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

[SHARE]

Rationale
All organizations and agencies working on biodiversity and resource management should have information and data available to them to inform their actions and to conduct analyses.

Recommended Products

- Reports and data (within data sharing agreements) made available in CD format and on the web. Printed and bound editions are also recommended.

INTRODUCTION

No one organization can adequately address the conservation needs of an ecoregion.
In order to build partnerships and leverage their work, ecoregional teams should design a communications strategy to accompany their assessment, and should make their findings publicly available.

To get conservation done "on the ground", a number of different audiences will need to hear the message and be moved to act. Communicating is more than just presenting the ecoregional report. It also involves listening to audiences and understanding what attributes the audience wants in any conservation group and agenda it will support. Finally, as with the ecoregional assessment, a communication plan should evolve and change as more information becomes available, as conservation actions shift and as awareness is altered in the conservation landscape.

The key steps in making ecoregional assessment information available are:

- Determine audience and develop key messages
- Developing a communications strategy
- Packaging the product

Determining audience and develop key messages

People who access what you make public need to *understand* the information you are providing and not merely receive it. Any data product must include metadata as described in the data management framework standard. Metadata clearly define the sources and attributes of data and ensure that there is clarity as to what they represent.

Many partners are involved in the ecoregional assessment process, but additional communications to their organizations and other staff are necessary, as well as to partner organizations that were not involved. Stakeholders represent a range of individuals and organizations from strong supporters to opponents.

Possible audiences include:

- Immediate neighbors
- Resource-based industry (agriculture, timber, mining, fishing, etc)
- Elected officials
- Government agencies
- Conflicting interest groups
- Recreational user groups
- Major donors
- News media

Many audiences will be familiar to the planning team. However, there may be great variation in how well the team understands the audience, what the team wants from the audience, and what the audience wants from the assessment team. There are many ways to quickly gain additional information about audiences. One resource is community-based staff; another might be a volunteer who serves on a chapter or advisory board and who is active in community affairs. Newspaper archives are an excellent resource, because they chronicle most of the day-to-day discussion of issues at local, regional, state and national levels.

Organizing information on the communication goals and audiences is helpful in clarifying messages, tools and lead staff. Below is an example of a matrix:

Goal	*Audience*	*Message*	*Tool*	*Leader*
Be recognized as the leader in ecoregional conservation	USFS Dist. Supervisor	Our ERA work backs you up	One-on-one briefings, maps, plan details, reports	Dir. Of Conservation Science, Conservation Programs, Regional Scientists, Govt. Relations
	Elected county commissioners	Voters support this	Polling, editorials of support in local newspapers	State Director, Govt. Relations staff
	News Media	Biodiversity is key to quality of life	Show them the places we're talking about	Communications staff
Preempt attacks from opponents	General public, media	Credible science, valid approach	Develop speaking points, media training	Communications team (State Dir., Conservation Science, Conservation Programs, Communications Dir., et al)

Developing a communication strategy

In addition to making the technical aspects of the ecoregional work available, the context of the work should be communicated differently for different audiences. To get conservation done "on the ground", a number of different audiences will need to hear and be moved by the message to act. Communicating is more than just presenting the ecoregional report. It also involves listening to audiences and understanding what attributes the audience wants in any conservation group and agenda it will support. Finally, as with the ecoregional assessment, communication plans should evolve and change as more information becomes available, as conservation actions shift and as awareness is altered in the conservation landscape.

Conservation assessments should produce three general components of information:

- A report summarizing the intent, partners, steps, processes, methods and products;
- Data sets in the form of tables and spatial (GIS) data, and;
- Communication materials such as peer-reviewed publications, brochures, email and published updates, public presentations and meetings that will help galvanize conservation actions and the use of the information generated in the assessment.

The development of a communications strategy can help ensure the team can produce these components. We recommend working with communications, government relations and marketing staff from the onset of the project. This ensures that budgets have money earmarked for the creation and production of publications, etc. Trying to piece together materials for various audiences after the completion of the plan takes much longer and generally lacks the quality of well thought out products/outcomes.

Packaging the product

Reports, data and communication pieces are critical for the credibility of our work. All publicly available reports and data should be reviewed by a small set of partners to see if the messages are clear, materials are well presented, and the information is not cluttered with insular organizational terminology. A professional proof-reader is recommended for all materials.

