On-Line Access to Conservation Data: Challenges and Opportunities

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The emergence of on-line databases of different kinds relevant to conservation and their increased accessibility is changing the way we can improve access to data, develop better analytical capacities and effectively support decision processes. The new paradigms created by on-line access not only can bridge the gap between scientific data and action but also accelerate the knowledge process and the impact of new research on policy making.

At the World Conservation Congress in Bangkok, November 2004, IUCN launched the Conservation Commons initiative, an effort to define a framework for facilitating access and data and information sharing within the conservation community. The Conservation Commons Principles support free access to data and information, protection for author's rights and recognition, and for the proper use of the data and information (safeguarding data integrity, etc). This effort, similar to the Science Commons, is already subscribed by more than 50 organizations from the non-governmental, governmental, inter-governmental, academic communities, and the private sector among others. Under this framework, we hope to develop the standards, methods and tools to leverage open access data and information for the benefit of the conservation of biodiversity.

IUCN in collaboration with other organizations has already been developing some of the core databases for such an effort. The Species Information System (SIS) developed by the IUCN Species Survival Commission, constitutes the basis for the development of the RedList on Endangered Species and is being released annually. The World Database of Protected Areas (WDPA), developed by the WDPA Consortium under an agreement between IUCN and UNEP, has been releasing annual versions of the World Database of Protected Areas on an annual basis since 2003, both in CD-ROMs and on-line. ECOLEX is a joint venture between IUCN, UNEP and FAO for on-line access to environmental law, treaties, court decisions and legal publications. PALNet, the Protected Areas Learning Network is a on-line collaboration network for knowledge management concerning Protected Areas issues. Each of these systems has their own organizational framework, constituency, policies and processes.

Many more non-IUCN systems important to conservation are now accessible on-line and are being developed and maintained by many organizations, either directly related to conservation or not. Many of them, like GBIF, already use a data sharing framework similar to the one proposed by the Conservation Commons.

Availability of these on-line data sources opens the way for new paradigms on how to facilitate the interoperability between these systems so new ways to visualize the data and information, perform analysis and synthesis and develop and maintain decision support tools can be developed by different actors. In effect, all of these systems have done the best job at visualizing the kind of analysis that a user can do with their data. If these systems are available in a way that facilitates interoperability it is very difficult for any particular organization or system to visualize the myriad of audiences and needs that can be addressed by these systems. A very simple demonstration was resented at the World Conservation Congress exploring these possibilities. The prototype used on-line GIS interfaces to query and integrate data from SIS, WDPA, GBIF, Arkive and other systems.

The focus of this presentation will be on exploring ways in which we might be able to address interoperability from an end-user point of view (how the user would like to combine, analyze and present data and information) and discuss on-going efforts to address these challenges.