0.1 Member State	Π
0.2.1 Species code	1175
0.2.2 Species name	Salamandrina terdigitata
0.2.3 Alternative species scientific name	Salamandrina perspicillata
0.2.4 Common name	Salamandrina dagli occhiali

## 1. National Level

#### **1.1 Maps**

1.1.1 Distribution Map	Yes
1.1.1a Sensitive species	No
1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate (3)
1.1.3 Year or period	2000-2012
1.1.4 Additional map	No
1.1.5 Range map	Yes

## 2. Biogeographical Or Marine Level

2.1 Biogeographical Region

### 2.2 Published sources

### Mediterranean (MED)

The present species assessment (fields 0.1-2.9) has been compiled by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco (Societas Herpetologica Italica). Information, unpublished data and experts' judgments have been provided by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco.

Distribution data for the following Nature 2000 sites have been inserted by the Ministry of Environment (source: Italian Nature 2000 database): IT9340091; IT9340090; IT51A0008

Angelini C., Vanni S., Vignoli L., 2007. Salamandrina terdigitata (Bonnatterre, 1789), Salamandrina perpicillata (Savi, 1821). In: Fauna d'Italia, vol. XLII, Amphibia. A cura di Lanza B., Andreone F., Bologna M.A., Corti C., Razzetti E., p. 228-236. Calderini, Bologna.

Barbieri F., Pellegrini M., 2006. Salamandrina terdigitata (Lacepede, 1788). In: Atlante degli Anfibi e dei Rettili d'Italia / Atlas of Italians Amphibians and Reptiles, Sindaco R., Doria G., Razzetti E. & Bernini F. (Eds). P. 208-213. Societas Herpetologica Italica. Edizioni Polistampa, Firenze.

Rondinini, C., Battistoni, A., Peronace, V., Teofili, C. (compilatori). 2013. Lista Rossa IUCN dei Vertebrati Italiani. Comitato Italiano IUCN e Ministero dell'Ambiente, del Territorio e del Mare, Roma.

## 2.3 Range

2.3.1 Surface area - Range (km²) 69000 Complete survey/Complete survey or a statistically robust estimate (3) 2.3.2 Method - Range surface area 2.3.3 Short-term trend period 2001-2012 2.3.4 Short-term trend direction stable (0) 2.3.5 Short-term trend magnitude min max 2.3.6 Long-term trend period 2.3.7 Long-term trend direction N/A 2.3.8 Long-term trend magnitude min max

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2.3.9 Favourable reference range	area (km²) operator unkown	approximately No	
2.3.10 Reason for change	method Use of different me	Expert judgeme ethod	ent
2.4 Population			
2.4.1 Population size (individuals or agreed exception)	Unit N/A min	max	
2.4.2 Population size (other than individuals)	Unit number of min 305	f map 10x10 km gr max 305	id cells (grids10x10)
2.4.3 Additional information	Definition of locality Conversion method Problems		
<ul><li>2.4.4 Year or period</li><li>2.4.5 Method – population size</li><li>2.4.6 Short-term trend period</li><li>2.4.7 Short term trend direction</li></ul>	2000-2012	omplete survey or	a statistically robust estimate (3)
<ul><li>2.4.8 Short-term trend magnitude</li><li>2.4.9 Short-term trend method</li><li>2.4.10 Long-term trend period</li></ul>	min Absent data (0)	max	confidence interval
2.4.11 Long term trend direction 2.4.12 Long-term trend magnitude 2.4.13 Long-term trend method 2.4.14 Favourable reference population	N/A min N/A number operator N/A unknown Yes	max	confidence interval
	method		
2.4.15 Reason for change	Improved knowleds	ge/more accurate o	data
2.5 Habitat for the Species	,		
2.5.1 Surface area - Habitat (km²) 2.5.2 Year or period 2.5.3 Method used - habitat 2.5.4 a) Quality of habitat 2.5.4 b) Quality of habitat - method	Good	suitable habitats c	th no or minimal sampling (1) caused by the alteration of woodland of aquatic habitats.
<ul><li>2.5.5 Short term trend period</li><li>2.5.6 Short term trend direction</li><li>2.5.7 Long-term trend period</li></ul>	2001-2012 stable (0)	·	·
2.5.8 Long term trend direction 2.5.9 Area of suitable habitat (km²)	N/A		
2.5.10 Reason for change	Improved knowled	ge/more accurate	data

