

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

**Second Report by the United Kingdom under  
Article 17  
on the implementation of the Directive  
from January 2001 to December 2006**

**Conservation status assessment for :  
S1213: *Rana temporaria* - Common frog**

Please note that this is a section of the report. For the complete report visit <http://www.jncc.gov.uk/article17>

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## S1213 *Rana temporaria* Common frog

*Audit trail compiled and edited by Joint Nature Conservation Committee, the Inter-Agency Herpetofauna Working Group and the Herpetological Conservation Trust*

This document is an audit of the data and judgements on conservation status in the UK's report on the implementation of the Habitats Directive (January 2001 to December 2006) for this species. Superscript numbers accompanying the headings below, cross-reference to headings in the corresponding Annex B reporting form. This supporting information should be read in conjunction with the UK approach for species (see 'Assessing Conservation Status: UK Approach').

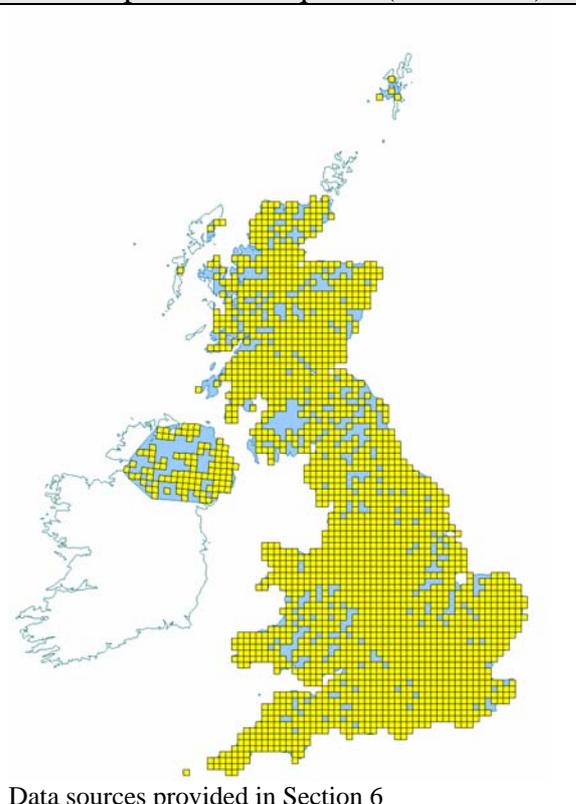
### 1. Range Information<sup>2.3</sup>

*Rana temporaria* is widespread across the UK.

#### 1.1 Surface area of range<sup>2.3.1</sup> 240,916km<sup>2</sup>

The above estimate was calculated within Alpha Hull software, using extent of occurrence as a proxy measure for range (as shown in the map below), at a resolution of 10 km. The value of alpha was set at 35 km. The alpha hull (range area) was clipped to include inland habitat only.

**Map 1.1.** Current extent of occurrence and occupied 10 km-squares (1970-2006)



#### 1.2 Date of range determination<sup>2.3.2</sup>

## **1970 – 2006**

This widespread species is under-recorded; based on expert opinion, records from this time period provide the best representation of current range.

### **1.3 Quality of range data<sup>2.3.3</sup>**

#### **Moderate**

The records used to calculate current range are from a relatively large date class and have been collated from a wide range of sources. They are not from a comprehensive survey. However, it is felt that they provide an accurate representation of species range at this coarse scale. Data quality is therefore moderate.

### **1.4 Range trend<sup>2.3.4</sup> & Range trend magnitude<sup>2.3.5</sup>**

#### **Stable**

*R. temporaria* has always been a widespread species in the UK. Although there is currently no trend data for this species, there is unlikely to have been any noticeable change in range since 1994.

### **1.5 Range trend period<sup>2.3.6</sup>**

**1994 – 2006**

### **1.6 Reasons for reported trend in range<sup>2.3.7</sup>**

**Not applicable**

### **1.7 Favourable reference range<sup>2.7.1</sup>**

**240,916km<sup>2</sup> (Equal to current)**

The decision tree in Note 1 has been used as a guide in determining the favourable reference range estimate (see 'Assessing Conservation Status: UK Approach').

The current range is stable, widespread and not at high risk from stochastic events. It is therefore considered sufficiently large to allow the long-term survival of the species. Hence, the favourable reference value is equal to the current estimate.

