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## NAME

*r.out.maxent\_swd*

## DESCRIPTION

The script is intended to produce a set of SWD files as input to MaxEnt 3.3.3e using r.stats.

The SWD file format is a simple CSV-like file format as described in Elith et al. 2011. Generally it looks like:

```
specie_name,X,Y,parameter_1,parameter_2,...  
your_specie,1.1,1.1,2,4.7,...
```

The first column always contains the name of the species, followed by two columns for the X- and Y-coordinates. Then each column represents one environmental parameter. In contrast to r.stats only integer values are accepted to represent NO DATA.

A background SWD file is always produced while specie output can be omitted.

Multiple species can be processed, but each has to be in an individual raster map. Map names of the maps containing the environmental parameters can be replaced by short names, which should be used in MaxEnt 3.3.3.e.

Results from MaxEnt can either be imported using r.in.xyz or calculated from MaxEnt lambdas file using the script r.maxent.lambdas.

## NOTES

## SEE ALSO

[r.stats](http://www.cs.princeton.edu/~schapire/maxent/) MaxEnt 3.3.3e <http://www.cs.princeton.edu/~schapire/maxent/>  
Wilson, Peter D. 2009: Guidelines for computing MaxEnt model output values from a lambdas file. (Available

at <http://groups.google.com/group/MaxEnt>) Steven J. Phillips, Miroslav Dudik, Robert E. Schapire. 2004: A maximum entropy approach to species distribution modeling. In Proceedings of the Twenty-First International Conference on Machine Learning, pages 655-662, 2004.

Steven J. Phillips, Robert P. Anderson, Robert E. Schapire. 2006: Maximum entropy modeling of species geographic distributions. Ecological Modelling, 190:231-259, 2006.

Jane Elith, Steven J. Phillips, Trevor Hastie, Miroslav Dudik, Yung En Chee, Colin J. Yates. 2011: A statistical explanation of MaxEnt for ecologists. Diversity and Distributions, 17:43-57, 2011.

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*Last changed: \$Date: 2013-03-27 10:03:58 +0100 (Wed, 27 Mar 2013) \$*

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