2.6 Main Pressures

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ressure	ranking	pollution qualifier(s)
eduction or loss of specific habitat features (J03.01)	medium importance (M)	N/A
nanagement of aquatic and bank vegetation for drainage ourposes (J02.10)	medium importance (M)	N/A
Orying out (K01.03)	medium importance (M)	N/A
orestry clearance (B02.02)	medium importance (M)	N/A
nodifying structures of inland water courses (J02.05.02)	medium importance (M)	N/A
Vater abstractions from surface waters (J02.06)	medium importance (M)	N/A
rollution to surface waters (limnic & terrestrial, marine & brackish) (H01)	medium importance (M)	N/A
uman induced changes in hydraulic conditions (J02)	high importance (H)	N/A
loads, paths and railroads (D01)	low importance (L)	N/A
se of biocides, hormones and chemicals (A07)	low importance (L)	N/A
ntagonism arising from introduction of species (K03.05)	medium importance (M)	N/A
.6.1 Method used – pressures mainly based on exp	ert judgement and other data (2	2)
2.7 Main Threats		
hreat	ranking	pollution qualifier(s)
eduction or loss of specific habitat features (J03.01)	medium importance (M)	N/A
nanagement of aquatic and bank vegetation for drainage ourposes (J02.10)	medium importance (M)	N/A
Orying out (K01.03)	medium importance (M)	N/A
orestry clearance (B02.02)	medium importance (M)	N/A
nodifying structures of inland water courses (J02.05.02)	medium importance (M)	N/A
Vater abstractions from surface waters (J02.06)	medium importance (M)	N/A
ollution to surface waters (limnic & terrestrial, marine & brackish) (H01)	medium importance (M)	N/A
uman induced changes in hydraulic conditions (J02)	high importance (H)	N/A
loads, paths and railroads (D01)	low importance (L)	N/A
se of biocides, hormones and chemicals (A07)	low importance (L)	N/A
ntagonism arising from introduction of species (K03.05)	low importance (L)	N/A
.7.1 Method used – threats expert opinion (1)		
.8 Complementary Information		
do complementary information		
8.1 Justification of % thresholds for rends		
.8.1 Justification of % thresholds for		

2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range assessment Favourable (FV) qualifiers N/A

2.9.2. Population assessment Unknown (XX) qualifiers N/A

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2.9.3. Habitat

assessment Favourable (FV) qualifiers N/A

2.9.4. Future prospects

assessment Favourable (FV) qualifiers N/A

2.9.5 Overall assessment of Conservation Status

Favourable (FV)

2.9.5 Overall trend in Conservation Status

N/A

## 3. Natura 2000 coverage and conservation measures - Annex II species

## 3.1 Population

3.1.1 Population Size Unit N/A

min max

3.1.2 Method used Absent data (0)

3.1.3 Trend of population size within N/A

#### 3.2 Conversation Measures

3.2.1 Measure	3.2.2 Type	3.2.3 Ranking	3.2.4 Location	3.2.5 Broad Evaluation
Other spatial measures (6.0)	Administrative	medium importance (M)	Both	Maintain Enhance Long term
Establish protected areas/sites (6.1)	Legal Administrative	high importance (H)	Inside	Maintain Enhance Long term Not evaluated
Specific single species or species group management measures (7.4)	One-off	high importance (H)	Inside	Enhance

## 2. Biogeographical Or Marine Level

#### 2.1 Biogeographical Region

#### 2.2 Published sources

#### Continental (CON)

The present species assessment (fields 0.1-2.9) has been compiled by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco (Societas Herpetologica Italica). Information, unpublished data and experts' judgments have been provided by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco.

Distribution data for the following Nature 2000 sites have been inserted by the Ministry of Environment (source: Italian Nature 2000 database): IT5210012; IT4050012; IT4050029

Angelini C., Vanni S., Vignoli L., 2007. Salamandrina terdigitata (Bonnatterre, 1789), Salamandrina perpicillata (Savi, 1821). In: Fauna d'Italia, vol. XLII, Amphibia. A cura di Lanza B., Andreone F., Bologna M.A., Corti C., Razzetti E., p. 228-236. Calderini, Bologna.

