

**European Community Directive  
on the Conservation of Natural Habitats  
and of Wild Fauna and Flora  
(92/43/EEC)**

Supporting documentation for the  
Third Report by the United Kingdom under  
Article 17

on the implementation of the Directive  
from January 2007 to December 2012  
Conservation status assessment for

Species:

S1213 - Common frog (*Rana temporaria*)

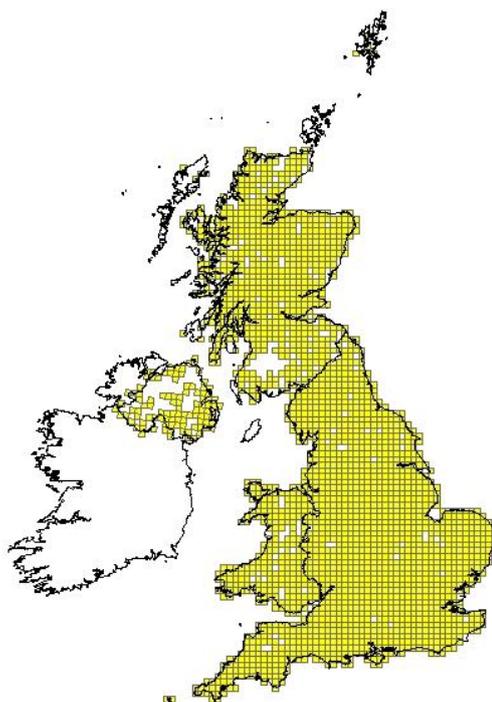
**IMPORTANT NOTE – PLEASE READ**

- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Northern Ireland Environment Agency** and refers only to the state of the habitat/species in **Northern Ireland** - it does not constitute an assessment for the whole of the UK.
- The Article 17 UK Approach document provides details on how this information has been used and, combined with information supplied by other Statutory Nature Conservation Bodies
- The format of the document is closely aligned to that set out by the European Commission for Member State reporting – as a result, some of the fields are not applicable at a country-level and have deliberately been left blank – in addition, the content of most fields is constrained by the EC reporting categories.

## Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species

<i>Field name</i>	<i>Brief explanations</i>	
<b>0.2 Species</b>	<b>0.2.1 Species code</b>	<b>S1213</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Rana temporaria</i></b>
	<b>0.2.3 Alternative species scientific name</b> Optional	
	<b>0.2.4 Common name</b> Optional	<b>Common Frog</b>

<b>1.1 Maps</b>			
<b>1.1.1 Distribution map</b>		<b>Sensitive</b>	<b>False</b>
	Based on NBN gateway data		



<b>1.1.2 Method used - map</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>		
<b>1.1.3 Year or period</b>	<b>2007-2012</b>		
<b>1.1.4 Additional distribution map</b>	<b>False</b>		
<b>1.1.5 Range map</b>			

	Range is based on current distribution and is considered to be the whole country.
--	---

<b>2.1 Biogeographical region &amp; marine regions</b>	<b>ATL</b>
<b>2.2 Published sources</b>	<p><b>"1. Dingerkus, S.K., Stone, R.E., Wilkinson, J.W., Marnell, M. &amp; Reid, N. (2011) Developing a methodology for the National Frog Survey of Ireland: a pilot study in Co. Mayo. Irish Naturalists' Journal 31(2): 85-90.</b></p> <p><b>2. Marnell, F. (1998) Discriminant analysis of the terrestrial and aquatic habitat determinants of the smooth newt (<i>Triturus vulgaris</i>) and the common frog (<i>Rana temporaria</i>) in Ireland. J. Zoology 244: 1-6</b></p> <p><b>3. Marnell, F. (1999) The distribution of the Common Frog <i>Rana temporaria</i> L. In Ireland. Bulletin of the Irish Biogeographical Society 23: 60-70.</b></p> <p><b>4. Reid, N., Dingerkus, S.K., Stone, R.E., Buckley, J., Beebee, T.J.C. &amp; Wilkinson, J.W. (2012) National Frog Survey of Ireland 2010/11. Irish Wildlife Manuals, No. 58. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.</b></p> <p><b>5. Reid, N., Karina Dingerkus, Richard E. Stone, Ruth Kelly, John Buckley, Trevor J.C. Beebee, Ferdia Marnell &amp; John W. Wilkinson (in review) Population enumeration and assessing conservation status in a widespread amphibian: a case study of <i>Rana temporaria</i> in Ireland. Animal Conservation"</b></p> <p>Reid et al. 2012, National Frog Survey of Ireland. Irish Wildlife Manuals No. 58 is the NPWS final report from the first national baseline survey of frogs in Ireland. The results are based on extensive field work with data extrapolation as required.</p>

<b>2.3 Range</b>	
<b>2.3.1 Surface area Range</b>	<b>13840</b>
	Range of the species is considered to be the whole of Northern Ireland where suitable habitat presents itself. Records are present in 102 10km squares, however the species is under recorded and often overlooked due its abundance. A wider countryside survey, similar to the NPWS

