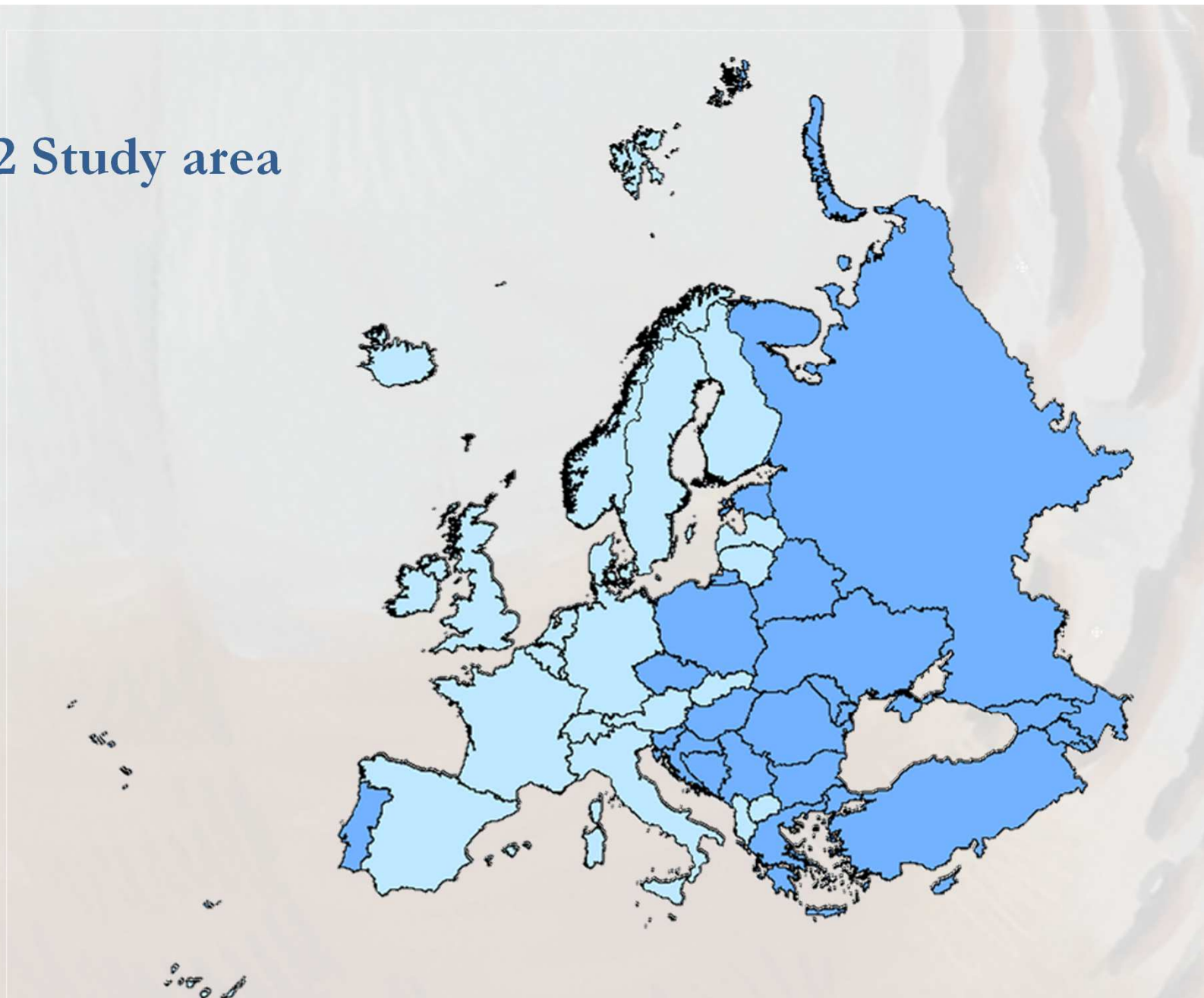


# EBBA2 requirements/minimum standards

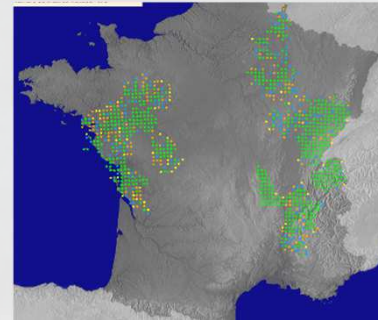
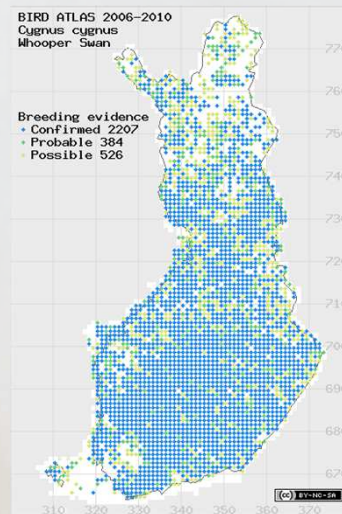
*Standardisation of data, field methods and field design*

**Sergi Herrando**

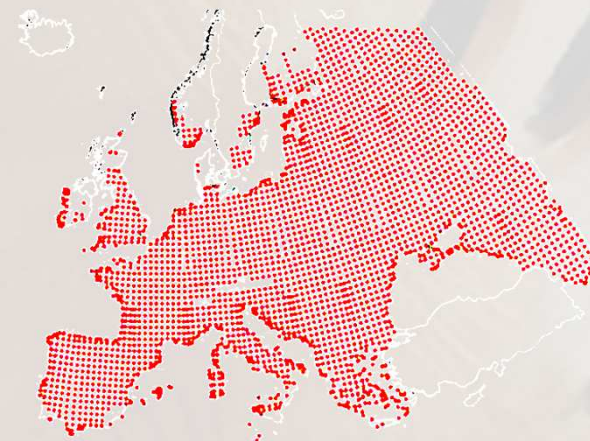
## EBBA2 Study area



# EBBA2 will be the integrated result of different national approaches for depicting bird distribution



Need of some common  
rules (methodological  
standards)



## Standardised list of species

- Data provision for all breeding species during the EBBA2 period (2013-2017)
- Distinction between native (580) and non-native (63) breeders
- Distinction between regular and occasional breeders
- Distinction between wild, feral and “park” populations



Easily  
recognisable  
forms,  
subspecies or  
potential  
future splits

## Phasianidae

Species code	EURING code	Scientific name (Separate recording)	Suggested <u>separate recording</u> (bold: <b>obligatory</b> ; normal font: <b>facultative</b> )
