Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

0.1 Member State	**IT**
0.2.1 Species code	**1284**
0.2.2 Species name	**Coluber viridiflavus**
0.2.3 Alternative species scientific name	Hierophis viridiflavus
0.2.4 Common name	Biacco

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

Mediterranean (MED)

2.2 Published sources

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 Information, unpublished data and experts' judgments have been provided by Anna Rita Di Cerbo, Francesco Ficetola, Roberto Sindaco.

De Pous P., Speybroeck J., Bogaerts S., Pasmans F., Beukema W. 2012. A contribution to the atlas of the terrestrial herpetofauna of Sardinia. Herpetology Notes, volume 5: 391-405

Regione Autonoma della Sardegna - Assessorato Difesa Ambiente , 2012 - "Servizio di monitoraggio dello stato di conservazione degli habitat e delle specie di importanza comunitaria presenti nei siti della Rete Natura 2000 in Sardegna – Linea 4. Redazione del Rapporto sullo stato di conservazione degli habitat e delle specie ".

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.

Salvi D., Bombi P., 2010. Reptiles of Sardinia: updating the knowledge on their distribution. Acta Herpetologica 5(2): 161-177

Vanni S., Nistri A., 2006. Hierophis viridiflavus (Lacepede, 1789). 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. 544-547. Societas Herpetologica Italica. Edizioni Polistampa, Firenze.

Vanni S., Zuffi M.A.L., 2011. Hierophis viridiflavus (Lacepede, 1789). In: Fauna d'Italia, vol. XLV, Reptilia. A cura di Corti C., Capula M., Luiselli L., Razzetti E., Sindaco R., p. 509-516. Edizioni Calderini de Il Sole 24 ORE, Bologna.

2.3 Range

Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

2.3.1 Surface area - Range (km²)	188900
2.3.2 Method - Range surface area	Complete survey/Complete survey or a statistically robust estimate (3)
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
2.3.9 Favourable reference range	area (km²) operator approximately equal to (≈) unkown No method
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 min max
2.4.2 Population size (other than individuals)	Unit number of map 10x10 km grid cells (grids10x10) min 1367 max 1367
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	stable (0)
2.4.8 Short-term trend magnitude	min max confidence interval
2.4.9 Short-term trend method	Estimate based on partial data with some extrapolation and/or modelling (2)
2.4.10 Long-term trend period	
2.4.11 Long term trend direction	N/A
2.4.12 Long-term trend magnitude	min max confidence interval
2.4.13 Long-term trend method	N/A
2.4.14 Favourable reference population	number operator approximately equal to (≈) unknown No 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)	
2.5.2 Year or period	2000-2012
2.5.3 Method used - habitat	Absent data (0)
2.5.4 a) Quality of habitat	Good
2.5.4 b) Quality of habitat - method	Agricultural intensification, roads and landscape modification are the main causes of the habitat decreasing for the species.
2.5.5 Short term trend period	2001-2012
2.5.6 Short term trend direction	stable (0)
2.5.7 Long-term trend period	

Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

2.5.8 Long term trend direction	N/A
2.5.9 Area of suitable habitat (km²)	
2.5.10 Reason for change	Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
removal of hedges and copses or scrub (A10.01)	low importance (L)	N/A
roads, motorways (D01.02)	medium importance (M)	N/A
anthropogenic reduction of habitat connectivity (J03.02)	medium importance (M)	N/A
removal of stone walls and embankments (A10.02)	low importance (L)	N/A
modification of cultivation practices (A02)	low importance (L)	N/A
burning down (J01.01)	medium importance (M)	N/A
continuous urbanisation (E01.01)	medium importance (M)	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)
removal of hedges and copses or scrub (A10.01)	low importance (L)	N/A
roads, motorways (D01.02)	medium importance (M)	N/A
anthropogenic reduction of habitat connectivity (J03.02)	medium importance (M)	N/A
removal of stone walls and embankments (A10.02)	low importance (L)	N/A
burning down (J01.01)	medium importance (M)	N/A
continuous urbanisation (E01.01)	low importance (L)	N/A

2.7.1 Method used – threats	expert opinion (1)

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	Favourable (FV)
	qualifiers	N/A
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	

Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

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	N/A	
3.1.3 Trend of population size within	N/A	

3.2 Conversation Measures

2. Biogeographical Or Marine Level

2.1 Biogeographical Region	**Continental (CON)**
2.2 Published sources	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. 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 Vanni S., Nistri A., 2006. Hierophis viridiflavus (Lacepede, 1789). 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. 544-547. Societas Herpetologica Italica. Edizioni Polistampa, Firenze. Vanni S., Zuffi M.A.L., 2011. Hierophis viridiflavus (Lacepede, 1789). In: Fauna d'Italia, vol. XLV, Reptilia. A cura di Corti C., Capula M., Luiselli L., Razzetti E., Sindaco R., p. 509-516. Edizioni Calderini de Il Sole 24 ORE, Bologna.