	Irish Frog Survey (2011), would ascertain the current population and distribution of this species in Northern Ireland.	
<b>2.3.2 Method used</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
<b>Surface area of Range</b>		
<b>2.3.3 Short-term trend</b>	<b>2007-2012</b>	
<b>Period</b>		
<b>2.3.4 Short term trend</b>	<b>stable</b>	
<b>Trend direction</b>		
<b>2.3.5 Short-term trend</b>	<b>a) Minimum</b>	<b>0</b>
	<b>b) Maximum</b>	<b>0</b>
<b>2.3.6 Long-term trend</b>	<b>1970-2012</b>	
<b>Period</b>		
<b>2.3.7 Long-term trend</b>	<b>stable</b>	
<b>Trend direction</b>		
<b>2.3.8 Long-term trend</b>	<b>a) Minimum</b>	<b>0</b>
	<b>b) Maximum</b>	<b>0</b>
<b>2.3.9 Favourable reference</b>	<b>a) Value in km<sup>2</sup></b>	<b>13840</b>
	The current range is taken as the entire country and consequently this is also taken as the favourable reference range.	
	<b>b) Operator for FRR</b>	<b>approximately equal to</b>
	<b>c) FRR is unknown (indicated by "true")</b>	<b>False</b>
<b>d) Method used to set FRR</b>	<b>Current range is calculated as the entire country; favourable reference range is taken as same based on current distribution and available habitat information.</b>	

<b>2.3.10 Reason for change</b> Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	<b>a) Genuine change?</b>	<b>False</b>
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>

<b>2.4 Population</b>		
<b>2.4.1 Population size estimation</b> (using individuals or agreed exceptions where possible)	<b>a) Unit</b>	
	<b>b) Minimum</b>	
	<b>c) Maximum</b>	
<b>2.4.2 Population size estimation</b> (using population unit other than individuals) Optional ( <i>if 2.4.1 filled in</i> )	<b>a) Unit</b>	<b>number of map 10x10 km grid cells</b>
		Based on number of 10km squares from NBN gateway
	<b>b) Minimum</b>	<b>102</b>
	<b>c) Maximum</b>	<b>102</b>
<b>2.4.3 Additional information on population estimates / conversion</b> Optional	<b>a) Definition of "locality"</b>	
	<b>b) Method to convert data</b>	
	<b>c) Problems encountered to provide population size estimation</b>	
<b>2.4.4 Year or period</b>	<b>2007-2012</b>	

<b>2.4.5 Method used Population size</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
	Estimate based on scientific opinion, partial data and upscaling.	
<b>2.4.6 Short-term trend Period</b>	<b>2007-2012</b>	
<b>2.4.7 Short-term trend Trend direction</b>	<b>stable</b>	
	Stable - there has been no mass extinction or mass boom in population , however a more in depth study and analysis across the wider countryside is required to fully understand the population dynamics of this species.	
<b>2.4.8 Short-term trend Magnitude</b>	<b>a) Minimum</b>	<b>0</b>
	<b>b) Maximum</b>	<b>0</b>
	<b>c) Confidence interval</b>	<b>95</b>
95% confidence level that there has been no mass change in population of this species in Northern Ireland, however a more in depth study and analysis across the wider countryside is required to fully understand the population dynamics of this species.		
<b>2.4.9 Short-term trend Method used</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
<b>2.4.10 Long-term trend – Period</b>	<b>1970-2012</b>	
<b>2.4.11 Long-term trend Trend direction</b>	<b>stable</b>	
	Stable - there has been no mass extinction or mass boom in population , however a more in depth study and analysis across the wider countryside is required to fully understand the population dynamics of this species.	
<b>2.4.12 Long-term trend Magnitude</b>  Optional	<b>a) Minimum</b>	<b>0</b>
	<b>b) Maximum</b>	<b>0</b>
	<b>c) Confidence</b>	<b>95</b>

	<b>interval</b>	
	95% confidence level that there has been no mass change in population of this species in Northern Ireland, however a more in depth study and analysis across the wider countryside is required to fully understand the population dynamics of this species.	
<b>2.4.13 Long term trend Method used</b>	<b>2</b>	
<b>2.4.14 Favourable reference population</b>	<b>a) Number of individuals/agreed exceptions/other units</b>	
	<b>b) Operator</b>	
	<b>c) FRP is unknown indicated by "true"</b>	<b>True</b>
	Currently unknown however	
	<b>d) Method used to set FRP</b>	
<b>2.4.15 Reason for change</b> Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	<b>a) Genuine change?</b>	<b>False</b>
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>

<b>2.5 Habitat for the species</b>	
<b>2.5.1 Area estimation</b>	<b>13840</b>
	Based on the NPWS Frog Survey research, a total of 2% of the total land area was estimated to be suitable as frog breeding habitat (derived from a complete survey or a statistically robust estimate). Assuming the total land area of Northern Ireland is 13,840 km <sup>2</sup> , and that there is a broad scale similarity between habitats utilised for breeding in the North and South of Ireland, then the total area estimated to be suitable as breeding habitat for the species is 267.8 km <sup>2</sup> . However, it should be

