

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	1354
0.2.2 Species name	Ursus arctos
0.2.3 Alternative species scientific name	N/A
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	2001-2012
1.1.4 Additional map	Yes
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 Daniele Paoloni, Cristiano Spilinga (Associazione Teriologica Italiana - ATIt) and Anna Alonzi, Piero Genovesi, Francesca Ronchi (Institute for Environmental Protection and Research - ISPRA). Information, unpublished data and experts' judgments have been provided by Marco Apollonio, Luigi Boitani, Paolo Ciucci, Luca Lapini, Anna Loy, Andrea Sforzi (ATIt).

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Boitani L., Lovari S., Vigna Taglianti A., 2003. Carnivora – Artiodactyla. Fauna d'Italia, vol. XXXVIII, Mammalia III. Ed. Calderini de Il Sole 24 ore Edagricole, Bologna.

Ciucci P., L. Boitani. 2005. Conflitto tra lupo e zootecnia in Italia: stato delle conoscenze, ricerca e conservazione. Biologia e Conservazione della Fauna 115: 26-51.

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

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Ciucci P., E. Tosoni, L. Boitani. 2009. Conta delle femmine di orso con piccoli dell'anno (FCOY): protocollo di applicazione nel parco nazionale d'Abruzzo Lazio e Molise. Ente Parco Nazionale d'Abruzzo Lazio e Molise, Pescasseroli.

Ciucci P., V. Gervasi, J. Boulanger, T. Altea, L. Boitani, D. Paetkau, R. Priveé, L. Sammarone, C. Sulli, E. Tosoni. 2013. Non-invasive, integrated datasources survey of the core Apennine bear population (*Ursus arctos marsicanus*) in 2011. Progetto LifeNAT/IT/000160, Dip. Biologia e Biotecnologie, Università di Roma "La Sapienza", Roma.

Falcucci A., L. Maiorano, P. Ciucci, E.O. Garton, and L. Boitani. 2008. Land-cover change and the future of the Abruzzo brown bear: A perspective from the past. *Journal of Mammalogy* 89:1502-1511.

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Salvatori V., Galluzzi A., Quattrociocchi F., Ciucci P., 2012. "Analisi della pratica zootecnica e sviluppo di indirizzi di gestione per la convivenza con i predatori" RELAZIONE TECNICA FINALE PER LA PARTE APPENNINICA. LIFE-ARCTOS.

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 (km ²)	1800
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	1989-2012
2.3.7 Long-term trend direction	stable (0)
2.3.8 Long-term trend magnitude	min max
2.3.9 Favourable reference range	area (km ²) operator more than (>) unknown No method Expert judgment
2.3.10 Reason for change	Improved knowledge/more accurate data

2.4 Population

2.4.1 Population size (individuals or agreed exception)	Unit number of individuals (i) min 40 max 50
2.4.2 Population size (other than individuals)	Unit N/A min max
2.4.3 Additional information	Definition of locality Conversion method Problems
2.4.4 Year or period	2004-2012
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	Complete survey/Complete survey or a statistically robust estimate (3)
2.4.10 Long-term trend period	1989-2012
2.4.11 Long term trend direction	stable (0)
2.4.12 Long-term trend magnitude	min max confidence interval
2.4.13 Long-term trend method	Complete survey/Complete survey or a statistically robust estimate (3)
2.4.14 Favourable reference population	number operator more than (>) unknown No method Expert judgement
2.4.15 Reason for change	

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km ²)	
2.5.2 Year or period	
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	Expert based.
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	1989-2012
2.5.8 Long term trend direction	stable (0)
2.5.9 Area of suitable habitat (km ²)	1727
2.5.10 Reason for change	Use of different method

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
trapping, poisoning, poaching (F03.02.03)	high importance (H)	N/A
introduction of disease (microbial pathogens) (K03.03)	medium importance (M)	N/A
reduced fecundity/ genetic depression in animals (inbreeding) (K05.01)	high importance (H)	N/A

2.6.1 Method used – pressures	based only on expert judgements (1)
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2.7 Main Threats

Threat	ranking	pollution qualifier(s)
trapping, poisoning, poaching (F03.02.03)	high importance (H)	N/A
introduction of disease (microbial pathogens) (K03.03)	high importance (H)	N/A
reduced fecundity/ genetic depression in animals (inbreeding) (K05.01)	high importance (H)	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

In order of reporting independently the two bear populations in Italy (Central Alps and Abruzzo), the entire population belonging to the subspecies *Ursus arctos marsicanus* refers to the Mediterranean biogeographical region.

Reproductive females of *Ursus arctos marsicanus* are not able to expand outside the boundaries of Abruzzo, Lazio and Molise National Park. This is a highly relevant conservation concern for this population (subspecies).

