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	**1058**
0.2.2 Species name	**Maculinea arion**
0.2.3 Alternative species scientific name	Phengaris arion
0.2.4 Common name	N/A

1. National Level

1.1 Maps

1.1.1 Distribution Map	Yes
1.1.1a Sensitive species	No
1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling (2)
1.1.3 Year or period	2007-2012
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 Fabio Stoch (on behalf ot the Comitato Scientifico per la Fauna d'Italia) and Anna Alonzi, Piero Genovesi, Francesca Ronchi (ISPRA). Information, unpublished data and expert judgements have been provided by Emilio Balletto and Simona Bonelli (Torino). Nowicki P., Bonelli S., Vrabec V., 2012 - Selection against dispersal in isolated metapopulations of large blue butterflies. Frank-Thorsten Krell, David Bettman &

2.3 Range

2.3.1 Surface area - Range (km²)	34600	
2.3.2 Method - Range surface area	Estimate based on partial data with some extrapolation and/or modelling (2)	
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 opinion
2.3.10 Reason for change	Improved knowledge/more accurate dataUse 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	90	max	90
2.4.3 Additional information	Definition of locality			

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2.4.3 Additional information	Definition of locality	
	Conversion method	not available
	Problems	it is impossible to convert grids into individuals
2.4.4 Year or period	2007-2012	
2.4.5 Method – population size	Estimate based on partial data with some extrapolation and/or modelling (2)	
2.4.6 Short-term trend period	2001-2012	
2.4.7 Short term trend direction	decrease (-)	
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	more than (>)
	unknown	No
	method	Expert opinion
2.4.15 Reason for change	Use of different method	

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	Absent data (0)
2.5.4 a) Quality of habitat	Moderate
2.5.4 b) Quality of habitat - method	Expert opinion
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 Use of different method

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
abandonment / lack of mowing (A03.03)	medium importance (M)	N/A
temperature changes (e.g. rise of temperature & extremes) (M01.01)	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)
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
abandonment / lack of mowing (A03.03)	medium importance (M)	N/A
temperature changes (e.g. rise of temperature & extremes) (M01.01)	medium importance (M)	N/A

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	Disappeared from Sila more than 12 years ago.
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	Inadequate (U1)
	qualifiers	N/A
2.9.3. Habitat	assessment	Favourable (FV)
	qualifiers	N/A
2.9.4. Future prospects	assessment	Inadequate (U1)
	qualifiers	N/A
2.9.5 Overall assessment of Conservation Status	Inadequate (U1)	
2.9.5 Overall trend in Conservation Status	declining (-)	

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 Fabio Stoch (on behalf ot the Comitato Scientifico per la Fauna d'Italia) and Anna Alonzi, Piero Genovesi, Francesca Ronchi (ISPRA). Information, unpublished data and expert judgements have been provided by Emilio Balletto and Simona Bonelli (Torino).

MUSEO FRIULANO DI STORIA NATURALE, 2011. Lo stato di conoscenza e di conservazione di alcune specie
animali di interesse comunitario in Friuli Venezia Giulia. Relazione inedita all'Amministrazione della Regione
Friuli Venezia Giulia, Udine (Novembre 2011): 1-194.
Nowicki P., Bonelli S., Vrabec V., 2012 - Selection against dispersal in isolated metapopulations of large blue butterflies. Frank-Thorsten Krell, David Bettman &

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 Range

2.3.1 Surface area - Range (km²)	29900
2.3.2 Method - Range surface area	Estimate based on partial data with some extrapolation and/or modelling (2)
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 opinion
2.3.10 Reason for change	Improved knowledge/more accurate dataUse 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 102 max 102
2.4.3 Additional information	Definition of locality Conversion method non available Problems it is impossible to convert grids into individuals
2.4.4 Year or period	2007-2012
2.4.5 Method – population size	Estimate based on partial data with some extrapolation and/or modelling (2)
2.4.6 Short-term trend period	2001-2012
2.4.7 Short term trend direction	decrease (-)
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 more than (>) unknown No method Expert opinion
2.4.15 Reason for change	

