



Natura 2000 in the Steppic Region



**European Commission
Environment Directorate General**

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The treeless steppic plains of Dobrogea region; Romania Photo © Daniel Petrescu/www.ibis-tours.ro

The Steppic Region

– grasses swaying in the wind

Covering less than 1% of the EU territory, the Steppic Region has only a small foothold in the European Union. But, from these modest beginnings, it develops into a vast band of vegetation that stretches out over southern Moldova, Ukraine, Russia and western Kazakhstan. It eventually continues all the way across Asia to the foothills to the Altai Mountains on the borders of Mongolia.

Within the EU, the Steppic Region is found only in one Member State: Romania. It begins east of the capital city of Bucharest and incorporates the entire eastern region known as Dobrogea. It is characterised by low-lying plains and undulating hills or plateaus with an average height of 200–300 metres.

The region is also crossed by the lower reaches of the majestic Danube and other smaller rivers. Because the land is so flat here the slow moving water tends to create broad shallow floodplains which contrast sharply with the otherwise dry, arid landscape. Every now and then small saltwater lakes also appear.

The steppic climate is generally continental in character with bitterly cold winters and warm, dry summers. The temperature difference between winter and summer is significant and can range from -15°C in January to $+30^{\circ}\text{C}$ in July. Hot winds are also common in summer. Depending on their strength and direction, they can lead to dramatic fluctuations in temperature even within a single day.

These harsh climatic conditions, combined with the porous soils and relentless wind, provoke many months of drought each year. As a result, trees are almost completely absent, except along water courses, near wetlands or on the western edge of the region where the vegetation merges with temperate and sub-Mediterranean forests. In their place, huge swathes of grasses and other drought-resistant plants dominate the landscape.

The natural steppe vegetation is composed mainly of grasses such as couch grass, feather grass and fescue as well as herbaceous plants like cinquefoil, mullein and wormwood which appear randomly amidst the tall grasses.

However, because the soils within the steppes are particularly rich in humus and consequently very fertile they have been much sought after for agriculture. Today the vast majority of the steppic plains in Romania (probably more than three-quarters) have been ploughed over and turned into arable land. The main crops are wheat, maize, oats, barley, sugar beet, sunflower and vegetables.

Pockets of natural vegetation are now increasingly hard to come by and tend to be restricted to inaccessible places like the Macin Mountains. Located in the eastern most corner of Romania near the town of Braila, these ancient mountains are a vital refuge for the many plants and animals that are typical of the Steppic Region such as the Levant sparrowhawk *Accipiter brevipes*, the steppic polecat *Mustela eversmannii* and the Romanian hamster *Mesocricetus newtoni*.

The general lack of water has also meant that many of the region's rivers and lakes have been diverted or drained to provide water for irrigation or to create new farmland. Those that are still intact are now heavily polluted by the surrounding farmland.



Prut River, Romania Photo © Lower Prut Floodplain Natural Park LIFE project

Map of Natura 2000 sites in the Steppic Region

The list of Natura 2000 sites in the Steppic Region was adopted in December 2008. Being a small intensively used region, there are only 34 Sites of Community Importance (SCIs) under the Habitats Directive and 40 Special Protection Areas (SPAs) under the Birds Directive designated so far. As there is often considerable overlap between some SCIs and SPAs the figures are not cumulative but together it is estimated that they cover over 20% of the land area in this region.

Number of habitat types in Annex I and species or sub-species in Annex II of the Habitats Directive.

Region	Habitat types	Animals	Plants
Atlantic	117	80	52
Boreal	88	70	61
Continental	159	184	102
Alpine	119	161	107
Pannonian	56	118	46
Steppic	25	25	14
Black Sea	58	79	6
Mediterranean	146	158	270
Macaronesian	38	22	159

Source: European Topic Centre on Biological Diversity (European Environment Agency) <http://biodiversity.eionet.europa.eu>
 - the figures are not cumulative since many habitats and species occur in two or more biogeographical regions
 - Birds from Annex I of the Birds Directive are not listed as they are not categorized according to biogeographical region

Region	N° SCI	Total area covered (km ²)	Terrestrial area covered (km ²)	% of total terrestrial area	N° SPA	Total area covered (km ²)	Terrestrial area covered (km ²)	% of total terrestrial area
Atlantic	2,747	109,684	68,794	8.7	882	76,572	50,572	6.4
Boreal	6,266	111,278	96,549	12.0	1,165	70,341	54,904	6.8
Continental	7,475	150,014	135,120	10.8	1,478	147,559	128,432	12.4
Alpine	1,496	145,643	145,643	39.7	365	93,397	93,397	31.1
Pannonian	756	15,858	15,858	12.3	100	19,965	19,965	17.5
Steppic	34	7,210	7,210	19.4	40	8,628*	8,628	24.4
Black Sea	40	10,243	8,298	71.8	27	4,100	3,561	30.8
Mediterranean	2,928	188,580	174,930	19.8	999	147,358	142,350	16.0
Macaronesian	211	5,385	3,516	33.5	65	3,448	3,388	32.3
TOTAL	21,612	655,968	568,463	13.3	5,004	486,571	429,615	10.5

