

B1.7d Mediterranean coniferous coastal dune woodland

Summary

The dune woods develop naturally where coastal sands around the Mediterranean have become sufficiently stabilised and remote from the influence of saline ground water or spray to sustain a permanent cover of trees. The main colonisers are various *Pinus* spp., often also widely planted, and the resulting woodlands bear a strong resemblance to the zonal woodland type(s) of the particular regional climate. Fires are the main threat with urban development and recreational activities. After fire or clearance, the habitat needs human intervention for recovery with planting of appropriate pines.

Synthesis

Data are available from 5 countries (only in the EU28). As the habitat experienced a slight decrease and it is relatively stable both in quantity and quality, is assessed as Least Concern under Criteria A1, A2a, A3, B1, B2 and C/D1 for EU 28 and EU 28+. The habitat is Data Deficient under the other Criteria.

Overall Category & Criteria			
EU 28		EU 28+	
Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

Sub-habitat types that may require further examination

No sub-habitats have to be distinguished within the Mediterranean coniferous coastal woodlands. Evergreen oak forests are very rare along the Mediterranean coast and may be considered as a separate Mediterranean dune woodland type. They have been included in the inland evergreen oak forests.

Habitat Type

Code and name

B1.7d Mediterranean coniferous coastal dune woodland



Coniferous coastal dune woods with *Pinus pinea*, Torre Astura, Lazio, Italy (Photo: Alicia Acosta).



Coniferous coastal dune woods at Follonica, Toscana, Italy (Photo: Gianmaria Bonari).

Habitat description

Dune woods develop naturally where coastal sands become sufficiently stabilised and remote from the influence of saline ground water or spray to sustain a permanent cover of trees and they bear a strong resemblance to the zonal woodland type(s) of the particular regional climate. Within the Mediterranean

zone, on the coasts of Cyprus, Albania, Italy, Spain and the Atlantic coast of Portugal, various pine dominate the vegetation landscape, similar to G3.7 Mediterranean lowland to sub-montane *Pinus* woodland. The commonest trees in the western Mediterranean are *Pinus pinea*, *Pinus pinaster* and *Pinus halepensis* and in the east *Pinus brutia*. The first three are also widely planted on stable coastal sands in the Mediterranean and long-established plantations with natural undergrowth (like in the equivalent Annex 1 habitat type 2270 Wooded dunes with *Pinus pinea* and/or *Pinus pinaster*) are included in this habitat type. Associated woody species include *Phillyrea angustifolia*, *Rhamnus oleoides*, *Pistacia lentiscus*, *Olea europaea* var. *sylvestris*, *Tamarix gallica* and *Tamarix africana*, with *Juniperus macrocarpa*, *Juniperus phoenicea* and *Juniperus oxycedrus* in Spain and Portugal. Where such shrubs exceed the cover of pines, the vegetation is included in B1.6b Mediterranean and Black Sea coastal dune scrub.

Indicators of quality:

- Absence of planted native or introduced pines or other forestry trees such as *Eucalyptus*
- Presence of uneven aged pine canopy with subordinate shrub layer
- Presence of typical associated flora without weeds
- Lack of disturbance from coastal tourism

Characteristic species:

Tree canopy species: *Pinus brutia*, *Pinus halepensis*, *Pinus pinea*, *Pinus pinaster*. Understorey species: *Juniperus macrocarpa*, *Juniperus phoenicea*, *Juniperus oxycedrus*, *Olea europaea* var. *sylvestris*, *Phillyrea angustifolia*, *Pistacia lentiscus*, *Rhamnus oleoides*, *Tamarix gallica*, *Tamarix africana*.

Classification

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

EUNIS:

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EuroVegChecklist:

Oleo-Ceratonion siliquae Br.-Bl. ex Guinochet et Drouineau 1944

Junipero phoeniceae-Pinion acutisquamae A.V. Pérez et Cabezudo in A.V. Pérez et al. 1988 corr. Rivas-Mart. et al. 2002 nom. invers. propos.

