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0.1 Member State	**GR**
0.2.1 Species code	**1459**
0.2.2 Species name	**Silene holzmannii**
0.2.3 Alternative species scientific name	N/A
0.2.4 Common name	N/A

1. National Level

1.1 Maps

1.1.1 Distribution Map	Yes
1.1.1a Sensitive species	No
1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling (2)
1.1.3 Year or period	2008-2012
1.1.4 Additional map	Yes
1.1.5 Range map	Yes

2. Biogeographical Or Marine Level

2.1 Biogeographical Region

Mediterranean (MED)

2.2 Published sources

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Raus Th. 1989. Die flora von Armathia und der Kleininseln um Kasos (Dodekanes, Griechenland). Bot. Chron. 9:19-39

Rechinger K.H. 1943. Flora Aegaea. Flora der Inseln und Halbinseln des ägäischen Meeres. Acad. Wiss. Wien, Math.-Naturwiss. Kl., Denkschr. 105(1): xx + 924 pp. +25 plates and 3 maps. Reprinted by Otto Koeltz Antiquariat 1973.

Runemark H. 1969. Reproductive drift, a neglected principle in reproductive biology. Bot. Not. 122:90-129

Runemark H. 1996. Report 632: Silene holzmannii. In: Kamari, G., F. Ferber & F. Garbari (eds.). Mediterranean chromosome number reports – 6. Fl. Medit. 6:235-236

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Γιαννίτσαρος Α., Οικονομίδου Ε., Δεληπέτρου Π., Μπαζός Ι., Γεωργίου Κ. 2000. Νέα δεδομένα για την εξάπλωση μερικών φυτικών ειδών στην περιοχή του Αιγαίου. Πρακτικά 8ου Επιστημονικού Συνεδρίου της Ελληνικής Βοτανικής Εταιρείας: 118-121. Πάτρα

Πανίτσα Μ. 1997. Συμβολή στη γνώση της χλωρίδας και της βλάστησης των νησίδων του Ανατολικού Αιγαίου (Ελλάδα). Διδακτορική Διατριβή, Πανεπιστήμιο Πατρών, Τμήμα Β, Πάτρα

2.3 Range

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2.3.1 Surface area - Range (km²)	30		
2.3.2 Method - Range surface area	Estimate based on partial data with some extrapolation and/or modelling (2)		
2.3.3 Short-term trend period	1999-2012		
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	1985-2012		
2.3.7 Long-term trend direction	decrease (-)		
2.3.8 Long-term trend magnitude	min 3	max 4	
2.3.9 Favourable reference range	area (km²)	31	
	operator	N/A	
	unkown	No	
	method	The species is an islet specialist. The Favourable reference range was defined as 1x1 km cells corresponding to the total of 34 islets where it has been recorded. Three localities have been excluded from FRR because they represent recent and probably transient establishments on marginal habitats of the coastal zone of one larger islet, one large island and one mainland locality.	
2.3.10 Reason for change	Improved knowledge/more accurate dataUse of different method		

2.4 Population

2.4.1 Population size (individuals or agreed exception)	Unit	number of individuals (i)	
	min	15500	max 36000
2.4.2 Population size (other than individuals)	Unit	N/A	
	min		max
2.4.3 Additional information	Definition of locality		
	Conversion method		
	Problems	The species has been recorded from a total of 34 islets throughout the Aegean so surveying is both difficult due to accessibility and costly. Also, repeated population counts at some of the islets have demonstrated that population size on each islet may present large interannual fluctuations (e.g. in the period 2008-2014 population size on the islet of Glaronisi varied between 85 to 672 individuals). So it is difficult to provide an accurate number for each reporting period (mean values have no meaning in this case). The minimum number provided in 2.4.1 is the minimum number counted in the period 2008-2014 on 12 islets, 1 larger island and 1 mainland locality and is based on both time series and unique counts. The maximum number at the same localities was 18000 individuals. Maximum number cannot be reported in 2.4.1 since there no current data on population size at the rest of the islets.	
2.4.4 Year or period	2008-2012		
2.4.5 Method – population size	Complete survey/Complete survey or a statistically robust estimate (3)		
2.4.6 Short-term trend period			
2.4.7 Short term trend direction	unknown (x)		