Source: European Topic Centre on Biological Diversity (European Environment Agency) <http://biodiversity.eionet.europa.eu> October 2008
 - SPAs and SCIs are not cumulative as there is considerable overlap between them
 - Some sites are on the border between two regions, the database does not allow for the possibility to split sites between regions, therefore some sites may be counted twice
 - Percentage of marine areas not available
 - SPAs are not selected according to biogeographical region
 - SPA area for the Steppic Region are calculated according to available GIS data



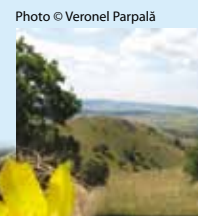
Region	Countries involved	% of EU territory
Atlantic	Belgium, Germany, Denmark, Spain, France, Ireland, Portugal, Netherlands, United Kingdom	18.4
Boreal	Estonia, Finland, Latvia, Lithuania, Sweden	18.8
Continental	Austria, Belgium, Bulgaria, Czech Republic, Germany, Denmark, France, Italy, Luxembourg, Poland, Romania, Sweden, Slovenia	29.3
Alpine	Austria, Bulgaria, Germany, Spain, Finland, France, Italy, Poland, Romania, Sweden, Slovenia, Slovakia	8.6
Pannonian	Czech Republic, Hungary, Romania, Slovakia	3.0
Steppic	Romania	0.9
Black Sea	Bulgaria, Romania	0.3
Mediterranean	Cyprus, Spain, France, Greece, Italy, Malta, Portugal	20.6
Macaronesian	Spain, Portugal	0.2

Source: European Topic Centre on Biological Diversity (European Environment Agency) <http://biodiversity.eionet.europa.eu> October 2008

1 Lower Prut river valley



2 Macin Mountain



3 Macin Mountain



4 Babadag Forest



- SCIs
- SPAs
- SPA and SCI

Map based on site coordinates supplied by the European Commission through the University of Leuven, Division SADL, October 2008



5 Islands in the Lower Danube



Macin Mountain, Romania Photo © Daniel Petrescu/www.ibis-tours.ro

Natura 2000 habitat types in the Steppic Region

Twenty-five habitat types listed in the Habitats Directive occur in the Steppic Region. Some are typical of this region such as the Ponto-Samatic steppes with their characteristic feather grasses and fescues and the Ponto-Samatic deciduous thickets or oak dominated Euro-Siberian steppe woods.

Unfortunately, very little is left of these once widely distributed habitats and what remains is highly fragmented, occurring only on remote plateaus or in isolated pockets within a heavily farmed landscape. The Macin Mountain range is now one of the few places left that still has large areas of natural steppe vegetation.

Many of the other habitat types in the Habitats Directive are associated with the handful of rivers that cross

through the plains on their way to the Black Sea. The Lower Danube is by far the largest of these rivers. Having crossed the Bulgarian border, it runs parallel to the shore for a while (the coast is only 50–100 km away by now) before turning on itself to start its final journey through the Danube Delta into the Black Sea.

This parallel stretch runs right through the heart of the Steppic Region. Almost the entire length is included in Natura 2000 in view of the fact that it still retains much of its natural hydrology and, as a result, hosts important areas of natural floodplain ecosystems.

Typical floodplain forests, gallery woods, marshes and sand banks appear both on the banks of the river and on the many little islands that lie in the middle. Created by the build up of large quantities of sediments, these islands provide a vital refuge for wildlife away from predators and humans.

The Steppic Region also hosts a number of brackish and saltwater lakes like Balta Alba and Jirlau near the town of Buzau. These lakes got cut off from the Buzau River a long time ago and now regularly host up to 20,000 birds during migration.

Photo © Veronel Parpalá



The Macin Mountains

In the eastern-most corner of Romania, behind the Danube Delta, a small mountain chain – 20 km long – rises discretely above the surrounding plains. These are the ancient Macin Mountains with peaks barely reaching 500 m. From the top, one is rewarded with sweeping views across an arid landscape of rolling hills, deep valleys, craggy outcrops and flat plateaus. Because Macin is much drier and hillier than the rest of the region, it has not been as heavily exploited as elsewhere. Consequently much of the terrain is still covered in natural oak forests, steppe thickets and grasslands, with their characteristic swathes of feather grasses and fescues. The Macin Mountains are a prime location for many typical steppic animals and plants such as the Romanian hamster *Mesocricetus newtoni*, long-legged bustard *Buteo ruffinus* and *Moehringia jankae* with its carpet of small white flowers.



Demoiselle crane *Anthropoides virgo* Photo © Andy Taylor



Steppe marmots *Marmota bobak* Photo © Hendrik Zeitler

Natura 2000 species in the Steppic Region

The absence of natural shelter has had a strong influence on the type of animals that live in the Steppic Region. Small rodents like the European souslik *Spermophilus citellus*, the rarer spotted souslik *Spermophilus suslicus* and the steppe marmot *Marmota bobak* have adapted well to the hot arid climate, burrowing into the soft soil to create their communal warrens.