Pinion pineae Feinbrun 1959

Quercion ilicis Br.-Bl. ex Molinier 1934

Annex 1:

2270 Wooded dunes with *Pinus pinea* and/or *Pinus pinaster*

Emerald:

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MAES-2:

Woodland and forest

IUCN:

1.4 Temperate Forest

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

Yes

Regions

Mediterranean

Justification

The habitat type is typical and largely restricted to the coastlines of the Mediterranean biogeographical region.

Geographic occurrence and trends

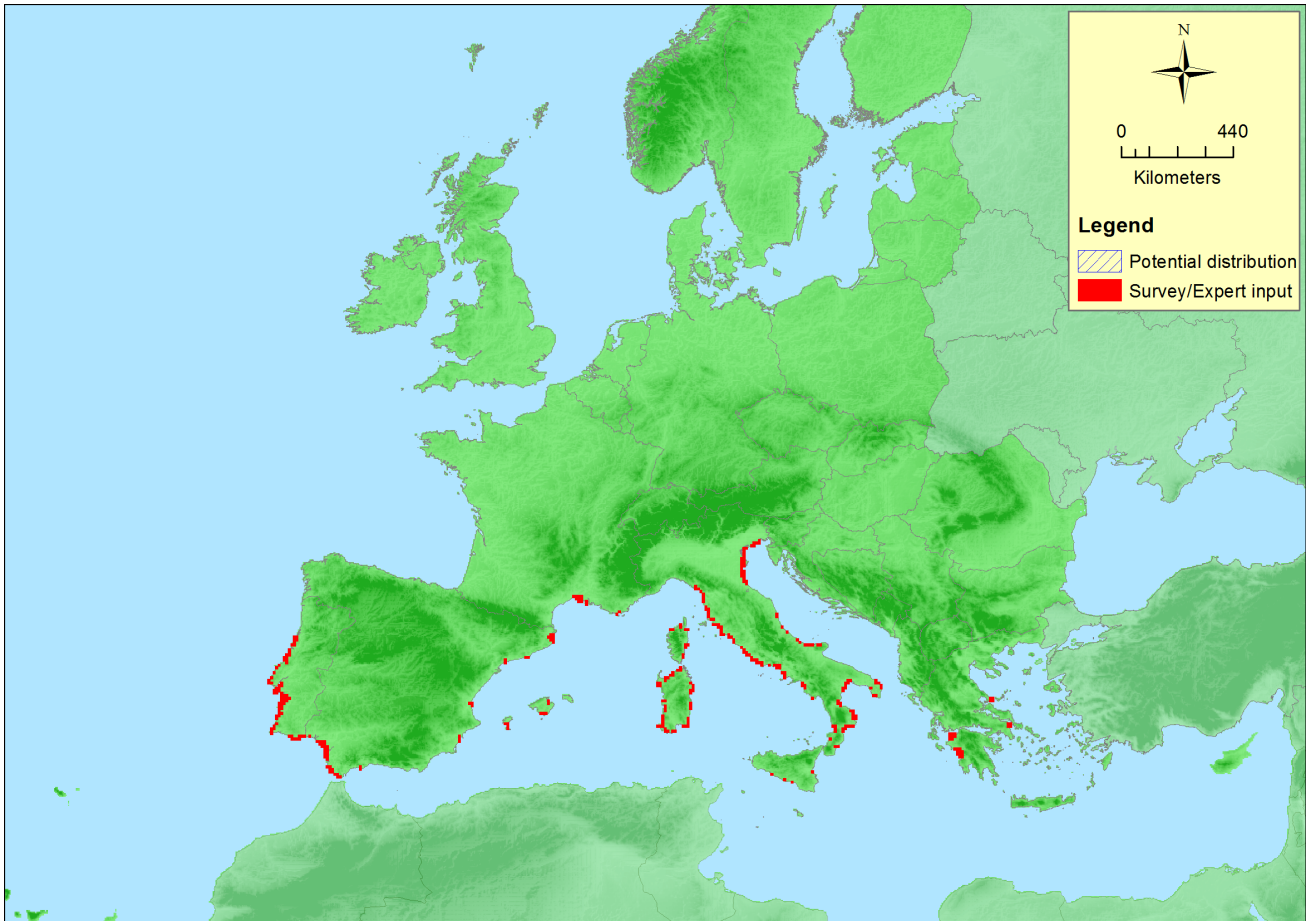
EU 28	Present or Presence Uncertain	Current area of habitat	Recent trend in quantity (last 50 yrs)	Recent trend in quality (last 50 yrs)
<i>Croatia</i>	Present	Unknown Km ²	Unknown	Unknown
<i>Cyprus</i>	Uncertain	Unknown Km ²	Unknown	Unknown
<i>France</i>	Corsica: Present France mainland: Present	27 Km ²	Decreasing	Unknown
<i>Greece</i>	Crete: Present East Aegean: Present Greece (mainland and other islands): Present	8.7 Km ²	Unknown	Decreasing
<i>Italy</i>	Italy mainland: Present Sardinia: Present Sicily: Present	222 Km ²	Stable	Decreasing
<i>Portugal</i>	Madeira: Present Portugal Azores: Present Portugal mainland: Present Savage Islands: Present	337 Km ²	Decreasing	Decreasing
<i>Spain</i>	Balearic Islands: Present Canary Islands: Present Spain mainland: Present	166 Km ²	Decreasing	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>	Present	Unknown Km ²	Unknown	Unknown
<i>Montenegro</i>	Present	Unknown Km ²	Unknown	Unknown

