BID-REX

Interreg Europe

European Union
European Regional
Development Fund

Data for Decision Makers

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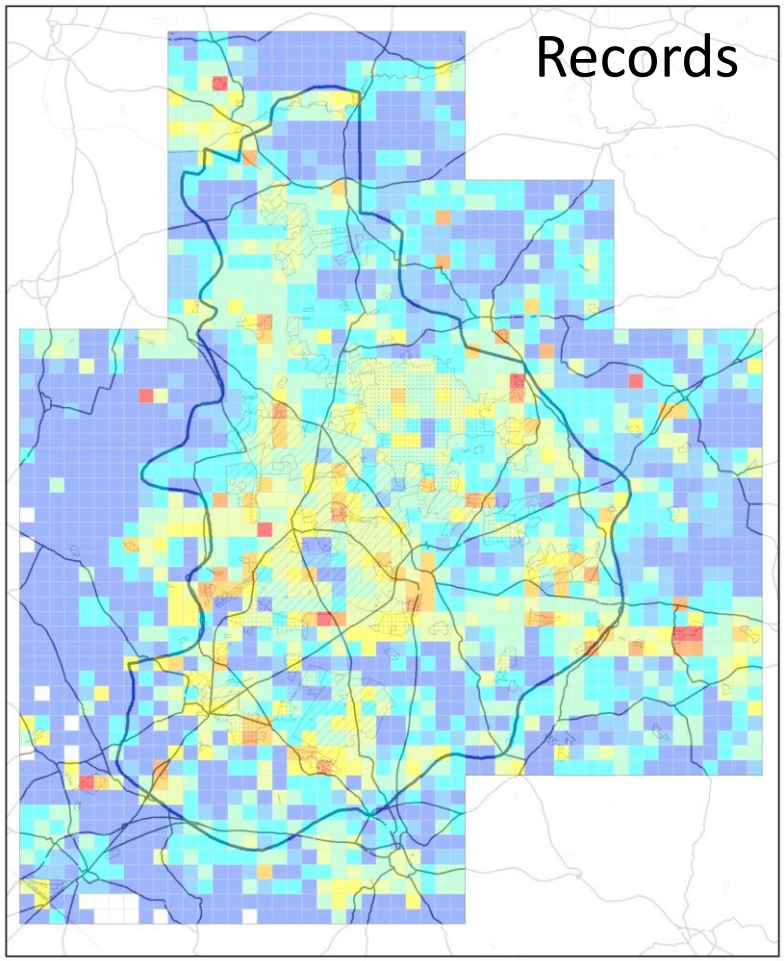
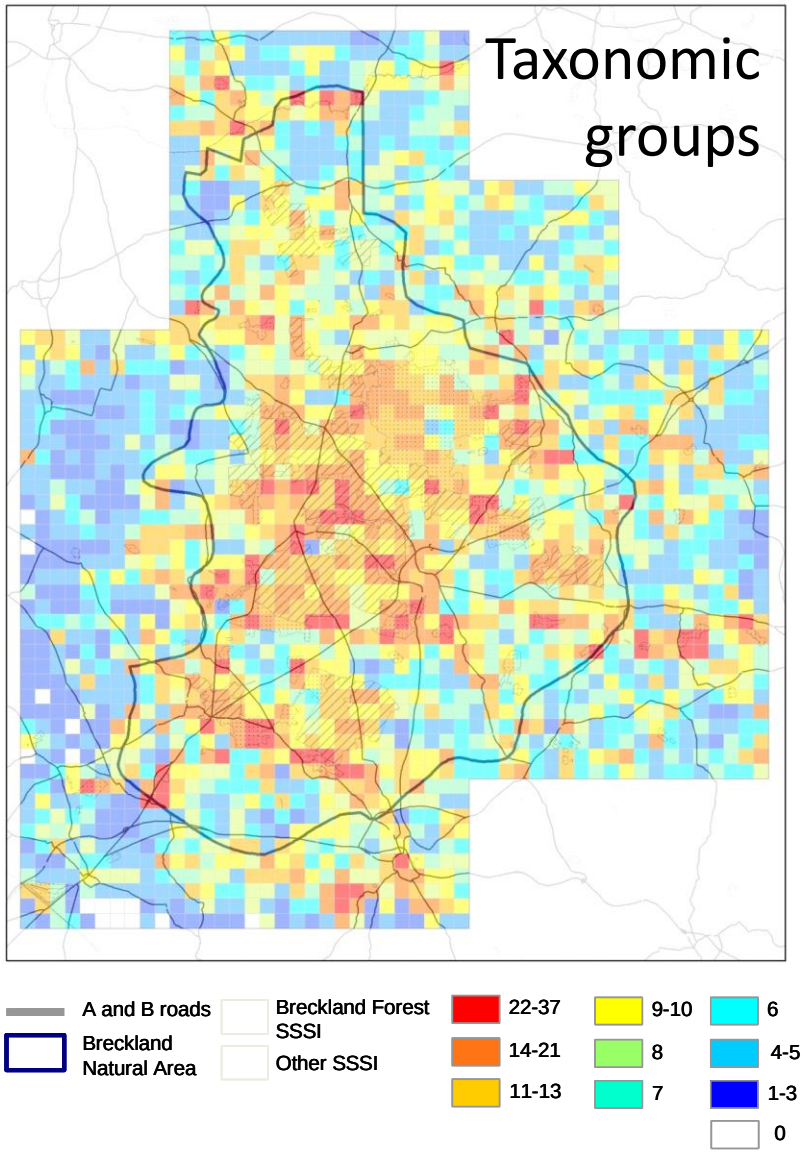
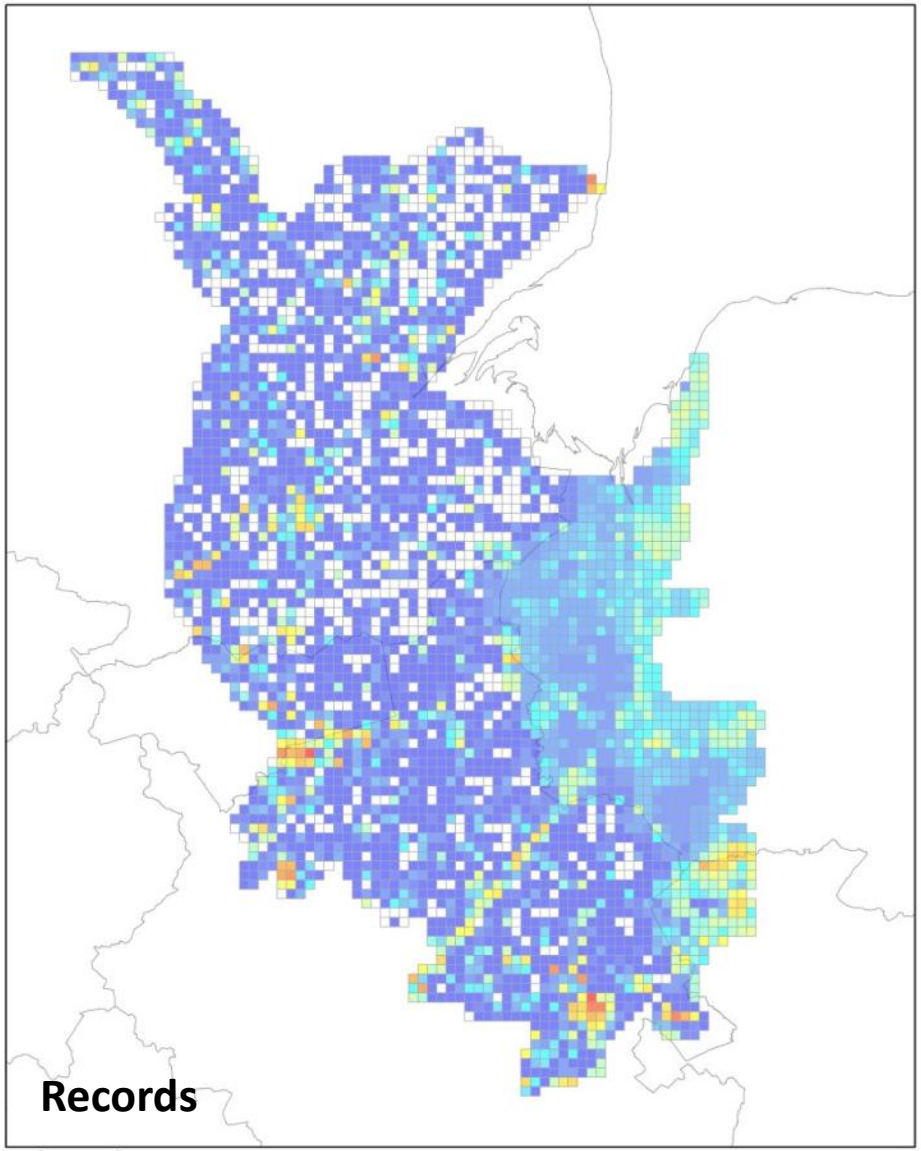
Issues with biological records

