

# Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

## NATIONAL LEVEL

### 1. General information

1.1 Member State	GR
1.2 Habitat code	1410 - Mediterranean salt meadows ( <i>Juncetalia maritimi</i> )

### 2. Maps

2.1 Year or period	2015
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.4 Additional maps	Yes

## BIOGEOGRAPHICAL LEVEL

### 3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs	<b>Mediterranean (MED)</b>
3.2 Sources of information	<p>Dimopoulos P., Xystrakis F. and Tsiripidis I. 2014. Deliverable A1. Final Catalogue of Habitat Types – 1st edition. Ministry of Environment, Energy and Climate Change, OIKOM Ltd - E. Alexandropoulou - A. Glavas, Athens, pages 54. Dimopoulos P., Fotiadis G., Tsiripidis I., Panitsa M. and Karadimou E. 2014. Deliverable A2. Report and Literature Database on Habitat Types of Greece – 1st edition. Ministry of Environment, Energy and Climate Change, OIKOM Ltd - E. Alexandropoulou - A. Glavas, Athens, pages 210. Tsiripidis I., Xystrakis F., Kasampalis D., Mastrogianni A., Strid A. and Dimopoulos P., 2014. Deliverable A4. Potential Distribution Maps of Habitat Types – 1st edition. Ministry of Environment, Energy and Climate Change, OIKOM Ltd - E. Alexandropoulou - A. Glavas, Athens, Athens, pages 176. Dimopoulos P., Tsiripidis I., Xystrakis F., Panitsa M., Fotiadis G., Kallimanis A.S. and Kazoglou I. 2014. Deliverable A6. Explanatory Implementation Manual for the Conservation Degree Assessment of Habitat Types – 1st edition. Ministry of Environment, Energy and Climate Change, OIKOM Ltd - E. Alexandropoulou - A. Glavas, Athens, pages 35. (with Annexes: I. Habitat types protocols, pages 600; II. Explanatory notes on the habitat types protocols selection, pages 4; III. Correspondence of Habitat types protocols with the clusters of vegetation relevés (excel file). Dimopoulos P., Tsiripidis I., Xystrakis F., Kallimanis A.S and Panitsa M. 2014. Deliverable A7. Preliminary Analysis of the Field Data for the Habitat Types – 1st edition. Ministry of Environment, Energy and Climate Change, OIKOM Ltd - E. Alexandropoulou - A. Glavas, Athens, pages 16. Babalonas D. 1980. Vegetationseinheiten und Vegetationskartierung in dem Mündungsgebiet des Flusses Evros. Feddes Repert. 9 (9/10): 615 – 627. Babalonas D., Sýkora K.V. &amp; Papastergiadou E. 1995. Review of plant communities from Greek dunes and salt marshes. A preliminary summarizing list. Ann. Bot. (Roma) 53: 107-117. Βαλλιανάτου Ε. 2005. Γεωβοτανική Έρευνα της Σαλαμίνας, Αίγινας και μερικών άλλων Νησιών του Σαρωνικού Κόλπου. Διδακτορική Διατριβή. Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, σελ. 558. Βασιλείου Α., Μπαμπαλώνας Δ. &amp; Greuter W. 2000. Ανάλυση της βλάστησης και των εδαφικών συνθηκών στη λιμνοθάλασσα της Επανομής. Πρακτικά του 8ου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρείας, Πάτρα, 5-8 Οκτωβρίου 2000: 89-95. Γεωργιάδης Θ., Δημόπουλος Π., Πανίτσα Μ. &amp; Δημητρέλλος Γ. 1996. Τα φυσικά οικοσυστήματα της Πελοποννήσου με βάση την ποικιλότητα σε τύπους οικοτόπων και τα</p>

