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

## 2.2 Published sources

# **Mediterranean (MED)**

The present species assessment (fields 0.1-2.9) has been compiled by Fabio Stoch (on behalf of 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 Information, unpublished data and expert judgements have been provided by Emilio Balletto and Simona Bonelli (Torino).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

<ul> <li>2.3.1 Surface area - Range (km²)</li> <li>2.3.2 Method - Range surface area</li> <li>2.3.3 Short-term trend period</li> <li>2.3.4 Short-term trend direction</li> </ul>	34600 Estimate based on p 2001-2012 stable (0)	artial data with some extrapolation and/or modelling (2)
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	e/more accurate dataUse of different method

## 2.4 Population

2.4.1 Population size	Unit	N/A				
(individuals or agreed exception)	min		max			
2.4.2 Population size	Unit	number	of map 10x	10 km grid o	cells (grids10	x10)
(other than individuals)	min	90	max	90		
2.4.3 Additional information	Definit	ion of local	litv			

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2.4.3 Additional information	Definition of locality			
	Conversion method	not available		
	Problems	it is impossible to conv	ert grids into individuals	
2.4.4 Year or period	2007-2012			
2.4.5 Method – population size	Estimate based on pa	rtial data with some extra	polation 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		nfidence interval	
2.4.9 Short-term trend method 2.4.10 Long-term trend period	Estimate based on pa	rtial data with some extrap	polation and/or modelling (2)	
2.4.11 Long term trend direction	N/A			
2.4.12 Long-term trend magnitude	min	max coi	nfidence interval	
2.4.13 Long-term trend method	N/A			
2.4.14 Favourable reference	number			
population	operator more that	nn (>)		
	unknown No			
	method Expert o	oinion		
2.4.15 Reason for change	Use of different meth	od		
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			
<ul><li>2.5.5 Short term trend period</li><li>2.5.6 Short term trend direction</li></ul>	2001-2012 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	ge/more accurate data Use of different method		
2.6 Main Pressures				
Pressure		ranking	pollution qualifier(s)	
abandonment of pastoral systems, lac	ck 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 tem (M01.01)	perature & extremes)	low importance (L)	N/A	
2.6.1 Method used – pressures	mainly based on expe	rt judgement and other d	ata (2)	
2.7 Main Threats				
Threat		ranking	pollution qualifier(s)	
abandonment of pastoral systems, lac	ck of grazing (A04.03)	medium importance (M)	N/A	

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expert opinion (1)

medium importance (M)

medium importance (M)

N/A

N/A

abandonment / lack of mowing (A03.03)

2.7.1 Method used – threats

(M01.01)

temperature changes (e.g. rise of temperature & extremes)

# 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

assessment Inadequate (U1)

qualifiers N/A

2.9.3. Habitat assessment Favourable (FV)

qualifiers N/A

assessment Inadequate (U1)

qualifiers N/A

Inadequate (U1)

declining (-)

N/A

N/A

2.9.2. Population

2.9.4. Future prospects

2.9.5 Overall assessment of **Conservation Status** 

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

3.1.3 Trend of population size within

3.2 Conversation Measures

# 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 Fabio Stoch (on behalf of 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

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,	•		
2.3 Range			
<ul> <li>2.3.1 Surface area - Range (km²)</li> <li>2.3.2 Method - Range surface area</li> <li>2.3.3 Short-term trend period</li> <li>2.3.4 Short-term trend direction</li> </ul>	29900 Estimate based on pa 2001-2012 stable (0)	artial data with some e	extrapolation and/or modelling (2)
<ul><li>2.3.5 Short-term trend magnitude</li><li>2.3.6 Long-term trend period</li></ul>	min	max	
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	(3)
	method	Expert opinion	
2.3.10 Reason for change	Improved knowledge	e/more accurate datal	Jse of different method
2.4 Population			
2.4.1 Population size	Unit N/A		
(individuals or agreed exception)	min	max	
2.4.2 Population size	Unit number of r	map 10x10 km grid cel	ls (grids10x10)
(other than individuals)	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 pa	artial data with some e	extrapolation and/or modelling (2)
2.4.6 Short-term trend period	2001-2012		
2.4.7 Short term trend direction	decrease (-)		
<ul><li>2.4.8 Short-term trend magnitude</li><li>2.4.9 Short-term trend method</li></ul>	min	max	confidence interval
2.4.10 Long-term trend method	Estimate based on pa	artiai data with some e	extrapolation and/or modelling (2)
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	number		
population	operator more th	an (>)	
	unknown No method Expert o	nninion	
2.4.15 Reason for change	mediod Experce	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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		