Barbieri F., Pellegrini M., 2006. Salamandrina terdigitata (Lacepede, 1788). In: Atlante degli Anfibi e dei Rettili d'Italia / Atlas of Italians Amphibians and

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Reptiles, Sindaco R., Doria G., Razzetti E. & Bernini F. (Eds). P. 208-213. Societas Herpetologica Italica. Edizioni Polistampa, Firenze.

Rondinini, C., Battistoni, A., Peronace, V., Teofili, C. (compilatori). 2013. Lista Rossa IUCN dei Vertebrati Italiani. Comitato Italiano IUCN e Ministero dell'Ambiente, del Territorio e del Mare, Roma.

## 2.3 Range

2.3.1 Surface area - Range (km²)

2.3.2 Method - Range surface area

2.3.3 Short-term trend period

2.3.4 Short-term trend direction

2.3.5 Short-term trend magnitude

2.3.6 Long-term trend period

2.3.7 Long-term trend direction

2.3.8 Long-term trend magnitude

2.3.9 Favourable reference range

17600

Complete survey/Complete survey or a statistically robust estimate (3)

2001-2012

stable (0)

min max

N/A

min max

area (km²)

operator approximately equal to (≈)

unkown No

method Expert judgement

2.3.10 Reason for change

Use of different method

### 2.4 Population

2.4.1 Population size

(individuals or agreed exception)

Unit N/A

max min

2.4.2 Population size

(other than individuals)

Unit number of map 10x10 km grid cells (grids10x10)

min 91 max 91

2.4.3 Additional information

**Definition of locality** 

Conversion method

**Problems** 

2.4.4 Year or period

2.4.5 Method – population size

2.4.6 Short-term trend period

2.4.7 Short term trend direction

2.4.8 Short-term trend magnitude

2.4.9 Short-term trend method

2.4.10 Long-term trend period

2.4.11 Long term trend direction

2.4.12 Long-term trend magnitude

2.4.13 Long-term trend method

2.4.14 Favourable reference

population

2000-2012

Complete survey/Complete survey or a statistically robust estimate (3)

2001-2012

unknown (x)

min max confidence interval

Absent data (0)

N/A

confidence interval min max

N/A

number operator

N/A Yes unknown

method

2.4.15 Reason for change

Improved knowledge/more accurate data

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km²)

5024

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2.5.2 Year or period 2.5.3 Method used - habitat

2.5.4 a) Quality of habitat

2.5.4 b) Quality of habitat - method

2.5.5 Short term trend period

2.5.6 Short term trend direction

2.5.7 Long-term trend period

2.5.8 Long term trend direction

2.5.9 Area of suitable habitat (km²)

2.5.10 Reason for change

2.6 Main Pressures

2000-2012

Estimate based on expert opinion with no or minimal sampling (1)

medium importance (M)

low importance (L)

Good

A moderate loss of suitable habitats caused by the alteration of woodland ecosystem, drying out and pollution of aquatic habitats.

pollution qualifier(s)

N/A

pollution qualifier(s)

2001-2012

stable (0)

N/A

Improved knowledge/more accurate data

Pressure	ranking
infilling of ditches, dykes, ponds, pools, marshes or pits	medium importance (M)
(J02.01.03)	

Drying out (K01.03) medium importance (M) Interspecific faunal relations (KO3) medium importance (M)

forestry clearance (B02.02) Pollution to surface waters (limnic & terrestrial, marine &

brackish) (H01) Water abstractions from surface waters (J02.06)

removal of forest undergrowth (B02.03) Water abstractions from groundwater (J02.07)

modifying structures of inland water courses (J02.05.02) problematic native species (IO2)

2.6.1 Method used – pressures

mainly based on expert judgement and other data (2)

ranking

2.7	Main	<b>Threats</b>

**Threat** 

infilling of ditches, dykes, ponds, pools, marshes or pits (J02.01.03)	medium importance (M)
Drying out (K01.03)	medium importance (M)
Interspecific faunal relations (K03)	medium importance (M)

forestry clearance (B02.02) Pollution to surface waters (limnic & terrestrial, marine &

brackish) (H01) Water abstractions from surface waters (J02.06)

removal of forest undergrowth (B02.03) Water abstractions from groundwater (J02.07)

modifying structures of inland water courses (J02.05.02)

problematic native species (IO2) 2.7.1 Method used – threats

expert opinion (1)

2.8 Complementary Information

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2.8.1 Justification of % thresholds for trends

