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	**1354**
1.3 Species scientific name	**Ursus arctos**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Kafe arkouda

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2015
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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Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

5. Range

5.1 Surface area	36663	
5.2 Short-term trend Period	2007-2018	
5.3 Short-term trend Direction	Increasing (+)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
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 (km²)	
	b) Operator	Approximately equal to (≈)
	c) Unknown	
	d) Method	Expert opinion.
5.11 Change and reason for change in surface area of range	Genuine Improved knowledge/more accurate data Use of different method No information on nature of change	
	The change is mainly due to:	Improved knowledge/more accurate data
5.12 Additional information	Genuine change: Natural causes such as recolonization of former range with dispersal of vagrants.	

6. Population

6.1 Year or period	2015	
6.2 Population size (in reporting unit)	a) Unit	number of individuals (i)
	b) Minimum	400
	c) Maximum	500
	d) Best single value	
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 b) Maximum 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 c) Unknown d) Method	 More than (>) Expert opinion
6.16 Change and reason for change in population size	No change The change is mainly due to:	
6.17 Additional information	The population estimation was carried out by intensive non-invasive genetic monitoring in four sampling areas in the core range of the species. These efforts were carried out at approximately less than half the core range and one third of the entire range of the species. The total population size was an extrapolation and expert judgement.	

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)? b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	Yes
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	The surface area of the habitat is estimated at 16825 km2, the area of suitable habitat is 17850 km2 and its quality is good. Expert opinion based (inferred from habitat use data, population density and human - bear interactions data). A. Quercetalia pubescentis (Oak forests – including 9250 & 9280) It covers 50% of the forests throughout the bear habitat. This zone is composed mainly by pure or mixed oak forests with Fagus sp., Castanea vasca, Acer platanoides, Pinus nigra, Carpinus orientalis and Fraxinus	

ornus. In the western sector (Peristeri, Pindos) the pure form is dominant, in particular in Peristeri, while in the eastern sector the pure and mixed stands are in about equal proportions. They are mainly coppice forests with low productivity. Only in Rhodope a 25% shows standing volume more than 100 m3/ha, while in Peristeri and Pindus the corresponding figures are 10% and 16%. B. Pinetalia nigrae (Black pine forests- 9530*) The black pine (Pinus nigra v. pallasiana) appears in the geographical area of the beech and the fir but also in the area of the oak. The black pine forests show a geological dependence. In Northern Greece these forests appear on serpentine and limestone grounds. The black pine forests cover 19% of the forested areas and primarily exist in sector 3 (91%). The black pine forms usually pure stands but also mixed with fir, beech and oaks. The stands have closed canopy, are not separated by large continuous openings, and have large productivity. C. Fagetalia (Beech - Fir forests) (including 9110, 9130 & 9150) This zone represents 30% of the forested area and is composed mainly by beech forests, most of which are in sector 3, where there are all the forests of Abies borissii-regis. In Rhodope, and even more in Peristeri, beech is found in pure stands while in Pindus about 43% of the beech forest are mixed with fir, black pine, oak, maple and Balkan pine (A. borissii-regis, Pinus nigra, Quercus sp., Acer sp. and Pinus leucodermis). The pine forests are 30% mixed mainly with beech and oaks. This zone is characterised of forests with large productivity. D. Vaccinio - Picetalia (Spruce and Scots pine forests) (9410) Here belongs 6% of the forests, of which 81% is in Rhodope sector and is composed of spruce, scots pine and birch forests. This zone is absent from sector 2 while in Pindus it is represented by the Balkan pine, which forms mainly pure stands. On the contrary, in Rhodope the mixed stands prevail, which are formed by the above species and in which participate the beech and, in smaller percentages, the oaks. They are forests with closed canopy and relatively continuous, particularly in Rhodope, and have the highest productivity in Greece. In particularly with regard to the spruce, the standing volume ranges from 246 m3/ha at the worst sites to 1,160 m3/ha at the best. The main habitat features for the species as described above include also the following habitat types: - 9180*, 91E0*, 9250, 9260, 9270, 9560*, 91F0, 7230.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Clear-cutting, removal of all trees (B09)	H
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Wind, wave and tidal power, including infrastructure (D01)	M
Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05)	M
Bycatch and incidental killing (due to fishing and hunting activities) (G12)	M
Vandalism or arson (H04)	M
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M

Oil and gas pipelines (D07)	M

Threat	Ranking
Wind, wave and tidal power, including infrastructure (D01)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Solar power, including infrastructure (D03)	M
Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas) (F05)	M
Bycatch and incidental killing (due to fishing and hunting activities) (G12)	M
Desynchronisation of biological / ecological processes due to climate change (N06)	M
Illegal shooting/killing (G10)	H
Poisoning of animals (excluding lead poisoning) (G13)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Closure or restricted access to site/habitat (H06)	M

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 and taken
9.2 Main purpose of the measures taken		Maintain the current range, population and/or habitat for the species
9.3 Location of the measures taken		Both inside and outside Natura 2000
9.4 Response to the measures		Medium-term results (within the next two reporting periods, 2019-2030)

9.5 List of main conservation measures

Control/eradication of illegal killing, fishing and harvesting (CG04)
Reduce bycatch and incidental killing of non-target species (CG05)
Reduce impact of transport operation and infrastructure (CE01)
Adapt/change forest management and exploitation practices (CB05)
Adapt/manage exploitation of energy resources (CC02)
Adapt/manage renewable energy installation, facilities and operation (CC03)
Reduce impact of hydropower operation and infrastructure (CC04)
Habitat restoration/creation from resources, exploitation areas or areas damaged due to installation of renewable energy infrastructure (CC07)

9.6 Additional information	Measures taken in a large part of the country (not entire country, though).

10. Future prospects

10.1 Future prospects of parameters	a) Range	Good
	b) Population	Unknown
	c) Habitat of the species	Good
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	Favourable (FV)
11.5 Overall assessment of Conservation Status	Unfavourable - Inadequate (U1)
11.6 Overall trend in Conservation Status	Improving (+)
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	200
	c) Maximum	300
	d) Best single value	
12.2 Type of estimate		Minimum
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		Increasing (+)

12.5 Short-term trend of population size within the network Method used	Based mainly on extrapolation from a limited amount of data
12.6 Additional information	Species for which either new Natura sites have been designated or former ones have been expanded to cover a bigger part of their populations. The population size in 12.1 is reported as minimum due to the recent update of the Greek Natura 2000 Database (extended areas of current Natura 2000 sites and newly proposed SCIs). No relevant data exist for the extensions or the new Natura 2000 sites.

13. Complementary information

13.1 Justification of % thresholds for trends	
13.2 Trans-boundary assessment	
13.3 Other relevant Information	The reasons for the population increase are: a difference in methodology use. The genetic monitoring carried out is more accurate than the field methods used previously to monitor the population size of the species. However, the increased population numbers provided in this assessment are due partly also to an actual increase of the brown bear population in Greece.