

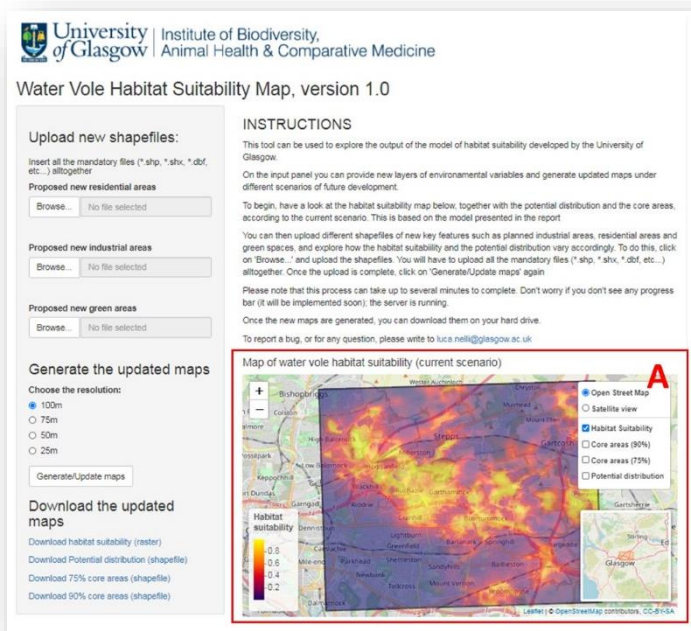
Water Vole Habitat Suitability Map, version 1.1: step-by-step tutorial

This document is a step-by-step guide to the use of the interactive tool developed by the University of Glasgow and presented in Nelli and McCafferty (2020), to explore the water vole habitat suitability in the Seven Lochs Area – Glasgow (UK) under different scenarios of planned development.

The most updated app can be found at the <http://boydorr.gla.ac.uk/lucaNELLI/watervole/>. To report any bug or for any questions, please contact luca.nelli@glasgow.ac.uk.

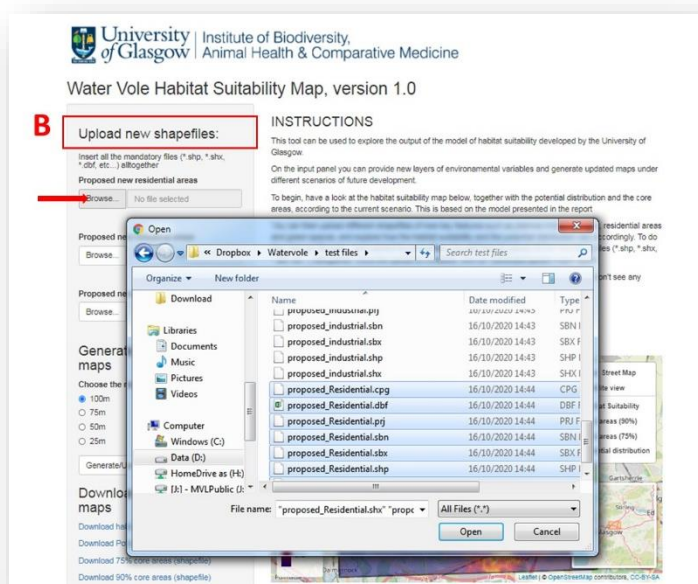
1. Explore the main viewer (step A)

The box in figure A is a map viewer in the form of a Web-GIS interface, where you can navigate, zoom in/out, change the background layer, and select which model output to show (e.g. continuous surface of habitat suitability or the core areas under different habitat suitability thresholds – see Nelli and McCafferty (2020) for details). Please note that this map represents the “current” scenario of habitat suitability, as estimated by the model presented in Nelli and McCafferty (2020). You can then download a screenshot of the map by clicking on “Download current view”. However please see step 5 for a proper download of the raw files.



