ENGLISH NATURE

Guide to databases held by Habitats and Species branches

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Guide to Databases held by Habitats and Species Branches

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INTRODUCTION

English Nature's Information Systems Programme provides the framework for managing data and information systems to ensure that these serve the organisation's effective delivery of nature conservation. The Programme recognised 'science and development' as one of four systems in English Nature that required business analysis and pilot development during the first three years of the Programme.

Habitats and Species Branches have produced a guide to the databases they hold as a contribution to the development of a system to hold conservation information. The Guide comprises summary tables describing the databases with a brief text that highlights their common characteristics. The tables are arranged so that, as far as possible, databases relevant to the new Specialist Support Teams are grouped together. It is hoped that the Guide will be a useful source of information for Specialist and Local Teams in English Nature's new structure.

SECTION I

HABITAT DATABASES

Description of databases (Table 1)

- Every section of Habitats Branch uses databases (23 different ones in total in the Branch).

  Note: Information generally relates to geographically defined sites, referenced by one or more grid references, not to all the 1 km squares covered by a particular habitat.

- The majority of the databases hold information in part or wholly on computer (17 in all).

- Nine databases have information that is more or less complete for England and are thus truly national in scope, while seven are actively being extended in coverage.

- Most of the databases contain habitat information, primarily relating to vegetation types, only four have information on taxonomic groups other than plants.

- The level of detail about habitats varies, one has information on habitat extent only, four have Phase I data only while 11 include at least some Phase II information. Only one (a woodland database) is a Phase III database (ie detailed, repeat recording at sites - a monitoring database), the rest are 'one-off' apart from the repeat recording of some marine and woodland sites.

- The overall quality of the data is considered to be generally good. However, the data that have been integrated within each database were usually collected over a relatively long time span (10+ years) and thus represent the state of the habitat in different areas (eg counties) at somewhat different times, rather than providing a 'snap-shot' of the national picture.

Ownership, accessibility and dissemination (Table 2)

- Thirteen databases are wholly 'owned' by the Branch, two are part-owned and seven, including all those in the new Coastal Specialist Support Team, are owned by others (Regions, SNH or JNCC).

- Most of the databases, which contain together at least £2-3 million pounds worth of data, exist at more than one location and so are reasonably secure, although some woodland, grassland and peatland data exist at only one location.

- Within English Nature, the databases in their national form are generally accessible only in Habitats Branch, although Regions usually have partial sets of data that are relevant to their area. Regions also hold relevant reports and inventories, only five databases are currently restricted to Habitats Branch within EN although two of these are also held by other organisations.

- Most of the databases were not thought to contain confidential information but some (eg grasslands and marine) do have confidential information, eg about pSSSIs, ownerships and 'commercial in confidence' data.

- The recent introduction of the EC Environmental Information Regulations means that requests for non-confidential information from databases from outside organisations and individuals are likely to increase. Some interpretation will be required for most 'raw' database output but most databases are being used or already have been used to produce reports and inventories.

Computer systems (Table 3)

- With the exception of the woodland databases, and one coastal module on the GIS all computer databases are on PCs.

- The predominant software system is AREV and with the exception of Uplands, and possibly Estuaries, the sections have no plans (or resources) to change their software systems. If owners of databases outside EN, eg JNCC, change software then change will be necessary.

- Several sections require access to a graphic plotter to produce at least simple coloured distribution maps and diagrams.

Bibliographic databases (Table 4)

- There are 11 bibliographies, seven of which are on computer. Five of these are PC-based.

- Only one (a woodland bibliography) is on EN's corporate bibliographic database STATUS.

- Only one section (Woodlands) has a direct computer link to STATUS although all other sections would like to have such a link.

- Uplands, Wetlands and Estuaries sections do not currently have bibliographies but want to develop them.

- Four sections would like to transfer existing bibliographies to STATUS, if resources were available, to improve the searching power and to make them more accessible to others.

