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SEP.
2009

🕐 de 13h à 14h30

Creating dynamic maps of biodiversity: examples in R + Google Earth

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The seminar will focus on application of open source tools for analysis of biodiversity data. The focus is put on R statistical computing environment and its various Environometrics and Spatial packages. There are three main opportunities for using R: (1) vitality and high speed of development of R, (2) academic openness of developers and their willingness to collaborate, and (3) increasing sympathy for spatial data analysis and visualization. Spatial statisticians generally believe that geostatistical techniques are suited only for modeling of features that are inherently continuous (spatial fields); discrete objects (points, lines, polygons) should be analyzed using point pattern analysis and similar methods. A method is suggested that tries to bridge this gap by combining the strong points of various packages in R with the geographical analysis capabilities of the open source GIS. The presenter will demonstrates how to combine geostatistical techniques with conceptually different techniques --- point pattern analysis and Niche analysis --- to allow prediction of species' distributions using regression-kriging.References: 1. Hengl, T., Sierdsema, H., Radovic, A., Dilo, A., 2009. Spatial prediction of species' distributions from occurrence-only records: combining point pattern analysis, ENFA and regression-kriging. Ecological Modelling, in press. 2. Hengl, T., 2007. A Practical Guide to Geostatistical Mapping of Environmental Variables. EUR 22904 EN Scientific and Technical Research series, Office for Official Publications of the European Communities, Luxemburg, 143 pp. ISBN: 978-92-79-06904-8 3. Hengl T., Heuvelink G.B.M., Rossiter D.G., 2007. About regression-kriging: from equations to case studies. Computers and Geosciences, 33(10): 1301-1315