### **1.8 Range conclusion<sup>2.8</sup>**

#### **Favourable**

Range is stable, and not less than the favourable reference range.

## **2. Population of the species<sup>2.4</sup>**

### **2.1 Population estimate<sup>2.4.1</sup>**

**2,149 occupied 10-km squares**

There are no true population estimates for this species. A surrogate of occupied 10-km squares has therefore been reported for this purpose (see Map 1.1).

### **2.2 Date of population estimate<sup>2.4.2</sup>**

**1970 – 2006**

The above estimate was generated from the same dataset as was used to determine current range. Hence again, the date class was 1970-2006.

### **2.3 Method of population estimate<sup>2.4.3</sup>**

#### **2 = extrapolation from surveys of part of the population, sampling**

The estimate has been generated using data collated from a variety of sources comprising incidental records. It does not represent a complete inventory.

### **2.4 Quality of population data<sup>2.4.4</sup>**

#### **Poor**

The estimate does not represent a complete inventory, and at this coarse scale, provides little information about population status at a local level. Therefore, when applied in this way, data quality is poor.

### **2.5 Population trend<sup>2.4.5</sup> & Population tend magnitude<sup>2.4.6</sup>**

#### **Stable**

Population trends at a UK or country level have not been studied. Since the 1800s, there are thought to have been massive declines and, based on expert opinion, current numbers probably represent just 60% of the historic population. However, it is thought that this decline has been curbed in recent years, and current *R. temporaria* populations are thought to be stable.

### **2.6 Population trend period<sup>2.4.7</sup>**

**1994 – 2006**

### **2.7 Reasons for reported trend in population<sup>2.4.8</sup>**

**Not applicable**

### **2.8 Justification of % thresholds for trends<sup>2.4.9</sup>**

**Not applicable**

### **2.9 Main pressures<sup>2.4.10</sup>**

**100 cultivation**

**101 modification of cultivation practices**

**141 abandonment of pastoral systems**

**151 removal of hedges & copses**

**164 forestry clearance**

**190 agriculture and forestry activities not referred to above**

**390 mineral extraction activities not referred to above – specifically chalk, coal and clay extraction**

**400 urbanised areas, human habitation**

**410 industrial or commercial areas**

**500 communication networks**

**701 water pollution**

**800 landfill etc**

**853 management of water levels**

**910 silting up**

**920 drying out**

**952 eutrophication**

### **2.10 Threats<sup>2.4.11</sup>**

**101 modification of cultivation practices**

**390 mineral extraction activities not referred to above** – specifically chalk, coal and clay extraction

**400 urbanised areas, human habitation**

**410 industrial or commercial areas**

**500 communication networks**

**800 landfill etc**

**853 management of water levels**

**910 silting up**

**920 drying out**

**2.11 Favourable reference population<sup>2.7.2</sup>**

**2,149 occupied 10-km squares (Equal to current)**

The decision tree in Note 1 has been used as a guide in determining the favourable reference population estimate (see ‘Assessing Conservation Status: UK Approach’).

At a coarse scale, the population is stable; although there are no true abundance estimates at present, the population is not considered to be at high risk from stochastic events. For this reason, the current estimate (2,149 occupied 10-km squares) has been set as a baseline for the favourable reference value.

**2.12 Population conclusion<sup>2.8</sup>**

**Favourable**

At the scale assessed the UK population of *R. temporaria* is considered to be Favourable. Uncertainties exist regarding population levels at a more local scale.

**3. Habitat for the species in the Biogeographic region or sea<sup>2.5</sup>**

*R. temporaria* breeds in the shallow waters of the full range of waterbody sizes. They tend to show preference for small (<100m<sup>2</sup>), unshaded ponds with some emergent and submerged vegetation. They are tolerant of fish. Acidic to alkaline water is also tolerated, although spawn mortality can be very high in waterbodies subject to acid precipitation and with poor buffering capacity. In breeding sites, water temperature, especially the availability of warm spawning sites, is probably more important than the size or shape of the waterbody.

*R. temporaria* tends to shelter in water and often hibernates there (although many do on land in places such as grass tussocks), so wetlands with a permanently high water table provide important habitats for this species. Dry habitats such as chalk grasslands, heathlands and arable land are unfavourable (Gent & Gibson, 2003).