TABLE 1 DATABASE DESCRIPTIONS

	On paper	On computer	Complete for England	Incomplete but active	Level of survey	One-off survey, dates	Repeat recording dates	Quality of data
LOWLANDS SST								
Grasslands								
1. Calcareous grassland survey	Yes	No	No	No	Quadrats only	1960s-early 70s	No	Good
2. GRASS (D Wells' grassland cards)	Yes	Yes	No	No	Quadrats only	1960s-1989	No	Good
3. National chalk grassland database	Yes	Yes	Yes	-	Phase II	1983-1993	No	Mostly good
4. Regional grassland surveys	Some	Some	No	Yes	Phase I, I½, II (most)	1970s →	No	Fair to good
5. Lowland wet grassland resource survey	Yes	Some	Yes - extent No - Phase I, II	-	Extent, some Phase I, ref. to existing Phase II	1979 →	No	Fair to good
Heathlands								
1. Lowland heathland database	No	Yes	Yes	-	Phase I (most), II	1970s-1980s	No	Fair to good
2. Heathland resource spreadsheet	Yes incl. maps	Yes except maps	No (S + E Regions complete)	Yes	Phase I	1970s-1980s	No	Fair to good
Woodlands								
1. Ancient Woodland Inventory	Yes	Yes	Yes (woods >2 ha)	-	Phase I	1981-1993	No	Fair
2. Phase II woodland database	Yes	Some	No	Yes	Phase II	1981-1993	No	Good
3. Long term site monitoring	Yes	No	No	Some	Phase III	No	Yes 1970s →	Good
4. Dorset afforestation study	Yes	Yes	-	Not active	Phase I½	No	1930, 1980s	Fair to poor
5. Afforestation and species change	Yes	No	Yes	No	Existing species records from County Recorders etc	No	1930s, 1980s	Fair to poor

Table 1 cont.

	On paper	On computer	Complete for England	Incomplete but active	Level of survey	One-off survey, dates	Repeat recording dates	Quality of data
Peatlands								
1. Fen SSSI/NNR information	Yes	No	Yes	-	Phase I	1980s	No	Good
2. National Peatland Resource Inventory	Some	No, as yet	Yes - extent of peat No - land cover, condition	Yes	Extent, Phase I, Phase II, II½	Condition, 1980s → Extent *c*1880s →	No	Fair
3. County surveys of peatlands	Yes	No	No	No	Phase II	1980s-1992	No	Good
UPLANDS SST								
Wetlands								
*1. River Database (mostly plants, some invertebrate records)	No	Yes	No	No	Phase II (N Holmes method)	1980s-1991	No	Good
2. Flora of grazing marsh ditches	Yes	Yes (quadrat info)	No	No	Phase II	1980s	1972-74, 1988-89 (Broadland only)	Good
Uplands								
1. SSSI database, sites above fell wall	Some	Yes	No	No	Phase II	1970s-1980s	No	Good
2. Uplands database, all land in Less Favoured Areas	Yes	No	No	Yes	Phase I	1970s-1980s	No	Fair
MARITIME SST								
Coastal								
1. Coastal habitats database: dunes, saltmarsh, shingle, cliff	No	Yes	Yes	No	Dunes, saltmarsh Phase II, others Phase I	1980s-1990s	No	Mostly good
Estuaries								
*1. Estuaries Review database: habitat extent, human activities	No	Yes	Yes	No	Habitat extent only (+ human activities)	1980s-1990s	No	Fair

Table 1 cont.

	On paper	On computer	Complete for England	Incomplete but active	Level of survey	One-off survey, dates	Repeat recording dates	Quality of data
*2. Rare Marine Fish database	Yes	Yes	Yes	No	Species records	1900s-1990s	No	Good
*1. Marine Nature Conservation Review database: plants, invertebrates, fish, mammals, some bird data	Some	Yes	No	Yes	Phase I, Phase II (some) Phase III (some)	1960s →	A few, 1960s →	Fair to good

Table 1 cont.