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2001-2012

stable (0)

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

N/A

Improved knowledge/more accurate data Use of different method

~		Mai		D			
_		11/12	ın	Ur	<b>DCC</b>		-00
_	U	IVIC				ı	

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 assessment Inadequate (U1) 2.9.2. Population qualifiers declining (-)

2.9.3. Habitat assessment Favourable (FV)

qualifiers N/A

2.9.4. Future prospects assessment Inadequate (U1) qualifiers declining (-)

Inadequate (U1)

2.9.5 Overall assessment of **Conservation Status** 

declining (-)

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

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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

# 2.2 Published sources

## Alpine (ALP)

The present species assessment (fields 0.1-2.9) has been compiled by Fabio Stoch (on behalf of 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)

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

41100

Estimate based on partial data with some extrapolation and/or modelling (2)

2001-2012 stable (0)

min max

N/A

min max

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)			•	_	d cells (grids10x10)
2.4.3 Additional information	min 13		max	133	
2.4.3 Additional information	Definition of Conversion		not	available	
	Problems	method			e to convert grids into individuals
2.4.4.Voor or poriod	2007-2012		11.15	iiiibossibii	e to convert grids into individuals
<ul><li>2.4.4 Year or period</li><li>2.4.5 Method – population size</li></ul>		ased on p	artial dat	a with sor	me extrapolation and/or modelling (2)
2.4.6 Short-term trend period	2001-2012	30CG 011 P	ar trai aat		ne extrapolation ana, or modelling (2)
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 ba	ased on p	artial dat	a with sor	me 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 2.4.14 Favourable reference	N/A number				
population	operator	annroxi	imately e	qual to (≈	)
population	unknown	No	illiately e	qual to (*)	1
	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 dat	a (0)			
2.5.4 a) Quality of habitat	Moderate				
2.5.4 b) Quality of habitat - method	Expert opir				
2.5.5 Short term trend period 2.5.6 Short term trend direction	2001-2012 stable (0)				
2.5.7 Long-term trend period	stable (0)				
2.5.8 Long term trend direction	N/A				
2.5.9 Area of suitable habitat (km²)	-				
2.5.10 Reason for change	Improved I	knowledg	e/more a	ccurate d	ata 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, lac	k of grazing (A04.03)	medium importance (M)	N/A
Outdoor sports and leisure activities, r (G01)	ecreational activities	low importance (L)	N/A
2.6.1 Method used – pressures	mainly based on exp	pert judgement and other data	(2)
2.7 Main Threats			

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Threat		ranking	pollution qualifier(s)
ntensive grazing (A04.01)		medium importance (M)	N/A
abandonment of pastoral systems, la	ck of grazing (A04.03)	medium importance (M)	N/A
Outdoor sports and leisure activities, (G01)	recreational activities	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 co	nservation status at e	end of reporting period)	
2.9.1 Range	assessment Favours qualifiers N/A	able (FV)	
2.9.2. Population	assessment Favours qualifiers N/A	able (FV)	
2.9.3. Habitat	assessment Favours qualifiers N/A	able (FV)	
2.9.4. Future prospects	assessment Favours qualifiers N/A	able (FV)	
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

# 3.1.1 Population Size Unit N/A min max 3.1.2 Method used 3.1.3 Trend of population size within N/A 3.2 Conversation Measures

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