Extent of Occurrence, Area of Occupancy and habitat area

	Extent of Occurrence (EOO)	Area of Occupancy (AOO)	Current estimated Total Area	Comment
EU 28	1974500 Km ²	373	762 Km ²	
EU 28+	1974500 Km ²	373	762 Km ²	

Distribution map



The map is rather complete, but data gaps exist for Albania. Data sources: Art17.

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

Ca 99% of the habitat type is within the EU28. The habitat is least represented out of the EU28.

Trends in quantity

The average present past trend in quantity (over the past 50 years) is a decline of 5.7%. In Spain and Portugal the habitat experienced a slight decrease (5-10%), while in Italy the trend is relatively stable. Estimated future trend in quantity is a relative stability (0% changes). Since 50-250 years ago only 3% of the potential area has been lost, however, trends have not been provided for all countries.

The recent, future and historical trends have been calculated on the basis of the available territorial data (km²). These data are referred to different years, but we assume that the habitat area is the same in the year of reference as in the year where the data was provided.

- 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
 Both EOO and AOO are above the thresholds. Moreover, it seems that the decline is considerably reduced or will stop as a relative stability is predicted for the future.
- Does the habitat have a small natural range by reason of its intrinsically restricted area?
 No
Justification

Both EOO and AOO are above the thresholds.

Trends in quality

The average degraded area in the last 50 years is 8.8% with a severity of degradation of about 15%, as has been calculated from territorial data in a 1-5 scale (from stable-slight to severe). The trend on quality is based on only 40% of the data, as it is unknown for France, Greece and Spain.

The trends in quality have been calculated on the basis of the available territorial data (km²). These data are referred to different years, but we assume that the habitat area is the same in the year of reference as in the year where the data was provided.

- Average current trend in quality

EU 28: Decreasing

EU 28+: Decreasing

Pressures and threats

Fires are the main factor threatening this habitat. Frequent fires, especially in summer, reduce forest cover with gradual replacement of pines with the formation of scrublands. Moreover, other pressures could be mentioned: Urban development, and recreational activities (trampling and wastes). In some areas, the introduction of *Pinus* afforestations on coastal dunes have changed the natural landscape. Predictions for the future pointed out that the habitat extent and quality should maintain rather stable.