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	Absent data (0)
2.5.4 a) Quality of habitat	Moderate
2.5.4 b) Quality of habitat - method	Expert opinion
2.5.5 Short term trend period	2001-2012
2.5.6 Short term trend direction	stable (0)

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

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 Use of different method

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
abandonment / lack of mowing (A03.03)	medium importance (M)	N/A
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
temperature changes (e.g. rise of temperature & extremes) (M01.01)	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)
abandonment / lack of mowing (A03.03)	medium importance (M)	N/A
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
temperature changes (e.g. rise of temperature & extremes) (M01.01)	medium importance (M)	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	The CON region is quite marginal for this species in relation to its ecological requirement
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 Inadequate (U1) qualifiers declining (-)
2.9.3. Habitat	assessment Favourable (FV) qualifiers N/A
2.9.4. Future prospects	assessment Inadequate (U1) qualifiers declining (-)
2.9.5 Overall assessment of Conservation Status	Inadequate (U1)
2.9.5 Overall trend in Conservation Status	declining (-)

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	**Alpine (ALP)**
2.2 Published sources	The present species assessment (fields 0.1-2.9) has been compiled by Fabio Stoch (on behalf ot the Comitato Scientifico per la Fauna d'Italia) and Anna Alonzi, Piero Genovesi, Francesca Ronchi (ISPRA). Information, unpublished data and expert judgements have been provided by Emilio Balletto and Simona Bonelli (Torino). Casacci L.P., Witek M., Barbero F., Patricelli D., Solazzo G., Balletto E., Bonelli S., 2011. Habitat preferences of Maculinea arion and its Myrmica host ants: implications for habitat management in Italian Alps. Journal of Insect Conservation, 15: 103-110, ISSN: 1366-638X Gerbaudo C., Mavilla L., Bonelli S., Balletto E., 2010. Maculinea arion (Linné, 1758) nel Parco Fluviale Gesso Stura (CN). Rivista piemontese di Storia naturale, 31: 83-100. Patricelli D., Barbero F., La Morgia V., Casacci L.P., Witek M., Balletto E., Bonelli S., 2011. To lay or not to lay: oviposition of Maculinea arion in relation to Myrmica ant presence and host plant phenology. Animal Behaviour, 82: 791-799, ISSN: 0003-3472. MUSEO FRIULANO DI STORIA NATURALE, 2011. Lo stato di conoscenza e di conservazione di alcune specie animali di interesse comunitario in Friuli Venezia Giulia. Relazione inedita all'Amministrazione della Regione Friuli Venezia Giulia, Udine (Novembre 2011): 1-194. Nowicki P., Bonelli S., Vrabec V., 2012 - Selection against dispersal in isolated metapopulations of large blue butterflies. Frank-Thorsten Krell, David Bettman &

2.3 Range

2.3.1 Surface area - Range (km²)	41100	
2.3.2 Method - Range surface area	Estimate based on partial data with some extrapolation and/or modelling (2)	
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 opinion
2.3.10 Reason for change	Improved knowledge/more accurate dataUse of different method	

2.4 Population

2.4.1 Population size (individuals or agreed exception)	Unit	N/A	
	min		max

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(individuals or agreed exception)	min	max	
2.4.2 Population size (other than individuals)	Unit	number of map 10x10 km grid cells (grids10x10)	
	min	133	max 133
2.4.3 Additional information	Definition of locality		
	Conversion method	not available	
	Problems	it is impossible to convert grids into individuals	
2.4.4 Year or period	2007-2012		
2.4.5 Method – population size	Estimate based on partial data with some extrapolation and/or modelling (2)		
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	Expert opinion	
2.4.15 Reason for change			

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	Absent data (0)
2.5.4 a) Quality of habitat	Moderate
2.5.4 b) Quality of habitat - method	Expert opinion
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 Use of different method

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
intensive grazing (A04.01)	medium importance (M)	N/A
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
Outdoor sports and leisure activities, recreational activities (G01)	low importance (L)	N/A

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

2.7 Main Threats

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

Threat	ranking	pollution qualifier(s)
intensive grazing (A04.01)	medium importance (M)	N/A
abandonment of pastoral systems, lack of grazing (A04.03)	medium importance (M)	N/A
Outdoor sports and leisure activities, recreational activities (G01)	medium importance (M)	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