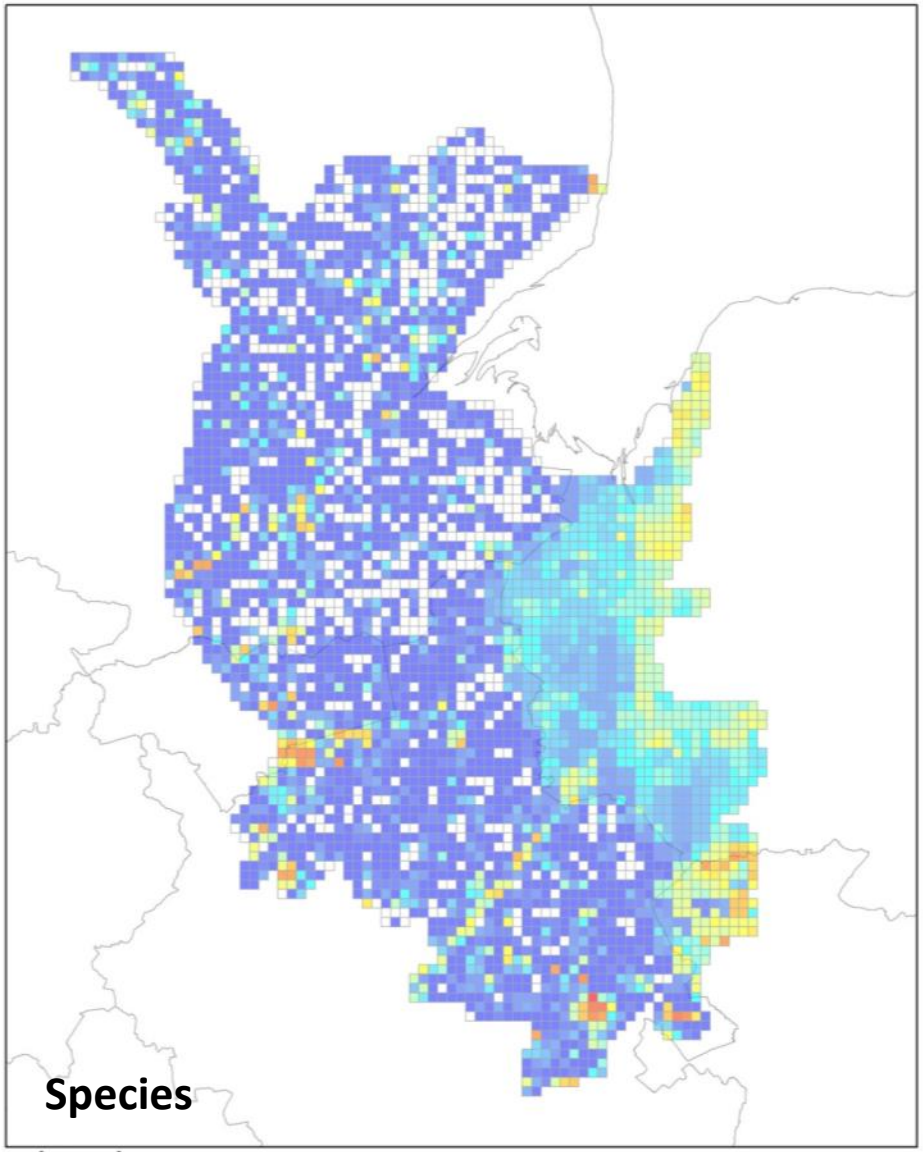
- Can be **sparse** – results in ‘patchiness’
- Concerns about **taxonomic** biases (+ birds, - inverts)
- Recording efforts vary **spatially** – ‘fake hot spots’
- Many **recorders** want ‘firsts’
- Difficulty inferring current state from **historical** records
- Mismatch between recorded species and those that may be responsive to habitat change