The Action Plan for the conservation of this population (PATOM 2011) indicates the need of increasing the population size of 25% by 2020, and a reduction of the human caused mortality of 50% in respect to the levels recorded in the previous decade

2.8.3 Trans-boundary assessment

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

2.9.1 Range	assessment Bad (U2) qualifiers stable (=)
2.9.2. Population	assessment Bad (U2) qualifiers stable (=)
2.9.3. Habitat	assessment Favourable (FV) qualifiers N/A
2.9.4. Future prospects	assessment Bad (U2) qualifiers declining (-)
2.9.5 Overall assessment of Conservation Status	Bad (U2)

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

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

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)	Legal	medium importance (M)	Inside	Long term
Legal protection of habitats and species (6.3)	Legal	high importance (H)	Both	Not evaluated
Regulation/ Management of hunting and taking (7.1)	Legal	high importance (H)	Both	Not evaluated

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 Daniele Paoloni, Cristiano Spilinga (Associazione Teriologica Italiana - ATIt) and Anna Alonzi, Piero Genovesi, Francesca Ronchi (Institute for Environmental Protection and Research - ISPRA). Information, unpublished data and experts' judgments have been provided by Marco Apollonio, Luigi Boitani, Paolo Ciucci, Luca Lapini, Anna Loy, Andrea Sforzi (ATIt).

Boitani L., Corsi F., Falcucci A., Maiorano L., Marzetti I., Masi M., Montemaggiori A., Ottaviani D., Reggiani G., Rondinini C., 2002. Rete Ecologica Nazionale. Un approccio alla conservazione dei vertebrati italiani. Università di Roma "La Sapienza", Dipartimento di Biologia Animale e dell'Uomo; Ministero dell'Ambiente, Direzione per la Conservazione della Natura; Istituto di Ecologia Applicata. <http://www.gisbau.uniroma1.it/REN>

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

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Milani F., Carlini E., Visaggi B., 2012. Relazione Tecnica sulle procedure di controllo sanitario e status del bestiame domestico pascolante nelle aree di presenza dell'Orso in Lombardia. LIFE-ARCTOS.

2.3 Range

2.3.1 Surface area - Range (km ²)	4200
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	increase (+)
2.3.5 Short-term trend magnitude	min max
2.3.6 Long-term trend period	1989-2012
2.3.7 Long-term trend direction	increase (+)
2.3.8 Long-term trend magnitude	min max
2.3.9 Favourable reference range	area (km ²) operator more than (>) unkown No method Expert judgement
2.3.10 Reason for change	Genuine Improved knowledge/more accurate dataUse of different method

2.4 Population

2.4.1 Population size (individuals or agreed exception)	Unit number of individuals (i) min 43 max 50
2.4.2 Population size (other than individuals)	Unit N/A min max
2.4.3 Additional information	Definition of locality Conversion method Problems
2.4.4 Year or period	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	increase (+)
2.4.8 Short-term trend magnitude	min 15 max confidence interval
2.4.9 Short-term trend method	Complete survey/Complete survey or a statistically robust estimate (3)
2.4.10 Long-term trend period	1989-2012
2.4.11 Long term trend direction	increase (+)

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

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 judgement	
2.4.15 Reason for change	Genuine Improved knowledge/more accurate data	Use of different method	

2.5 Habitat for the Species

2.5.1 Surface area - Habitat (km ²)	
2.5.2 Year or period	
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	Expert based
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	1989-2012
2.5.8 Long term trend direction	stable (0)
2.5.9 Area of suitable habitat (km ²)	5349
2.5.10 Reason for change	

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
reduced fecundity/ genetic depression in animals (inbreeding) (K05.01)	medium importance (M)	N/A
trapping, poisoning, poaching (F03.02.03)	medium importance (M)	N/A
2.6.1 Method used – pressures	based only on expert judgements (1)	

2.7 Main Threats

Threat	ranking	pollution qualifier(s)
reduced fecundity/ genetic depression in animals (inbreeding) (K05.01)	high importance (H)	N/A
trapping, poisoning, poaching (F03.02.03)	high importance (H)	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

In order of reporting independently the two bear populations present in Italy (Central Alps and Abruzzo), it is specified that the entire population belonging to the subspecies *Ursus arctos marsicanus* refers to the Mediterranean biogeographical region.

The Alpine population is the result of a reintroduction project; nine animals captured in Slovenia have been released in the Adamello Brenta natural park in 1999-2002. Since then the population has constantly grown to the present level.

The minimum number of alive in the Central Alps at the end of 2012 is 43, of which 22 males, 14 females and 7 indeterminate (MF sex ratio 1:0,64 - n = 36).

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

(Source: Groff C., Bragalanti N., Rizzoli R., Zanghellini P. (a cura di), 2013. Rapporto Orso 2012 del Servizio Foreste e fauna della Provincia Autonoma di Trento.)

The average rate of annual growth of the bear population in the period 2002-2012, based on minimum numbers of alive (MNA), is equal to 15.6% with an increase over the 2012. (Source: Groff C., Bragalanti N., Rizzoli R., Zanghellini P. (a cura di), 2013. Rapporto Orso 2012 del Servizio Foreste e fauna della Provincia Autonoma di Trento.)

The increasing risk of inbreeding makes it necessary an expansion of the range by the species within the Central Alps. The negative perspectives for the population are due to the dramatic decrease in the social support to the reintroduction recorded in recent years.