41	03260	<i>Tetrastes bonasia</i>	
42	03320	<i>Tetrao tetrix</i>	
43	03330	<i>Tetrao mlokosiewiczi</i>	
44	03350	<i>Tetrao urogallus</i>	<b>urogallus, aquitanicus, cantabricus</b>
45a	03290	<i>Lagopus *lagopus* lagopus</i>	<b>lagopus, rossicus</b>
45b	03292	<i>Lagopus *lagopus* scoticus</i>	
45c	77777	<i>Lagopus *lagopus* hibernicus</i>	
46	03300	<i>Lagopus mutus</i>	<i>pyrenaicus, helveticus, millaisi, mutus</i>
47	03500	<i>Tetraogallus caucasicus</i>	
48	03510	<i>Tetraogallus caspius</i>	
49	03570	<i>Alectoris graeca</i>	<i>whitakeri, graeca, saxatilis</i>
50	03550	<i>Alectoris chukar</i>	
51	03590	<i>Alectoris barbara</i>	
52	03580	<i>Alectoris rufa</i>	
53	03620	<i>Ammoperdix griseogularis</i>	
54	03640	<i>Francolinus francolinus</i>	
55	03670	<i>Perdix perdix</i>	<b>perdix etc, hispaniolensis, italica</b>
56	03700	<i>Coturnix coturnix</i>	
57	03940	<i>Phasianus colchicus</i>	<b>native <u>and</u> feral/introduced populations</b>