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2.4.8 Short-term trend magnitude	min	max	confidence interval
2.4.9 Short-term trend method	Absent data (0)		
2.4.10 Long-term trend period			
2.4.11 Long term trend direction	N/A		
2.4.12 Long-term trend magnitude	min	max	confidence interval
2.4.13 Long-term trend method	N/A		
2.4.14 Favourable reference population	number	22000	
	operator	N/A	
	unknown	No	
	method	Favourable reference population was set as larger than the theoretically estimated Minimum Viable Population per subpopulation for an annual species, with high fertility, frequent production of reproductive units but unknown survival, at a stageless habitat with high environmental fluctuations. This corresponds to 1000-1500 individuals per each of the c. 22 subpopulations of the species and should represent at least one count of that magnitude for each subpopulation in a 6 year period.	
2.4.15 Reason for change	Improved knowledge/more accurate data		

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km²)	0,3
2.5.2 Year or period	2008-2012
2.5.3 Method used - habitat	Complete survey/Complete survey or a statistically robust estimate (3)
2.5.4 a) Quality of habitat	Good
2.5.4 b) Quality of habitat - method	The habitat of the species is the epilittoral zone of islets of an area of 0.0003-0.15 km2 (rarely at the coastal zone of larger ilands or the mainlan). On most islets where the species occurs it is of good quality regarding species composition (it includes islet specialists and halophilous or halonitrophilous species) and width (>1300 m2), despite occasional grazing. The habitat is moderate or of bad quality at the islets of Prasonisi (Oxalis pes-caprae invasion), Glaronisi (connection to the main island) and at the probably transient establishment localities of Kea and mainland Attiki.
2.5.5 Short term trend period	1998-2012
2.5.6 Short term trend direction	stable (0)
2.5.7 Long-term trend period	1991-2012
2.5.8 Long term trend direction	stable (0)
2.5.9 Area of suitable habitat (km²)	5
2.5.10 Reason for change	Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
non intensive grazing (A04.02)	high importance (H)	N/A
damage by herbivores (including game species) (K04.05)	high importance (H)	N/A
piers / tourist harbours or recreational piers (D03.01.02)	low importance (L)	N/A
invasive non-native species (I01)	low importance (L)	N/A
Trampling, overuse (G05.01)	low importance (L)	N/A

2.6.1 Method used – pressures	based exclusively or to a larger extent on real data from sites/occurrences or othe

2.7 Main Threats

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Threat	ranking	pollution qualifier(s)
non intensive grazing (A04.02)	high importance (H)	N/A
damage by herbivores (including game species) (K04.05)	high importance (H)	N/A
piers / tourist harbours or recreational piers (D03.01.02)	low importance (L)	N/A
invasive non-native species (I01)	low importance (L)	N/A

2.7.1 Method used – threats	expert opinion (1)

2.8 Complementary Information

2.8.1 Justification of % thresholds for trends	
2.8.2 Other relevant Information	2.3.6. the actual period is 1974-2014

Note on 2.4.1. The minimum number reported 2.4.1 is the minimum number counted in the period 2008-2014 on 12 islets, 1 larger island and 1 mainland locality and is based on both time series and unique counts. The maximum number at the same localities was 18000 individuals. This maximum number cannot be reported in 2.4.1 since data on population size at the rest 23 islets are either too old (6 islets) or non-existent. A very rough and non-reliable estimation on the maximum population size can be reached taking into account older data and an arbitrary maximum number of 1000 individuals for the rest of the islets and this number is reported as a maximum population size.