Recording intensity in Breckland







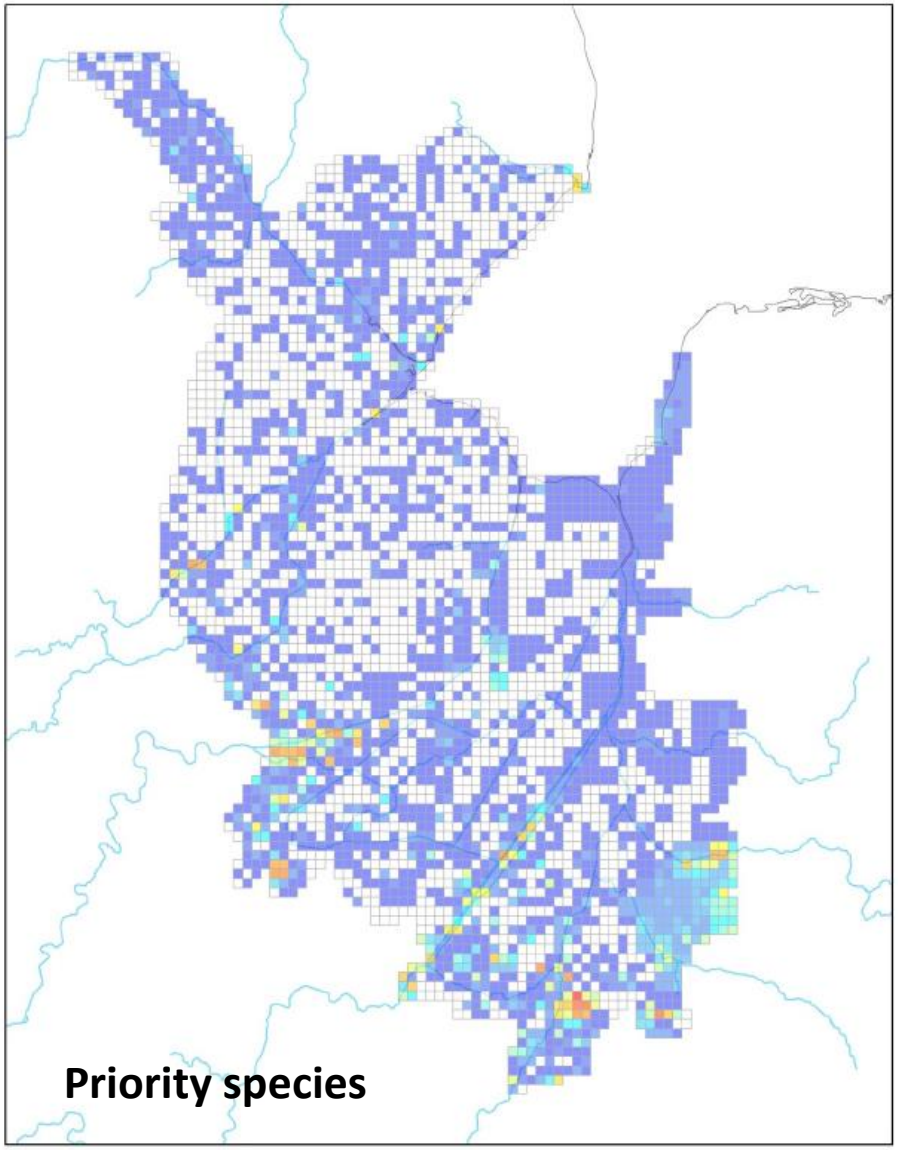


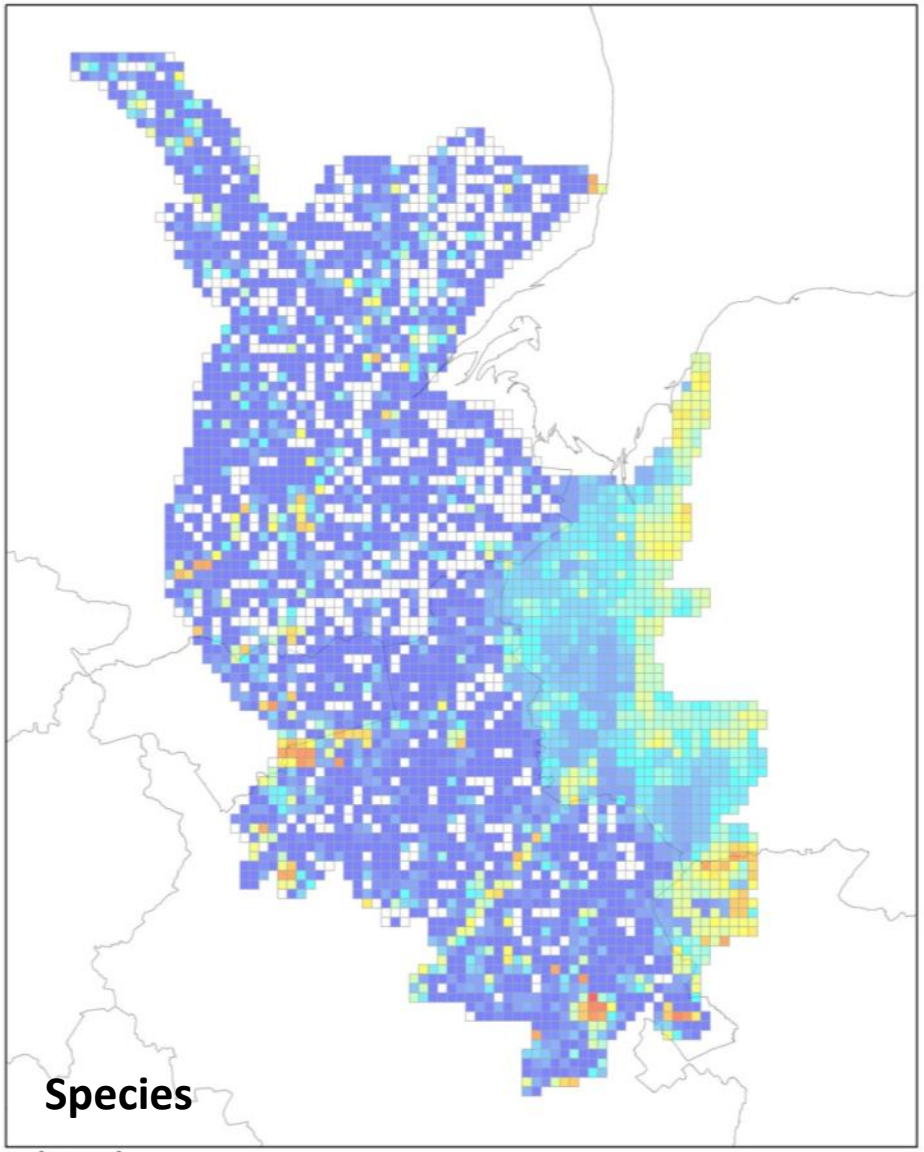
Legend

No. of records						
22177 - 50535	2113 - 2834	422 - 509	155 - 179	1 - 34	County Boundary	
8898 - 22176	1590 - 2112	354 - 421	133 - 154	0		
6456 - 8897	1139 - 1589	301 - 353	111 - 132			
4270 - 6455	869 - 1138	254 - 300	88 - 110			
2835 - 4269	659 - 868	212 - 253	62 - 87			
	510 - 658	180 - 211	35 - 61			

