Landscape Conservation for Irish Bats - metadata

Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N., (2011) *Landscape conservation for Irish bats & species specific roosting characteristics*. Bat Conservation Ireland.

These GIS layers are a research outcome of a study by Lundy *et al.* (2011) examining the relative importance of landscape and habitat associations across Ireland. The study analysed data contained in the Irish National Bat Database, maintained by Bat Conservation Ireland and the National Lesser Horseshoe Bat database maintained by National Parks and Wildlife Service.
The analysis was done for all bat species that commonly occur in Ireland, namely;

- Common pipistrelle
- Soprano pipistrelle
- Nathusius' pipistrelle
- Leisler's bat
- Daubenton's bat
- Natterer's bat
- Whiskered bat
- Brown long-eared bat
- Lesser horseshoe bat

WHAT WAS THE METHOD USED?
Maximum Entropy Models (MEM) were constructed for each bat species using records from the National Bat Database from 2000-2009. This method allows species' records that have not been collected in a systematic survey to be analysed. The results help explain patterns of species' occurrence and predict where species might occur.
Landcover (CORINE), topography, climate, soil pH, riparian habitat and human bias factors were incorporated into the models.
Predictor layers were constructed on grids of increasing spatial scale of size = 0.5km, 1.5km, 2.5km, 4.5km, 6.5km, 10.5km and 20.5km.

WHAT ARE THE PROJECT RESULTS?
Arising from the study the following outputs were achieved, and the results summarised in the accompanying GIS layers for all species combined, and the individual species.

1. The geographical areas that are suitable for individual species are identified.

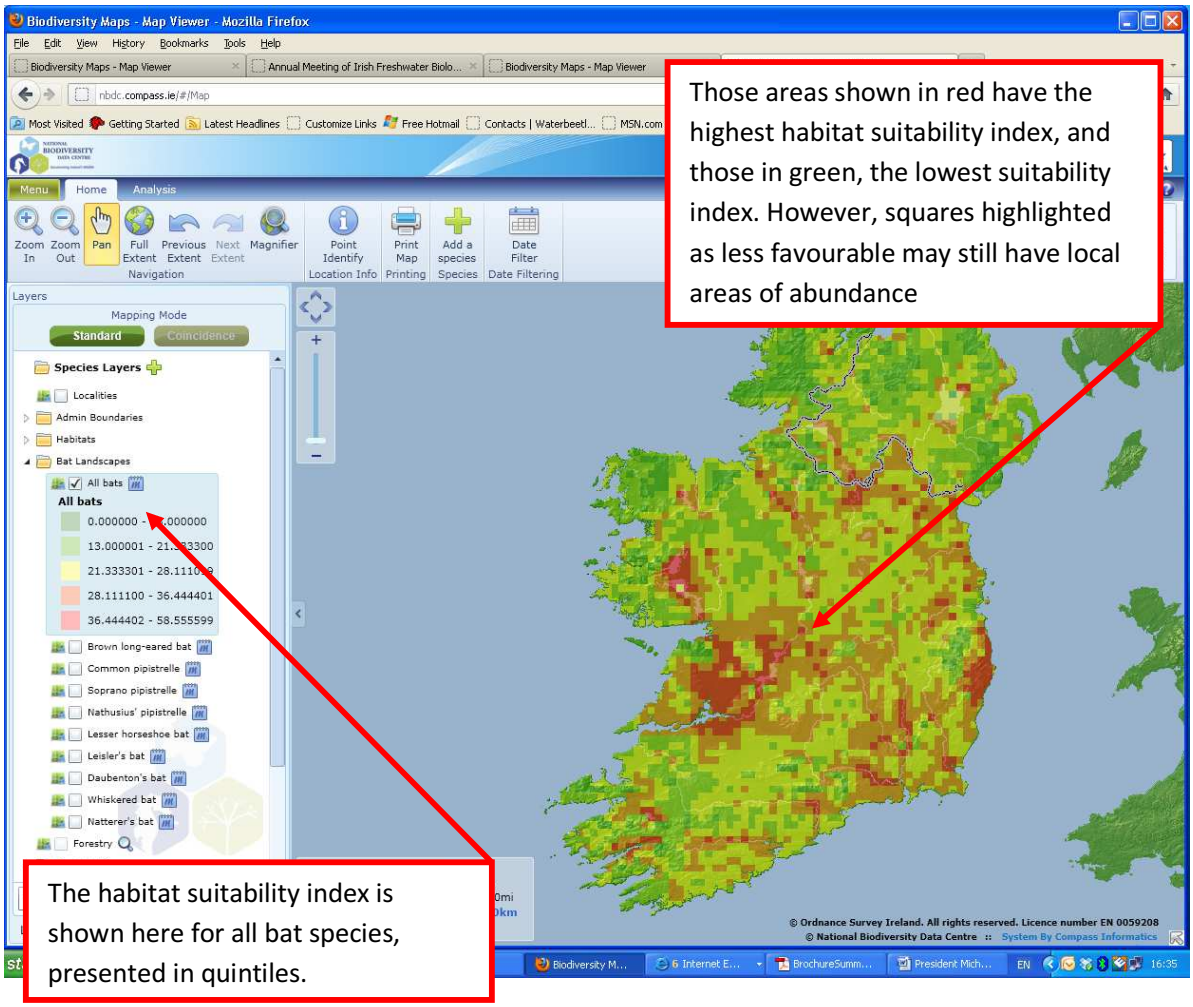
2. The associations that result in these patterns are summarized.

