

# 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	9130 - <i>Asperulo-Fagetum</i> beech forests

### 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.</p> <p>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.</p> <p>Tsiripidis I., Xystrakis F., Kasampalis D., Mastroggianni 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.</p> <p>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).</p> <p>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. Bergmeier E. 1990. Walder und Gebusche des Niederen Olymp (Kato Olimbos, NO-Thessalien). <i>Phytocoenologia</i> 18(2/3): 161-342.</p> <p>Bergmeier E. &amp; Dimopoulos P. 2001. <i>Fagus sylvatica</i> forest vegetation in Greece: Syntaxonomy and gradient analysis. <i>Journal of Vegetation Science</i> 12: 109-126.</p> <p>Bergmeier E. &amp; Dimopoulos P. 1999. Classification of Greek <i>Fagus</i> woodlands: a</p>

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preliminary survey. *Annali di Botanica*, Roma, 57: 91-104. Βραχνάκης Μ., Φωτιάδης Γ. & Καζόγλου Ι. 2011. Τύποι Οικοτόπων Εθνικού Πάρκου Πρεσπών – Αναγνώριση-Καταγραφή 2011. Εταιρία Προστασίας Πρεσπών, σελ. 101. Δημόπουλος Π. & Bergmeier E. 1998. Χωρολογία και συνχωρολογία των δασών οξιές στην Ελλάδα. Πρακτικά 7ου Πανελληνίου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρίας, Αλεξανδρούπολη, 1-4 Οκτωβρίου 1998: 96-101. Dierschke H. 1998 (1997). Syntaxonomical survey of European beech forests: some general conclusions. *Ann. Bot. (Roma)* 55: 17–26.

Dimopoulos P. & Bergmeier E. 1997. The Beech forests of Greece: Diversity, Syntaxonomy and relationships with the Palearctic Habitat Classification. 6th International Workshop, "European Vegetation Survey", Rome, Italy, 13 -16 March 1997. Fotiadis G., Panajiotidis S. & Gerasimidis A. 2005. Phytosociological approach on the forest vegetation of Mt Verno (W Macedonia, Greece). *Bot. Chron.* 18(1): 101-116. Gamisans J. & Hebrard J.-P. 1979. A propos de la vegetation des forets d'Epire et de Macedoine Grecque occidentale. *Documents phytosociologiques IV*: 290-327. Habeck F. & Reif A. 1994. Die Waldgesellschaften der montanen und subalpinen Stufe des Ostabfalls des Olymp, Griechenland. *Phytocoenologia* 22(4): 501-536. Θεοδωρόπουλος Κ., Ξυστράκης Φ., Ελευθεριάδου Ε. & Σαμαράς Δ. 2011. Ζώνες βλάστησης και τύποι οικοτόπων της περιοχής του Φορέα Διαχείρισης Εθνικού Δρυμού Ολύμπου. *Επιστ. Επετ. Σχολής Δασολογίας και Φυσικού Περιβάλλοντος*, ΑΠΘ 2002, ΜΕ, σελ. 18 (σε CD). Karagiannakidou V. 1993. Site research in beech forests of the Chortiatis Mountain Range, NE Greece. *Bot. Helv.* 103: 23-37. Κοράκης Γ.Χ. 2003. Οι μονάδες βλάστησης του όρους Πάικου και η αξιολόγησή τους από αναδασωτική σκοπιά. Διδακτορική Διατριβή. ΑΠΘ, σελ. 264 + Παράρτημα. 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 (Λεκάνη Μυγδονίας): Μέρος ΙΙ. Οικολογική κατάσταση και δυναμική. *Επιστ. Επετ. Τμημ. Δασολογίας & Φυσικού Περιβάλλοντος ΜΔ*: 655-680. Ντάφης Σ. 1969. Σταθμολογικαι έρευναι εις δάση οξιάς. *Επιστ. Επετ. Γεωπονικής και Δασολογικής Σχολής Πανεπιστημίου Θεσσαλονίκης* 13: 1-49. Πουλής Γ. 2011. Οι φυτοκοινωνίες των δασών οξιάς του όρους Οξιά (Κ. Ελλάδα). Μεταπτυχιακή Διατριβή, Τμήμα Δασοπονίας & Φυσικού Περιβάλλοντος, ΑΠΘ, σελ. 50. Quézel P. & Contandriopoulos J. 1965. A propos de la végétation des forets de Hetres dans le Massif du Pinde. *Bulletin de la societe botanique de France*: 312-319. Quézel P. 1967. A propos de quelques hetraies de Macedoine grecque. *Bull. Soc. Bot. France* 114(5-6): 200-210. Reif A. & Löblich-Ille K. 1999. Sind die Rotbuchenwälder im Pieria-Gebirge (Nordgriechenland) hohenzonal oder extrazonal? Eine Studie zum Übergang zwischen temperaten und submediterranen Wäldern in Nordgriechenland. *Phytocoenologia* 29(1): 87-146. Schreiber H.J. 1998. Waldgrenznahe Buchenwälder und Grasländer des Falakron und Pangäon in Nordostgriechenland. *Syntaxonomie, Struktur und Dynamik. Arb. Inst. Landscftsökol. Westf. Wilhelms-Univ. Münster* 4: 1-171. Smiris P. 1980. Standortkundliche und Waldbauliche Untersuchungen von Naturnahen Buchenwäldern im Voras-Gebirge (Nordgriechenland). PhD Thesis, Georg-August-Universität, Göttingen. Σταμέλλου Σ. 2011. Φυτοκοινωνίες και μοριακή ποικιλότητα της οξιάς (*Fagus sylvatica*) στο όρος Μενοίκιο. Μεταπτυχιακή Διατριβή. Τμήμα Βιολογίας, ΑΠΘ, σελ. 47. Τσιριπίδης Ι. 2001. Οι φυτοκοινωνίες δασών οξιάς της Ροδόπης και εκτίμηση περιβαλλόντων τους για αναδάσωση. Διδακτορική Διατριβή. ΑΠΘ, σελ. 359 + Παραρτήματα. Τσιριπίδης Ι., Fotiadis G.,