Legend

No. of species					
2567 - 4927	466 - 563	207 - 228	108 - 122	1 - 22	
1439 - 2566	384 - 465	189 - 206	94 - 107	0	
941 - 1438	337 - 383	171 - 188	79 - 93		
709 - 940	300 - 336	153 - 170	62 - 78		
564 - 708	264 - 299	137 - 152	42 - 61		
	229 - 263	123 - 136	23 - 41		


Priority species
Legend
No. of priority species
401 - 599
192 - 400
131 - 191
113 - 130
99 - 112
88 - 98
78 - 87
70 - 77
63 - 69
56 - 62
50 - 55
43 - 49
36 - 42
30 - 35
24 - 29
16 - 23
8 - 15
1 - 7
0
UK Outline
Major Rivers


Species
Legend
No. of species
2567 - 4927
1439 - 2566
941 - 1438
709 - 940
564 - 708
466 - 563
384 - 465
337 - 383
300 - 336
264 - 299
229 - 263
207 - 228
189 - 206
171 - 188
153 - 170
137 - 152
123 - 136
108 - 122
94 - 107
79 - 93
62 - 78
42 - 61
23 - 41
1 - 22
0

Data flows

- Most get some data from centralised sources (NBN etc.) – ease of access
- Some recorders prefer not to share data, solution with recognised schemes and permits
- Some stakeholders collect data in house but restrictions with cost and taxonomic expertise
- Most stakeholders pass all data on to NBIS (NCC)

Basis for Decisions

- Some stakeholders are keen to optimise management to multiple taxa
- General consensus on managing for ‘priority’ species (e.g. Section 41, IUCN, nationally scarce)
- Others explicitly manage for narrow taxa set (e.g. wading birds)
- But face **multiple constraints** (in addition to data considerations)

Basis for Decisions (constraints)

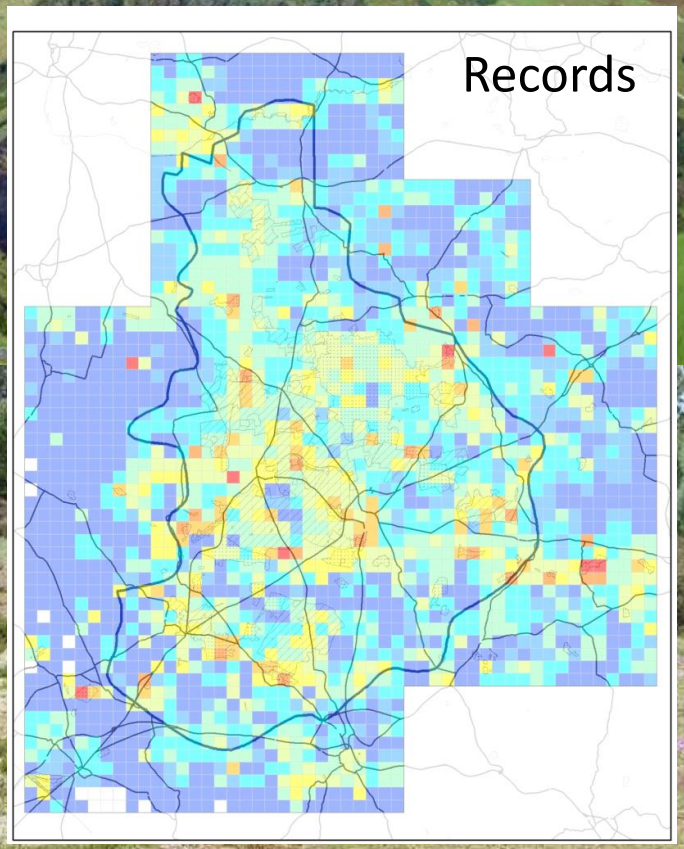
- Often restricted by basis of site's designation…
- …Informs basis of assessment!
- Funding streams also restrict stakeholders' ability to optimise management based on biodiversity data
- Some management isn't that data intensive (e.g. wading birds, abundance counts only)

