

E1.2b Continental dry steppe

Summary

This broadly-defined habitat includes steppe and steppe-like grasslands on mostly base-rich soils over limestones, of varying depth and stoniness, through the Continental lowlands to sub-montane belts of Europe. Dominated by plants adapted to long periods of summer drought, mostly tall tussock grasses and perennial forbs, these grasslands show wide variation in particular topographic situation and species composition across the substantial range. In more extreme situations, the grasslands are natural, but they often sustain extensive grazing and abandonment of traditional farming, over-grazing and attempts at soil improvement and cultivation have all had an impact. Strict protection of remaining areas and restoration of such grazing as was previously sustained are essential for conservation.

Synthesis

The habitat type is assessed as Near Threatened (NT) under criterion A1 because of a large reduction in quantity (on average -26%) in both the EU28 and EU28+ over the last 50 years. The maximum trend calculated is however higher (-31%) and meets the threshold for Vulnerable (VU). Further uncertainty about the assessment exists, because of uncertain area data from Romania, the country that covers the largest area of continental steppes in the EU28+ region. All other criteria for which data were available resulted in a Least Concern category.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Near Threatened	A1	Near Threatened	A1

Sub-habitat types that may require further examination

The habitat has large diversity in different regions of the large range. A main division could be in the true steppes of the Steppic Region (northern Bulgaria, Romania) and a subtype for the continental and pannonian region, partly secondary steppes. Outside the EU28+, in the steppe region of Ukrain, Russia and Kazakhstan other steppe subhabitats (or habitats) may be distinguished.

Habitat Type

Code and name

E1.2b Continental dry steppe



Loess steppe in Nikopol Plateau in the Pleven region, Bulgaria (Photo: Rossen)



Steppe with spring aspect of *Paeonia tenuifolia* at Gorna Studena village in the

Habitat description

Open or closed arid, floristically rich or poor steppes or steppe-like grasslands of sub-continental and continental areas of Central, South-Eastern and Eastern Europe from sea level to maximum 1200-1300 m alt. They are widespread in the plains, lowlands, hills and foothills, mostly on slopes or plainly but elevated terrains. The localities have mostly southern exposure and different tilt, as a result of which the underground surface waters are absent and the humidity of the soil completely depends on the rainfall. The habitat comprises plant communities which have developed in different soil and climatic conditions. The bedrock is mostly calcareous (limestones, dolomites, marls) but it can also be silicate and even sandstones. The soils are very diverse: Phaeozems, Chernozems, Luvisols, Lithosols, Rankers and Rendzhinas, but generally dry, thick or shallow, eroded and stony. The plant species that participate in the composition of this herbaceous vegetation are adapted to long periods of drought. There are two rest periods, one of which is in summer. Their distribution in various climatic conditions reflects in their floristic composition and structure. Additional factors of the environment such as altitude, soil characteristics, including soil acidity and anthropogenic pressure also have an impact on these communities.

The plant communities are dominated by high, tuft-forming grasses and other perennial herbaceous species. In the west, such communities (*Stipo-Poion xerophilae*) extend to the lower arid slopes of valleys in Eastern and Central Alps. The typical steppes (*Festucion sulcatae*, *Stipion lessingiana*) are developed mostly on deep soils in Central and Eastern Europe. They are dominated from xerophytic grasses: *Stipa* spp., *Festuca* spp., *Chrysopogon gryllus*, *Dichanthium ischaemum*, *Bromus* spp. They may be of primary origin, especially in most continental regions on thick loess cover or on naturally eroded terrains with basic rocks outcrops. But in the sub-continental and foothill regions they can inhabit places of former destroyed woodland. In these parts, semi-shrubs and solitary trees have remained from the primary wood vegetation. In more humid regions, or on eastern and northern slope in primary steppes, the habitat is more like a meadow, with many tall herbs, among which *Salvia* spp., *Phlomis* spp. and *Filipendula vulgaris*. On eroded slopes there are various petrophytic steppes (*Satureion montanae*) on shallow, degraded humus-carbonate soils or sandy-clayey screes. These communities are dominated by perennial herbs and aromatic semi-shrubs like *Satureja* spp., *Thymus* spp., *Genista* spp., *Teucrium* spp., *Hyssopus officinalis*. In the southernmost parts of the habitat's range and on the coastal areas of the Black Sea, besides perennial grasses and semi-shrubs, also many annuals with Mediterranean origin participate in the habitat. The species composition of steppes along the Northern Black Sea is a mixture between typical steppe grasses, semi-shrubs and southern annuals (endemic alliance *Pimpinello-Thymion zigoidi*). Very diverse are also steppe communities on slopes, ridges and tops of loess plateaus in the Danube plain. They range from typical primary grasslands on deep chernozems on the tops, to open and poor semi-ruderal communities (*Artemisio-Kochion*) on the steep loess outcrops. The last ones are relic communities from the Pleistocene and dominated by large tufts of *Artemisia campestris*, *Chamaecytisus supinus*, *Kochia prostrata*, *Agropyron cristatum* and *Krascheninnikovia ceratoides*. The richest steppes are found however outside the EU28+, in Ukraine, South Russia and Kazakhstan, regions of ecological and climatic optimum for steppes. Many different steppe syntaxa have been described there, representing a large diversity of steppe vegetation.

