

EVALUATING SPECIES FOR ACTION

RED DATA BOOKS & LOCAL BIODIVERSITY ACTION PLANS

A one day seminar organised by
the National Federation for Biological Recording

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The John Clare Lecture Theatre, Peterborough Library

CONTENTS

1. *The International Context - IUCN criteria*
Dr Georgina Mace, Zoological Society of London

2. *Red Data Books - The UK Perspective*
Ian McLean, Head of Species Advice at JNCC, Peterborough

3. *The Conservation Cube - an objective method of assessing national conservation priorities*
Martin Warren, Head of Conservation, Butterfly Conservation

5. **Developing a Red Data Book in Cornwall & The Isles of Scilly**
Adrian Spalding, Director, Cornish Biological Records Unit

6. **Translating a Red Data Book into Biodiversity Action**
Pat Brassley, Senior Conservation Officer, Derbyshire Wildlife Trust

7. **Evaluating Priorities for Action in Local Biodiversity Action Plans**
John Everitt, Conservation Officer, The Wildlife Trusts national office

THE INTERNATIONAL CONTEXT - IUCN CRITERIA

DR. GEORGINA MACE, RESEARCH FELLOW, ZOOLOGICAL SOCIETY OF LONDON

1 The Process for Developing Criteria for IUCN Red Lists

IUCN has used threat categories for species since the 1960s to develop IUCN Red List, Global Red Data Books, IUCN/SSC Taxonomically based action plans. The species threatened (as identified by the lists) have action plans written for them. The red list is designed to be an authoritative source of information, there is no obligation on anyone (Government or otherwise) to take action as a result of the listing.

2 Reasons for Change

- Wider forum for species evaluation
- Increased use in planning and priority setting exercise
- Need for greater objectivity and transparency
- Need to update the old categories.

3 The Criteria

A. *Population Reduction*

Some quite abundant species have appeared on the list - has been quite controversial.

B. *Small Distribution and Fluctuations.*

C. *Small Population Size and Decline.*

D. *Very Small or Restricted.*

This covers the very rare and therefore can include populations which are stable or even increasing.

4 The Categories

Extinct (EX)

A taxon is extinct when there is no reasonable doubt that the last individual has died.

Extinct in the Wild (EW)

A taxon is extinct in the wild when it is known only to survive in cultivation, in captivity or as a naturalised population (or populations) well outside the past range.

Critically Endangered (CR)

A taxon is critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.

Endangered (EN)

A taxon is endangered when it is not critically endangered but is facing a very high risk of extinction in the wild in the near future.

Vulnerable (VU)

A taxon is vulnerable when it is not critically endangered or endangered but is facing a high risk of extinction in the wild in the medium-term future.

Lower Risk (LR)

A taxon is lower risk when it has been evaluated, does not satisfy the criteria for any of the above categories.

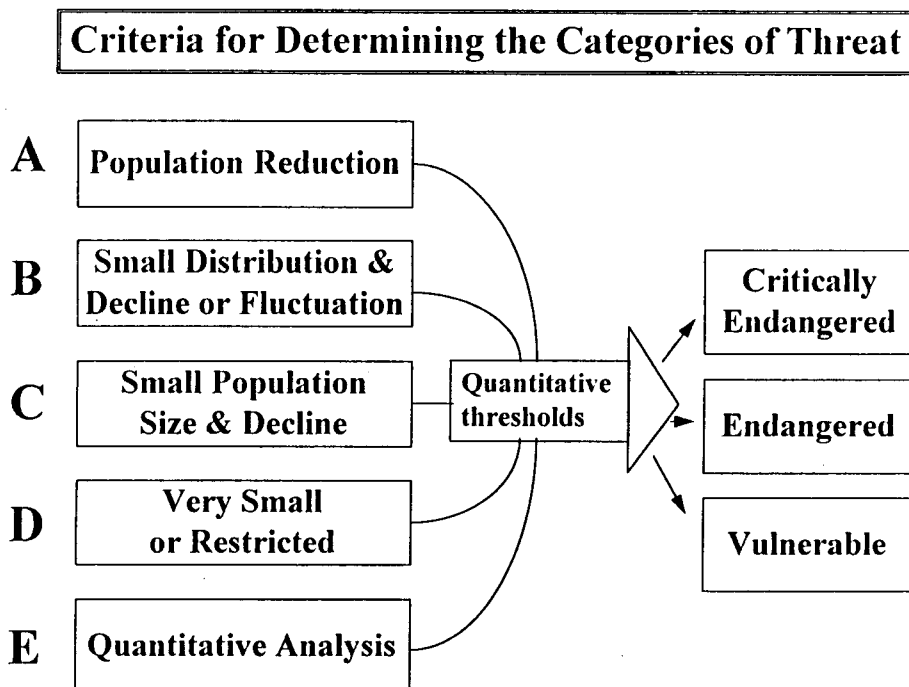
Data Deficient (DD)

A taxon is data deficient when there is inadequate information to make a direct or indirect assessment of its risk of extinction based on its distribution and/or population status.