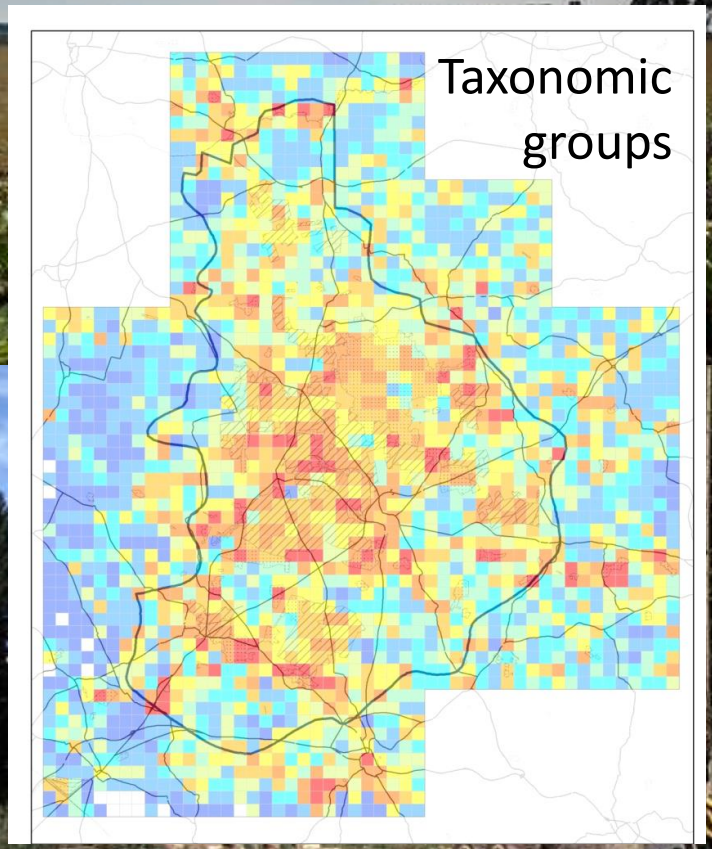
Basis for Decisions - Marine

- Similar situation, designation depends on habitat – not species
- Species data more use for condition assessment
- Actually have lots of well targeted and incidental data!
- Management involves limiting extractive activities, therefore main data deficiency is for sensitivity to extraction across multiple taxa

Possibilities for optimisation

- Constraints leave little scope for optimisation by stakeholders
- Therefore optimisation needs to feed into:
  - Prescription design
  - Assessment of designated sites
  - Funding streams
- Could be consistent with systematic approach a ‘bio-regional’ scale