Through the whole range, overgrazing of steppes has caused ruderalization and degradation of the habitat, which transforms into pastures dominated by low grasses like *Cynodon dactylon* and *Lolium perenne*, with many spiny, poisonous or non-palatable species for cattle. The semi-ruderal grasslands dominated by *Dichanthium ischaemum* are also secondary, because due to the overgrazing they may replace more natural communities dominated by *Chrysopogon gryllus*, *Stipa* spp., etc. Continental steppes are very important habitat for many plant and animal species including relics and endemics. They are also very valuable resource for cattle. The most fertile soils, Chernozems, are formed by the interaction of the steppe vegetation and loess. Because of it, the most steppe areas are ploughed and replaced from agriculture.

Indicators of good quality:

In good conditions these grasslands have rich species composition and dominance of steppe grasses. Main threat is ploughing, urbanization, industrial, agricultural and communication infrastructure, overgrazing that leads to xerophytisation, ruderalization and changes in their structure and ecological characteristics. General aridisation of the climate, fertilization of the neighbouring agricultural land, stone pits, digging activities, deposition of industrial and household waste, invasion of alien species, developing of tree and shrub vegetation are also serious threats. Complete abandoning of the grazing in foothill areas led to shrub and tree invasion as a process of restoration of former woodland. A patchy pattern of grassland and shrubs on a landscape scale is, on the other hand, of importance for many typical insects, birds and reptilians. In such cases, especially for secondary steppes in foothill and low mountain areas, more intensive management may be needed for maintenance. The following characteristics may be considered as indicators of good quality, but these indicators differ in different regions depending by origin, geographical position and level of human disturbance:

- High species richness
- Presence of rare and/or threatened species mostly with relic steppe origin
- Low cover and balance of encroaching shrubs and trees
- Absence of invasive species
- Sustainability of traditional human activities: mowing, grazing, gathering of medicinal plants, fungi, etc.

Characteristic species:

