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	**1092**
0.2.2 Species name	**Austropotamobius pallipes**
0.2.3 Alternative species scientific name	Austropotamobius italicus
0.2.4 Common name	Gambero di fiume

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

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 Information, unpublished data and expert judgements have been provided by Fabio Stoch (Rome).

Aquiloni L., Tricarico E. & Gherardi F. 2010. Crayfish in Italy: distribution, threats and management. Int. Aquat. Res. 2: 1-14.

De Luise G., 2010. I crostacei decapodi di acqua dolce in Friuli Venezia Giulia. Recenti acquisizioni sul comportamento e sulla distribuzione nelle acque dolci della Regione. Venti anni di studi e ricerche. Ente Tutela Pesca, Regione Autonoma Friuli Venezia Giulia, 94 pp.

Fratini S., Zaccara S., Barbaresi S., Grandjean F., Souty-Grosset C., Crosa G., Gherardi F., 2005. Phylogeography of the threatened crayfish (genus Austropotamobius) in Italy: implications for its taxonomy and conservation. Heredity, 94: 108–118.

Ghia D., Nardi P.A., Negri A., Bernini F., Bonardi A., Fea G., Spairani M., 2006. Syntopy of A. pallipes and A. italicus: genetic and morphometrical investigations. Bull. Fr. Pêche Piscic., 380-381 : 1001-1018.

Morpurgo M., Aquiloni A., Bertocchi S., Brusconi S., Tricarico E., Gherardi F., 2010. Distribuzione dei gamberi d'acqua dolce in Italia. Studi Trent. Sci. Nat., 87: 125-132.

2.3 Range

2.3.1 Surface area - Range (km²)	42400	
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)	

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	operator	approximately equal to (≈)
	unkown	No
	method	Expert opinion
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	168	max	168
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 expert opinion with no or minimal sampling (1)			
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	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	Genuine Use of different method

2.6 Main Pressures

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Pressure	ranking	pollution qualifier(s)
Sand and gravel extraction (C01.01)	low importance (L)	N/A
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
pollution to surface waters by industrial plants (H01.01)	low importance (L)	N/A
diffuse pollution to surface waters via storm overflows or urban run-off (H01.04)	high importance (H)	N/A
diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	high importance (H)	N/A
invasive non-native species (I01)	high importance (H)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
small hydropower projects, weirs (J02.05.05)	medium importance (M)	N/A
reduction or loss of specific habitat features (J03.01)	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)
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
diffuse pollution to surface waters via storm overflows or urban run-off (H01.04)	medium importance (M)	N/A
diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	medium importance (M)	N/A
invasive non-native species (I01)	high importance (H)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
small hydropower projects, weirs (J02.05.05)	high importance (H)	N/A
reduction or loss of specific habitat features (J03.01)	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: Following recent molecular studies (see Fratini et al., 2005 and following papers cited in 2.2), in the ALP region A. pallipes was subdivided in A. pallipes s. str. In western Piedmont and Liguria, and A. italicus in remaining part of the areal; ssp. A. italicus carinthiacus and A. italicus carsicus are present in ALP region.

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	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 wetland-related measures (4.0)	Recurrent	medium importance (M)	Inside	Maintain Enhance
Restoring/improving water quality (4.1)	Legal Administrative	high importance (H)	Both	Maintain Not evaluated
Restoring/improving the hydrological regime (4.2)	Legal	high importance (H)	Both	Long term
Managing water abstraction (4.3)	Legal Administrative	high importance (H)	Both	Long term Not evaluated
Legal protection of habitats and species (6.3)	Legal	high importance (H)	Both	Long term Unknown Not evaluated
Other species management measures (7.0)	One-off	medium importance (M)	Outside	Maintain Enhance
Specific single species or species group management measures (7.4)	Legal Administrative One-off	high importance (H)	Both	Long term Unknown Not evaluated

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 Fabio Stoch (Rome). Aquiloni L., Tricarico E. & Gherardi F. 2010. Crayfish in Italy: distribution, threats and management. Int. Aquat. Res. 2: 1-14. Cataudella R., Puillandre N., Grandjean F., 2006. Genetic analysis for conservation of Austropotamobius italicus populations in Marches region (central Italy). Bull. Fr. Pêche Piscic., 380-381: 991-1000.

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

De Luise G., 2010. I crostacei decapodi di acqua dolce in Friuli Venezia Giulia. Recenti acquisizioni sul comportamento e sulla distribuzione nelle acque dolci della Regione. Venti anni di studi e ricerche. Ente Tutela Pesca, Regione Autonoma Friuli Venezia Giulia, 94 pp.
Fratini S., Zaccara S., Barbaresi S., Grandjean F., Souty-Grosset C., Crosa G., Gherardi F., 2005. Phylogeography of the threatened crayfish (genus Austropotamobius) in Italy: implications for its taxonomy and conservation. Heredity, 94: 108–118.
Ghia D., Nardi P.A., Negri A., Bernini F., Bonardi A., Fea G., Spairani M., 2006. Syntopy of A. pallipes and A. italicus: genetic and morphometrical investigations. Bull. Fr. Pêche Piscic., 380-381 : 1001-1018.
Morpurgo M., Aquiloni A., Bertocchi S., Brusconi S., Tricarico E., Gherardi F., 2010. Distribuzione dei gamberi d'acqua dolce in Italia. Studi Trent. Sci. Nat., 87: 125-132.