2.8.2 Other relevant Information

2.8.3 Trans-boundary assessment

## 2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range assessment Favourable (FV)

qualifiers N/A

assessment Unknown (XX)

qualifiers N/A

assessment Favourable (FV)

qualifiers N/A

assessment Favourable (FV)

qualifiers N/A

Favourable (FV)

N/A

## 3. Natura 2000 coverage and conservation measures - Annex II species

## 3.1 Population

2.9.2. Population

2.9.4. Future prospects

Conservation Status
2.9.5 Overall trend in

**Conservation Status** 

2.9.5 Overall assessment of

2.9.3. Habitat

3.1.1 Population Size Unit N/A min

4.004.4.1.1.40

3.1.2 Method used Absent data (0)

3.1.3 Trend of population size within N/A

#### 3.2 Conversation Measures

3.2.1 Measure	3.2.2 Type	3.2.3 Ranking	3.2.4 Location	3.2.5 Broad Evaluation	
Establish protected areas/sites (6.1)	Administrative	medium importance (M)	Inside	Maintain Enhance Long term	
Specific single species or species group management measures (7.4)	One-off t	high importance (H)	Inside	Enhance	

max

## 2. Biogeographical Or Marine Level

### 2.1 Biogeographical Region

2.2 Published sources

## Alpine (ALP)

The present species assessment (fields 0.1-2.9) has been compiled by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco (Societas Herpetologica Italica). Information, unpublished data and experts' judgments have been provided by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco.

Angelini C., Vanni S., Vignoli L., 2007. Salamandrina terdigitata (Bonnatterre, 1789), Salamandrina perpicillata (Savi, 1821). In: Fauna d'Italia, vol. XLII, Amphibia. A cura di Lanza B., Andreone F., Bologna M.A., Corti C., Razzetti E., p. 228-236. Calderini, Bologna.

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Barbieri F., Pellegrini M., 2006. Salamandrina terdigitata (Lacepede, 1788). In: Atlante degli Anfibi e dei Rettili d'Italia / Atlas of Italians Amphibians and Reptiles, Sindaco R., Doria G., Razzetti E. & Bernini F. (Eds). P. 208-213. Societas Herpetologica Italica. Edizioni Polistampa, Firenze.

Rondinini, C., Battistoni, A., Peronace, V., Teofili, C. (compilatori). 2013. Lista Rossa IUCN dei Vertebrati Italiani. Comitato Italiano IUCN e Ministero dell'Ambiente, del Territorio e del Mare, Roma.

#### 2.3 Range

2.3.1 Surface area - Range (km²)

2.3.2 Method - Range surface area

2.3.3 Short-term trend period

2.3.4 Short-term trend direction

2.3.5 Short-term trend magnitude

2.3.6 Long-term trend period

2.3.7 Long-term trend direction

2.3.8 Long-term trend magnitude

2.3.9 Favourable reference range

4300

Complete survey/Complete survey or a statistically robust estimate (3)

2001-2012

stable (0)

min max

N/A

min max

area (km²)

approximately equal to (≈) operator

unkown No

method Expert judgement

2.3.10 Reason for change

Use of different method

N/A

### 2.4 Population

2.4.1 Population size

(individuals or agreed exception)

min

Unit

Unit

max

2.4.2 Population size

(other than individuals)

number of map 10x10 km grid cells (grids10x10) min 14 max 14

2.4.3 Additional information

**Definition of locality** 

Conversion method

#### **Problems**

2.4.4 Year or period

2000-2012

2.4.5 Method – population size

Complete survey/Complete survey or a statistically robust estimate (3)

2.4.6 Short-term trend period

2001-2012

2.4.7 Short term trend direction

unknown (x)

2.4.8 Short-term trend magnitude 2.4.9 Short-term trend method

min confidence interval max

Absent data (0)

2.4.10 Long-term trend period

2.4.11 Long term trend direction

2.4.12 Long-term trend magnitude

2.4.13 Long-term trend method

2.4.14 Favourable reference

population

N/A

confidence interval min max

N/A

number

operator N/A unknown Yes

method

2.4.15 Reason for change

Improved knowledge/more accurate data

### 2.5 Habitat for the Species

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2.5.1 Surface area - Habitat (km²)2.5.2 Year or period

2.5.3 Method used - habitat

2.5.4 a) Quality of habitat

2.5.4 b) Quality of habitat - method

2.5.5 Short term trend period

2.5.6 Short term trend direction

2.5.7 Long-term trend period

2.5.8 Long term trend direction

2.5.9 Area of suitable habitat (km²)

2.5.10 Reason for change

1720

2000-2012

Estimate based on expert opinion with no or minimal sampling (1)

Good

A moderate loss of suitable habitats caused by the alteration of woodland ecosystem and hydrograpich functioning of aquatic habitats.

