

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	5337
1.3 Species scientific name	<i>Economidichthys pygmaeus</i>
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Lourogovios

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

Νταουλάς, Χ., Οικονόμου, Α.Ν., Παπαδάκης, Β. & Λεονάρδος, Ι. (2001). Γεωγραφική κατανομή του λουρογωβιού (*Economidichthys pygmaeus*) στην Αιτωλοακαρνανία και Ήπειρο. Κίνδυνοι και πληθυσμιακή κατάσταση. Παρουσίαση σε POSTER. Πρακτικά 10ου Πανελληνίου Συνεδρίου Ιχθυολόγων, Χανιά, 18-20 Οκτωβρίου, σελ. 341-342.

Νταουλάς, Χ. (2003). Νέες καταγραφές παρουσίας στη Δυτική Ελλάδα των *Economidichthys pygmaeus* (Holly, 1929) (Gobiidae) και *Valencia letourneuxi* (Sauvage, 1880) (Valenciidae). Πρακτικά 11ου Πανελληνίου Συνεδρίου Ιχθυολόγων. Πρέβεζα 10-13 Απριλίου 2003, σελ. 109-112.

Gkenas, Ch., Malavasi, S., Georgalas, V., Leonardos, I.D. & Torricelli, P. (2010). The reproductive behavior of *Economidichthys pygmaeus*: secondary loss of sound production within the sand goby group? *Environmental Biology of Fishes* 87: 299-307.

Kottelat, M. and J. Freyhof, 2007. Handbook of European freshwater fishes. Publications Kottelat, Cornol, Switzerland. 646 p.

Economidis P.S., Vogiatzis V.P., Bobori D.C. (1996). Freshwater Fishes. In: S. Dafis, E. Papastergiadou, K. Georgiou, D. Babalonas, T. Georgiadis, M. Papageorgiou, Th. Lazaridou, V. Tsiaoussi (Eds), Directive 92/43/EEC, The Greek "Habitat" Project NATURA 2000: An overview, pp. 604-635. Life Contract B4-3200/94/756 Commission of the European Communities DG XI, The Goulandris Natural History Museum - Greek Biotope/Wetland Center.

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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	Stable (0)
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
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)? Yes b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?
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	Stable (0)
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 2525 km ² and its quality is good.

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8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Drainage for use as agricultural land (A31)	H
Irrigation of agricultural land (A18)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M

Threat	Ranking
Drainage for use as agricultural land (A31)	H
Irrigation of agricultural land (A18)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M

8.2 Sources of information

PRESSURES: Based mainly 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? No
- b) Indicate the status of measures

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

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9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

- a) Range Good
- b) Population Good
- c) Habitat of the species Good

10.2 Additional information

11. Conclusions

11.1. Range

Favourable (FV)

11.2. Population

Favourable (FV)

11.3. Habitat for the species

Favourable (FV)

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11.4. Future prospects	Favourable (FV)
11.5 Overall assessment of Conservation Status	Favourable (FV)
11.6 Overall trend in Conservation Status	Stable (=)
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 5x5 km grid cells (grids5x5) b) Minimum c) Maximum d) Best single value 58
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	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. The equivalent taxa names for Greece's endemic taxa (several formerly

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considered subspecies units) are interpreted in terms of their taxonomic relatedness and presented in detail in: Economidis P.S., Vogiatzis V.P., Bobori D.C. (1996). This document is analytical in its presentation and is published within the process of adoption and adaptation to the implementation of Directive 92/43/EC under the auspices of the Hellenic Ministry of Environment. The fish names presented as so-called equivalent have in some cases been published as species entities before the enactment of the Directive but this does not mean that biogeographically associated and/or taxonomically related equivalent species cannot be substituted in place of the many endemic and range-restricted forms existing in Greece. This is the spirit of the interpretation given in Economidis et al. (1996) and this was adhered to here.

In each case: the above authorities promote the association of "taxonomically equivalent" units related with or formerly considered below the species level; these were presented and defined. Here we give supporting details. Although the two endemic species of small gobies *Economidichthys* had been defined as being taxonomically closer to *Pomatoschistus canestrini* the ETC (2011) notes the following: «*Economidichthys pygmaeus* was described originally as *Gobio pygmaeus* and later cited as *E. pygmaeus* in Economidis & Miller 1990. According to these authors *G. pymeus* was earlier believed to be a subspecies of *P. canestrinii*, opinion which persisted over 1960's-1970's. But already the 1980's authors consider it as a separate species» (ETC 2011).

The species may have been valid just before the enacting of Directive 92/43 however this does not mean that the related endemic forms in Greece must be now ignored as interpreted by Economidis et al. (1996). Since the species taxonomy is in flux especially after the Phylogenetic Species Concept application and widespread acceptance species names have continued to change. A detailed phylogenetic study (Geiger et al. 2014) now places former *Pomatoschistus canestrini* into the genus *Ninnigobius*. Although genetically a different clade, the two small-sized goby groups today's *Ninnigobius* and *Economidichthys* should in our mind be considered under a single name.

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).