Flora

Vascular plants: *Achillea clypeolata*, *A. collina*, *A. millefolium*, *A. nobilis*, *A. pannonica*, *A. setacea*, *A. tormentosa*, *A. virescens*, *Adonis flammea*, *A. vernalis*, *A. volgensis*, *Aegilops cylindrica*, *A. geniculata*, *A. triuncialis*, *Agrimonia eupatoria*, *Agropyron pectinatum*, *Ajuga genevensis*, *A. laxmannii*, *Alyssum alyssoides*, *A. caliacrae*, *A. parviflorum*, *A. saxatile*, *Allium flavum*, *A. moschatum*, *A. paniculatum*, *A. sphaerocephalon*, *Althaea hirsuta*, *Anacamptis pyramidalis*, *Anthericum ramosum*, *Asperula cynanchica*, *Arabis recta*, *Artemisia alba*, *A. austriaca*, *A. campestris*, *A. lerschiana*, *A. pedemontana*, *A. pontica*, *A. scoparia*, *Asphodeline lutea*, *Aster oleifolius*, *Astragalus austriacus*, *A. corniculatus*, *A. dasyanthus*, *A. exscapus*, *A. haarbachii*, *A. glaucus*, *A. monspessulanus*, *A. onobrychis*, *A. ponticus*, *A. pubiflorus*, *A. spruneri*, *A. vesicarius*, *Bellevia ciliata*, *Brachypodium pinnatum*, *Brassica elongata*, *Bromus erectus*, *B. inermis*, *B. japonicus*, *B. mollis*, *B. tectorum*, *Buglossoides incrassata*, *Bupleurum falcatum*, *Camelinamicrocarpa*, *Campanula macrostachya*, *C. sibirica*, *Carex humilis*, *C. montana*, *C. caryophyllea*, *C. stenophylla*, *C. supina*, *Centaurea micranthos*, *C. stereophylla*, *C. stoebe*, *C. triumfetti*, *Cephalaria transsilvanica*, *C. uralensis*, *Chamaecytisus austriacus*, *Ch. jankae*, *C. supinus*, *Chondrilla juncea*, *Chrysopogon gryllus*, *Cichorium intybus*, *Cleistogenes serotina*, *Colchicum turcicum*, *Convolvulus cantabrica*, *Coronilla scorpioides*, *Crambe tatarica*, *Crocus reticulatus*, *Crupina vulgaris*, *Cynodon dactylon*, *Danthonia alpina*, *Dianthus campestris subsp. roseoluteus*, *D. carthusianorum*, *D. glabriusculus*, *D. nardiformis*, *D. pallens*, *D. petraeus subsp. noaeanus*, *D. pontederiae*, *D. pseudarmeria*, *Dichanthium ischaemum*, *Dorycnium herbaceum*, *Dracocephalum austriacum*, *Echinops ritro*, *Echium maculatum*, *E. vulgare*, *Elymus elongatus*, *E. hispidus*, *Elytrigia intermedia subsp. intermedia*, *Ephedra distachya*, *E. helvetica*, *E. negrii*, *Eryngium campestre*, *Erysimum diffusum*, *Euphorbia cyparissias*, *E. myrsinites*, *E. nicaeensis*, *E. seguierana*, *Euphrasia tatarica*, *Helianthemum canum*, *Hedysarum tauricum*, *Helianthemum salicifolium*, *Helictotrichon compressum*, *Herminium monorchis*, *Hieracium bauhinii*, *H. hoppeanum*, *Himantoglossum caprinum*, *Hyacinthella leucophaea*, *Hypericum elegans*, *H. perforatum*, *Hypochoeris maculata*, *Falcaria vulgaris*, *Ferula sadlerana*, *Festuca dalmatica*, *F. valesiaca*, *F. rupicola*, *Filipendula vulgaris*, *Fragaria viridis*, *Fumana procumbens*, *Galium album*, *G. octonarium*, *G. purpureum*, *G. verum*, *Genista sessilifolia subsp. trifoliata*, *Goniolimon besseranum*, *G. collinum*, *G. tataricum*, *Gypsophila glomerata*, *Inula ensifolia*, *I. hirta*, *I. oculus-christi*, *Iris pumila*, *Jurinea mollis*, *J. stoechadifolia*, *Kochia*