Note regarding 2.4.6 (short term trend) and 2.4.11 (long term trend): Due to the large interannual fluctuations of the population size, it is difficult to estimate a trend, even when there are time series of population estimations. On the islet of Tristomo (0.8 ha, offshore the large island of Karpathos), population viability analysis (PVA) using the diffuse approximation method for 12 non consecutive years (counts between 5 and 2200 individuals, generally c. 100-200 individuals, 1983-2012) resulted in a positive value for the change in population growth rate, i.e. the population was not anticipated to reach the extinction threshold of 1 individuals. However, in 2013 and 2014 there were no individuals on the islet, possibly because of the establishment of a rodent. It is possible that the population will recover since there is still available habitat. On the islet of Glaronisi (0.1 ha, offshore the large island of Karpathos, presently artificially connected to the mainland) using the same PVA method, the change in population growth rate was negative. In general, population size seems to vary most at smaller and more disturbed islets (grazing, other predators).
The species is most probably extinct on Prasonisi islet (off Kaprathos) where it has not been found since 1987 (it was searched for in 2004, 2008 and 2014 but during the 1990s rabbits had been introduced on the islet, for hunting) and the available habitat on the islet is presently close to nill. It is also most probably extinct from the islets of Megalo Kalapodi (due to grazing) and Stefania (due to the establishement of rabbits). Similarly, on the locus classicus, the small islet of Arpidoni in Attiki the population has deteriotated to 11 individuals (2014), apparently due to grazing by predators. On the other hand, there are several remote or undisturbed islets which provide a safe habitat for the species. The largest population counts were made on the remote islet of Fokionisi (2.5 ha), where the population ranged from 6324 (2008) to 7961 (2013) individuals and on the islet of Vai (0.2 ha, offshore E Kriti) where 5723 individuals were counted in 2014. Moreover, the species has recently established at 3 new localities (although the populations may be transient).

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Note regarding 2.5.9 (area of suitable habitat for the species):
There are 680 – 700 islets of an area 0.0003-0.15 km2 in the central, southern and eastern Aegean which may provide suitable habitat for the species. The area of suitable habitat has been estimated as c. one third of the area of these islets (which is roughly equal to the width of the epilittoral zone).
Note regarding 2.6: Grazing by goat or sheep which are fetched to the islets during the winter and predation by rodents intentionally or non-intentionally established on the islets are the main pressures and threats for the species. Predation may lead to extinction of the species from an islet. Although many of the islets where it occurs are totally undisturbed, at least 5 – 6 of them are either grazed or host rodents. Fortunatelly, grazing on the small islets is generally in retreat. All other pressures and threats concern local, non-widespread occurences. Although it seems

The species has never been reported from GR4210002. It has been reported from 3 islets S of the borders of GR4210002. The species was present on one islet in GR4210003 (last seen in 2008) and the islet is included in the FRR for the species, but currently there are no individuals on the islet (2013, 2014).

2.8.3 Trans-boundary assessment	

2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range	assessment	Inadequate (U1)
	qualifiers	unknown (x)
2.9.2. Population	assessment	Unknown (XX)
	qualifiers	N/A
2.9.3. Habitat	assessment	Favourable (FV)
	qualifiers	N/A
2.9.4. Future prospects	assessment	Inadequate (U1)
	qualifiers	unknown (x)
2.9.5 Overall assessment of Conservation Status		Inadequate (U1)
2.9.5 Overall trend in Conservation Status		unknown (x)

3. Natura 2000 coverage and conservation measures - Annex II species

3.1 Population

3.1.1 Population Size	Unit	number of individuals (i)		
	min	15000	max	36000
3.1.2 Method used	Complete survey/Complete survey or a statistically robust estimate (3)			
3.1.3 Trend of population size within	unknown (x)			

3.2 Conversation Measures

3.2.1 Measure	3.2.2 Type	3.2.3 Ranking	3.2.4 Location	3.2.5 Broad Evaluation
No measures needed for the conservation of the habitat/species (1.1)	Administrative	medium importance (M)	Inside	Not evaluated
Legal protection of habitats and species (6.3)	Legal	high importance (H)	Inside	Enhance Long term

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Other species management measures (7.0)	One-off	low importance (L)	Inside	Not evaluated
Regulation/ Management of hunting and taking (7.1)	Legal	high importance (H)	Inside	Long term
Establish protected areas/sites (6.1)	Legal One-off	medium importance (M)	Inside	Enhance Long term