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σημαντικά τους είδη. Πρακτικά 6ου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρείας και της Βιολογικής Εταιρείας Κύπρου, Παραλίμνι Κύπρου, 6-11 Απριλίου 1996: 68-73. Δρόσος Ε., Αθανασιάδης Ν., Θεοδωρόπουλος Κ. & Ελευθεριάδου Ε. 1996. Αμμόφιλες, Αλόφιλες και υδρόφιλες φυτοκοινωνίες του Δέλτα του Θεσσαλικού Πηνειού ποταμού. Επιστ. Επετ. Τμημ. Δασολογίας & Φυσικού Περιβάλλοντος 39(1): 327-365. Gehu J.M., Costa M., Biondi E., Franck J. & Arnold N. 1987. Donnees sur la vegetation littorale de la Crete (Grece). Ecologia Mediterranea XIII (1/2): 93-105. Georgiadis Th., Dimopoulos P. & Dimitrellos G. 1997. The flora and vegetation of the Acheron Delta (W Greece) aiming at nature conservation. Phytos 37: 31-60. Grandstein S.R. & Smittenberg J.H. 1977. The hydrophilus vegetation of western Crete. Vegetatio 34(2): 65-86. Ζώτος Α. & Δημόπουλος Π. 2005. Οικολογική έρευνα της βλάστησης των καλαμιώνων και των υγρών λιβαδιών στις λίμνες Λυσιμαχεία και Τριχωνίδα (Δ. Ελλάδα). Πρακτικά 10ου Πανελληνίου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρείας, Ιωάννινα, 5-8 Μαΐου 2005, σελ. 10 (σε CD). Θεοδωρόπουλος Κ. 2001. Ζώνες βλάστησης και τύποι οικοτόπων του νομού Θεσσαλονίκης. Επιστ. Επετ. Τμημ. Δασολογίας & Φυσικού Περιβάλλοντος ΜΔ: 353-381. Καραγιάννη Π. 2009. Οικολογία των τύπων οικοτόπων της αποξηραμένης Λίμνης Μουριάς. Μελέτη της χλωρίδας και βλάστησης και οικολογική διερεύνηση περιβαλλοντικών παραμέτρων στα πλαίσια προγράμματος πιλοτικού επαναπλημμυρισμού. Διδακτορική Διατριβή. Πανεπιστήμιο Πατρών, σελ. 234 + Παράρτημα. Καραγιάννη Π., Τηνιακού Α. & Γεωργιάδης Θ. 2005. Συμβολή στην παρόχθια βλάστηση των ποταμών της Δυτικής Ελλάδος. Πρακτικά 10ου Πανελληνίου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρείας, Ιωάννινα, 5-8 Μαΐου 2005, σελ. 10 (σε CD). Korakis G. & Gerasimidis A. 2006. Coastal and halophytic habitats and their flora in Evrotas Delta (SE Peloponnisos, Greece). J. Biol. Res. 6: 155-166. Κωνσταντινίδης Π. & Τσιουρλής Γ. 2001. Οι βλαστητικές μονάδες (τύποι οικοτόπων) της Επαρχίας Λαγκαδά (Λεκάνη Μυγδονίας): Μέρος Ι: Περιγραφή, ανάλυση και χαρτογράφηση. Επιστ. Επετ. Τμημ. Δασολογίας & Φυσικού Περιβάλλοντος ΜΔ: 627-654. Κωνσταντινίδης Π. & Τσιουρλής Γ. 2001. Οι τύποι οικοτόπων της Επαρχίας Λαγκαδά (Λεκάνης Μυγδονίας): Μέρος ΙΙ. Οικολογική κατάσταση και δυναμική. Επιστ. Επετ. Τμημ. Δασολογίας & Φυσικού Περιβάλλοντος ΜΔ: 655-680. Lavrentiades G.J. 1964. The ammophilous vegetation of the western Peloponnesos coasts. Vegetatio 12(3-4): 223-287. Μπαμπαλώνας Δ. 1979. Οι φυτοκοινωνιολογικές τάξεις Ammophiletalia arundinaceae (Br.-Bl. 1933) R. Tx. Et Oberd. 1958 και Elymetalia gigantei Vich. 1971 στην οριακή θέση της Θράκης. Πρακτικά 1ης επιστημονικής ημερίδας Ελληνικής Εταιρείας Βιολογικών Επιστημών. Θεσσαλονίκη. Sarika M. 2012. Flora and vegetation of some coastal ecosystems of Sterea Ellas and eastern continental Greece. Lazaroa 33: 65-99. Sarika M., Dimopoulos P. & Yannitsaros A. 2005. Contribution to the knowledge of the wetland flora and vegetation of Amvrakikos Gulf. W Greece. Willdenowia 35: 69-85. Σύκορα Κ.Υ., Βαβαλονάς Δ. & Παπαστεργιάδου Ε. 1998. An overview of the coastal vegetation of Greece based on multivariate analysis: Dunes. Proceedings of the 1st Balkan Botanical Congress (Progress in Botanical Research), Thessaloniki 1998. Kluwer Academic Publishers, 149-152. Σύκορα Κ.Υ., Βαβαλονάς Δ. & Παπαστεργιάδου Ε. 2003. Strandline and sand-dune vegetation of coasts of Greece and some other Aegean countries. Phytocoenologia 33(2-3): 409-446. Χριστοδουλάκης Δ. 1986. Η χλωρίδα και η βλάστηση της Σάμου. Διδακτορική Διατριβή. Πανεπιστήμιο Πατρών, σελ. 381. Vasiliou A. 2000. Die psammophile und halophile Vegetation des Lagunenkomplexes Epanomi (Makedonien, Nordgriechenland). Pflanzensoziologische und floristische Untersuchungen. Diplomarbeit, Freie Universität Berlin, pg. 125.



