

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	2373
1.3 Species scientific name	<i>Mauremys rivulata</i>
1.4 Alternative species scientific name	<i>Mauremys caspica</i>
1.5 Common name (in national language)	Potamohelona

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

- Bringsoe, H., 1985. A check-list of Peloponnesian amphibians and reptiles, including new records from Greece. *Annales Musei Goulandris*, 7:271-318.
- Broggi, M.F., 2011. The semi-aquatic herpetofauna of Serifos (Cyclades, Greece) including conservation aspects. *Herpetozoa*, 24(1/2): 13-22.
- Broggi, M.F., 2012. The Balkan Terrapin *Mauremys rivulata* (Valenciennes, 1833), in the Aegean islands. Threats, conservation aspects and the situation on the island of Kea (Cyclades) as a case study (Testudines: Geoemydidae). *Herpetozoa*, 24(3/4): 149-163.
- Buttle, D., 1989. Notes on reptiles and amphibians of northeastern Greece and the island of Samothraki. *British Herpetological Society Bulletin*, 29: 49-51.
- Buttle, D., 1993. Notes on the herpetofauna of some of the Cyclades islands, Greece. *British Herpetological Society Bulletin*, 46: 5-14.
- Cyren, O., 1941. Beitrage zur Herpetologie der Balkanhalbinsel. *Mitteilungen des Königlichen Naturwissenschaftlichen Institut Sofia*, 14: 36-152.
- Fritz, U. & Wischuf, T., 1997. Zur Systematik westasiatisch-sudosteuropaischer Bachschildkroten (Gattung *Mauremys*) (Reptilia: Testudines: Bataguridae). *Zoologische Abhandlungen aus dem staatlichen Museum für Tierkunde in Dresden*, 49(13): 223-260.
- Mantziou, G., 2000. Ecology, Distribution and Differentiation of *Mauremys caspica* (Testudines: Bataguridae) in Crete. M.Sc. Thesis, University of Crete.
- Mantziou G., Poulakakis N., Lymberakis P., Valakos E., Mylonas M., 2004. The inter- and intraspecific status of Aegean *Mauremys rivulata* (Chelonia, Bataguridae) as inferred by mitochondrial DNA sequences. *Herpetological Journal*, 14: 35-45.
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- Maragou, P., 1999. Herpetological notes from mainland and insular Greece. British Herpetological Society Bulletin, 67: 33-38.
- Stepanek, O., 1944. Zur herpetologie Griechenlands. Vestnik Ceskoslovenske Spolecnosti Zoologicke, 9: 123-147.
- Van Dijk, P.P., Lymberakis, P., Ahmed Mohammed Mousa Disi, Ajtic, R., Tok, V., Ugurtas, I., Sevinç, M. & Haxhiu, I., 2004. *Mauremys rivulata*. The IUCN Red List of Threatened Species. Version 2014.2. <www.iucnredlist.org>. Downloaded on 3 October 2014.
- Werner, F., 1930. Contribution to the knowledge of the Reptiles and Amphibians of Greece, especially the Aegean islands. Occasional papers of the Museum of Zoology, 211: 1-47.
- Wischuf, T. & Busack, S.D., 2001. *Mauremys rivulata* (Valenciennes in Bori de Saint-Vincent et al., 1833) - Ostmediterrane Bachschildkroete. In: Fritz, U. (ed.): Handbuch der Reptilien und Amphibien Europas. Schildkroeten (Testudines), I: 89-110.

5. Range

5.1 Surface area	51535,71
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	
5.10 Favourable reference range	a) Area (km ²) b) Operator Approximately equal to (≈) c) Unknown d) Method A wide ranging species. None of the known populations became extinct since 1994. FRV is the total of the range which excludes the unfavorable altitude areas.
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	2015
6.2 Population size (in reporting unit)	a) Unit number of map 1x1 km grid cells (grids1x1) b) Minimum 1101 c) Maximum 1495 d) Best single value

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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	Unknown (x)
6.9 Short-term trend Magnitude	a) Minimum b) Maximum c) Confidence interval
6.10 Short-term trend Method used	Insufficient or no data available
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 x d) Method
6.16 Change and reason for change in population size	No change The change is mainly due to:
6.17 Additional information	There are no adequate references or measurements regarding the population size or the population densities. Based on the available data an estimation of the population using as unit the number of individuals doesn't seem feasible at this stage.

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 (-)

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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 1495 km² and its quality is moderate. The area of suitable habitat is 2619 km². A species that is more commonly present in small bodies of water, rivers and channels. Deterioration of the habitat quality in parts of its range mainly in some islands and in the lower parts of some rivers in the mainland. Random surveys have been conducted in the distribution areas.

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Conversion into agricultural land (excluding drainage and burning) (A01)	M
Use of plant protection chemicals in agriculture (A21)	M
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	M
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Physical alteration of water bodies (K05)	H
Threat	Ranking
Conversion into agricultural land (excluding drainage and burning) (A01)	M
Use of plant protection chemicals in agriculture (A21)	M
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01)	M
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Physical alteration of water bodies (K05)	H
Other human intrusions and disturbance not mentioned above (H08)	H

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

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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)

Reduce impact of multi-purpose hydrological changes (CJ02)

Restore habitats impacted by multi-purpose hydrological changes (CJ03)

Management, control or eradication of established invasive alien species of Union concern (CI02)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

a) Range	Good
b) Population	Unknown
c) Habitat of the species	Poor

10.2 Additional information

11. Conclusions

11.1. Range

Favourable (FV)

11.2. Population

Unknown (XX)

11.3. Habitat for the species

Unfavourable - Inadequate (U1)

11.4. Future prospects

Unknown (XX)

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

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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	1046
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	Unknown (x)	
12.5 Short-term trend of population size within the network Method used	Insufficient or no data available	
12.6 Additional information	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 range estimations do not include unfavorable altitude areas.