**3.1 Surface area of habitat<sup>2.5.2</sup>**

**Unknown**

**3.2 Date of estimation<sup>2.5.3</sup>**

**Not applicable**

**3.3 Quality of data on habitat area<sup>2.5.4</sup>**

**Poor**

Although *R. temporaria* habitat has been well-documented, there is no area estimate relevant to this species.

### **3.4 Habitat trend<sup>2.5.5</sup>**

#### **Unknown**

There is no data on this at present. However, historically, there is likely to have been a decline in suitable habitat, concurrent with agricultural intensification and development. Although this trend is thought to have slowed in recent years as a result of increased conservation action, since 1994, it is probable that common frog habitat has continued to decline in both area and quality. The extent of this decline is unknown, however.

### **3.5 Habitat trend period<sup>2.5.6</sup>**

**1994 – 2006**

### **3.6 Reasons for reported trend in habitat<sup>2.5.7</sup>**

#### **3. Direct human influence (restoration, deterioration, destruction)**

#### **4. Indirect anthropo(zoo)genic influence**

Development and agriculture, and associated pollution and drainage issues.

### **3.7 Suitable habitat for the species (in km<sup>2</sup>)<sup>2.7.3</sup>**

#### **Unknown**

### **3.8 Habitat conclusion<sup>2.8</sup>**

#### **Unknown**

This species is widespread and does not show particular habitat specificity. Making an assessment at a UK level is therefore problematic, and is more appropriate to judge habitat quality and area as unknown at this time.

## **4. Future Prospects<sup>2.6</sup>**

### **Good prospects**

“Species is expected to survive and prosper”.

Agri-environment schemes are now better targeted and with good incentives, and should encourage habitat retention, enhancement and creation. New emphasis on habitat creation in planning systems could, in theory, result in major gains. General large-scale habitat creation schemes (e.g. Great Fen Project) should also benefit the species. These positive comments are however heavily dependent on how well the mechanisms are implemented and it remains to be seen how much will be achieved in practice. Recent trends for creating ponds in gardens, which brings benefits to this species in urban and suburban areas, looks likely to continue, though it is important to recognise that this does not address wider countryside losses.

### **4.1 Future prospects conclusion<sup>2.8</sup>**

#### **Favourable**

## **5. Overall Conclusion<sup>2.8</sup>**

### **Favourable**

All of the parameters have been assessed as Favourable, with the exception of habitat, which was Unknown. Therefore, in accordance with Annex C, the overall conclusion is Favourable.

**Table 5.1.** Summary of conclusions

| Parameter          | Judgement  | Grounds for Judgement (in accordance with Annex C)                                                          | Reliability* |
|--------------------|------------|-------------------------------------------------------------------------------------------------------------|--------------|
| Range              | Favourable | Current range is stable and not smaller than the favourable reference range                                 | 1            |
| Population         | Favourable | Current population is stable and not smaller than the favourable reference population at the scale assessed | 3            |
| Habitat            | Unknown    | No or insufficient reliable information available                                                           | N/A          |
| Future Prospects   | Favourable | Main pressures and threats to the species not significant; species will remain viable in the long-term      | 1            |
| Overall Assessment | Favourable | Three Favourable and one Unknown                                                                            | N/A          |

\*1=High, 2=Moderate, 3=Low

High – Expert opinion is that the concluding judgement accurately reflects the current situation based on a professional understanding of the species. For range, population, and habitat, quality of data used to establish the current estimate has been identified as “good”; data used to inform trends is comprehensive and up to date.

Moderate – A greater understanding of the feature, or the factors affecting it, is required before a confident concluding judgement can be made by experts. For range, population, and habitat, the current estimate and/or trend are based on recent, but incomplete or limited survey data; or alternately, a comprehensive, but outdated (pre-1994) review.

Low – Judgements, and comprising estimates, are based predominately on expert opinion.

N/A – Assessment conclusion is “unknown”, on the basis of insufficient reliable information

## 6. References

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### **Map Data Sources**

BTO 2006 Gardenwatch survey data.

The Herpetofauna Conservation Trust Rare Species Database; Reptiles and Amphibians Dataset; SWT Scottish Borders Local Wildlife Site Survey; Lothian Wildlife Information Centre Secret Garden Survey; Amphibian Records for Wiltshire 1900 – 2003; Environmental Heritage Service Species Datasets; Freshwater site visits (species and habitats); Highland Biological Records Centre Fish and Herpetiles dataset; Take a Pride in Fife Environmental Information Centre dataset (via the National Biodiversity Network (NBN) Gateway).