The abundance of small rodents attracts, in turn, a number of larger mammals, such as the marbled polecat *Vormela peregusna* and the steppe polecat *Mustela eversmannii*, as well as many birds of prey like the short-toed snake-eagle *Circaetus gallicus*, the steppe eagle *Aquila nipalensis*, imperial eagle *Aquila heliaca* and the saker falcon *Falco cherrug*. The golden jackal *Canis aureus* is also present in the Romanian part where it has

established a small resident population along the coast and inland plains.

Other typical birds of the steppes include demoiselle crane *Anthropoides virgo*, great bustard *Otis tarda* and many colourful species of bunting, quail and partridge as well as larks and pipits. Rarer species like the stone-curlew *Burhinus oedicnemus* and chukar *Alectoris chukar* are also present, although they are only occasionally seen in the Romanian part of the region.

As for the lush river valleys of the Lower Danube and Prut River, they are a haven for all sorts of rare species, not least migrating birds.

The Lower Danube is often referred to as a 'green corridor' not just because its lush green vegetation contrasts sharply with the surrounding steppes but also because it provides a vital ecological corridor for wildlife. No less than eight rare bat species have been recorded here and eleven fish species listed in the Habitats Directive.

In total 39 species of the Habitats Directive are present in this region, including a number of unusual plants like the *Echium russicum*, the orchid *Himantoglossum caprinum* and the cinquefoil *Potentilla emilii-popii*.

Photo © V. Motcyka

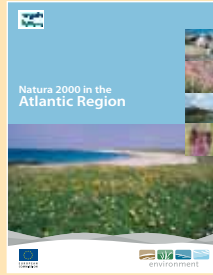


The marbled polecat *Vormela peregusna*

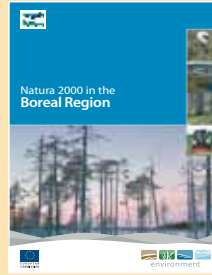
The marbled polecat is a curious looking carnivore. A member of the weasel family it has an elongated body and a multi coloured coat. Its diet consists mainly of rodents (sousliks, marmots, hamsters, voles...). It is found in a variety of dry habitats including steppes, open desert, semi-desert, semi-arid rocky areas in upland valleys and low hill ranges.

The marbled polecat has a distribution extending from south-east Europe, through Asia Minor, the Middle East, the Caucasus, and Central Asia, to northern China and Mongolia. In the past it was heavily hunted for its fur in Romania but now its main threats come from severe habitat loss and a reduction in prey species. In the last ten years alone its population has dropped by 30% as a result of habitat loss.

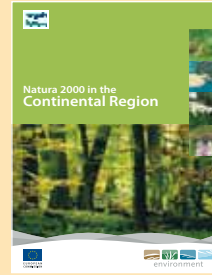
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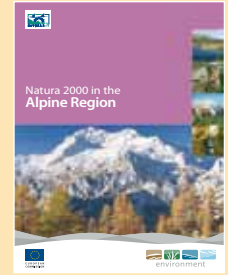
Natura 2000 in the Atlantic Region



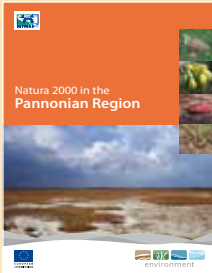
Natura 2000 in the Boreal Region



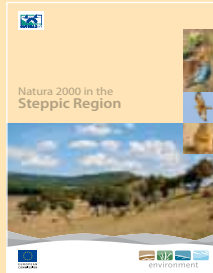
Natura 2000 in the Continental Region



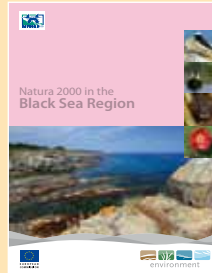
Natura 2000 in the Alpine Region



Natura 2000 in the Pannonian Region



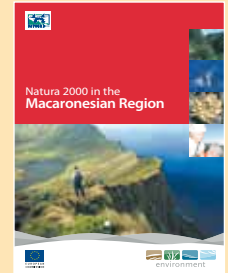
Natura 2000 in the Steppic Region



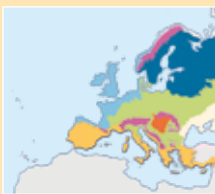
Natura 2000 in the Black Sea Region



Natura 2000 in the Mediterranean Region



Natura 2000 in the Macaronesian Region



The European Union has nine biogeographical regions, each with its own characteristic blend of vegetation, climate and geology. Sites of Community Importance are selected according to each region on the basis of national lists submitted by each Member State within that region. Working at this level makes it easier to conserve species and habitat types under similar natural conditions across a suite of countries, irrespective of political and administrative boundaries. Together with the Special Protection Areas designated under the Birds Directive, the Sites of Community Importance selected for each biogeographical region make up the ecological Natura 2000 network which spans all 27 countries of the EU.