## Standards of breeding evidences

### •A) Possible breeding

*1 Species observed in breeding season in possible nesting habitat*

*2 Singing male(s) present (or breeding calls heard) in breeding season*

## Standards of breeding evidences

### •B) Probable breeding

*3 Pair observed in suitable nesting habitat in breeding season*

*4 Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two different days a week or more apart at same place*

*5 Courtship and display*

*6 Visiting probable nest-site*

*7 Agitated behaviour or anxiety calls from adults*

*8 Brood patch on adult examined in the hand*

*9 Nest-building or excavating of nest-hole*

## Standards of breeding evidences

### •C) Confirmed breeding

*10 Distraction-display or injury-feigning*

*11 Used nest or eggshells found (occupied or laid within period of survey)*

*12 Recently fledged young (nidicolous species) or downy young (nidifugous species)*

*13 Adults entering or leaving nest-site in circumstances indicating occupied nest (including high nests or nest holes, the contents of which cannot be seen) or adult seen incubating*

*14 Adult carrying a faecal sac or food for young*

*15 Nests containing eggs*

*16 Nests with young seen or heard*



# Standards of breeding evidences

- 0 Non-breeding

## Standards of map resolution

- 50x50 km resolution

## Standards of grid type



- 50x50 km grid used in EBBA1 (EOAgrid)

## Standards of species abundance

As in EBBA1. Semi-quantitative estimates of abundance at each 50x50 km square (6 categories):

- A: 1-9 pairs
- B: 10-99 pairs
- C: 100-999 pairs
- D: 1,000-9,999 pairs
- E: 10,000-99,999 pairs
- F: More than 100,000 pairs

Several procedures: expert knowledge, direct counts, statistical inference, etc.

(guidelines provided but decisions at national level).

## Standards of fieldwork design

### When?

- Years: breeding seasons 2013-2017
- Months: guidelines at country/regional level:
  - A general rule for the majority of species (e.g. April-June)
  - Flexible for early (e.g. *Aquila chrysaetos*) and late breeders (e.g. *Falco eleonora*).

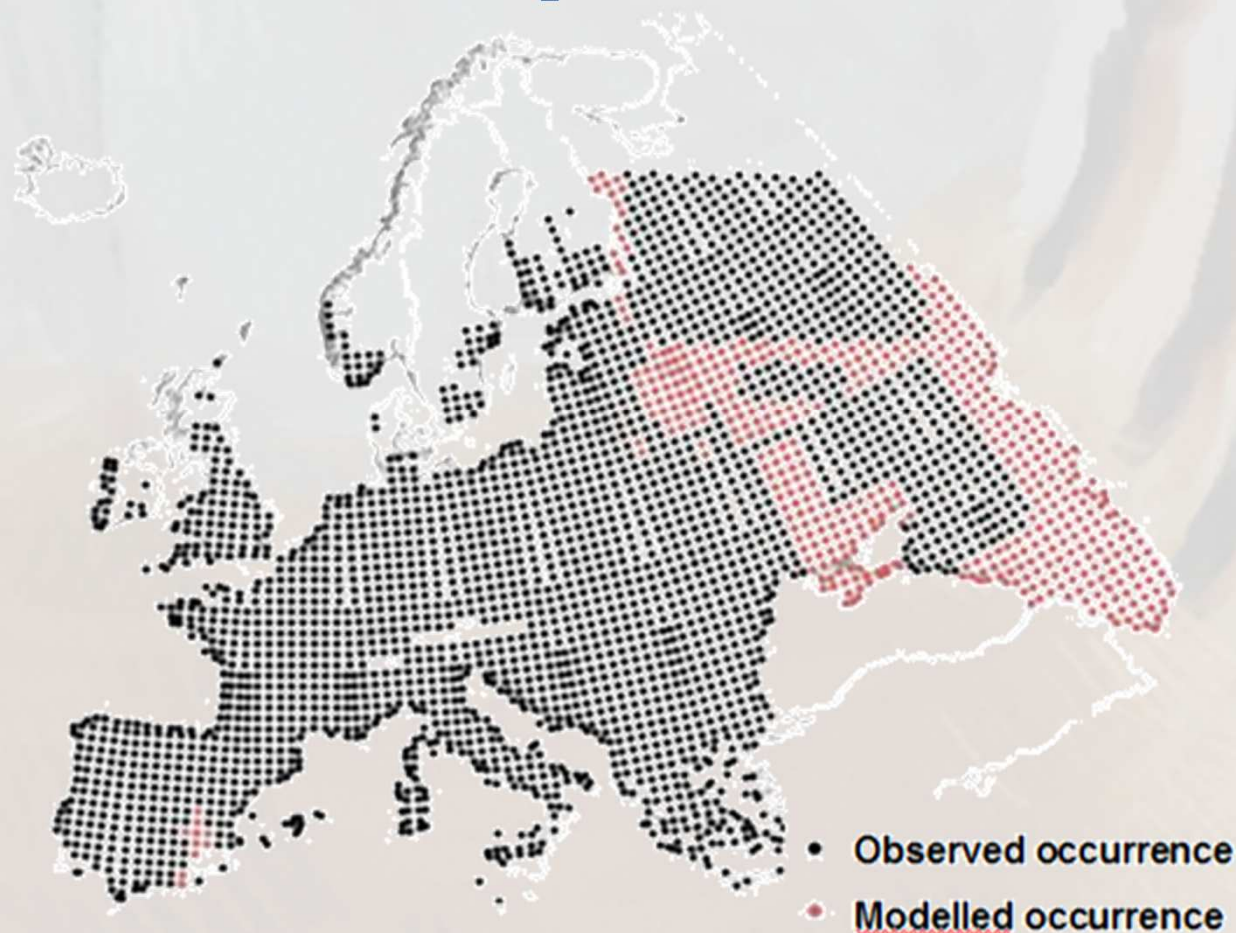
### Where?