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b) Area in not-good condition (km <sup>2</sup> )	Minimum 31,13	Maximum 31,13
c) Area where condition is not known (km <sup>2</sup> )	Minimum 124,51	Maximum 124,51

6.2 Condition of habitat Method used	Complete survey or a statistically robust estimate
6.3 Short-term trend of habitat area in good condition Period	20072018
6.4 Short-term trend of habitat area in good condition Direction	Increasing (+)
6.5 Short-term trend of habitat area in good condition Method used	Complete survey or a statistically robust estimate
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period? No
6.7 Typical species Method used	<p>Typical species were determined on the basis of a vegetation database, comprised of about 22000 sampling plots. First, a list of possible typical species was determined per habitat type, selecting the ones presenting a high fidelity value to the habitat types according the algorithm of Tsiripidis et al. (2009) and the phi coefficient value (Chytrý et al. 2002). Then typical species per habitat type were selected from the above-mentioned lists by expert judgment and using as criteria species niche breadth, their ability to comprise indicators of habitat types' conservation status and their function as keystone species. The nomenclature of the typical species follows Dimopoulos et al. (2013). References Chytrý , M., Tichý , L., Holt, J. &amp; Botta-Duká t, J. 2002. Determination of diagnostic species with statistical fidelity measures. <i>Journal of Vegetation Science</i> 13: 79–90. Dimopoulos, P., Raus, Th., Bergmeier, E., Constantinidis, Th., Iatrou, G., Kokkini, S., Strid, A. &amp; Tzanoudakis, D. 2013: Vascular plants of Greece: an annotated checklist. – Berlin: Botanischer Garten und Botanisches Museum Berlin-Dahlem, Freie Universität Berlin; Athens: Hellenic Botanical Society. <i>Englera</i> 31: 1-367. Tsiripidis, I., Bergmeier, E., Fotiadis, G. &amp; Dimopoulos, P. 2009. A new algorithm for the determination of differential taxa. <i>Journal of Vegetation Science</i> 20: 233-240.</p>
6.8 Additional information	Assumption: 20% of habitat area is estimated to be in not-good condition.