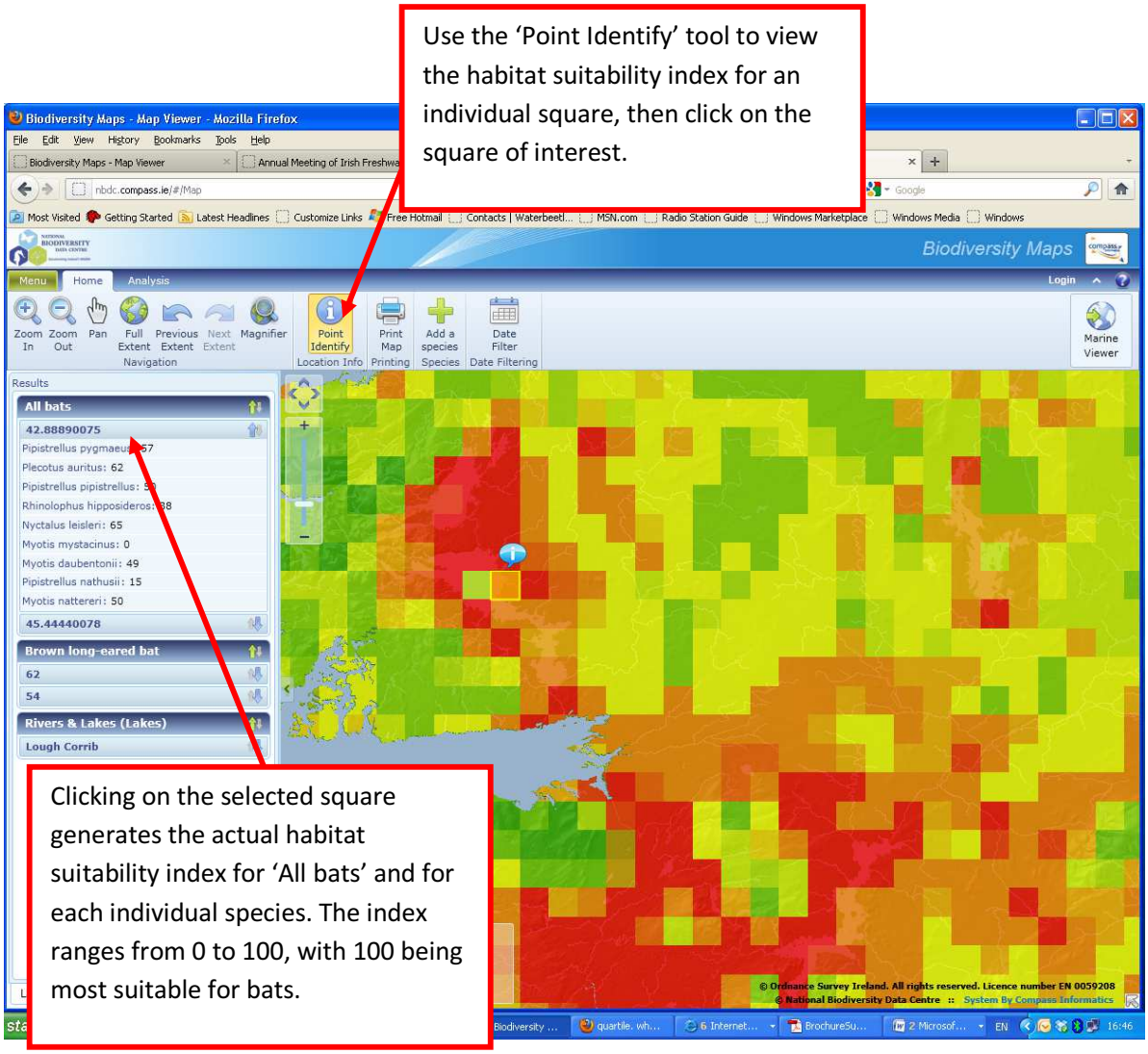
3. For each species, the 'core favourable area' is identified.

4. Roosting habitat associations of each species are identified.

5. Patterns of selection for specific aspects of roost type, such as building types or wall construction material, are also described. This combination of analyses provides a picture of the broad scale geographic patterns of occurrence and local roosting habitat requirements for Irish bat species.

The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. The maps are constructed using spatial units of the OSi National Grid. The index presented is for all species combined, in addition to the individual species' indices.





Associated links:

The final research report is available to download at
http://www.batconservationireland.org/pubs/reports/Landscape_Conservation_Irish_Bats.pdf

The Irish National Bat Database can be viewed at
http://maps.biodiversityireland.ie/#/DataSet/128

The National Lesser Horseshoe Bat database can be viewed at
http://maps.biodiversityireland.ie/#/DataSet/127

For further information about the Centre for Irish Bat Research
www.cibr.ie

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