed in the steppes of Şanlıurfa, and this makes the region a gene centre.

Triticum sp. (Wheat) ve Hordeum sp. (Barley)



### Protecting Ancestors of Grain in Şanlıurfa

There are two basic approaches to the conservation of genetic resources as follows:

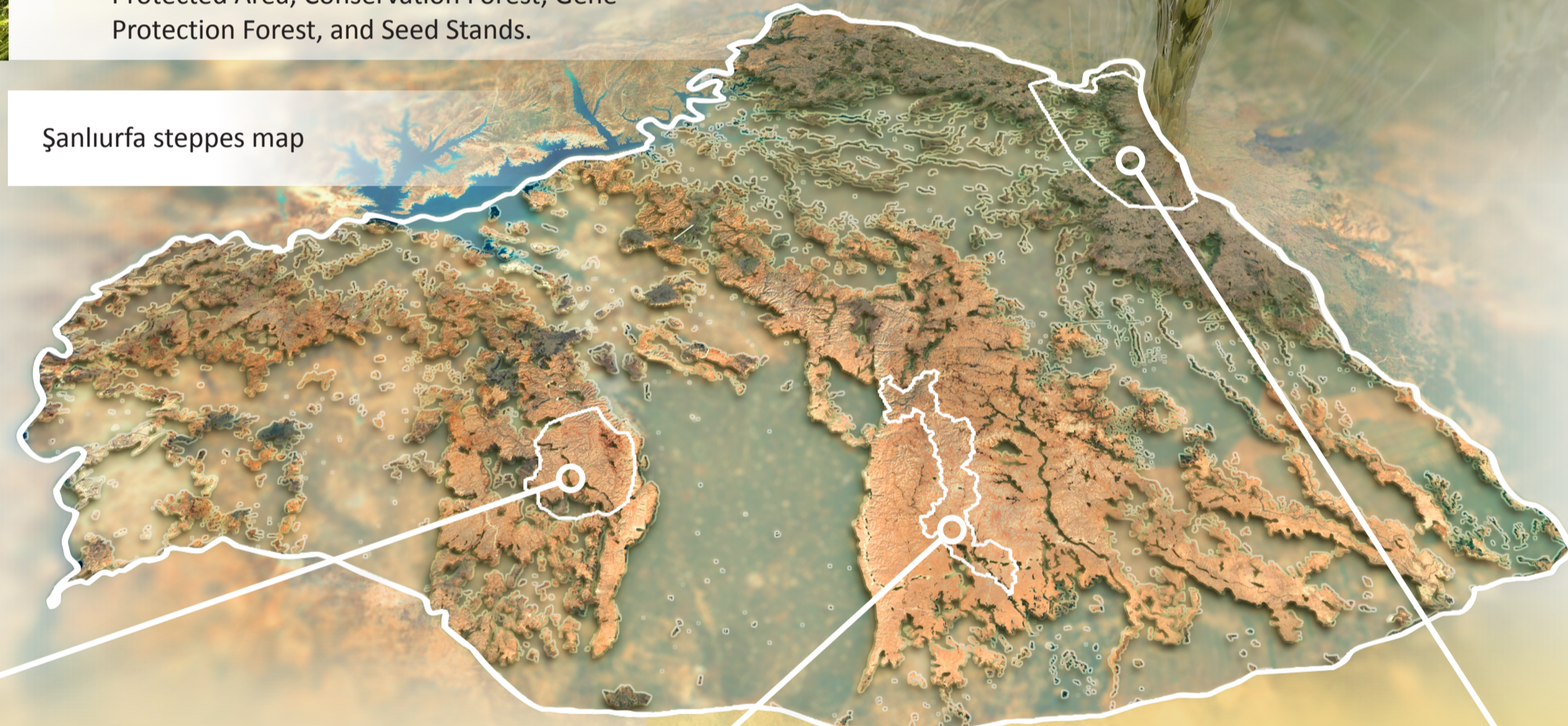
- **On-site conservation (*in situ*):** It refers to the conservation and management of living things in their natural habitats under different statuses. On-site conservation studies in our country are carried out under different protection categories such as National Parks, Natural Reserves, Nature Parks, Natural Monuments, Wildlife Reserves, Wetlands of National and Local Importance, Special Environmental Protection Area, Natural Protected Area, Conservation Forest, Gene Protection Forest, and Seed Stands.
- **Off-site conservation (*ex situ*):** It refers to the conservation of living things outside their natural habitats. In this approach, species are protected in artificially controlled environments, such as seed banks, field gene banks and botanical gardens.



The city is like a map indicating the evolution of agriculture in the history of humanity. It also hosts a very important cultural and scientific heritage, namely Göbeklitepe World Heritage Site, which leads us to reconsider the first transition to agriculture. Furthermore, the oldest known ancestor of wheat was found and taken into culture in the mountain steppes of Karacadağ, which is located to the north of Göbeklitepe.

It has been determined that the oldest ancestor of wheat species collected from the Fertile Crescent is wild einkorn, which is naturally found in Karacadağ.

### Şanlıurfa steppes map



### Kızılkuyu Wildlife Reserve



In the lowland steppe ecosystems of Kızılkuyu Wildlife Reserve, three wild relatives of barley (*Hordeum spontaneum*, *Hordeum bulbosum*, *Hordeum murinum*), and two wild relatives of wheat (*Aegilops geniculata*, *Aegilops triuncialis*) have been identified. As to the legumes, one wild relative of lentil (*Lens culinaris* subsp. *orientalis*), two wild relatives of Lathyrus (*Lathyrus setifolius*, *Lathyrus cicera*), and one wild relative of pea (*Pisum sativum*) have been identified in the Reserve.

Pisum sativum  
(Green pea)



In the lowland steppes of Tek Tek Mountains National Park, two wild relatives of barley (*Hordeum spontaneum*, *Hordeum bulbosum*), and four wild relatives of wheat (*Triticum dicoccoides*, *Aegilops triuncialis*, *Aegilops biuncialis*, *Aegilops columnaris*) have been identified. In Tek Tek Mountains, a wild relative of lentil (*Lens culinaris* subsp. *orientalis*), a wild relative of Lathyrus (*Lathyrus cicera*), a wild relative of pea (*Pisum sativum*) and a wild relative of chickpea (*Cicer pinnatifidum*) have been recorded.

Aegilops sp.



Karacadağ steppes are home to wild emmer (*Triticum dicoccoides*) and wild einkorn (*Triticum boeoticum*), which are two ancestors of wheat. Three wild relatives of barley (*Hordeum spontaneum*, *Hordeum bulbosum*, *Hordeum murinum*), and two wild relatives of wheat (*Aegilops triuncialis*, *Aegilops columnaris*) have been recorded in the area. Additionally, a wild relative of lentil (*Lens culinaris* subsp. *orientalis*), a wild relative of pea (*Pisum sativum*) and a wild relative of chickpea (*Cicer pinnatifidum*) have been identified.

### Tek Tek Mountains National Park

### Karacadağ Steppes



Conservation of the species found in these areas together with their natural habitats is one of the main goals. In order to protect these species in these areas, together with their habitats, studies are carried out in cooperation with the local people and different stakeholders.

Aegilops sp.



Fertile Crescent Region Map

### The Geography Where Agriculture Began: The Fertile Crescent

According to the findings of archaeological, botanical and genetic sciences, the oldest traces of agriculture are in the region called “Fertile Crescent”, which is located in an area covering today’s Southeastern Anatolia and northern Syria, and the upper parts of the Tigris and the Euphrates rivers.

For the details

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