

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

CODE: 9130

NAME: Asperulo-Fagetum beech forests

## 1. National Level

### 1.1 Maps

1.1.1 Distribution Map	Yes
1.1.2 Distribution Method	Estimate based on partial data with some extrapolation and/or modelling (2)
1.1.3 Year or period	2006-2012
1.1.4 Additional map	No
1.1.5 Range Map	Yes

## 2. Biogeographical Or Marine Level

### 2.1 Biogeographical Region

### 2.2 Published

#### Mediterranean (MED)

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.

Bergmeier E. 1990. Walder und Gebusche des Niederen Olymp (Kato Olimbos, NO-Thessalien). *Phytocoenologia* 18(2/3): 161-342.

Bergmeier E. & Dimopoulos P. 2001. *Fagus sylvatica* forest vegetation in Greece: Syntaxonomy and gradient analysis. *Journal of Vegetation Science* 12: 109-126.

Bergmeier E. & Dimopoulos P. 1999. Classification of Greek *Fagus* woodlands: a 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 οξυάς 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,

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

- 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, Greichenland. *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 α.*
- Κωνσταντινίδης Π. & Τσιουρλής Γ. 2001. Οι βλασθητικές 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.*
- 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 Οξυά (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 περιβαλλοντικών τους για αναδάσωση. *Διδακτορική Διατριβή. ΑΠΘ, σελ. 359 + Παραρτήματα.*
- Tsiripidis I., Fotiadis G., Karagiannakidou V. & Babalonas D. 2005. Classification problems of forest vegetation in Greece: Transition from beech to deciduous oak

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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.

## 2.3 Range of the habitat type in the biogeographical region or marine region

2.3.1 Surface area - Range (km <sup>2</sup> )	2744
2.3.2 Range method used	Estimate based on partial data with some extrapolation and/or modelling (2)
2.3.3 Short-term trend period	2001-2012
2.3.4 Short-term trend direction	stable (0)
2.3.5 Short-term trend magnitude	min max
2.3.6 Long-term trend period	
2.3.7 Long-term trend direction	N/A
2.3.8 Long-term trend magnitude	min max
2.3.9 Favourable reference range	area (km <sup>2</sup> ) operator approximately equal to (≈) unkown No method
2.3.10 Reason for change	Improved knowledge/more accurate data Use of different method

## 2.4 Area covered by Habitat

2.4.1 Surface area (km <sup>2</sup> )	767,7
2.4.2 Year or period	2000-2012
2.4.3 Method used	Estimate based on partial data with some extrapolation and/or modelling (2)
2.4.4 Short-term trend period	2001-2012
2.4.5 Short-term trend direction	stable (0)
2.4.6 Short-term trend magnitude	min max
2.4.7 Short term trend method used	Estimate based on partial data with some extrapolation and/or modelling (2)
2.4.8 Long-term trend period	
2.4.9 Long-term trend direction	N/A
2.4.10 Long-term trend magnitude	min max
2.4.11 Long term trend method used	N/A
2.4.12 Favourable reference area	area (km) operator approximately equal to (≈) unknown No method

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## 2.4.13 Reason for change

Improved knowledge/more accurate data Use of different method

## 2.5 Main Pressures

Pressure	ranking	pollution qualifier(s)
Forest and Plantation management & use (B02)	low importance (L)	N/A
Sport and leisure structures (G02)	low importance (L)	N/A

### 2.5.1 Method used – pressures

mainly based on expert judgement and other data (2)

## 2.6 Main Threats

Threat	ranking	pollution qualifier(s)
Forest and Plantation management & use (B02)	medium importance (M)	N/A
Sport and leisure structures (G02)	low importance (L)	N/A

### 2.6.1 Method used – threats

expert opinion (1)

## 2.7 Complementary Information

### 2.7.1 Species

Anemone nemorosa

Anemone ranunculoides

Aremonia agrimonoides

Athyrium filix-femina

Cardamine bulbifera

Doronicum austriacum

Dryopteris dilatata

Dryopteris filix-mas

Epilobium montanum

Fagus sylvatica

Galeopsis tetrahit

Galium odoratum

Geranium robertianum

Hordelymus europaeus

Lamium galeobdolon s.l.

Milium effusum

Neottia nidus-avis

Oxalis acetosella

Paris quadrifolia

Polygonatum verticillatum

Pulmonaria rubra

Rubus hirtus

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Sanicula europaea

Senecio nemorensis agg.

Stachys sylvatica

Stellaria nemorum

Symphytum tuberosum

## 2.7.2 Species method used

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. & Botta-Duká, J. 2002. Determination of diagnostic species with statistical fidelity measures. *Journal of Vegetation Science* 13: 79–90.

Dimopoulos, P., Raus, Th., Bergmeier, E., Constantinidis, Th., Iatrou, G., Kokkini, S., Strid, A. & 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. & Dimopoulos, P. 2009. A new algorithm for the determination of differential taxa. *Journal of Vegetation Science* 20: 233-240.

## 2.7.3 Justification of % - thresholds for trends

## 2.7.4 Structure and functions - methods used

Complete survey/Complete survey or a statistically robust estimate (3)

## 2.7.5 Other relevant information

## 2.8 Conclusions (assessment of conservation status at end of reporting period)

### 2.8.1 Range

assessment Favourable (FV)  
qualifiers N/A

### 2.8.2 Area

assessment Favourable (FV)  
qualifiers N/A

### 2.8.3 Specific structures and functions (incl Species)

assessment Favourable (FV)  
qualifiers N/A

### 2.8.4 Future prospects

assessment Favourable (FV)  
qualifiers N/A

### 2.8.5 Overall assessment of Conservation Status

Favourable (FV)

### 2.8.5 Overall trend in Conservation Status

N/A

## 3. Natura 2000 coverage conservation measures - Annex I habitat types on biogeographical level

### 3.1 Area covered by habitat

#### 3.1.1 Surface area (km<sup>2</sup>)

min	483,3	max	483,3
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3.1.2 Method used

Complete survey/Complete survey or a statistically robust estimate (3)

3.1.3. Trend of surface area

stable (0)

## 3.2 Conservation Measures

3.2.1 Measure

3.2.2 Type

3.2.3 Ranking

3.2.4 Location

3.2.5 Broad Evaluation

Establish protected areas/sites (6.1)

Legal  
Administrative  
One-off

high importance  
(H)

Inside

Maintain  
Long term