

Species Information Service

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Background

SIS was conceived approximately 12 years ago as a solution to the information management needs of the highly dispersed members of the SSC. Over a few years, the SIS vision grew, proposing SIS as a decision-support tool for the private sector – a “one-stop shop” for biodiversity information. At that time, there weren’t many significant efforts on the web to disseminate information on global biodiversity information.

The Species Information Service, as a one-stop shop for biodiversity information, was never realized. Today, the web is saturated with attempts to disseminate species information in a global, “one-stop shop” approach. These include the Encyclopedia of Life (EOL), Fishbase, SpeciesBase, Global Species Information Service and Wikipedia, just to name a few. None of these however focus on the conservation status of species.

The IUCN Red List today

IUCN currently maintains and provides an important biodiversity information service on the web: The IUCN Red List of Threatened Species™.

The IUCN Red List doesn’t attempt to be a one-stop shop for species information. Rather, it provides detailed information on the conservation status, threats, and distribution of species. A particular focus of the IUCN Red List is to identify and provide information on those species most at risk of extinction, so that conservation efforts can be focused where they will have the biggest impact on halting extinction.

This goal is much different than the goal of the EOL, for example, which is to have “a web page” for each 1.8 million species on Earth. Another resource, Fishbase, holds such information as recipes for fish, symptoms a human would experience if he or she would ingest a particular toxic fish, and detailed information on swim speeds. These tools are useful for many purposes, but much of the information is not relevant to conservation.

IUCN, the SSC, and indeed the IUCN Red List and SIS, are focused on information relevant to species conservation. This is where IUCN adds significant value.

What is SIS, then?

With the above in mind, SIS is not attempting to compete in the arena of one-stop shops for species information. Rather, SIS must focus on two areas:

1. Improving the ability of the SSC and IUCN Red List Partners to collect, manage, and use species information;
2. Enhance and improve the usability, accessibility, and reach of the IUCN Red List of Threatened Species as IUCN's principle means for disseminating species conservation information.

Rather than a single tool or web application, SIS will be a suite of services and tools to improve SSC species information collection, management and the network's ability to use the information, as well as tools (new and existing tools) for making the information widely available and useable for conservation decision-makers, scientists, educators, etc.

SIS web-based information management tools

Shortly, IUCN will be launching a completely new web-based (with offline support) system for managing species information, initially focusing on all IUCN Red List processes. The initial focus on new Red List tools is a matter of urgency. The IUCN Red List is growing while the documentation requirements for Red List assessments are growing, yet the tools at our disposal are completely unsatisfactory. The new tools will aim to increase the quality and transparency of Red List assessments while facilitating smooth collaboration among experts spread across the world.

Following the successful implementation of the Red List tools, the focus will shift to providing additional modules to support SSC species information management needs that fall outside of Red Listing. These modules may be created to support tracking detailed population information, occurrence data, PVAs, species legislation information, use/trade information, or other information specific to certain taxonomic groups or thematic specialist groups. The architecture of the new system makes creating and adding information modules easy; *in fact, the system was designed specifically to be a system that will scale and expand well beyond its use for performing and managing Red List assessments.*

Improving the usability, accessibility, and reach of IUCN's species information

The second focus of SIS is to make the species information generated within the SSC as accessible and useable as possible to a diverse group of users – scientists, educators, conservation practitioners, businesses, and more.

Currently, the IUCN Red List website is the principle means of making IUCN Red List information available to the world. The site enjoys heavy traffic (1.8 million page views per month as of Jan 2008), is extremely well linked-to by other websites (currently 217,000 links), and is a trusted source of information. However, there is ample opportunity to improve and expand the website to make it an even more powerful resource for exploring and using species information. Some examples of needed improvements:

- Create a more user-friendly and powerful search interface
- Allow users to “save” searches in their own Red List account
- Add more dynamic GIS capabilities now that we have more raw spatial data
- Include photos of species from SSC experts and others
- Move the site towards a content-management platform to ease updates to the static pages and improve the ability to quickly publish news items

Furthermore, there is an opportunity to make the species information IUCN holds available to users through other innovative approaches. These include:

- IUCN Red List web services. This is best described as serving up the information through information “feeds” or queries through the backend of the IUCN Red List. This approach can reduce “screen scraping”, whereby other website producers copy information from the Red List website, which often results in poor attribution and information quickly going out of data.
- Publishing species information via Google Earth, Google Maps, and other Earth viewing applications.
- Providing alternative search interfaces through web browser tools, such as Firefox’s Search Bar.

Conclusion

SIS aims to serve the information management needs of the SSC, and indeed, the wider IUCN family, whilst improving the accessibility, usability, and reach of the species information we want to see benefiting conservation.

The Species Information Service will consist of:

- Targeted improvements to the IUCN Red List website
- Web-based tools to support the entire Red Listing process
- Web-based tools to support non-Red List information management needs
- Using web services and other innovative tools to make the IUCN species information more broadly accessible and useable

In 2008, we will see the first of the new web-based tools and some major improvements to the IUCN Red List website. The identification, development, and implementation of other SIS tools is an ongoing endeavor responding to the changing needs of IUCN, the SSC, and the information users.