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Karagiannakidou V. & Babalonas D. 2005. Classification problems of forest vegetation in Greece: Transition from beech to deciduous oak zone. *Bot. Chron.* 18(1): 253-268. Tsiripidis, I., Bergmeier, E. & Dimopoulos, P. 2007. Geographical and ecological differentiation in Greek *Fagus* forest vegetation. *Journal of Vegetation Science* 18: 743-750. Tsiripidis I., Karagiannakidou V. & Athanasiadis N. 2005. Ecological and phytogeographical differentiation of beech forests in Greek Rodopi (Northeast Greece). *Biologia* 60: 57-67. Tsiripidis I., Karagiannakidou V., Alifragis D. & Athanasiadis N. 2007. Classification and gradient analysis of the beech forest vegetation of the southern Rodopi (Northeast Greece). *Folia Geobotanica*, 42: 249–270. Χοχλίουρος Π.Σ. 2005. Χλωριδική και Φυτοκοινωνιολογική Έρευνα του Όρους Βερμίου - Οικολογική προσέγγιση. Διδακτορική Διατριβή. Πανεπιστήμιο Πατρών. 352 σελ. + 3 Παραρτήματα. Xystrakis F. 2009. The drought tolerance limit of European beech (*Fagus sylvatica* L.) stands on Mt. Olympus, NC Greece. PhD Thesis, Freiburg, pg. 184 + Annex I, II, III. Zoller H., Geissler P. & Athanasiadis N. 1977. Beiträge zur Kenntnis der Wälder, Moos- und Flechtenassoziationen in den Gebirgen Nordgriechenlands. *Bauhinia* 6/1: 215-255.

## 4. Range

4.1 Surface area	2744
4.2 Short-term trend Period	2007-2018
4.3 Short-term trend Direction	Stable (0)
4.4 Short-term trend Magnitude	a) Minimum <span style="margin-left: 150px;">b) Maximum</span>
4.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data
4.6 Long-term trend Period	
4.7 Long-term trend Direction	
4.8 Long-term trend Magnitude	a) Minimum <span style="margin-left: 150px;">b) Maximum</span>
4.9 Long-term trend Method used	Based mainly on extrapolation from a limited amount of data
4.10 Favourable reference range	a) Area (km <sup>2</sup> ) b) Operator <span style="margin-left: 100px;">Approximately equal to (≈)</span> c) Unknown <span style="margin-left: 100px;">Yes</span> d) Method
4.11 Change and reason for change in surface area of range	No change The change is mainly due to:
4.12 Additional information	

## 5. Area covered by habitat

5.1 Year or period	2015-015-
5.2 Surface area (in km <sup>2</sup> )	a) Minimum <span style="margin-left: 100px;">b) Maximum</span> <span style="margin-left: 100px;">c) Best single value</span> 767,7
5.3 Type of estimate	Best estimate
5.4 Surface area Method used	Based mainly on extrapolation from a limited amount of data
5.5 Short-term trend Period	2007-2018
5.6 Short-term trend Direction	Stable (0)
5.7 Short-term trend Magnitude	a) Minimum <span style="margin-left: 100px;">b) Maximum</span> <span style="margin-left: 100px;">c) Confidence interval</span>
5.8 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data
5.9 Long-term trend Period	

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5.10 Long-term trend Direction			
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used			
5.13 Favourable reference area	a) Area (km <sup>2</sup> )	Approximately equal to (≈)	
	b) Operator	Yes	
	c) Unknown	Yes	
	d) Method		
5.14 Change and reason for change in surface area of range	No change		
	The change is mainly due to:		
5.15 Additional information			

## 6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km <sup>2</sup> )	Minimum 690,93	Maximum 690,93
	b) Area in not-good condition (km <sup>2</sup> )	Minimum 0	Maximum 0
	c) Area where condition is not known (km <sup>2</sup> )	Minimum 76,77	Maximum 76,77
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	Stable (0)		
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, 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. Englera 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: 90% of habitat area is estimated to be in good condition.		

## 7. Main pressures and threats

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## 7.1 Characterisation of pressures/threats

Pressure Ranking

Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05) M

Other forestry activities, excluding those relating to agro-forestry (B29) M

Threat Ranking

Other forestry activities, excluding those relating to agro-forestry (B29) M

Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05) 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? **No**

b) Indicate the status of measures

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

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8.6 Additional information

## 9. Future prospects

9.1 Future prospects of parameters a) Range **Good**

b) Area **Good**

c) Structure and functions **Good**

9.2 Additional information

## 10. Conclusions

10.1. Range **Favourable (FV)**

10.2. Area **Favourable (FV)**

10.3. Specific structure and functions (incl. typical species) **Favourable (FV)**

10.4. Future prospects **Favourable (FV)**

10.5 Overall assessment of Conservation Status **Favourable (FV)**

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10.6 Overall trend in Conservation Status	Stable (=)
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to:  b) Overall trend in conservation status No change The change is mainly due to:
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)	a) Minimum b) Maximum c) Best single value 450,82
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

12.1 Justification of % thresholds for trends
12.2 Other relevant information