Notes: a. The descriptions 'on paper' and 'on computer' refer to the forms of the database held and accessible in the Branch.

b. * = Databases which include information on plants and other groups (and human activities in the case of the Estuaries Review Database). All other databases are primarily habitat (vegetation) databases although they may include other information, eg on management, site status etc.

c. 'Phase II' means NVC survey unless otherwise specified, except for marine datbase.

d. The Estuaries and Marine databases are linked to UKDMAP, a map database owned by the Natural Environment Research Council, to enable production of maps and other information.

e. The coastal database includes a module on the GIS for saltmarsh extent in Essex and Kent.

TABLE 2 ACCESSIBILITY AND DISSEMINATION

	'Owned' by Branch	Safety (>1 location)	Accessible in EN only in Branch	Known to have confidential data	Published inventories or reports	Dissemination plans
LOWLANDS SST						
Grasslands						
1. Calcareous grasslands	Yes	Yes (Lancaster University)	Yes	Yes	No but data incorporated into NVC vol. 3	None
2. GRASS database	Yes	Yes - paper (Regions) No - computer	Paper - No: cards copied to Regions. Computer - Yes	Yes	No	None
3. National chalk grassland database	Yes (+ Regions)	Yes (Regions)	Paper: No (Regions) Computer: Yes	Yes	County Grassland Inventories, Survey reports	Further Inventories; updated computer database for Regions
4. Regional surveys	No (Regions)	Some	No (Regions)	Yes	As for 3	As for 3
5. Lowland wet grassland resource survey	Yes	Yes - paper (Regions) No - computer	No - paper (Regions) Yes - computer	No	As for 3	Computer database will be made accessible to Regions and RSPB
Heathlands						
1. Lowland Heathland database	Yes (+ RSPB)	Yes	Yes	No	No	None
2. Heathland resource spreadsheets	as for 1	Yes, except for maps	Yes	Yes	No	County Heathland Inventories in production
Woodlands						
1. Ancient Woodland Inventory	Yes	Yes	No (Regions)	No	Provisional Inventories for all counties	-
2. Phase II database	Yes	No (for computer)	Yes (for computer) No - paper records (Regions)	No	Summary reports for each survey	Access to computer database for Regions being explored

Table 2 cont.

	'Owned' by Branch	Safety (>1 location)	Accessible in EN only in Branch	Known to have confidential data	Published inventories or reports	Dissemination plans
3. Long term site monitoring	Yes	Yes	No - relevant paper records in Regions	No	No	Reports to be produced
4. Dorset afforestation study	Yes	No	Yes	No	Yes	None
5. Afforestation and species change	Yes	No	Yes	No	Yes	None
Peatlands						
1. Fen SSSI/NNR information	Yes	No	Yes	No	No	None
2. National Peatland Resource Inventory	No (SNH)	No, as yet (for computer)	Computer database not yet available Paper - No (Regions)	No	Reports on Raised Bogs	Copies of computer database to be made available to EN users
3. County surveys	Yes	Yes (Regions)	No (Regions)	No	Reports for each survey	-
UPLANDS SST						
Wetlands						
1. Rivers database	No (SNH)	Yes	Yes	No	No	None at present
2. Flora of grazing marsh ditches	Yes	Yes - paper (Regions) No - computer	No (Regions)	No	Yes, survey reports	None, although Regions with links to mini could have access if desired
Uplands						
1. SSSI database	Yes (England part)	Yes	No - paper records (Regions) Yes - computer database when available	Yes	No	None at present

Table 2 cont.