	<p>noted that any area may be suitable for frogs out of the breeding season as no habitats appear to be avoided. Thus, the figure presented is the area estimated to be suitable throughout their life cycle and in this case is the total area of Northern Ireland.</p> <p>There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.</p>	
<b>2.5.2 Year or period</b>	<b>2007-2012</b>	
<b>2.5.3 Method used Habitat for the species</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
<b>2.5.4 Quality of the habitat</b>	<b>a) Habitat quality</b>	<b>Unknown</b>
	<p>Unknown - as frogs occupy a wider range of habitats it is not possible to qualify a condition of the habitat. However many of the habitats used for breeding, primarily unshaded ponds (&lt;100m<sup>2</sup>) with submerged/emergent vegetation, are in unfavourable condition although research into the quality and distribution of these habitats is required. Hibernation habitats, especially wetlands, are in unfavourable condition.</p>	
	<b>b) Assessment method</b>	<b>Estimated that 2% of the land in Northern Ireland is suitable for breeding, however the whole of the wider countryside can be used by frogs outside of the breeding season.</b>
<b>2.5.5 Short-term trend Period</b>	<b>2007-2012</b>	
<b>2.5.6 Short-term trend Trend direction</b>	<b>stable</b>	
<b>2.5.7 Long-term trend Period</b>		
<b>2.5.8 Long-term trend Trend direction</b>	<b>stable</b>	
	<p>Stable - there has been no mass extinction or mass boom in population, however a more in depth study and analysis across the wider countryside is required to fully understand the population dynamics of this species. However, historically there is likely to have been a decline in the suitable habitat, concurrent with agricultural intensification and development.</p>	
<b>2.5.9 Area of suitable habitat for the species</b>	<b>a) Value in km<sup>2</sup></b>	<b>13840</b>
	<b>b) Absence of data indicated as '0'</b>	
<b>2.5.10 Reason for change</b> Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	<b>a) Genuine change?</b>	<b>False</b>
	<b>b) Improved knowledge/more</b>	<b>True</b>

	<b>accurate data?</b>	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>

<b>2.6 Main pressures</b>		
<b>a) Pressure</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance M = medium importance L = low importance	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	H	P
A01: Cultivation	M	
A02: modification of cultivation practices	M	
A03: mowing / cutting of grassland	M	
A04: grazing	M	
J02: human induced changes in hydraulic conditions	M	
B02: Forest and Plantation management & use	L	
E01: Urbanised areas, human habitation	L	
I01: invasive non-native species	L	

<b>2.6.1 Method used – Pressures</b>	<b>mainly based on expert judgement and other data</b>

<b>2.7 Threats</b>		
<b>a) Threat</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance M = medium importance L = low importance	
A04: grazing	H	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	H	P

A01: Cultivation	L	
A11: Agriculture activities not referred to above	L	
B02: Forest and Plantation management & use	L	
G01: Outdoor sports and leisure activities, recreational activities	L	
I01: invasive non-native species	L	
J02: human induced changes in hydraulic conditions	L	
K02: Biocenotic evolution, succession	L	

<b>2.7.1 Method used – Threats</b>	<b>expert opinion</b>

<b>2.8 Complementary information</b>	
<b>2.8.1 Justification of % thresholds for trends</b>	
<b>2.8.2 Other relevant information</b>	<p><b>Based on the Irish frog survey (2011) upper threshold of 326,000,000 individuals in Ireland and scaled to the area of Northern Ireland (13840km<sup>2</sup>), therefore the estimated number of frogs in Northern Ireland equates to 51,671,000. With an average adult weight of 22.7g; the Common Frog has a significant biomass of 1172.93 tonnes in Northern Ireland.</b></p> <p>Common frog is the only amphibian to be found in Northern Ireland. This widespread and abundant species occurs in a broad range of habitats across the country. Adults congregate at pools, ponds and ditches to breed in the spring. The spawn is fertilized and develops into tadpoles as the temperature increases and metamorphosis produces froglets which emerge onto land in the summer. They spend 2-3 years on land feeding on invertebrates until they reach sexual maturity and return to freshwater to breed. Vulnerable to predation throughout their life cycle; typical life expectancy of 3-4 years.</p>
<b>2.8.3 Trans-boundary assessment</b>	

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

Please refer to the United Kingdom assessment for this species.

**3 Natura 2000 coverage & conservation measures - Annex II species  
(only applies to species listed under Annex II of the Directive)****3.1 Population****3.1.1 Population size**

Estimation of population size included in the SAC network

**a) Unit****b) Minimum****c) Maximum****3.1.2 Method used****3.1.3 Trend of population size within the network (short-term trend)****3.2 Conservation measures**

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

**3.2.1 Measure****3.2.2 Type****3.2.3 Ranking****3.2.4 Location****3.2.5 Broad evaluation of the measure**

H = high importance  
M = medium importance  
L = low importance

where the measure is PRIMARILY applied

a) Legal/statutory

b) Administrative

c) Contractual

d) Recurrent

e) One-off

a) Inside

b) Outside

c) Both inside &amp; outside

a) Maintain

b) Enhance

c) Long term

d) No effect

e) Unknown

f) Not evaluated