prostrata, *Koeleria brevis*, *K. cristata*, *K. gracilis*, *Leontodon crispus*, *Limonium latifolium*, *Linum austriacum*, *L. tauricum*, *Lolium perenne*, *Matthiola fruticulosa*, *M. odoratissima*, *Medicago disciformis*, *M. falcata*, *M. minima*, *M. orbicularis*, *M. rigidula*, *Melampyrum arvense*, *Melica ciliata*, *Minuartia setacea*, *Nepeta parviflora*, *Nonea pulla*, *Onobrychis arenaria*, *O. viciifolia*, *Ononis arvensis*, *O. cenisia*, *O. pusilla*, *Onosma helveticasp. tridentina*, *Onosma tornensis*, *O. visianii*, *Orchis militaris*, *O. ustulata*, *Origanum vulgare*, *Orlaya grandiflora*, *Ornithogalum refractum*, *Ophrys apifera*, *O. sphegodes*, *O. fuciflora*, *Oxytropis pilosa*, *Paeonia tenuifolia*, *Paliurus spina-christi*, *Parentucellia latifolia*, *Paronychia cephalotes*, *Petrorhagia prolifera*, *P. saxifraga*, *P. velutina*, *Peucedanum arenarium*, *P. cervaria*, *Pimpinella saxifraga*, *P. tragium*, *Phleum phleoides*, *Phlomis herba-venti* subsp. *pungens*, *P. tuberosa*, *Plantago lanceolata*, *P. media*, *Poa angustifolia*, *P. bulbosa*, *Polygala major*, *Potentilla astracantha*, *P. arenaria*, *P. bornmuelleri*, *P. emillii-poppii*, *P. pilosa*, *P. pusilla*, *Pseudolysimachion spicatum*, *Pulsatilla montana*, *P. nigricans*, *P. zimmermannii*, *Ranunculus illyricus*, *R. polyanthemus*, *Rhamnus saxatilis*, *Rindera umbellata*, *Ruta graveolens*, *Salvia aethiopis*, *S. argentea*, *S. austriaca*, *S. nemorosa*, *S. nutans*, *S. scabiosifolia*, *S. pratensis*, *S. ringens*, *S. sclarea*, *Sanguisorba minor*, *Satureja coerulea*, *S. montana*, *Saxifraga tridactylites*, *Scabiosa micrantha*, *S. ochroleuca*, *Scandix australis*, *Scorzonera austriaca*, *Scutellaria orientalis* subsp. *pinnatifida*, *Sedum hispanicum*, *S. maximum*, *S. urvillei*, *Seseli annuum*, *Seseli tortuosum*, *S. osseum*, *S. varium*, *Sideritis montana*, *Silene longiflora*, *S. otites*, *Stachys arenariaeformis*, *S. officinalis*, *S. recta*, *Sternbergia colchiciflora*, *Stipa capillata*, *S. crassiculmis*, *S. dasyphylla*, *S. joannis*, *S. lessingiana*, *S. stenophylla*, *S. pulcherrima*, *S. ucrainica*, *Syringa vulgaris*, *Tanacetum millefolium*, *Taraxacum serotinum*, *Teucrium chamaedrys*, *T. montanum*, *T. polium*, *Thlaspi jankae*, *Thesium linophyllum*, *Thymus callieri* subsp. *urumovii*, *T. glabrescens*, *T. pannonicus*, *T. zygioides*, *Trifolium alpestre*, *T. angustifolium*, *T. cherleri*, *T. hirtum*, *T. incarnatum*, *T. montanum*, *T. scabrum*, *T. subterraneum*, *Trigonella gladiata*, *T. monspeliaca*, *Valerianella pumila*, *Verbascum banaticum*, *V. phoeniceum*, *Veronica austriaca*, *V. prostrata*, *Vinca herbacea*, *Vincetoxicum hirundinaria*, *Viola ambigua*, *Xeranthemum annuum*.

Mosses: *Campyliadelphus chrysophyllus*, *Ceratodon purpureus*, *Eurhynchium hians*, *Homalothecium lutescens*, *Hypnum cupressiforme*, *Fissidens dubius*, *F. taxifolius*, *Grimmia pulvinata*, *Plagiomnium affine*, *Polytrichum piliferum*, *Rhytidium rugosum*, *Rhytidiadelphus triquetrus*, *Syntrichia ruralis*, *Thuidium abietinum*

Lichens: *Cladonia convoluta*, *C. foliacea*, *C. furcata*, *C. rangiformis*, *Fulgensia fulgens*, *Peltigera canina*, *P. rufescens*

Fauna

Mammals: *Cricetus cricetus*, *Mesocricetus newtoni*, *Mus spicilegus*, *Mustela eversmanni*, *Sicista subtilis*, *Spermophilus citellus*, *Vormela peregusna*

Birds: *Alauda arvensis*, *Anthus campestris*, *Anthopoides svirgo*, *Asio flammeus*, *Burhinus oedicephalus*, *Calandrella brachydactyla*, *Circus cyaneus*, *C. pygargus*, *Emberiza calandra*, *E. cia*, *E. citrinella*, *E. melanocephala*, *Lullula arborea*, *Lanius collurio*, *Melanocorypha calandra*, *Oenanthe pleschanka*, *Otis tarda*, *Perdix perdix*, *Phoenicurus ochruros*, *Sturnus roseus*, *Tetrax tetrax*

Reptilia: *Ablepharus kitaibelii*, *Dolichophis caspius*, *Eurotestudo hermanni*, *Lacerta trilineata*, *Lacerta viridis*, *Pseudopus apodus*, *Testudo graeca*, *Vipera ammodytes*
Insects: *Bradyporus dasypus*, *Iphiclydes podalirius*, *Mantis religiosa*, *Oedipoda germanica*, *Papilio machaon*, *Tettigonia viridissima*
Indicatorsofquality

Classification

This habitat may be equivalent to, or broader than, or narrower than the habitats or ecosystems in the following typologies.