2.3 Range

2.3.1 Surface area - Range (km²)	101700	
2.3.2 Method - Range surface area	Complete survey/Complete survey or a statistically robust estimate (3)	
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
2.3.9 Favourable reference range	area (km²)	
	operator	approximately equal to (≈)
	unkown	No
	method	
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
	min	max

Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

2.4.2 Population size (other than individuals)	Unit	number of map 10x10 km grid cells (grids10x10)	
	min	892	max 892
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	stable (0)		
2.4.8 Short-term trend magnitude	min	max	confidence interval
2.4.9 Short-term trend method	Estimate based on partial data with some extrapolation and/or modelling (2)		
2.4.10 Long-term trend period			
2.4.11 Long term trend direction	N/A		
2.4.12 Long-term trend magnitude	min	max	confidence interval
2.4.13 Long-term trend method	N/A		
2.4.14 Favourable reference population	number		
	operator	approximately equal to (≈)	
	unknown	No	
	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)	
2.5.2 Year or period	2000-2012
2.5.3 Method used - habitat	Absent data (0)
2.5.4 a) Quality of habitat	Good
2.5.4 b) Quality of habitat - method	Agricultural intensification, roads and landscape modification are the main causes of the habitat decreasing for the species.
2.5.5 Short term trend period	2000-2012
2.5.6 Short term trend direction	stable (0)
2.5.7 Long-term trend period	
2.5.8 Long term trend direction	N/A
2.5.9 Area of suitable habitat (km²)	
2.5.10 Reason for change	Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
use of biocides, hormones and chemicals (A07)	low importance (L)	N/A
anthropogenic reduction of habitat connectivity (J03.02)	medium importance (M)	N/A
removal of stone walls and embankments (A10.02)	low importance (L)	N/A
reduction or loss of specific habitat features (J03.01)	medium importance (M)	N/A
removal of hedges and copses or scrub (A10.01)	low importance (L)	N/A
continuous urbanisation (E01.01)	medium importance (M)	N/A
burning down (J01.01)	low importance (L)	N/A
Other ecosystem modifications (J03)	low importance (L)	N/A
forest replanting (B02.01)	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)
use of biocides, hormones and chemicals (A07)	low importance (L)	N/A
anthropogenic reduction of habitat connectivity (J03.02)	medium importance (M)	N/A
removal of stone walls and embankments (A10.02)	low importance (L)	N/A
reduction or loss of specific habitat features (J03.01)	medium importance (M)	N/A
removal of hedges and copses or scrub (A10.01)	low importance (L)	N/A
continuous urbanisation (E01.01)	medium importance (M)	N/A
burning down (J01.01)	low importance (L)	N/A
Other ecosystem modifications (J03)	low importance (L)	N/A
forest replanting (B02.01)	low importance (L)	N/A

2.7.1 Method used – threats	expert opinion (1)

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	Favourable (FV)
	qualifiers	N/A
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	N/A		
3.1.3 Trend of population size within	N/A		

3.2 Conversation Measures

2. Biogeographical Or Marine Level

Report on the main results of the surveillance under article 11 for annex II, IV and V species (Annex B)

2.1 Biogeographical Region	**Alpine (ALP)**
2.2 Published sources	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. 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 Vanni S., Nistri A., 2006. Hierophis viridiflavus (Lacepede, 1789). 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. 544-547. Societas Herpetologica Italica. Edizioni Polistampa, Firenze. Vanni S., Zuffi M.A.L., 2011. Hierophis viridiflavus (Lacepede, 1789). In: Fauna d'Italia, vol. XLV, Reptilia. A cura di Corti C., Capula M., Luiselli L., Razzetti E., Sindaco R., p. 509-516. Edizioni Calderini de Il Sole 24 ORE, Bologna.

2.3 Range

2.3.1 Surface area - Range (km²)	50000
2.3.2 Method - Range surface area	Complete survey/Complete survey or a statistically robust estimate (3)
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
2.3.9 Favourable reference range	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 min max
2.4.2 Population size (other than individuals)	Unit number of map 10x10 km grid cells (grids10x10) min 334 max 334
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	stable (0)
2.4.8 Short-term trend magnitude	min max confidence interval
2.4.9 Short-term trend method	Estimate based on partial data with some extrapolation and/or modelling (2)
2.4.10 Long-term trend period	

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2.4.11 Long term trend direction	N/A		
2.4.12 Long-term trend magnitude	min	max	confidence interval
2.4.13 Long-term trend method	N/A		
2.4.14 Favourable reference population	number		
	operator	approximately equal to (≈)	
	unknown	No	
	method	Expert judgement	
2.4.15 Reason for change	Improved knowledge/more accurate data		

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km²)	
2.5.2 Year or period	2000-2012
2.5.3 Method used - habitat	Absent data (0)
2.5.4 a) Quality of habitat	Good
2.5.4 b) Quality of habitat - method	Agricultural intensification and roads are the main causes of the habitat decreasing for the species.
2.5.5 Short term trend period	2001-2012
2.5.6 Short term trend direction	stable (0)
2.5.7 Long-term trend period	
2.5.8 Long term trend direction	N/A
2.5.9 Area of suitable habitat (km²)	
2.5.10 Reason for change	Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
removal of stone walls and embankments (A10.02)	medium importance (M)	N/A
anthropogenic reduction of habitat connectivity (J03.02)	medium importance (M)	N/A
Roads, paths and railroads (D01)	high importance (H)	N/A
removal of hedges and copses or scrub (A10.01)	medium importance (M)	N/A
burning down (J01.01)	medium importance (M)	N/A
modification of cultivation practices (A02)	low importance (L)	N/A
agricultural intensification (A02.01)	medium importance (M)	N/A
Restructuring agricultural land holding (A10)	low importance (L)	N/A
forest replanting (B02.01)	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)
agricultural intensification (A02.01)	medium importance (M)	N/A
removal of hedges and copses or scrub (A10.01)	low importance (L)	N/A
removal of stone walls and embankments (A10.02)	low importance (L)	N/A
roads, motorways (D01.02)	medium importance (M)	N/A
continuous urbanisation (E01.01)	medium importance (M)	N/A
burning down (J01.01)	low importance (L)	N/A
reduction or loss of specific habitat features (J03.01)	medium importance (M)	N/A

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2.7.1 Method used – threats	expert opinion (1)

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	Favourable (FV)
	qualifiers	N/A
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	N/A		
3.1.3 Trend of population size within	N/A		

3.2 Conversation Measures