2001-2012

stable (0)

N/A

Improved knowledge/more accurate data

2.6 Main Pressures		
Pressure	ranking	pollution qualifier(s)
infilling of ditches, dykes, ponds, pools, marshes or pits (J02.01.03)	high importance (H)	N/A
Drying out (K01.03)	medium importance (M)	N/A
Interspecific faunal relations (K03)	medium importance (M)	N/A
forestry clearance (B02.02)	high importance (H)	N/A
Pollution to surface waters (limnic & terrestrial, marine & brackish) (H01)	medium importance (M)	N/A
Water abstractions from surface waters (J02.06)	medium importance (M)	N/A
removal of forest undergrowth (B02.03)	medium importance (M)	N/A
Water abstractions from groundwater (J02.07)	low importance (L)	N/A
modifying structures of inland water courses (J02.05.02)	low importance (L)	N/A
problematic native species (IO2)	low importance (L)	N/A

2.6.1 Method used – pressures mainly based on expert judgement and other data (2)

	· · · · · · · · · · · · · · · · · · ·	
2.7 Main Threats		
Threat	ranking	pollution qualifier(s)
infilling of ditches, dykes, ponds, pools, marshes or pits (J02.01.03)	high importance (H)	N/A
Drying out (K01.03)	medium importance (M)	N/A
Interspecific faunal relations (K03)	medium importance (M)	N/A
forestry clearance (B02.02)	high importance (H)	N/A
Pollution to surface waters (limnic & terrestrial, marine & brackish) (H01)	medium importance (M)	N/A
Water abstractions from surface waters (J02.06)	medium importance (M)	N/A
removal of forest undergrowth (B02.03)	medium importance (M)	N/A
Water abstractions from groundwater (J02.07)	low importance (L)	N/A
modifying structures of inland water courses (J02.05.02)	low importance (L)	N/A
problematic native species (IO2)	low importance (L)	N/A
2.7.1.Mathadasad throats		

2.7.1 Method used – threats expert opinion (1)

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## 2.8 Complementary Information

2.8.1 Justification of % thresholds for trends

2.8.2 Other relevant Information

2.8.3 Trans-boundary assessment

## 2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range assessment Favourable (FV)

qualifiers N/A

2.9.2. Population assessment Unknown (XX)

qualifiers N/A

2.9.3. Habitat assessment Favourable (FV)

qualifiers N/A

assessment Favourable (FV)

qualifiers N/A

Favourable (FV)

N/A

2.9.5 Overall assessment of

**Conservation Status** 

2.9.4. Future prospects

2.9.5 Overall trend in

**Conservation Status** 

## 3. Natura 2000 coverage and conservation measures - Annex II species

### 3.1 Population

3.1.1 Population Size Unit N/A

min max

3.1.2 Method used Absent data (0)

3.1.3 Trend of population size within N/A

## 3.2 Conversation Measures

3.2.1 Measure 3.2.2 Type 3.2.3 Ranking 3.2.4 Location 3.2.5 Broad Evaluation

()

No measure known/

impossible to carry out specific measures (1.3)

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## Notes

Cunning warmer Calaman duing A	andicitate (4475)	
Species name: Salamandrina t	erdigitata (1175)	
Field label	Note	User
0.2.4 Common Speciesname	Nome comune di Salamandrina perspicillata: Salamandrina di Savi	ISPRA <sub>-</sub> AUNA
0.2.3 Alternative Speciesname	Le popolazioni degli appennini settentrionali e centrali sono state distinte su base genetica da Salamandrina terdigitata e ascritte alla specie Salamandrina perspicillata (Lanza et al. 2007).  Riferimenti bibliografici: Fonti Bibliografiche: Lanza B., Andreone F., Bologna M.A., Corti C., Razzetti E., 2007. Fauna d'Italia. Amphibia. Calderini, Bologna.	ISPRA_ AUNA

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