EUNIS:

E1.2 Perennial calcareous grassland and basic steppes

EuroVegChecklist alliances:

Festucion sulcatae Soó 1930 = *Festucion valesiaca*

Artemisio-Kochion Soó 1964

Stipo-Poion xerophilae Br.-Bl. et Tx. ex Br.-Bl. 1949

Stipion lessingiana Soó 1947

Pimpinello-Thymion zygoi Dihoru et Donita 1970

Satureion montanae Horvat 1958

Helictotrichon desertori-Stipion rubentis Toman 1969

Annex 1:

6240 Sub-Pannonic steppic grasslands

6250 Pannonic loess steppic grasslands

62C0 Ponto-Sarmatic steppes

Emerald:

E1.2 Perennial calcareous grassland and basic steppes

MAES:

Grassland

IUCN:

4.4. Temperate grassland

Does the habitat type present an outstanding example of typical characteristics of one or more biogeographic regions?

Yes

Regions

Continental

Pannonian

Steppic

Justification

The habitat is representative for the regions with continental climate in Europe. It is characterized from the participation of many relic steppic species from primary grassland vegetation. The optimum of habitat distribution is outside the EU28 in the Steppic region, but within the EU28 mainly in the Continental and Pannonian regions.

Geographic occurrence and trends

EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Austria</i>	Present	7.6 Km ²	Decreasing	Decreasing
<i>Bulgaria</i>	Present	988 Km ²	Decreasing	Decreasing
<i>Croatia</i>	Present	1.3 Km ²	Decreasing	Decreasing
<i>Czech Republic</i>	Present	22 Km ²	Decreasing	Decreasing

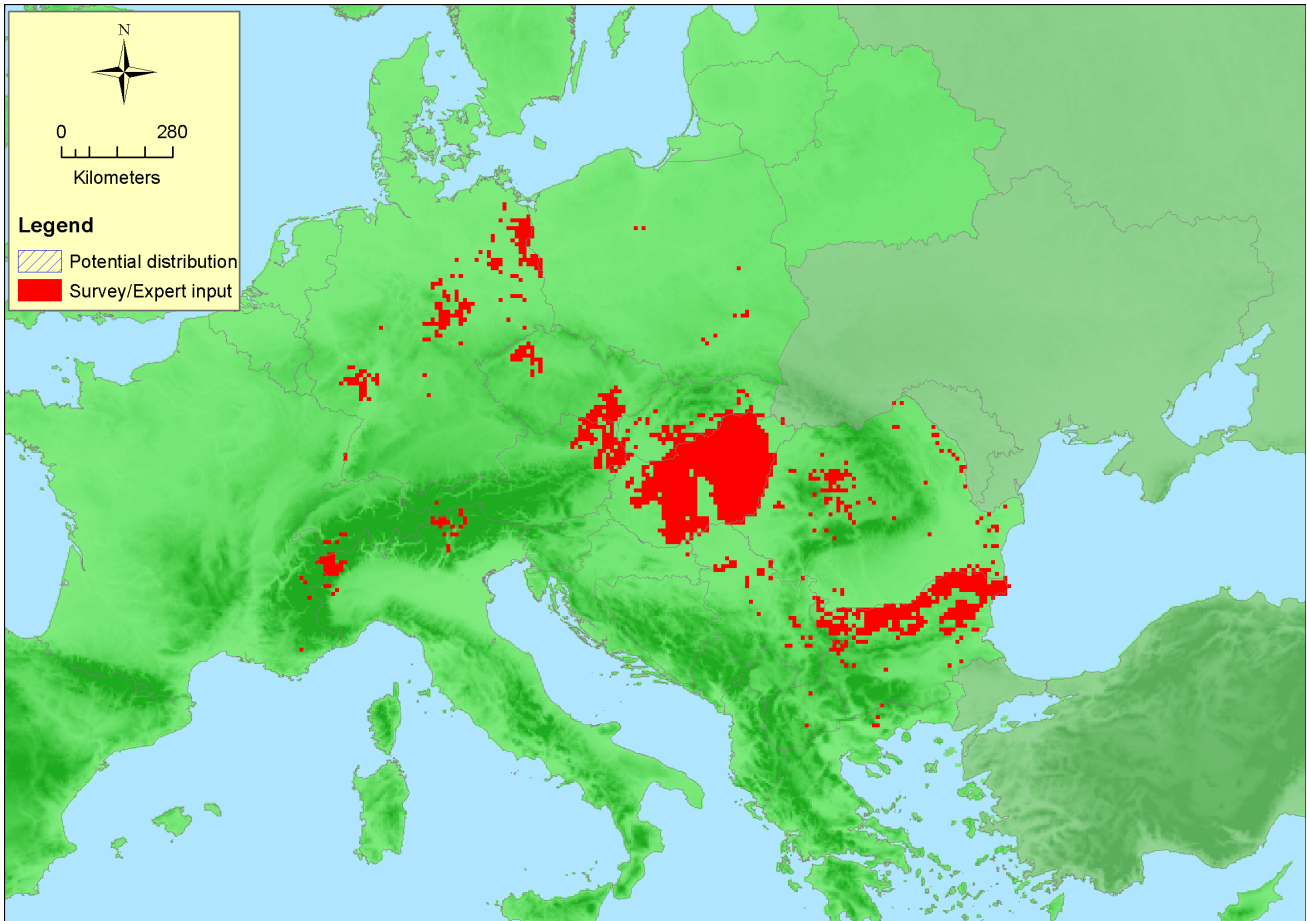
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>France</i>	France mainland: Present	100 Km ²	Decreasing	Decreasing
<i>Germany</i>	Present	130 Km ²	Decreasing	Decreasing
<i>Hungary</i>	Present	407 Km ²	Decreasing	Decreasing
<i>Italy</i>	Italy mainland: Present	25 Km ²	Decreasing	Decreasing
<i>Poland</i>	Present	2 Km ²	Decreasing	Decreasing
<i>Romania</i>	Present	1700 Km ²	Decreasing	Decreasing
<i>Slovakia</i>	Present	15 Km ²	Decreasing	Decreasing
<i>Slovenia</i>	Present	Unknown Km ²	Unknown	Unknown