- In all 50x50 km squares (where possible)  
or
- In a representative sample of 50x50 km squares (guidelines provided but decided at national level).



## Non-surveyed squares

There will be a potential role for modeling the species distribution in squares with no fieldwork



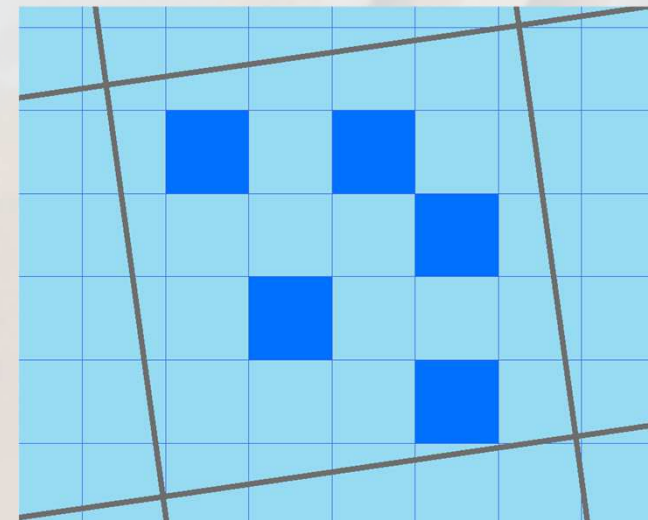


## Standards of fieldwork design

Where within each 50x50 km?

In a representative sample of smaller squares  
(guidelines provided but decided at national level).

Synergies with BiE3  
(BirdLife International):  
using a different grid system  
at 10x10 km



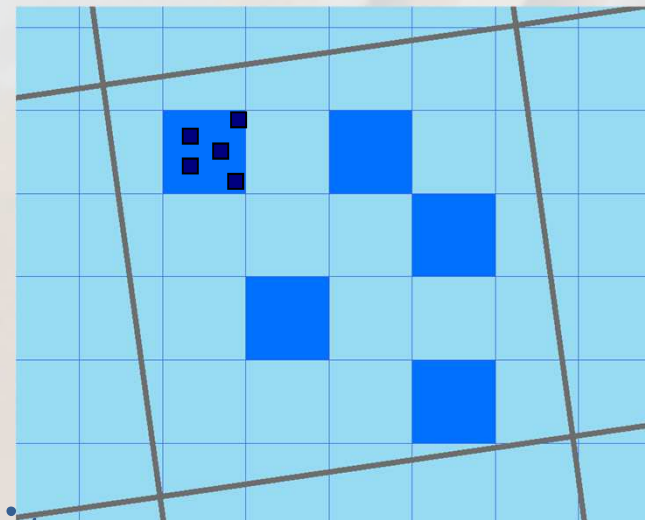
10x10 km ETRS grid maybe a good possibility (but  
not the only one) for distributing a representative  
sample of squares

## Standards of fieldwork design

Where within each 10x10 km?