Not Evaluated (NE)

A taxon is not evaluated when it has not yet been assessed against the criteria.

1996 IUCN Red List of Threatened Animals no shows the criteria which each species "qualifies" under.



- 5 Enables an assessment of which groups are under threat - taking into account the % of group assessed. Assessing threats is not the same as setting priorities.

Issues in Setting Priorities:

- Association with other species
- Taxonomic or genetic uniqueness
- Protection Status
- Status outside region
- Recovery potential

6 Using the Criteria and Categories at a National Level

IUCN Red List Categories (1994)

It is not possible to take these criteria and categories and implement them directly at a national level:

- Endemics are straightforward. Global = National
- Very small proportion of "population" in country tends to be listed as very rare
- Significant part of range in country not listed as rare. May qualify under other criteria.

Work on developing a process for using the IUCN criteria at a local level.

Issues which can be used to "de-value" the status:

- contact to same species outside borders - dispersal abilities
- abundance and status of species outside borders
- extent of local adaptation (better able to survive within region)
- conservation status inside borders
- re-colonisation possibilities

Work going on developing.

7 References

IUCN Red List Categories (1994)

RED DATA BOOKS - THE UK PERSPECTIVE

IAN MCLEAN, HEAD OF SPECIES AT JOINT NATURE CONSERVATION COMMITTEE

1 The Past

The History of Publishing Red Data Books (RDBs) in the UK:

RDBs have been based primarily on data gathered by amateur naturalists - they would not exist without this input. The list below shows how slow progress has been.

- First RDB published was *Vascular Plants* (1977)
- *Vascular Plants* second edition (1983)
- *Insects* (1987); *Birds* (1990); *Invertebrates* (1991); *Stoneworts* (1992)
- Next: *Lichens*, *Vascular Plants* third edition; *Bryophytes*

How Far Have Original Aims Been Met?

- They have identified the most threatened species
- They have provided a basis for legal protection
- The coverage is uneven: to date there is no marine coverage (very difficult to assess threats in the same way)
- They have not been successful in popularising many of the less well known groups: worthy but dull?

What Have RDBs Achieved?

- They have brought together much scattered information
- They have stimulated much new work (on status, ecology, threats and management)
- Used extensively by new initiatives (eg. UK BAP)
- The national approach has been adopted locally

2 The Future

Information Gathering

- Sound basis: need to develop stronger links for amateur naturalists working with Local Record Centres (LRCs) and national recording schemes through the BRC. RDBs should be based on sound information as part of a process for enhancing the value of data by using it effectively
- Current trends which need to continue include: greater coverage, more frequent updating, more systematic recording targeting priority species, and some increase in detail and precision ↵

- Improvements in techniques for census - disentangling the short term flux from long term trends
- Learning spreads (slowly!) from advanced (birds) to backward (insects)

Links to Other Conservation Activities

- Need to simplify processes and avoid duplication. Currently the collation of data to prepare an RDB is a long complicated one-off process.
- RDBs should be part of a single process which covers Quinquennial Review, Biodiversity Action Plan and Favourable Conservation Status (Natura 2000)
- Site management, balance with other requirements for other wildlife
- Countryside policies - there should be a link to CAP/Forestry etc. so RDBs can act

Local and National Processes

- National Biodiversity Network (NBN) is an outstanding new opportunity - we must build on the momentum that this has generated
- Develop better local/national links (potential role for NFBR)
- Provide more support for **relevant** recording -through better targeting of resources
- Seek to raise standards (accuracy, coverage, frequency)

Reporting and Publishing

- Widen support for RDBs, both within the "conservation community" and through more 'popular' versions to reach a wider audience, increasing awareness.
- Use a wide range of publishing media - in particular a move towards electronic media (CD ROM, WWW)
- Multiple reporting using same data, including far more regular reporting - of course this relies heavily on the proposed improvements to recording and information management.

3 Conclusions

- Overall RDBs have been a success: they need to have a more varied approach to increase influence and popularity
- It is essential to capitalise on the NBN and to streamline processes
- Marked at 7 out of 10? Trying hard but could do better!

**THE CONSERVATION CUBE:
AN OBJECTIVE METHOD OF ASSESSING NATIONAL CONSERVATION PRIORITIES**

MARTIN WARREN, HEAD OF CONSERVATION, BUTTERFLY CONSERVATION

1 Background

The Conservation Cube is a conceptual framework providing an objective method for assessing relative priorities for species. This is based on the IUCN criteria but taking into account national issues without being parochial. Why bother having priorities? Resources are limited and we have to focus our efforts to what really matters and not be diverted.

Assessing National Biodiversity Priorities - 3 main principles

- Set national priorities in global/European context
- Use quantitative criteria where possible
- Concentrate on biology (not existing legislation)

2 Three Biological Axes - The Conservation Cube

- International Threat
- International Importance (how much of range is within the country)
- National Threat

3 Proposed Rationale for Placing Species Along 3 Biological Axes of Conservation Priority

The table overleaf shows a proposed rationale for placing species along each of three separate biological axes of conservation priority. Proposed thresholds for qualification under each criteria are also given. Note that these thresholds are only provisional and may change prior to the publication of a revised red list.

