

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	5332
1.3 Species scientific name	<i>Squalius keadicus</i>
1.4 Alternative species scientific name	<i>Leuciscus keadicus</i>
1.5 Common name (in national language)	Kaiadiki Menida

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

Kottelat M. & Freyhof J. (2007). Handbook of European freshwater fishes. Publications Kottelat, Cornol, Switzerland.

Economou A.N., Giakoumi S., Vardakas L., Barbieri R., Stoumboudi M. & Zogaris S. (2007). The freshwater ichthyofauna of Greece - an update based on a hydrographic basin survey. Mediterranean Marine Science, Vol. 8(1): 91-166.

Economidis, P.S. & Chrysopolitou V. (2009). Squalius keadicus. In Red Data Book of threatened Animals of Greece. Legakis A. & Maragou P. (eds). Hellenic Zoological Society, Athens.

5. Range

5.1 Surface area

501

5.2 Short-term trend Period

2007-2018

5.3 Short-term trend Direction

Stable (0)

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

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5.10 Favourable reference range

a) Area (km ²)	Approximately equal to (≈)
b) Operator	
c) Unknown	
d) Method	Basic assumption: Favourable Reference Range = Surface Area Range (current range)

5.11 Change and reason for change in surface area of range

No change
The change is mainly due to:

5.12 Additional information

6. Population

6.1 Year or period

2015

6.2 Population size (in reporting unit)

a) Unit	number of map 1x1 km grid cells (grids1x1)
b) Minimum	
c) Maximum	
d) Best single value	501

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

Decreasing (-)

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	Approximately equal to (≈)
c) Unknown	
d) Method	Basic assumption: Favourable Reference Population = value extracted from Additional Range Map

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6.16 Change and reason for change in population size

No change
The change is mainly due to:

6.17 Additional information

Most data are described as semi-quantitative or qualitative. Few quantitative data. Too much variability between existing samples, especially between different river basins, making it difficult to extrapolate a number or a class for reporting population unit.

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)? Unknown

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

Decreasing (-)

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 501 km² and its quality is moderate.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Physical alteration of water bodies (K05)	H
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	H
Drainage for use as agricultural land (A31)	M
Irrigation of agricultural land (A18)	M
Application of synthetic (mineral) fertilisers on agricultural land (A20)	H
Other invasive alien species (other than species of Union concern) (I02)	H
Development and operation of dams for agriculture (A32)	H
Droughts and decreases in precipitation due to climate change (N02)	M

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Deposition and treatment of waste/garbage from commercial and industrial facilities (F10) M

Threat	Ranking
Deposition and treatment of waste/garbage from household/recreational facilities (F09)	M
Deposition and treatment of waste/garbage from commercial and industrial facilities (F10)	M
Physical alteration of water bodies (K05)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Active abstractions from groundwater, surface water or mixed water for agriculture (A30)	M
Modification of hydrological flow (K04)	H
Application of synthetic (mineral) fertilisers on agricultural land (A20)	H
Other invasive alien species (other than species of Union concern) (I02)	H
Development and operation of dams for agriculture (A32)	H
Droughts and decreases in precipitation due to climate change (N02)	M

8.2 Sources of information

PRESSURES: Mainly based on expert judgement and other data.
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

Improvement of habitat of species from the directives (CS03)
Restore habitats impacted by multi-purpose hydrological changes (CJ03)
Reduce impact of multi-purpose hydrological changes (CJ02)
Reduce impact of hydropower operation and infrastructure (CC04)
Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
Management, control or eradication of other invasive alien species (CI03)
Implement climate change adaptation measures (CN02)

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Adopt climate change mitigation measures (CN01)

9.6 Additional information

Partial implementation of above measures - awareness campaigns.

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	Deteriorating (-)
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 map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	88
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	Stable (0)	
12.5 Short-term trend of population size within the network Method used	Based mainly on extrapolation from a limited amount of data	

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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 change in 12.1 (in comparison to the previous report) is mainly due to the recent update of the Greek Natura 2000 Database (extended areas of current Natura 2000 sites and newly proposed SCIs) and also (in cases of absent data or mandatory population unit 1x1 grid) to a different approach/method used for the calculation of the population size in GIS.

13. Complementary information

13.1 Justification of % thresholds for trends

The % threshold could not be used for the assessment since: a) a different method for assessing range was employed, compared to the 2nd Reporting Period or b) no data were reported in the 2nd Reporting Period.

13.2 Trans-boundary assessment

13.3 Other relevant Information

1. A species endemic to the Evrotas river drainage, including the adjacent Vassilopotamos channalized stream in the Evrotas Delta. Due to its confinement to a single river basin and the fact that the Evrotas River dries out almost completely in hydrologically adverse drought years, the species should be considered as very vulnerable to extirpation in parts of its range. It is a rheophilic species, usually found in open sites of the river, with stony bottoms and relatively cool waters; it is much scarcer in the Delta of the Evrotas.

2. Basic Assumptions:

i) "Surface Area Range" (field 5.1) = value extracted from "Range Map" (field 2.5).

ii) "Favourable Reference Range" (field 5.10a) = a) "Surface Area Range" (field 5.1) OR b) value extracted from "Additional Reference Range Map" (provided). Depends on whether the Favourable range is equal or larger than actual species range.

iii) "Population Size" (field 6.2 or 6.4) = value extracted from "Distribution Map" (field 2.3) or "Additional Distribution Map" (field 2.5) (when provided).

iv) "Favourable Reference Population" (field 6.15a) = a) "Population Size" (field 6.2 or 6.4) OR b) value extracted from "Additional Reference Range Map" (provided). Depends on whether the Favourable population is equal or larger than actual species population.

v) Habitat "Area Estimation" (field 7.9) = "Distribution Map" (field 2.3) or "Additional Distribution Map" (field 2.5) (when provided).

3. Population assessment and relative short-term trend took into account, besides Favourable Reference Population, population structure and reproduction trends. In several samplings since 2006 (LIFE project, WFD project), numbers are declining in many areas of Evrotas basin.