2.3 Range

2.3.1 Surface area - Range (km²)	65800		
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	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	260	max	260
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 expert opinion with no or minimal sampling (1)			
2.4.10 Long-term trend period				
2.4.11 Long term trend direction	N/A			

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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	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	decrease (-)
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	Genuine Improved knowledge/more accurate data

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
Sand and gravel extraction (C01.01)	medium importance (M)	N/A
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
pollution to surface waters by industrial plants (H01.01)	high importance (H)	N/A
diffuse pollution to surface waters via storm overflows or urban run-off (H01.04)	medium importance (M)	N/A
diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	medium importance (M)	N/A
invasive non-native species (I01)	high importance (H)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
small hydropower projects, weirs (J02.05.05)	medium importance (M)	N/A
reduction or loss of specific habitat features (J03.01)	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)
Sand and gravel extraction (C01.01)	medium importance (M)	N/A
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
pollution to surface waters by industrial plants (H01.01)	high importance (H)	N/A
diffuse pollution to surface waters via storm overflows or urban run-off (H01.04)	medium importance (M)	N/A

diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	medium importance (M)	N/A
invasive non-native species (I01)	high importance (H)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
small hydropower projects, weirs (J02.05.05)	low importance (L)	N/A
reduction or loss of specific habitat features (J03.01)	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: Following recent molecular studies (see Fratini et al., 2005 and following papers cited in 2.2), in the CON region A. pallipes was subdivided in A. pallipes s. str. In a very restricted area of northwestern Italy, and A. italicus in remaining part of the areal; ssp. A. italicus carinthiacus, A. italicus carsicus and few populations of A. i. meridionalis and A. italicus italicus are intermixed in CON region. Intermixing may be due to human intervention (transfaunation).

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: Inadequate (U1); qualifiers: declining (-)

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: 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 wetland-related measures (4.0)	Recurrent	high importance (H)	Inside	Maintain Enhance

Legal protection of habitats and species (6.3)	Legal	high importance (H)	Both	Long term Unknown
Specific single species or species group management measures (7.4)	Legal One-off	high importance (H)	Both	Long term Unknown

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 Fabio Stoch (Rome).

Aquiloni L., Tricarico E. & Gherardi F. 2010. Crayfish in Italy: distribution, threats and management. Int. Aquat. Res. 2: 1-14.

Fratini S., Zaccara S., Barbaresi S., Grandjean F., Souty-Grosset C., Crosa G., Gherardi F., 2005. Phylogeography of the threatened crayfish (genus Austropotamobius) in Italy: implications for its taxonomy and conservation. Heredity, 94: 108–118.

Ghia D., Nardi P.A., Negri A., Bernini F., Bonardi A., Fea G., Spairani M., 2006. Syntopy of A. pallipes and A. italicus: genetic and morphometrical investigations. Bull. Fr. Pêche Piscic., 380-381 : 1001-1018.

Morpurgo M., Aquiloni A., Bertocchi S., Brusconi S., Tricarico E., Gherardi F., 2010. Distribuzione dei gamberi d'acqua dolce in Italia. Studi Trent. Sci. Nat., 87: 125-132.

Paolucci M., Liberato C., Di Cristo C. and Di Cosmo A. 2004. Freshwater crayfish populations in the District of Benevento (Campania Region, Italy): Distribution and analysis of genetic structure. Freshwater Crayfish 14: 121-128.

Regione Basilicata. Programma Rete Natura 2000 Basilicata.

2.3 Range

2.3.1 Surface area - Range (km²)	40900	
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	Use of different method	

2.4 Population

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

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2.4.2 Population size (other than individuals)	Unit	number of map 10x10 km grid cells (grids10x10)		
	min	132	max	132
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 expert opinion with no or minimal sampling (1)			
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	decrease (-)
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	Genuine

2.6 Main Pressures

Pressure	ranking	pollution qualifier(s)
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	medium importance (M)	N/A
invasive non-native species (I01)	medium importance (M)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
reduction or loss of specific habitat features (J03.01)	high importance (H)	N/A

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

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)
Hunting, fishing or collecting activities not referred to above (F06)	medium importance (M)	N/A
diffuse pollution to surface waters due to agricultural and forestry activities (H01.05)	medium importance (M)	N/A
invasive non-native species (I01)	medium importance (M)	N/A
Canalisation & water deviation (J02.03)	high importance (H)	N/A
modifying structures of inland water courses (J02.05.02)	high importance (H)	N/A
reduction or loss of specific habitat features (J03.01)	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	Following recent molecular studies (see Fratini et al., 2005 and following papers cited in 2.2), in the MED region A. pallipes is absent and populations formerli ascribed to it are now ascribed to A. italicus meridionalis.
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	Inadequate (U1)
	qualifiers	declining (-)
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	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	high importance (H)	Inside	Long term