

❖Standard 4: Make all products, methods and supporting data publicly available, in accordance with data sharing agreements.

Case Study: Southeastern United States freshwater biodiversity assessment final report and supplementary CD

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Purpose and region of analysis

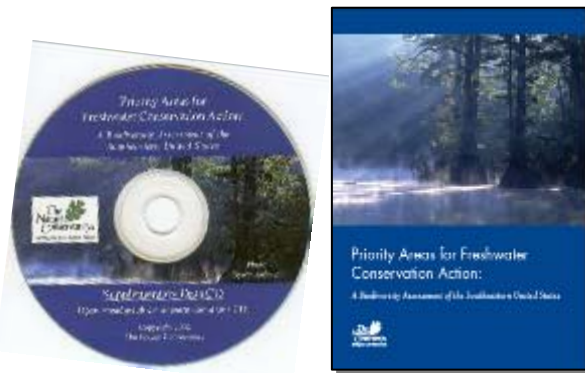
A freshwater biodiversity assessment was conducted for 4 freshwater ecoregions in the Southeastern United States. Upon completion of the assessment, the team put together a report and supplementary data CD for distribution to the broader conservation community.

Criteria/Methods

Freshwater ecosystems in the Southeastern United States harbor a globally recognized biological diversity. A World Wildlife Fund study identified priority freshwater ecoregions in North America based on biodiversity value and threats to the biodiversity (Abell et al. 2000). Many of the highest priority freshwater ecoregions are located in the Southeastern United States. This assessment examines four of these: Tennessee-Cumberland, Mobile Bay, South Atlantic and Mississippi Embayment.



The methods, results and data from this assessment effort were published in a report and on an accompanying CD and disseminated with the intent that these products would “facilitate a coordinated approach to freshwater biodiversity protection by: identifying a suite of conservation areas around which groups can prioritize their work; supporting the development of multi-site strategies; and providing baseline data for future assessment of conservation actions and freshwater biodiversity status.” The Supplementary Data CD was placed in a sleeve on the back cover of the report for dissemination with each copy of the final report “Priority Areas for Freshwater Conservation Action: A biodiversity assessment of the Southeastern United States.”



In order to link the CD to the report further ensuring the use of this product, a box summary was placed early in the text of the report. An icon of a CD was used throughout the text when supplemental information or data was available on the CD. The CD contains four directories; tabular data, data gaps, final report and GIS data. Each of these directories has an associated “read me” document describing the content of each directory. The team also plans to use gis.tnc.org as a repository for updates and new data including the periodic update of the MS Access database.

BOX 1. Using This Report as a Conservation Tool

Accompanying the text of this report is a CD including detailed information on conservation targets (species and freshwater ecosystems), target viability and integrity, conservation area attributes (target lists and threats), and geo-referenced data. Our intention is that this report and the accompanying data be used for further analysis and as a tool to implement conservation action. The conservation community can use the data to refine priorities, develop conservation strategies, address identified data gaps, and assess the efficacy of conservation actions and the status of freshwater biodiversity in the future.

Included on this CD are all tabular data and most GIS data sets used in this project. Components of the CD are:

- Report Text
- More detailed description of some methods/strategies
- GIS projects with key data layers
- Maps of conservation areas, geology, land use
- All tabular data including lists and descriptions of targets, Ecological Drainage Units, conservation areas, lists of targets in conservation areas, and details on target goals

In addition, all other large data layers used in this analysis will be available at gis.tnc.org. These include several large datasets (e.g., land use/land cover, digital elevation models, and surficial and bedrock geology coverages) not included on this CD. Details for logs and download information can be found at the website.

Throughout the document, a CD icon will be used to indicate that important related data are available on the CD. Please see the file <readme.doc> in the base directory on the CD for further instructions and software requirements for viewing the CD components.

Products/Outcomes

The report and CD were developed within TNC relying on those with GIS, graphic design and editorial expertise to convert a technical report and raw data into a useable product for an external audience. The project was completed under a grant from the Charles Stewart Mott Foundation.

Approximately 500 copies of the report were printed and 1000 CD produced for around \$11,500. The products were disseminated throughout the Southeastern United States and to others interested in freshwater conservation assessments around the world. Dissemination targeted conservation groups and resource management agencies including TNC

contacts in States covered by report, relevant Heritage Programs and NGOs, all experts that participated in the process, and appropriate persons in several state and federal agencies. Contacts were identified in most wildlife and fisheries, water quality and transportation agencies in the represented States. Attempts were also made to identify regional USFWS, EPA and USFS contacts. This product was utilized by several State Wildlife Comprehensive Planning teams (e.g., Tennessee, Georgia, and South Carolina). North Carolina has reviewed the report and may be using it in some of their basin-wide water quality plans. World Wildlife Fund used the data generated in this project in developing foci for their Southeastern rivers work. Components of the products (e.g., freshwater ecosystem maps, GIS-based ecosystem integrity analysis, and threat assessments) are being used as the basis for a TNC project providing recommendations to the Southeastern Aquatic Resource Partnership (a consortium of state and federal fish and wildlife agencies) on a framework for a regional aquatic habitat plan. Several other recipients have followed up with further questions.

Strengths and weaknesses

Several partners have indicated that a primary strength of this product is the compilation of many types of information on freshwater species and ecosystems in a single location. For example, partners have benefited from the all-inclusive, searchable database where they can view the current state of knowledge on status of fishes, mollusks, other invertebrates in one place along with information on ecosystem type, threats to imperiled species, etc.

In retrospect, the authors would have done more thorough research to engage potential "users" before hand to learn how to make the product most useful. Also, the benefits of the assessment effort and data collection and analysis could have been much more useful to State Wildlife Comprehensive Planning teams. A more deliberate introduction of the assessment to SWCP teams may have resulted in more comprehensive use of this product and less redundancy of effort among TNC and external state-level conservation planning teams. Another weakness is data gaps, especially in areas of threats to biodiversity at conservation areas and viability of some species targets.

Suggestions for others considering similar analysis

For those considering the production of ecoregional assessment products for an external audience, we recommend:

- A staff person dedicated to data management on the project team as the burdens of data compilation, report writing, final analyses, etc. were too much for the team at the end of the project.
- A priori determination of products useful to partners.
- Review of content and tone of text by qualified reviewers. This may require several reviewers acknowledging that those most qualified to review content may not be best suited to reviewing tone and readability and vice versa.
- Complete engagement and participation of all TNC state chapters in the project area improving engagement of partners after product is complete and disseminated.

References

Smith, R.K., P.L. Freeman, J.V. Higgins, K.S. Wheaton, T.W. FitzHugh, K.J. Ernstrom, A.A. Das (2002). Freshwater Biodiversity Conservation Assessment of the Southeastern United States. The Nature Conservancy.