Presence data of *Ursus arctos* in North East Italy (Veneto and Friuli Venezia Giulia) refer to a few young males dispersing from Slovenia, and cannot be considered as an established population. However, since the home range of these animals partly overlap with bears (including females) dispersing from the Central Alps, a reproduction event may occur.

2.8.3 Trans-boundary assessment

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

2.9.1 Range	assessment Inadequate (U1) qualifiers improving (+)
2.9.2. Population	assessment Inadequate (U1) qualifiers improving (+)
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	improving (+)

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 agriculture-related measures (2.0)	Administrative Contractual Recurrent	high importance (H)	Both	Maintain Long term

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

Other forestry-related measures (3.0)	Contractual	low importance (L)	Inside	Maintain
Establish protected areas/sites (6.1)	Legal	medium importance (M)	Inside	Long term
Legal protection of habitats and species (6.3)	Legal Administrative	high importance (H)	Both	Maintain Long term Not evaluated
Regulation/ Management of hunting and taking (7.1)	Legal Contractual	high importance (H)	Both	Maintain Not evaluated
Other measures (8.0)	Legal	high importance (H)	Both	Enhance Long term
Specific management of traffic and energy transport systems (8.2)	Contractual	low importance (L)	Inside	Maintain

Species name: Ursus arctos (1354)

Field label	Note	User
1.1.4 Additional distribution map	Additional map provided reports areas of sporadic presence in Italy (areas of occasional presence of single or sporadic individuals, with no reproductive potential)	ISPRA_AUNA
2.0 Regions	In order of reporting independently the two bear populations in Italy (Central Alps and Abruzzo), the entire population belonging to the subspecies Ursus arctos marsicanus refers to the Mediterranean biogeographical region.	ISPRA_AUNA

Species name: Ursus arctos (1354) Region code: ALP

Field label	Note	User
2.9.4a Conclusion - future	Population dynamics are positive, but the social support to the reintroduction project has dramatically dropped in recent years. It is envisaged a possible risk of increased poaching in the short term, if the social support will remain low	ISPRA_AUNA
2.4.1a Population size (individuals or agreed exception) - Unit	The minimum number of alive at the end of 2012 is 43, of which 22 males, 14 females and 7 indeterminate (MF sex ratio 1:0,64 - n = 36). (Source: Groff C., Bragalanti N., Rizzoli R., Zanghellini P. (a cura di), 2013. Rapporto Orso 2012 del Servizio Foreste e fauna della Provincia Autonoma di Trento.)	ISPRA_AUNA
2.4.7 Short term trend direction	The average rate of annual growth of the bear population in the period 2002-2012, based on minimum numbers of alive (MNA), is equal to 15.6% with an increase over the 2012. (Source: Groff C., Bragalanti N., Rizzoli R., Zanghellini P. (a cura di), 2013. Rapporto Orso 2012 del Servizio Foreste e fauna della Provincia Autonoma di Trento.)	ISPRA_AUNA
2.5.9 Area of suitable habitat (km2)	<p>The area of suitable habitat (2.5.9) has been calculated by intersecting habitat suitability models with each biogeographical region in which the species is present. The habitat suitability models are those included in the Italian Ecological Network (Rete Ecologica Nazionale – REN; Boitani et al. 2002), and were developed at the national scale for all vertebrate species, based on species-environments relationships defined with inputs from leading species' experts. The models were created integrating into a Geographic Information System geographic and environmental data, such as Corine Land Cover, Digital Terrain Model, water and road networks.</p> <p>Source: Boitani L., Corsi F., Falcucci A., Maiorano L., Marzetti I., Masi M., Montemaggiori A., Ottaviani D., Reggiani G., Rondinini C., 2002. Rete Ecologica Nazionale. Un approccio alla conservazione dei vertebrati italiani. Università di Roma "La Sapienza", Dipartimento di Biologia Animale e dell'Uomo; Ministero dell'Ambiente, Direzione per la Conservazione della Natura; Istituto di Ecologia Applicata. Http://www.gisbau.uniroma1.it/REN</p>	ISPRA_AUNA

Species name: Ursus arctos (1354) Region code: MED

Field label	Note	User
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2.5.9 Area of suitable habitat (km2)	<p>The area of suitable habitat (2.5.9) has been calculated by intersecting habitat suitability models with each biogeographical region in which the species is present. The habitat suitability models are those included in the Italian Ecological Network (Rete Ecologica Nazionale – REN; Boitani et al. 2002), and were developed at the national scale for all vertebrate species, based on species-environments relationships defined with inputs from leading species' experts. The models were created integrating into a Geographic Information System geographic and environmental data, such as Corine Land Cover, Digital Terrain Model, water and road networks.</p> <p>Source: Boitani L., Corsi F., Falcucci A., Maiorano L., Marzetti I., Masi M., Montemaggiori A., Ottaviani D., Reggiani G., Rondinini C., 2002. Rete Ecologica Nazionale. Un approccio alla conservazione dei vertebrati italiani. Università di Roma "La Sapienza", Dipartimento di Biologia Animale e dell'Uomo; Ministero dell'Ambiente, Direzione per la Conservazione della Natura; Istituto di Ecologia Applicata. Http://www.gisbau.uniroma1.it/REN</p>	ISPRA AUNA
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