List of pressures and threats

Urbanisation, residential and commercial development

Urbanised areas, human habitation

Discharges

Human intrusions and disturbances

Outdoor sports and leisure activities, recreational activities

Natural System modifications

Fire and fire suppression

Conservation and management

Legal protection of habitats and species could be suggested. In particular, a general legislation to prevent construction of new infrastructures and land clearing at expense of this habitat should be shared by all the EU countries. Moreover, restoring degraded coastal pines areas are also important. If pines have been planted, programmed cutting schedules are needed to maintain the quality of the habitat. Preventing from trampling could be also mentioned.

List of conservation and management needs

Measures related to forests and wooded habitats

Restoring/Improving forest habitats

Measures related to wetland, freshwater and coastal habitats

Restoring coastal areas

Measures related to spatial planning

Establish protected areas/sites

Legal protection of habitats and species

Measures related to hunting, taking and fishing and species management

Specific single species or species group management measures

Conservation status

Annex I types:

2270: CON FV, MED U2

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

This habitat could be severely damaged by fire. After fire or clearing, the habitat needs human intervention for recovering. In particular, planting *Pinus* spp. is suggested.

Effort required

20 years	50+ years
Through intervention	Through intervention

Red List Assessment

Criterion A: Reduction in quantity

Criterion A	A1	A2a	A2b	A3
EU 28	-5.7 %	0 %	Unknown %	3.1 %
EU 28+	-5.7 %	0 %	Unknown %	3.1 %

The recent, future and historical trends have been calculated on the basis of the available territorial data (km²). These data are referred to different years, but we assume that the habitat area is the same in the year of reference as in the year where the data was provided. The percentage of area declining in extent over the past 50 years (Criterion A1) is 5.7%. The average historical reduction in quantity was estimated of about 3% (Criterion A3). The estimated future reduction in extent over a 50 years period (Criterion A2a) is about 0%. Thus, the habitat is assessed as Least Concern under Criterion A.

Criterion B: Restricted geographic distribution

Criterion B	B1				B2				B3
	EOO	a	b	c	AOO	a	b	c	
EU 28	197450 Km ²	No	No	No	373	No	No	No	No
EU 28+	197450 Km ²	No	No	No	373	No	No	No	No

Both the extent of occurrence (EOO) and the area of occupancy (AOO) are above the thresholds. Criterion B1a/B2a are not met because the ongoing decline in biotic (ii) and abiotic (iii) quality is relatively low. It is unlikely that a threatening event will cause continuing declines within the next 20 years. The number of locations has not been calculated but it is probably very large. Thus, this habitat is assessed as Least Concern under Criterion B.

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	8.8 %	15 %	Unknown %	Unknown %	Unknown %	Unknown %
EU 28+	8.8 %	15 %	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 trends in quality have been calculated on the basis of the available territorial data (km²). These data are referred to different years, but we assume that the habitat area is the same in the year of reference as in the year where the data was provided. There is only data available for Criterion C/D1. Based on the territorial data provided, the reduction in quality over the last 50 years affected about 8.8% of the current area, with a relative severity of degradation of 15%. The ongoing decline in biotic (ii) and abiotic (iii) quality is relatively low. Thus, this habitat is assessed as Least Concern under Criterion C/D.

Criterion E: Quantitative analysis to evaluate risk of habitat collapse

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

No data available for a quantitative analysis to evaluate risk of habitat collapse. Thus, this habitat is assessed as Data Deficient under Criterion E.

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	LC	LC	DD	LC	LC	LC	LC	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD
EU28+	LC	LC	DD	LC	LC	LC	LC	LC	DD	DD	DD	DD	DD	DD	DD	DD	DD

Overall Category & Criteria			
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Red List Category	Red List Criteria	Red List Category	Red List Criteria
Least Concern	-	Least Concern	-

Confidence in the assessment

Medium (evenly split between quantitative data/literature and uncertain data sources and assured expert knowledge)

Assessors

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Contributors

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