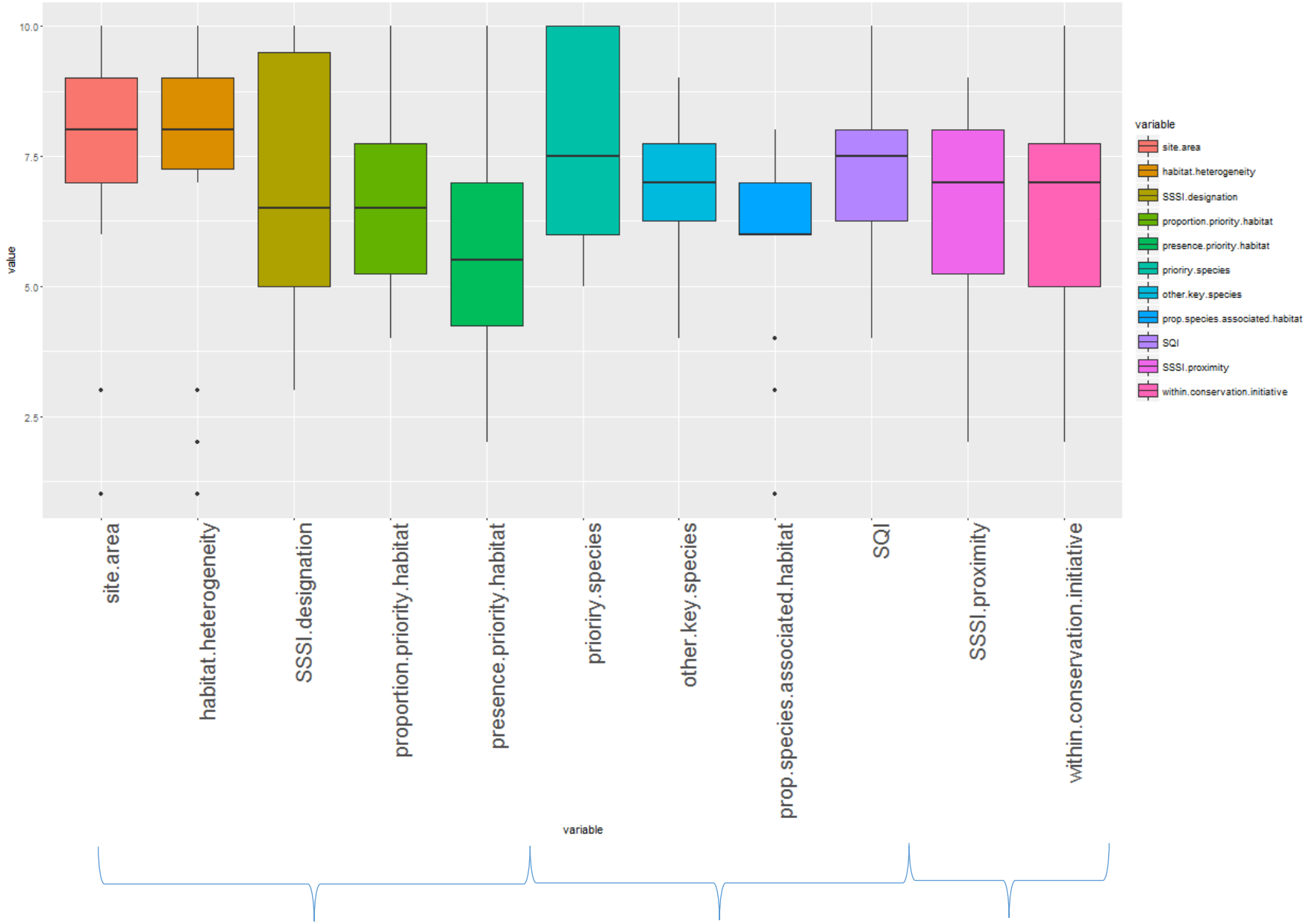

Records


Taxonomic
groups

How would our stakeholders prioritise effort across sites?

- All asked to give relative importance of 11 different measures (+ verbal feedback)
- Told to answer as if free of internal and external policy constraints

- Do they converge?
- Are they consistent with what we've already been told?


10.0
7.5
5.0
2.5
value
site.area
habitat.heterogeneity
SSSI.designation
proportion.priority.habitat
presence.priority.habitat
priority.species
other.key.species
prop.species.associated.habitat
SQI
SSSI.proximity
within.conservation.initiative
variable
variable
site.area
habitat.heterogeneity
SSSI.designation
proportion.priority.habitat
presence.priority.habitat
prioriry.species
other.key.species
prop.species.associated.habitat
SQI
SSSI.proximity
within.conservation.initiative
Site characteristics
Species
Landscape context

Conclusions

- All stakeholders collect biodiversity data and use it to inform management
- However, they are usually constrained in the management optimisations they are free to make
- Therefore making greater use of biodiversity data needs a multiple taxa approach to be recognised by funders and other assessments of management