In a representative sample of smaller squares (e.g. 1x1 km)

How many samples  
(10x10 km) and  
subsamples (1x1 km)?



- Depends on available capacity (fieldworkers, time, money...)
- Ideally, same number in all squares

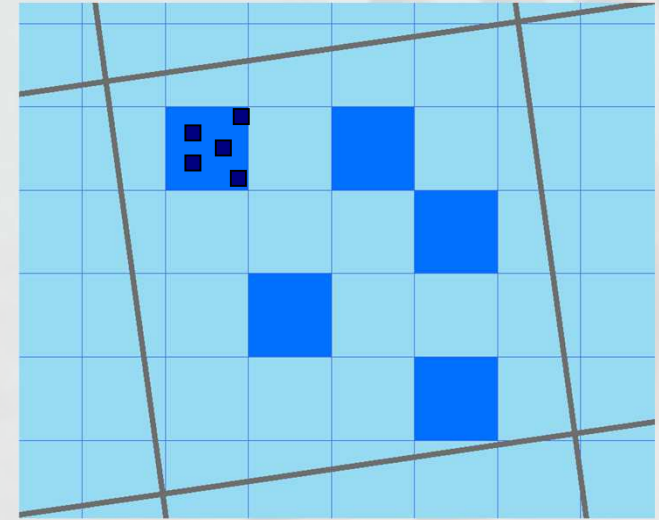
## Standards of fieldwork design

How many visits at a given square?

- In an atlas project, the spatial coverage is more important than the temporal coverage at a given site.
- But some repeated visits could be desirable when possible (to match differences in species phenology, also as an option to take detectability into account, etc.)
- Again, depending on available capacity (fieldworkers, time, money...)
- Ideally, same approach in all squares

## Standards of fieldwork design

Is this sampling strategy compulsory for EBBA2?



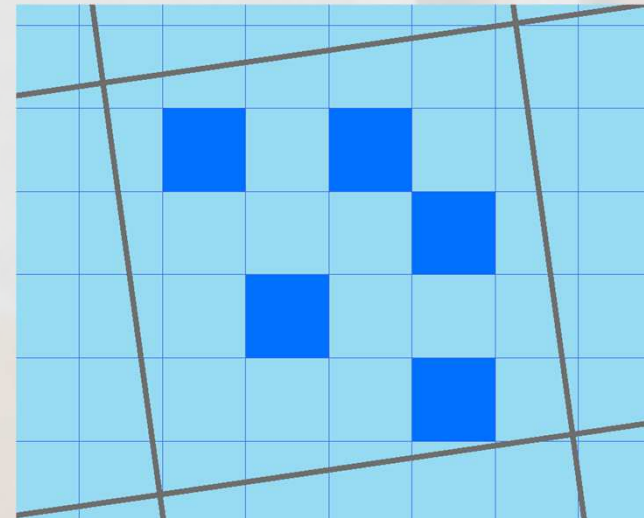
No.

Lists of breeding species, with atlas codes and abundance estimations at 50x50 km squares will be enough.

- But this would increase a lot the quality of the results and it would be highly recommended to try to do that, at least in a portion of the squares of the country

This sampling strategy allows or improves:

- Systematic species survey
- Quantitative measures of frequency of occurrence
- Quantitative measures of effort (number of sites and visits). Essential to compare data among squares
- Higher opportunities for modeling the species distribution in non-surveyed areas





## Standards of fieldwork methodology

Many techniques (point counts, transects, territory mapping, direct censuses, etc.).

No common rules are necessary for EBBA2

Timed  
Species lists



Casual  
records

But there should be minimum standards to allow  
validations:

Square, Dates, Observer, Species

# Data flow