## 7. Main pressures and threats

### 7.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Dumping/depositing of inert materials from terrestrial extraction (C06)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Sports, tourism and leisure activities (F07)	M
Use of plant protection chemicals in agriculture (A21)	H
Construction or modification (e.g. of housing and settlements) in existing urban or recreational areas (F02)	H
Construction or modification of commercial / industrial infrastructure in existing commercial / industrial areas (F04)	H
Irrigation of agricultural land (A18)	M

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Active abstractions from groundwater, surface water or mixed H water for agriculture (A30)

Threat	Ranking
Conversion into agricultural land (excluding drainage and burning) (A01)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Dumping/depositing of inert materials from terrestrial extraction (C06)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Sports, tourism and leisure activities (F07)	M
Use of plant protection chemicals in agriculture (A21)	H
Irrigation of agricultural land (A18)	M
Solar power, including infrastructure (D03)	M

## 7.2 Sources of information

PRESSURES: Based mainly on expert judgement and other data.  
THREATS: Based on expert opinion.

## 7.3 Additional information

## 8. Conservation measures

### 8.1 Status of measures

- a) Are measures needed? Yes
- b) Indicate the status of measures Measures identified, but none yet taken

### 8.2 Main purpose of the measures taken

### 8.3 Location of the measures taken

### 8.4 Response to the measures

### 8.5 List of main conservation measures

Adapt mowing, grazing and other equivalent agricultural activities (CA05)

Adapt/manage extraction of non-energy resources (CC01)

Reduce impact of transport operation and infrastructure (CE01)

Reduce impact of outdoor sports, leisure and recreational activities (CF03)

Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)

Other measures related to residential, commercial, industrial and recreational infrastructures, operations and activities (CF12)

Manage drainage and irrigation operations and infrastructures in agriculture (CA15)

Habitat restoration/creation from resources, exploitation areas or areas damaged due to installation of renewable energy infrastructure (CC07)

Habitat restoration of areas impacted by transport (CE06)

### 8.6 Additional information

## 9. Future prospects

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9.1 Future prospects of parameters	a) Range	Good
	b) Area	Poor
	c) Structure and functions	Poor

## 9.2 Additional information

## 10. Conclusions

10.1. Range	Favourable (FV)
10.2. Area	Unfavourable - Inadequate (U1)
10.3. Specific structure and functions (incl. typical species)	Unfavourable - Inadequate (U1)
10.4. Future prospects	Favourable (FV)
10.5 Overall assessment of Conservation Status	Unfavourable - Inadequate (U1)
10.6 Overall trend in Conservation Status	Improving (+)
10.7 Change and reasons for change in conservation status and conservation status trend	<p>a) Overall assessment of conservation status</p> <p>No change</p> <p>The change is mainly due to:</p> <p>b) Overall trend in conservation status</p> <p>Improved knowledge/more accurate data</p> <p>Use of different method</p> <p>The change is mainly due to: Improved knowledge/more accurate data</p>
10.8 Additional information	

## 11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km <sup>2</sup> in biogeographical/marine region)	<p>a) Minimum</p> <p>b) Maximum</p> <p>c) Best single value 98,85</p>
11.2 Type of estimate	Minimum
11.3 Surface area of the habitat type inside the network Method used	Complete survey or a statistically robust estimate
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)
11.5 Short-term trend of habitat area in good condition within network Method used	Complete survey or a statistically robust estimate
11.6 Additional information	The change in 11.1 (in comparison to the previous report) is due to the updated mapping datasets on terrestrial habitat types within the Natura 2000 network (pSCIs, SCIs and SACs), based on the most recent national project (results became available in 2018). As this project did not include the extended areas of the Natura 2000 sites, nor the newly proposed SCIs, the surface area reported is the minimum.

## 12. Complementary information

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12.1 Justification of % thresholds for trends

12.2 Other relevant information