

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	GR
1.2 Species code	1352
1.3 Species scientific name	Canis lupus
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Likos

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2013-2018
2.3 Distribution map	Yes
2.4 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.5 Additional maps	Yes

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Mediterranean (MED)

4.2 Sources of information

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Iliopoulos, Y., 2010. Wolf biology and ecology in Central Greece. - Habitat selection, movements and effects on livestock. PhD Thesis. University of Thessaloniki, School of Biology, Department of Zoology.
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5. Range

5.1 Surface area	73305
5.2 Short-term trend Period	2007-2018
5.3 Short-term trend Direction	Increasing (+)
5.4 Short-term trend Magnitude	a) Minimum 0,09 b) Maximum 0,09
5.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data
5.6 Long-term trend Period	
5.7 Long-term trend Direction	
5.8 Long-term trend Magnitude	a) Minimum b) Maximum
5.9 Long-term trend Method used	
5.10 Favourable reference range	a) Area (km ²) b) Operator Approximately equal to (≈) c) Unknown d) Method Maximum range at species first complete national survey in 1998, adequate also to fully sustain approximately 100 wolf packs.
5.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data Use of different method The change is mainly due to: Improved knowledge/more accurate data
5.12 Additional information	

6. Population

6.1 Year or period 2013-2018

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6.2 Population size (in reporting unit)	a) Unit	number of individuals (i)
	b) Minimum	907
	c) Maximum	1134
	d) Best single value	1020
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	
	b) Minimum	
	c) Maximum	
	d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Based mainly on extrapolation from a limited amount of data	
6.7 Short-term trend Period	2007-2018	
6.8 Short-term trend Direction	Increasing (+)	
6.9 Short-term trend Magnitude	a) Minimum	0,26
	b) Maximum	0,29
	c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size	
	b) Operator	More than (>)
	c) Unknown	
	d) Method	Estimate based on partial data with some extrapolation and modelling.
6.16 Change and reason for change in population size	Improved knowledge/more accurate data	
	The change is mainly due to: Improved knowledge/more accurate data	
6.17 Additional information	<p>Wolf population was based on estimation of social units (189 wolf packs) and estimation of lower and higher confidence intervals (from 4.8 to 6 individuals) of mean wolf pack size per pack (5.4 individuals) with the use of field methods (camera trapping-snowtracking).</p> <p>Minimum and maximum population was estimated by multiplying number of occupied territories (189 wolf packs) with lower and higher confidence interval levels respectively.</p> <p>As it is very difficult to estimate number of individual wolves not belonging to packs (lone wolves and dispersers) population size estimates should be considered as minimum with min-max confidence intervals given.</p>	

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7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	No
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	No
7.2 Sufficiency of area and quality of occupied habitat Method used	Based mainly on extrapolation from a limited amount of data	
7.3 Short-term trend Period	2007-2018	
7.4 Short-term trend Direction	Increasing (+)	
7.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information	<p>The surface area of the habitat is estimated at 61000 km², the area of suitable habitat is 65000 km² and its quality is moderate.</p> <p>Evaluation based on statistical procedures (habitat suitability analysis) is ongoing /pending. Current evaluation was based on expert estimations. It is considered "moderate" as there is a simultaneous a) positive trend on wild ungulate population in most wolf occupied areas, b) suitable denning habitat is also highly available while c) free ranging livestock availability is decreasing (main food resource for wolves).</p>	

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	H
Hunting (G07)	M
Threat	Ranking
Absence or reduction of interspecific faunal and floral relations (e.g. pollinators) (L07)	H
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	H
Problematic native species (I04)	M
Other human intrusions and disturbance not mentioned above (H08)	M

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8.2 Sources of information

PRESSURES: Based exclusively or to a larger extent on real data from sites/occurrences or other data sources.

THREATS: Based on expert opinion.

8.3 Additional information

9. Conservation measures

9.1 Status of measures

a) Are measures needed? Yes

b) Indicate the status of measures Measures identified, but none yet taken

9.2 Main purpose of the measures taken

9.3 Location of the measures taken

9.4 Response to the measures

9.5 List of main conservation measures

Reduce impact of transport operation and infrastructure (CE01)

Habitat restoration of areas impacted by transport (CE06)

Other measures related to transport (CE07)

Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants (CG02)

Control/eradication of illegal killing, fishing and harvesting (CG04)

Management of problematic native species (CI05)

Maintain existing extensive agricultural practices and agricultural landscape features (CA03)

9.6 Additional information

Measures partly taken

10. Future prospects

10.1 Future prospects of parameters

a) Range Good

b) Population Poor

c) Habitat of the species Poor

10.2 Additional information

11. Conclusions

11.1. Range

Favourable (FV)

11.2. Population

Unfavourable - Inadequate (U1)

11.3. Habitat for the species

Unfavourable - Inadequate (U1)

11.4. Future prospects

Unfavourable - Inadequate (U1)

11.5 Overall assessment of Conservation Status

Unfavourable - Inadequate (U1)

11.6 Overall trend in Conservation Status

Improving (+)

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11.7 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:

11.8 Additional information

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)

a) Unit number of individuals (i)

b) Minimum 157

c) Maximum 196

d) Best single value

12.2 Type of estimate

Best estimate

12.3 Population size inside the network Method used

Based mainly on extrapolation from a limited amount of data

12.4 Short-term trend of population size within the network Direction

Unknown (x)

12.5 Short-term trend of population size within the network Method used

Insufficient or no data available

12.6 Additional information

13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information

6.2 Population units: Social units - Number of breeding pairs with offspring in late winter-early spring (wolf packs) Important factor for the long-term species survival is the continuity of the distribution, (minimizing habitat fragmentation due to infrastructure construction) and management of wild ungulate populations (wild boar and roe deer).

5.3 Reasons for reported trend: - Rural abandonment: Improved habitat (spontaneous natural restoration of wild boar and roe deer , Increased natural food availability) - sustainable illegal human caused mortality: Abandonment of bounties - Abandonment of KCN and strychnine poison use - Improvement of legislation regime for the species - Improvement of damage compensation regime for farmers - Natural recolonization - improvement on denning habitat.

6.8 Reasons for reported trend: There are areas where wolf population has increased and also areas where wolf population has decreased. Overall trend though positive -Areas with positive trends: - Indirect anthropo(zoo)genic influence: rural abandonment - Improved habitat (spontaneous natural

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restoration of wild herbivores, Increased food availability) - improved denning habitat-sustainable illegal human caused mortality: - Abandonment of bounties - Abandonment of KCN and strychnine poison use - Improvement of legislation regime for the species - Improvement of damage compensation regime for farmers. Areas with negative trends: -Rapid reduction in livestock populations, (reduction of food availability)- shortage of available livestock carcasses - widespread Illegal use of poison baits.

7.4 Reasons for reported trend: - Rural abandonment: Improved habitat especially for denning, sustainable of human caused mortality: Abandonment of bounties - Abandonment of KCN and strychnine poison use. - Improvement of legislation regime for the species. - Improvement of damage compensation regime for farmers. - Natural recolonization by wild ungulates.

8.1 Main threats related to long term viability: Unknown if positive trends on wild ungulate natural restoration will continue (lack of appropriate hunting management)- Free ranging livestock grazing rapid decrease in many areas - a density dependend relation between livestock and wolf presence is present with possible threshold values still define wolf occurrence in most wolf distribution - multiple local extinctions are suspected to occur in the future if rapid livestock decline continues with no parallel and extensive wild herbivore population restoration- Wolf-dog hybridization is widesread and needs assesment- habitat fragmenation due to infrastructures needs better assessment.