EU 28 +	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Albania</i>	Uncertain	Km ²	-	-
<i>Bosnia and Herzegovina</i>	Present	20 Km ²	Decreasing	Decreasing
<i>Former Yugoslavian Republic of Macedonia (FYROM)</i>	Uncertain	Km ²	-	-
<i>Kaliningrad</i>	Uncertain	Km ²	-	-
<i>Montenegro</i>	Present	unknown Km ²	Unknown	-
<i>Serbia</i>	Present	Km ²	-	-
<i>Switzerland</i>	Present	60 Km ²	Stable	Decreasing

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
<i>EU 28</i>	1683200 Km ²	1596	3400 Km ²	
<i>EU 28+</i>	1699350 Km ²	1636	3500 Km ²	

Distribution map



The map is rather complete, although some overestimation may exist in some regions (a.o. Germany, Hungary). Data sources: Art17, EVA.

How much of the current distribution of the habitat type lies within the EU 28?

<30%. The range of the habitat and expands in Eastern Europe (Russia, Ukraine, Moldova) towards Kazakhstan and South Siberia. The countries of the EU28 and EU28+ are in the westernmost and southwesternmost parts of this very large range of distribution.

Trends in quantity

A decrease has been reported from almost all countries, with the lowest extends around -20% (France, Bulgaria, Romania) and the highest about 50% (Austria, Slovakia and Poland). A slight decrease is expected to continue in most of the countries. The main reasons for decrease are agricultural intensification, change in the grazing regimes (abandonment of grazing, overgrazing), direct destruction (human urbanisation, mining and quarrying activities), natural successions and invasion of shrubs and trees.

- Average current trend in quantity (extent)
 EU 28: Decreasing
 EU 28+: Decreasing
- Does the habitat type have a small natural range following regression?
 No
Justification
 The habitat has a very large EOO.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
 No
Justification

The habitat has a very large EOO and occurs in large stands.

Trends in quality

The average EU28 trend in quality is declining, affecting about 25% of the area with slight to moderate severity.

- Average current trend in quality

EU 28: Decreasing

EU 28+: Decreasing

Pressures and threats

The biggest threats are the agricultural intensification and change of grasslands into arable land. Also changing of grazing regimes (abandonment of grazing, overgrazing), direct destruction (human urbanisation, mining and quarrying activities), natural successions and invasion of shrubs and trees are important threats.

