

Preliminary guidelines for data collection at the national level

Working document, prepared by the Atlas Steering Committee (ASC) to support national coordinators

April 2012

Preamble

The second European breeding bird atlas (EBBA2) is still in its early planning stage. It is not possible yet to provide detailed guidelines covering every aspect of data collection. On the other hand, planning of national atlases that will provide data for the European atlas has started in many countries, online platforms for data collection are developed or improved, and many national contact points have asked for guidance from EBCC. The ASC has therefore started to compile some basic guidelines on data collection, and this 'working document' will be improved and updated with many other aspects of planning and organising data collection for EBBA2. Check the EBCC website for updates and related documents: <http://www.ebcc.info/new-atlas.html>.

These guidelines cover basic principles on how observations should be gathered and stored in databases to make them easy to use at national level (for atlases but also for other purposes) and for EBBA2. At the end of the document some specific principles for preparing national atlases are listed.

Species lists and codes

- EBCC and BirdLife International aim to use the same species list for EBBA2 and for BiE. We encourage countries that do not have their own national lists to use this list, and to also include relevant non-native species for which knowledge of their changing distributions could be very valuable.
- Data exchange within Europe is done via Euring codes/numbers (provided in the EBCC/BirdLife list). You can of course use national codes, but store the Euring codes in your database as well.
- Collect data at species level. However, check the EBCC/BirdLife species list for recent splits or subspecies that may occur in your country. Subspecies in the EBCC/BirdLife list concern taxa that are likely to be considered as species in the near future. If they can be distinguished in the field, encourage people to record them separately. In the national species lists, provide species codes for the full species but also for the relevant subspecies.

Examples:

In Italy (etc.), please record Subalpine and Moltoni's warblers separately, even if the final decision to split them as species has not been reached yet.

In Switzerland, please record subspecies Alpine Willow Tit from lowland Willow tits

separately, as they might show different trends.
... and so on.

Spatial resolution

- Use geographical coordinates (national grid references or degrees/minutes/seconds) for recording your observations.
- Avoid storing records under site names only, because these are difficult to handle in databases: spelling may differ between maps, and it is difficult to attribute them to grid cells or atlas squares.
- If you want to use site names, store information on geographical location together with the sites: central coordinate, area covered (e.g. 1x1 km squares lying in the site) etc.
- Record individual observations at the highest resolution possible, e.g. with precise coordinates or attributed to 1x1 km grid cells. More precise locations allow better linking the records to habitat data, which offers more possibilities to model distribution of species, but this must be balanced against the effort required by volunteers to record spatial information for every sighting.
- If you ask observers for species lists at larger scales, e.g. for a national 10x10 km grid atlas, store at least one precise coordinate (e.g. the one with the highest atlas code, 1x1 km grid) for each species per square.
- Store the altitude at which the species was observed. Mostly this doesn't have to be done by the volunteer but can be done automatically by using altitude data provided electronically with topographic maps (e.g. mean altitude per 1x1 km square). However, in mountainous areas storing the exact altitude can be important to determine upper and lower range limits of species.

Atlas codes

- Use breeding atlas codes (AC) for observations during the breeding season.
- For EBBA2 the same Atlas Codes will be used as for the first EBCC atlas (available on EBCC website).
- Use the precise AC wherever possible (e.g. adult feeding chicks). The more general codes for possible/probable/confirmed breeding should be reserved for interpretation at a later stage when compiling data.
- If you ask observers for species lists at larger scales, e.g. for a national 10x10 km grid atlas, ask them to give you the record with the highest AC.

Recording schemes for casual observations/online platforms

- Casual observations can be used for many monitoring purposes. With the increase of online platforms, the quantity of such observations is growing. These guidelines are intended to maximise the quality of data collected this way, be it for an atlas or for other purposes. The value of casual observations can be increased greatly if observer effort is monitored at the same time, and a measure of sites visited where the species was definitely not recorded. Encourage observers to submit complete species lists from a specific location instead of just observations from any species they like to record, and ask them to record the amount of time spent observing.
- Individual records may be particularly important to record distribution. Observers that know particular species well but may not be able to provide full lists should not be discouraged by asking for full lists.
- Make sure that records submitted on complete lists and as individual observations can be distinguished in the database.
- If you use an online platform, offer the possibility that observers can enter records but hide them from view by other observers while making them available for the national

database holder. This is important for instance to hide the location of nest sites of rare or sensitive species. If a list of nationally rare breeding birds exists, make these species lists available to volunteers and recommend that records for these species are recorded as sensitive.

- Recommend evening visits to look for nocturnal species

Additional information useful for national atlases and for EBBA2

- In addition to setting Atlas Codes define a breeding season per species (sometimes called “safe dates”), to avoid mistakes arising from species singing during migration etc. Observations with an Atlas Code outside this period should only be accepted as breeding records after careful checking and if high AC are used. Safe dates may have to be defined separately for different regions within a country (e.g. for southern and northern regions).
- Observations outside the known range of a species have to be checked carefully.
- To facilitate future transfer for EBBA2 it can be useful if an “Atlas-Verification-Code” is introduced when you design a new database:
 - ok for EBBA2
 - unusual but checked and ok
 - dubious
 - not qualifying for EBBA2

Principles for preparing national atlases

In recent years many atlases have been published or are in preparation that can be used as models for planning a national atlas. Examples are the atlas for Britain & Ireland (see <http://www.bto.org/volunteer-surveys/birdatlas/taking-part>), Catalonia or Italy, for which the field methodology can be found on the EBCC website.

All these atlases combine two levels of spatial resolution and of details of data recording, usually a 10x10 km grid and a 1x1 km (or 2x2 km) grid.

The large grid (10x10 km) contains presence/absence data for all breeding species:

- Observers are asked to prepare a list of all breeding species (as complete as possible) per atlas square by visiting all habitat types.
- The highest breeding evidence (see Atlas Codes) should be recorded.
- The aim is to visit all atlas squares within a country. If this is not possible, the squares should be as widespread and randomly distributed as possible to be representative of the whole country. Start with a loose net and fill in the gaps if resources allow. A chequer-board approach could be used to identify priority squares for surveying to ensure more even coverage across a country
- The data will give you the basis for preparing traditional presence/absence grid maps.

Information at a smaller scale (1x1 km) is used to gather information on relative abundance especially for widespread species. Very localised or colonial breeders can usually not be covered by these methods.

- A number of small squares per large atlas square is chosen, e.g. 5 squares or less if resources are lacking.
- The squares should ideally be stratified, i.e. they should cover the main habitats and altitude belts within the atlas square.
- Information is gathered in a standardised way, by point counts, transects or territory mapping.
- Timed transects, e.g. lasting 1 or 2 hours, following a transect across the square, are a good way to involve less-experienced observers. Territory mapping is more demanding,

and point counts are often not very popular among volunteers not familiar with these methods.

- On the transects, either the number of (adult) individuals per species (seen or heard) is noted (more difficult) or just the list of species observed (easier).

Documents for downloading

The following related documents can be found on the EBCC website:

- Atlas codes
- Species list (in preparation)
- 50x50 km grid for download (will be added)

19 April 2012

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