Dublin Core to Ensure Interoperability between Models Generated by Tools of Species Distribution Modeling

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Abstract

This poster presents the use of the Dublin Core for tools that make species distribution modeling. As a case study, this poster proposes the use of the Dublin Core for there to be a connection between the models generated by tools of species distribution, contributing to the area for Biodiversity Informatics.

Justification

The Species distribution modeling assists in decision making for conservation and preservation of biodiversity. This area makes it possible to verify the changes in species distribution, changes in populations and their diversity for a given period, for example. However, studies show that currently modeling species distribution has become more complex (Soberón, Nakamura, 2009). And equally modeling tools require improvements to the application of new techniques and modeling strategies (Peterson et al. 2011).

One of the requirements is to ensure data interoperability between modeling tools. Interoperability means the ability of information exchange through a metadata standard. In this context the Dublin Core could help being adopted as a standard of data between models generated by the modeling tools distribution of species.

Dublin Core and their use in species distribution modeling

Currently the main link between the modeling of species distribution and Dublin Core is that modeling tools access different database platforms that use the Dublin Core standard for publishing and standardization of information.

The use of metadata standards such as Dublin Core also assists in collecting biodiversity data process because the data becomes public and through standardization is possible that the data is available on various platforms.

At this stage, display and availability of the data collected, this poster proposes the use of Dublin Core to be explored and used between models generated by modeling species distribution tools.

Application of Dublin Core for connection between models of species distribution

The current structure of species distribution modeling tools is that they generate independent models and may not be used or reused by other tools. This makes the researcher / user having to use more than one tool to reach your goal.

The idea is that with the Dublin Core standard, other standards, and an ontology, it is possible to create a connection between the tools, ensuring interoperability between them, as we can see in Fig 1 and Fig. 2.

Conclusion

In conclusion of this part of the research it is possible to realize that the use of the Dublin Core can assist in the process to ensure interoperability between models generated by modeling tools distribution of species. The Dublin Core standard has been one of the references regarding standardization for data availability and data visualization, and this would have a strong acceptance of the researchers for this standard is adopted as a party basis for a connection between modeling tools distribution species.

References


