

Information and Communication Technology, Social Networks and the Development of the Brazilian Biodiversity Information Infrastructure

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Knowledge on the diversity and distribution of biological species is fundamental to support the development of conservation strategies, public health policies and sustainable socio-economic development. Example applications include the search for rare or endangered species, planning new conservation areas, assessing the impact of human activities on biodiversity, predicting the impact of climate change on species' distribution, preventing the spread of invasive species, identifying disease vectors and develop strategies to increase agricultural productivity. Addressing the challenges in mega-diverse countries is a major endeavor. Informed policy making to support sustainable socio-economic development is dependent on the easy and ready access to a variety of data. This depends on the development of robust data infrastructures that support the free and open access and dynamic integration of data and information from distributed data providers. The developments of information and communication technology associated with the adoption of internationally agreed standards and protocols are promoting the interoperability of information systems and the dynamic integration of biological data with types of data, including environmental and socio-economic data, literature information and satellite images. The presentation will discuss the appropriation of emerging technologies in the consolidation of bottom-up community efforts and social networks community that are allowing the production of taxonomic catalogues, the development of computational environments to support ecological niche modeling, and the transparent integration of specimen data from biological collections. The experience of the implementation and consolidation of the speciesLink network (over 180 biological collections and 3,5 million records), the information system to support the social network involved in the revision of the Brazilian Flora and the impact of development of tools to support data cleaning and visualization of biodiversity and data information in Brazil will be discussed.