	'Owned' by Branch	Safety (>1 location)	Accessible in EN only in Branch	Known to have confidential data	Published inventories or reports	Dissemination plans
2. Uplands database	Yes	No	Yes	Yes	No	Relevant reports to be sent to Regions
MARITIME SST						
Coastal						
1. Coastal habitats database	No (JNCC)	Yes	Yes for computer database No - paper data and maps in Regions	No	Saltmarsh and sand dune survey reports	None
Estuaries						
1. Estuaries Review database	No (JNCC)	Yes	No (Policy Branch)	Yes	Inventories of estuaries, vol 2+3	Five further inventory volumes being produced
2. Rare Marine Fish database	No (JNCC)	Yes	Yes	No	Yes	Copies to be sent to Regions
Marine						
1. Marine Nature Conservation Review database	No (JNCC)	Yes	Yes	Yes	Survey reports	JNCC to produce reviews for sections of coast. Regions may get abbreviated copies of database

TABLE 3 COMPUTER SYSTEMS

	Hardware used	Software system	Additional hardware requirements	Proposed changes in hardware/software
LOWLANDS SST				
Grasslands				
2. GRASS database	PC	AREV	No	None
3. National chalk grassland database	PC	AREV (VEGAN)	Access to graphic plotter, laser printer, larger hard disc (250+mb) + 8mb RAM	None
4. Regional grassland surveys	PC	AREV (VEGAN)	As for 3	None
5. Lowland wet grassland resource survey	PC	PARADOX	-	-
Heathlands				
1. Lowland heathland database	PC	AREV	None at present	None at present
2. Heathland resource spreadsheet	PC	QUATTRO PRO	As for 1	As for 1
Woodlands				
1. Ancient Woodland Inventory	Mini	SYSTEM-BUILDER	No	None
2. Phase II woodland database	Mini	SYSTEM-BUILDER	No	None
4. Dorset afforestation study	PC	d BASE IV	PC	Section does not have d BASE IV, this software or an alternative translation required.
Peatlands				
2. National peatland Resource Inventory	PC	GIS (PC version)	Yes (486,200 + mb) computer and facility to produce maps, access to later printer. GIS software when database is available. Also for fen database	-

Table 3 cont.

	Hardware used	Software system	Additional hardware requirements	Proposed changes in hardware/software
UPLANDS SST				
Wetlands				
1. Rivers database	PC	AREV	Colour monitor, access to graphic plotter, ideally with colour print option	None
2. Flora of grazing marsh ditches	Mini	PRIME INFORMATION	No	Translation to SYSTEM BUILDER
Uplands				
1. SSSI database	PC	AREV (at present)	Access to graphic plotter	AREV being changed to PARADOX
2. Uplands database	PC	PARADOX	As for 1	-
MARITIME SST				
Coastal				
1. Coastal habitats database	PC	AREV	No	None
Estuaries				
1. Estuaries Review database	PC	AREV	Scanner (for Branch) for map analysis	Explore changing AREV to more user friendly system
2. Rare Marine Fish database	PC	AREV	As for 1	As for 1
Marine				
1. Marine Nature Conservation Review database	PC	AREV	No	None

TABLE 4 BIBLIOGRAPHIC DATABASES

Section	Bibliography Title	On paper	On computer	Development of bibliography needed	Proposals to computerise if funded
LOWLANDS SST					
Grasslands	Grassland	Yes	No	Consolidation of indexes	Yes - STATUS on MINI
Heathlands	Lowland heathland	Yes	PC, PAPER BASE	Training in operation is required	-
Woodlands	1. Ancient woodland	-	PC, PAPERBASE	-	-
	2. NNR woodland bibliography	-	MINI-unique system		Transfer to STATUS
	3. Recreation + woodland bibliography		MINI, STATUS	-	-
	4. General bibliography	Yes	No	-	Yes - STATUS on MINI (10,000 + records)
Peatlands	1. Fens	Yes	No	Keyword identification	Yes, STATUS on MINI
	2. Peatlands (SNH)	-	PC, PAPERBASE	Keyword identification	Yes, STATUS on MINI
UPLANDS SST					
Wetlands	None	-	-	Yes (SNH has a freshwater bibliography on PAPERBASE)	Advice required
Uplands	None	-	-	Yes	PC, advice required
MARITIME SST					
Coastal	Sand dune bibliography	Yes	PC, PAPERBASE	Possible Habitat Management bibliography	TRANSFER sand dune bibliography to STATUS on MINI
Estuaries	None	-	-	Yes	Advice required
Marine	1. General bibliography	-	PC, AREV	No	-
	2. Sector Reviews	Yes	-	No	Yes, advice required

Table 4 cont.