Conservation Priority on Single Axis

	<i>High</i>	<i>Medium</i>	<i>Low</i>
National threat (Axis 1)	Declining rapidly in numbers or range	Rare breeder Localised breeder Localised non-breeder Moderate decline in numbers or range	None of these
International Importance (Axis 2)	UK holds high proportion of European population	UK holds medium proportion of European population	UK holds small proportion of European population
International threat (Axis 3)	Globally threatened	Unfavourable status in Europe	Favourable status in Europe

Proposed (provisional) thresholds for qualification:

Decline in numbers or range:

Rapid:	>50% over 25 years.
Moderate:	25-49% over 25 years
Rare breeder:	<300 pairs
Localised breeder or non-breeder:	>50% in top 10 sites (and >300 pairs)

International importance:

High:	UK holds >30% of European population
Medium:	15-29%
Low:	<15%

International threat:

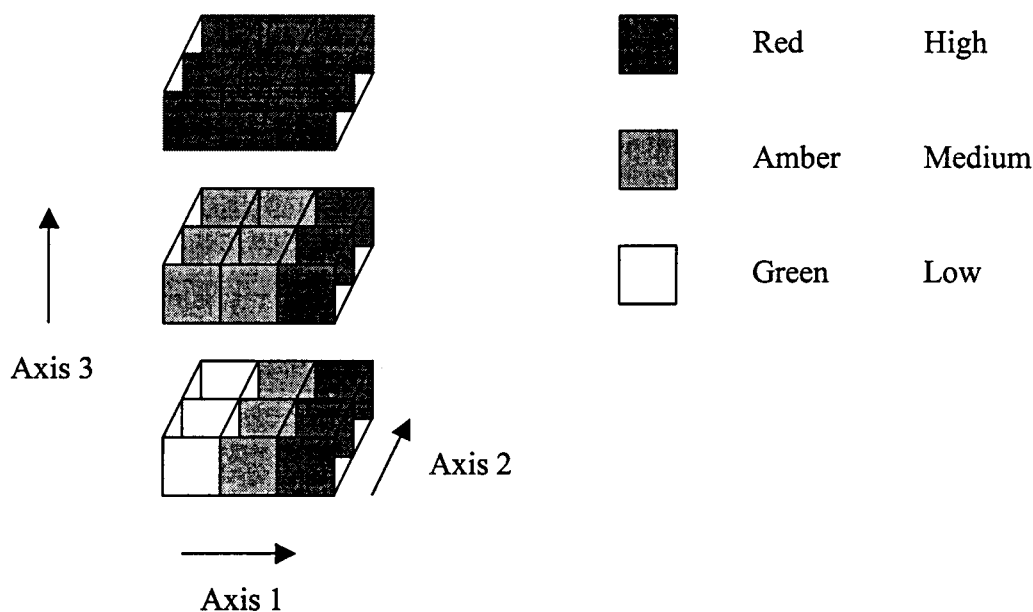
High:	SPEC1
Medium:	SPEC2 & SPEC3
Low:	others

4 'Conservation Cube' for Identifying National Conservation Priorities Along Three Axes (after Avery et al, 1995).

- Axis 1 is a species' national status;
- Axis 2 is its international importance
- Axis 3 is its global/continental conservation status.

High priority species occupy the **red** area of the cube
Medium priority species occupy the **amber** area of the cube
Low priority species occupy the **green** area

The medium priority (amber) list includes some rare but stable species which are conservation dependent (ie maintained through conservation action) and must not be forgotten.



5 Thresholds for Placing British Butterfly Species in Three Categories of Conservation Priority Along Three Biological Axes (adapted from Avery et al., 1995)

		Conservation priority on single axis		
		HIGH	MEDIUM	LOW
Axis 1:	NATIONAL THREAT	Rapid decline in numbers or range (RD) ie > 50% over 25 years, equivalent to > 32% loss of ten-km grid squares	Rare (R) < 50 colonies or < 15 ten-km squares or Moderate Decline (MD) ie 25-50% over 25 years, equivalent to 16-32% loss of ten-km grid squares	None of these
Axis 2:	INTERNATIONAL IMPORTANCE	> 20% of western European colonies in GB (BI)	> 20% of western European colonies in GB (BI)	< 20% of western European colonies in GB
Axis 3:	INTERNATIONAL THREAT	Globally threatened (SPEC1)	Unfavourable status in Europe (SPEC2 & SPEC3)	Favourable status in Europe (SPEC4 & others)

6 Revised Red List of British Butterflies Showing Qualifying Criteria Along Three Axes of the Conservation Cube.

NB: Species have been assigned Low unless stated.

Key: BI = Internationally important breeder;
 RD = Rapid Decline;
 MD = Moderate Decline;
 R = Rare or Vulnerable breeder;
 SPEC = Species of European Conservation Concern
 (SPEC 1 = globally threatened; SPEC 3 = threatened in Europe).