2. Upload new shapefiles (box B)

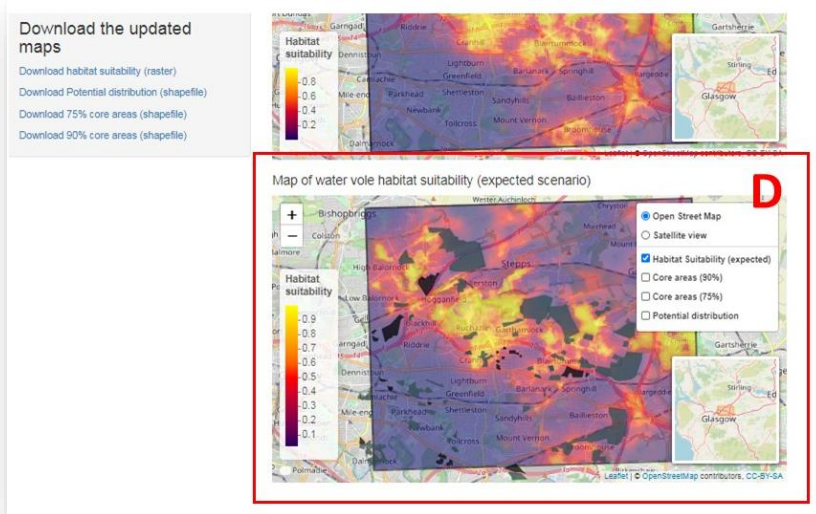
You can now upload the shapefiles of the new environmental variables (i.e. proposed new residential areas, industrial areas and green spaces). You don't need to necessarily upload all the three categories, but please note that for each category, you need to upload all the requested files associated with the shapefile (e.g. *.shp, *.shx, *.dbf, etc...). A compressed folder with a set of example files can be downloaded [from here](#) (you'll need to unzip the folder and save on your computer).



3. Generate the new habitat suitability maps (box C)

Once the upload has completed you can click on 'Generate/Update' maps, to generate the new habitat suitability map for the expected scenario, under the new shapefiles. Please note that this process may take several minutes, depending on the desired resolution (from 25m to 100m). It is advised to test this step first at 100m, then move to a higher resolution once you are sure that everything is working. Also please note that in the current version (1.0), you won't see any progress bar (it will be implemented soon); however the server is running in the background so please just be patient.

Upload new shapefiles:
Insert all the mandatory files (*.shp, *.shx, *.dbf, etc...) altogether
Proposed new residential areas
Browse... 7 files
Upload complete
Proposed new industrial areas
Browse... 7 files
Upload complete
Proposed new green areas
Browse... No file selected
C Generate the updated maps
Choose the resolution:
☒ 100m
☐ 75m
☐ 50m
☐ 25m
Generate/Update maps

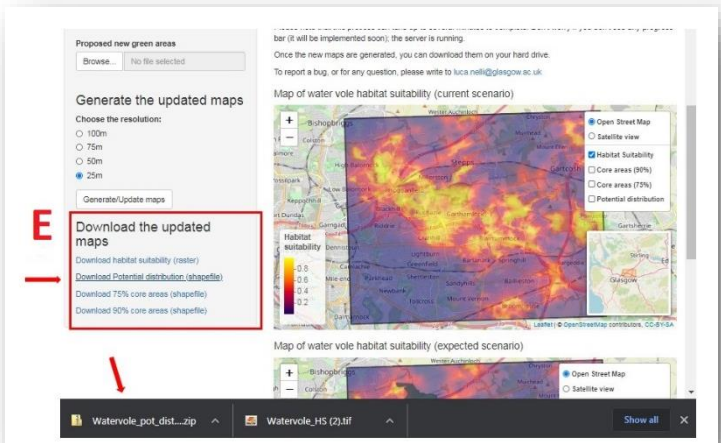


4. Explore the updated maps (Box D)

You can now scroll down to the map viewer for the expected scenario, under the planned development. This map shows the habitat suitability, and the core areas, as it would be expected given the new or changed environmental variables, that you have uploaded at step B. These will be shown on the map as well in black (new industrial areas), grey (new residential areas) and green (new green spaces).

5. Download the new maps (Box E)

Finally, you can download the habitat suitability maps on your computer by clicking on the links in box E. The general habitat suitability comes as a GeoTiff format, whereas the core areas will be stored as ESRI Shapefile into compressed folders. Please note that you will download only the "updated" maps (i.e. those generated after having uploaded the new shapefiles); the maps of the current scenario (as in box A) are already available [at this link](#) (see Nelli and McCafferty (2020) for details).



References

Nelli and McCafferty (2020). Using habitat suitability and connectivity models for the management and conservation of urban grassland water voles (*Arvicola amphibius*). Unpublished report.