Note: Published bibliographies of selected references exist for:

Heathlands:	Heathland Management Handbook
Woodlands:	Selected woodland references
Grasslands:	Forthcoming Grassland Management Handbook
Coastal:	Sand dune bibliography
Peatland:	Fens references
Marine:	MNCR sector reviews, Marine Conservation Handbook

Selected references will also appear in *Habitat conservation in England*

SECTION 2

SPECIES DATABASES

Description of databases (Table 1)

- Every section of Species Branch uses databases (11 different ones in total in the Branch). The majority are computerised.

- Two sections (Invertebrates and Birds) rely heavily on national databases maintained by JNCC. Improving access to these is a priority for the Branch. These databases do not appear in the table as they are not 'owned' within the Branch.

- Data on the distribution of many species are held at the Biological Records Centre. However, this system does not easily relate occurrence to sites of conservation importance or to communities.

- Most databases are being actively added to as part of their monitoring function. Because of this they cannot, by their nature, ever be considered complete.

- The overall quality of the data is generally considered to be good, though information has generally been collected over a long period.

Ownership, accessibility and dissemination (Table 2)

- Six databases are wholly 'owned' by the Branch, two or three are shared with JNCC and one is owned by an NGO.

- Most data exist at more than one location and so are reasonably secure. However, the need to maintain some confidential information restricts the distribution of some.

- National databases on Invertebrates and Birds are held and maintained by JNCC. On-line access to these is a priority and on-line access to BRC may also be achievable in the future.

- Copies of data or inventories have been provided to Regions, JNCC or other agencies where appropriate.

- Some data about the occurrence of rare species are confidential and so must remain under the control of the data 'owner'. This applies mainly to rare plant information.

Computer systems (Table 3)

- All computer databases held in the Branch are on PCs.

- The predominant software system is AREV. There are no plans to move data to other software systems and the main priority is to improve the hardware through the phased replacement of ageing computers.

- GIS has considerable potential for use with species data, but neither the hardware nor software is currently available within the Branch.

Bibliographic databases (Table 4)

- Six bibliographic databases are held in the Branch, of which two are on computer. One of these is PC based, the other on the corporate bibliographic database system STATUS.

TABLE 1 DATABASE DESCRIPTIONS

	On paper	On computer	Complete for England	Incomplete but active	Level of survey	One-off survey, dates	Repeat recording dates	Quality of data
LOWLANDS SST								
Invertebrates								
1. Large Copper butterfly at Woodwalton Fen	Yes	No	N/A				Annual	Good
2. Butterflies on NNRs	Yes	Yes				1990-92		Fair to good
3. Invertebase, EFU survey data	Yes	Yes		Yes, for grazing marsh	"Phase II" species level	1981-1991		Good
Reptiles & Amphibians								
1. National amphibian and reptile database	Yes	(Yes, at BRC)		Yes	Species			Fair
2. Natterjack site register	Yes	No		Yes	Species at sites		Annually	
Mammals								
1. Batdata - enquiries database	Yes	Yes	-	Yes	Species at sites		Continuous	Fair to good
2. Batsites - bat sites database	Yes	Yes		Yes	Species at sites and counts "Phase II"		Continuous	Good
UPLANDS SST								
Plants								
1. RDB Vascular plants	No	Yes	Yes, covers all species	Actively added to	Phase II +	1975-1990		Fair to good
2. Historical RDB data	Yes	(Yes at BRC)	Yes		Literature and herbarium records			Fair to good
3. RDB plant localities	Yes	No	Yes (UK)	Actively added to	Phase II +	1975-1990		Fair to good
Birds								
1. Internationally important bird files	No	Yes	Yes		Species/sites			Variable