List of pressures and threats

Agriculture

Modification of cultivation practices

Agricultural intensification

Grassland removal for arable land

Grazing

Intensive grazing

Abandonment of pastoral systems, lack of grazing

Fertilisation

Sylviculture, forestry

Forest planting on open ground

Urbanisation, residential and commercial development

Urbanised areas, human habitation

Natural biotic and abiotic processes (without catastrophes)

Biocenotic evolution, succession

Species composition change (succession)

Conservation and management

The most important is a legal protection of the steppic grassland and stopping of their transformation into arable lands. Restoration of some steppe areas and their management (like extensive grazing) are also important conservation activities.

List of conservation and management needs

Measures related to agriculture and open habitats

Maintaining grasslands and other open habitats

Measures related to spatial planning

Establish protected areas/sites

Legal protection of habitats and species

Conservation status

Annex I

6240: ALP U2, ATL U1, BLS U1, CON U1, PAN U1

6250: CON U1, PAN U2

62C0: BLS U1, CON U1, STE U1

When severely damaged, does the habitat retain the capacity to recover its typical character and functionality?

The habitat has a capacity to recover naturally but the process is slow and difficult. It could be restored in many areas on the former arable lands with a low productivity. In the past it was dependent on wild herbivores, now practically extinct in most areas. Domestic animals could play an analogical role, but their grazing has to be regulated so that it will not cause any overgrazing and loss of biodiversity.

Effort required

10 years	50+ years
Through intervention	Naturally

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-26/31 %	unknown %	unknown %	unknown %
EU 28+	-26/30 %	unknown %	unknown %	unknown %

The habitat has been decreased in almost all countries. The average (calculated from provided territorial data of 12 countries) is -26% for both EU28 and EU28+, but applying the maximum ranges it is up to -31%/-30% respectively. Reported data from Romania were not reliable and have been corrected according to area reported by Donita et al. (2005; types 3414 to 3421), resulting in Romania having the largest proportion of this habitat of all countries (49% of the EU28+ total reported). Using the maximum decline percentages results in the assessment Vulnerable (VU) for both the EU28 and EU28+. As the trend data from Romania is uncertain, the overall assessment certainty has been indicated to be 'low'.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	>50000 Km ²	Yes	No	no	>50	Yes	No	no	no
EU 28+	>50000 Km ²	Yes	No	no	>50	Yes	No	no	no

The habitat is widespread in the Eastern and parts of Central and even Western Europe and the EOO is larger than 50000 km², the AOO larger than 50 km² and the number of locations high. The habitat is assessed as Least Concern under all B criteria.

Criterion C and D: Reduction in abiotic and/or biotic quality

Criteria C/D	C/D1		C/D2		C/D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	25 %	38 %	unknown %	unknown %	unknown %	unknown %
EU 28+	25 %	39 %	unknown %	unknown %	unknown %	unknown %

Criterion C	C1		C2		C3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

Criterion D	D1		D2		D3	
	Extent affected	Relative severity	Extent affected	Relative severity	Extent affected	Relative severity
EU 28	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %
EU 28+	unknown %	unknown %	unknown %	unknown %	unknown %	unknown %

The overall extent and severity are the weighted average calculated from reported territorial data, excluding the (uncertain) Romanian data, and therefore covering about 50% of the reported data. The involved countries could not provide enough information on long historical or future trends in quality (CD2, CD3, C2, C3, and D2). The changes in quality are both abiotic and biotic, so C/D1 has not been split into C1 and D1. The assessment of C/D1 results in the category Least Concern.

Criterion E: Quantitative analysis to evaluate risk of habitat collapse

Criterion E	Probability of collapse
EU 28	Unknown
EU 28+	unknown

There is no quantitative analysis available that estimates the probability of collapse of this habitat type.

Overall assessment "Balance sheet" for EU 28 and EU 28+

	A1	A2a	A2b	A3	B1	B2	B3	C/D1	C/D2	C/D3	C1	C2	C3	D1	D2	D3	E
EU28	NT	DD	DD	DD	LC	LC	LC	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	NT	DD	DD	DD	LC	LC	LC	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Near Threatened	A1	Near Threatened	A1

Confidence in the assessment

Low (mainly based on uncertain or indirect information, inferred and suspected data values, and/or limited expert knowledge)

Assessors

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