**European Environment Agency**
*European Topic Centre on Biological Diversity*

# Colchicum arenarium

| | |
|---|---|
| **Annex** | II, IV |
| **Priority** | No |
| **Species group** | Vascular plants |
| **Regions** | Continental, Pannonian |

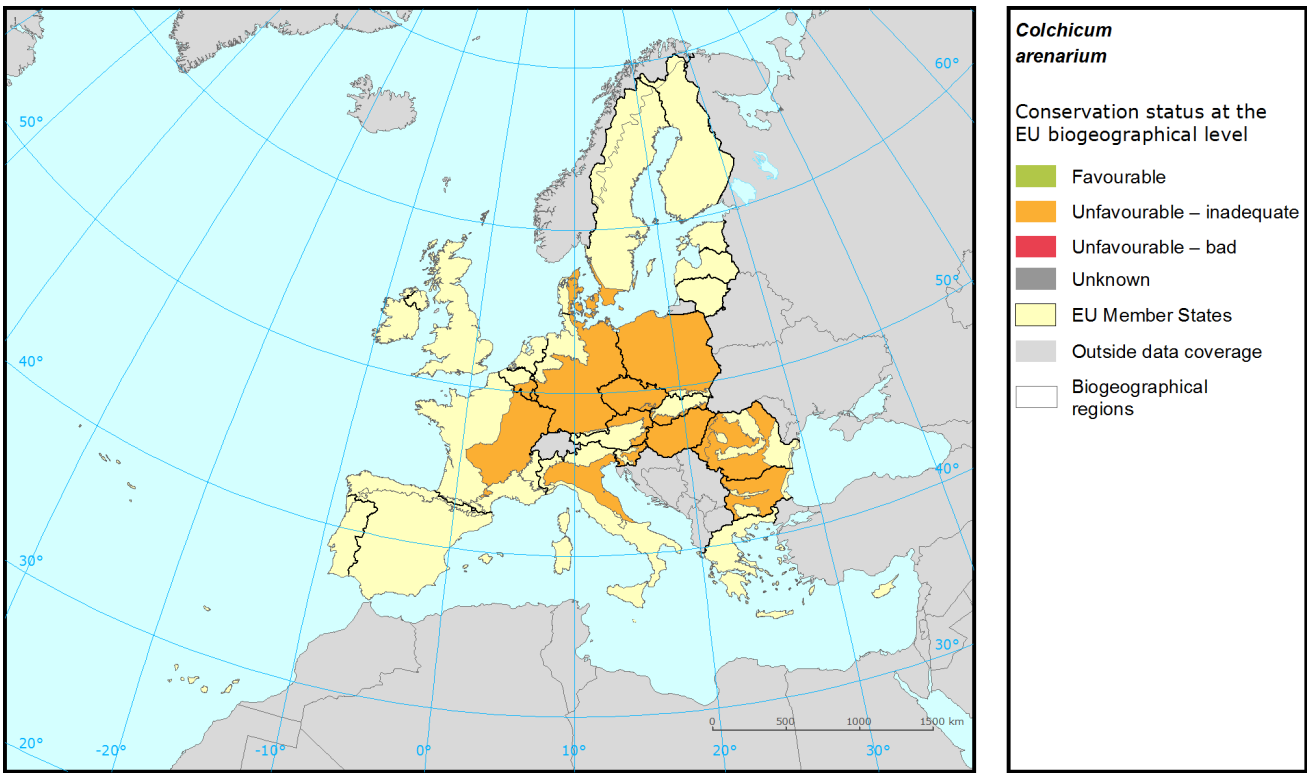
Sand saffron *Colchicum arenarium* is a perennial flowering plant species endemic to Pannonian region, especially to Hungaria, with only single localities in Slovakia. 1–3 localities are reported from Romania (Continental region) and according to the EU Red List the situation similarly in Ukraine, Moldova, Serbia and Croatia. Its population in Hungary is three orders of magnitude larger than in the other countries. Sand saffron prefers sandy pine forests and sandy grasslands (steppes) from lowlands to hilly regions. Sand saffron is assessed Least Concern (LC) in the EU Red List especially due to its large population in Hungary.

The conservation status is assessed as "Unfavourable Inadequate" status in Pannonian region what corresponds with the evaluation of all parameters by both reporting countries. This conclusion is the same as the previous assessment with slight improvement reported in Slovakian population. "Unfavourable Inadequate" status was concluded for the small population in the Continental region as well.

Major threats to sand saffron include intensive grazing in one hand as well as abandonment of pastoral systems in the other hand, forestry management digging up the soil, anthropogenic reduction of habitat connectivity, changes in abiotic conditions and invasions by non-native species. This is different to the threats to the small Romania population in the Continental region, where droughts and new constructions in landscape are considered among the main threats.

No changes in overall conservation status between 2001-06 and 2007-12 reports in Pannonian region. The species was not reported from Continental region 2001-06.