TABLE 2 ACCESSIBILITY AND DISSEMINATION

	'Owned' by branch	Safety (>1 location)	Accessible in EN only in branch	Known to have confidential data	Published inventories or reports	Dissemination plans
LOWLANDS SST						
Invertebrates						
1. Large Copper butterfly at Woodwalton Fen	Yes	No	Yes	No	Yes - scientific paper	Summary to Keele University
2. Butterflies on NNRs	Yes	Copies with other agencies	No, copies with JNCC, CCW, SNH, ITE	No	Yes - scientific papers	Copies to SNH & ITE
3. Invertebase, EFU survey data	Yes	No	Yes	No	Yes - EFU reports	Copies to Regions, JNCC (ISR) Publications
Reptiles & Amphibians						
1. National amphibian and reptile database	No, BRC? JNCC?	Paper copies widely distributed	Not accessible in branch - paper copy only	No	No	Via JNCC to recorders and regions
2. Natterjack site register	No, by BHS	Not held in branch	No	No	Inventory produced by BHS	Via BHS
Mammals						
1. Batdata - enquiries database	Yes	Regional data held by regions	Accessible in regions via copies	No. but covered by DPA	Scientific papers. Summary data	Database already disseminated
2. Batsites - bat sites database	Yes	No	Yes - at present	Yes, some	Some regional reports: Scientific papers	To be disseminated to LCSTs once they have decided if they want it
UPLANDS SST						
Plants						
1. RDB Vascular plants	? maintained by JNCC	Yes	Held by JNCC, copy with EN	Yes	No	No
2. Historical RDB data	Probably BRC	at BRC	Also at BRC	Yes	No	No
3. RDB plant localities	Yes	No	Yes	Yes	No	No
Birds						
1. Internationally important bird files	Co-owned with JNCC	Yes, also at JNCC and SNH	Also at JNCC & SNH		Yes - Important bird areas in the UK	No

TABLE 3 COMPUTER SYSTEMS

	Hardware used	Software System	Additional hardware requirements	Proposed changes in hardware/software
LOWLANDS SST				
Invertebrates				
2. Butterflies on NNRs	PC	Quattro-Pro	-	-
3. Invertebase, EFU survey data	PC	AREV	Yes - replacement of 286 computer with more modern one	
Reptiles & Amphibians				
1. National amphibian and reptile database	At BRC	Oracle (at BRC)	More memory	Statistics package
2. Natterjack site register	PC - (at University of Sussex)	Superbase (non in-house)		
Mammals				
1. Batdata - enquiries database	PC	AREV	Upgrade to 486 computer	Consider networking with LCSTs
2. Batsites - bat sites database	PC	AREV	Upgrade to 486 computer. Link to GIS	
UPLANDS SST				
Plants				
1. RDB Vascular plants	PC	AREV (Recorder)	Mouse, printer, plotter colour monitor	-
Birds				
1. Internationally important bird files	PC	AREV		

TABLE 4 BIBLIOGRAPHIC DATABASES

	Bibliography title	On paper	On computer	Development of bibliography needed	Proposals to computerise if funded
LOWLANDS SST					
Invertebrates	Threatened species database	Yes	-	Yes	Yes - don't know which system
	INSTAR - Invertebrate status in Natural Areas	Yes		Yes	Yes
	ENTSCAPE		MINI, STATUS	Yes	
Reptiles & Amphibians	RADAR - Reptile & Amphibian data access & retrieval			Yes	Yes - System unknown
Mammals	Mammal bibliography	Yes	No	No	No
UPLANDS SST					
Plants	Plants bibliography	Yes	No	-	Possibly
Birds	Internationally important sites bibliography		Yes	-	-