# Assessment of conservation status at the European biogeographical level




| Region | Conservation status (CS) of parameters | | | | Current CS | Trend in CS | % in region | Previous CS | Reason for change |
|---|---|---|---|---|---|---|---|---|---|
| | Range | Population | Habitat | Future prospects | | | | | |
| CON | U1 | U1 | U1 | U1 | U1 | - | | XX | Not genuine |
| PAN | U1 | U1 | U1 | U1 | U1 | = | 100 | U1 | |

See the endnote for more information[i]

## Assessment of conservation status at the Member State level


***Colchicum arenarium***

Distribution and conservation status at the Member State level

- Favourable
- Unfavourable – inadequate
- Unfavourable – bad
- Unknown
- EU Member States
- Outside data coverage
- Biogeographical region

The map shows both Conservation Status and distribution using a 10 km x 10 km grid. Conservation status is assessed at biogeographical level. Therefore the representation in each grid cell is only illustrative.

| MS | Region | Conservation status of parameters | | | | Current CS | Trend in CS | % in region | Previous CS | Reason for change |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Range | Population | Habitat | Future prospects | | | | | |
| RO | CON | U1 | U1 | U1 | U1 | U1 | | 100.0 | | |
| HU | PAN | U1 | U1 | U1 | U1 | U1 | = | 98.1 | U1 | |
| SK | PAN | U1 | U1 | U1 | U1 | U1 | = | 1.9 | U2 | Genuine |

Knowing that not all changes in conservation status between the reporting periods were genuine, Member States were asked to give the reasons for changes in conservation status. Bulgaria and Romania only joined the EU in 2007 and Greece did not report for 2007-12 so no reason is given for change for these countries. Greek data shown above is from 2001-06.

## Main pressures and threats reported by Member States

Member States were asked to report the 20 most important threats and pressures using an agreed hierarchical list which can be found on the Article 17 Reference Portal. Pressures are activities which are currently having an impact on the species and threats are activities expected to have an impact in the near future. Pressures and threats were ranked in three classes ‘high, medium and low importance’; the tables below only show threats and pressures classed as ‘high’, for some species there were less than ten threats or pressures reported as highly important.

**Ten most frequently reported 'highly important' pressures**

| Code | Activity | Frequency |
|---|---|---|
| A04 | Grazing by livestock | 29 |
| M01 | Abiotic changes (climate change) | 29 |
| B02 | Forest and plantation management & use | 14 |
| I01 | Invasive alien species | 14 |
| J03 | Other changes to ecosystems | 14 |

**Ten most frequently reported 'highly important' threats**

| Code | Activity | Frequency |
|---|---|---|
| A04 | Grazing by livestock | 22 |
| M01 | Abiotic changes (climate change) | 22 |
| B02 | Forest and plantation management & use | 11 |
| D01 | Roads, railroads and paths | 11 |
| E04 | Scattered structures and buildings | 11 |
| I01 | Invasive alien species | 11 |
| J03 | Other changes to ecosystems | 11 |

## Proportion of population covered by the Natura 2000 network

For species listed in the Annex II of the Directive Member States were asked to report the population size within the Natura 2000 network. The percentage of species population covered by the network was estimated by comparing the population size within the network and the total population size in the biogeographical/marine region.

**Percentage of coverage by Natura 2000 sites in biogeographical/marine region**

| | CON | PAN |
|---|---|---|
| **HU** | | 96 |
| **RO** | 100 | |
| **SK** | | 29 |

See the endnotes for more information[ii]

## Most frequently reported conservation measures

For species listed in the Annex II of the Directive Member States were asked to report up to 20 conservation measures being implemented for this species using an agreed list which can be found on the Article 17 Reference Portal. Member States were further requested to highlight up to five most important ('highly important') measures; the table below only shows measures classed as 'high', for many species there were less than ten measures reported as highly important.

**Ten most frequently reported 'highly important' conservation measures**

| Code | Measure | Frequency |
|---|---|---|
| 6.1 | Establish protected areas/sites | 25 |
| 7.4 | Specific single species or species group management measures | 25 |
| 2.0 | Other agriculture-related measures | 13 |
| 2.1 | Maintaining grasslands and other open habitats | 13 |
| 3.2 | Adapt forest management | 13 |
| 6.3 | Legal protection of habitats and species | 13 |

This information is derived from the Member State national reports submitted to the European Commission under Article 17 of the Habitats Directive in 2013 and covering the period 2007-2012. More detailed information, including the MS reports, is available at: http://bd.eionet.europa.eu/article17/reports2012/species/summary/?group=Vascular+plants&period=3&subject=Colchicum+arenarium

[i]**Assessment of conservation status at the European biogeographical level:** Current Conservation Status (Current CS) shows the status for the reporting period 2007-2012, Previous Conservation Status (Previous CS) for the reporting period 2000-2006. Reason for change in conservation status between the reporting periods indicates whether the changes in the status were genuine or not genuine. Previous Conservation Status was not assessed for Steppic, Black Sea and Marine Black Sea regions. For these regions the Previous status is therefore considered as 'unknown'. The percentage of the species population occurring within the biogeographical/marine region (% in region) is calculated based on the area of GIS distribution.

[ii]**Percentage of coverage by Natura 2000 sites in biogeographical/marine region:** In some cases the population size within the Natura 2000 network has been estimated using a different methodology to the estimate of overall population size and this can lead to percentage covers greater than 100%. In such case the value has been given as 100% and highlighted with an asterisk (*). The value 'x' indicates that the Member State has not reported the species population and/or the coverage by Natura 2000. No information is available for Greece. The values are only provided for regions, in which the occurrence of the species has been reported by the Member States.