Reports and data are critical to inform the next steps of future iterations of the assessment, designing appropriate strategies, taking actions and measuring progress. These products galvanize and provide information to partners and stakeholders in conservation and natural resource management actions. At The Nature Conservancy, to date 43 conservation assessment reports have been published in the ConserveOnline[1] digital library. Over 25 assessments have been published on CD-ROMs with associated tabular, spatial and publication data. While the content of assessment reports will vary widely, we recommend that all reports contain (Groves 2003, WWF 2004):

- *Executive summary*

[1] http://conserveonline.org/subjects/Ecoregional_Planning

- *Introduction to the ecoregion or planning region*: Ecological and environmental descriptions, boundary justification, biodiversity status, land ownership and land-use patterns, threats to biodiversity, existing conservation areas, human population status and trends.
- *Overall purpose, goals, and objectives*: A brief overview of conservation problem(s) the plan is attempting to address, and the overall vision and goals for what the plan hopes to achieve.
- *Overview of methods*: A summary of the overall methods, with details in an appendix.
- *Sources of Information, data collection and data management*: A summary of the types of data used in the project (e.g., remote sensing, expert opinion, governmental databases), their origins, and how the information is being managed and accessed (GIS, database software, metadata).
- *Partners and stakeholders*: A summary of the organizations and agencies involved in the planning process and the nature of that involvement.
- *Identification of conservation targets*: The elements of biodiversity or surrogates for them upon which the plan is based, the rationale for their selection, and assumptions surrounding their use.
- *Setting conservation goals*: A summary of the target-based goals for each of the conservation targets or groups of targets, and the reasoning and assumptions behind them.
- *Gap Analysis of existing conservation areas*: A description of the management status of existing conservation areas in the planning region and what conservation targets are found within them.
- *Assessment of population viability and ecological integrity*: A brief summary of the methods used to assess viability and integrity, and the outcome of applying these methods to population and occurrences of target species, communities, and ecological systems and/or ecosystems in the planning region.
- *Selection and design of a network of conservation areas*: Criteria used to select conservation areas, a consideration of linkages and network design and minimum area requirements for species and processes and a map and list of selected areas.
- *Assessment of threats to conservation areas*: Results of threats assessments, including an indication of the scale at which the threat occurs (e.g., single conservation area, multiple conservation area, entire planning region).
- *Setting priorities for action among conservation areas*: Criteria used to set priorities for action among areas in the conservation network, methods for applying criteria, the rationale and assumptions used in the methods, a map and table reporting the results of priority setting.
- *Selection and computation of measures.* Identify indicators to measure viability, threat status and conservation management status of targets and measure progress toward goals. Determine and report current status and outline a plan for evaluating indicators and measuring progress toward goals into the future.
- *Development of conservation strategies*: A brief introduction to how this planning process will lead into the next phase of identifying conservation strategies at different scales, to help achieve the goals of the plan (i.e., implementation).
- *Data gaps and future research/planning needs*: Identification of critical data gaps in the planning process (e.g., aquatic ecosystem data, human threat information), planning

needs in future versions of plan (e.g., incorporation of socioeconomic data), assumptions to be tested.
- *Conclusions, literature cited and appendices*

A growing number of assessment teams are developing interactive websites[2], data clearinghouses and interactive map servers[3]. All of these strategies enable efficient public access to information and data. However, in many cases, not all ecoregional assessment data can be made public. Formal data sharing agreements with data providers define the parameters by which information can be shared, if at all. An example of sensitive data are rare and endangered species Element Occurrences (EOs). Generally, agreements are made to represent these data at only a very coarse-level in order to preclude providing accurate location information to potential poachers, and agreements are made to ensure that databases with detailed information are not made publicly available(see Resources section for examples),

Finally, there are specific publication elements that are required for every product. These include: 1) formal citation; 2) list of contributing participants, 3) contact information; 4) confidential information statements, intellectual property rights (copyright, trademark issues for TNC and materials used from other sources; and 5) Corporate Identifiers (Organization and partner logos). Contact your legal department to go over these issues before completing the documents for public distribution.

OPPORTUNITIES FOR INNOVATION

We need to improve methods, templates and tools to make information available from ecoregional assessments. Distribution of products need be more far reaching than merely posting a final report on Conserve Online. Publishing in peer-reviewed journals will garner scientific credibility and share best practices with the broader conservation community. Hard copy brochures and data CD's may be the best way to promote methods and results within the government sector. Teams should continue to explore best formats to provide overview, details and marketing of ecoregional assessment products. What formats are most effective for what audiences? Currently we know very little about the fate and use of various products. Product tracking could provide valuable feedback about the success and utility of products.

Data sensitivity is an important consideration when developing products for external audiences. Data sharing agreements are being developed with organizations that frequently provide data for ecoregional assessments. More local agreements may also need to be developed for vendors specific to an ecoregion.

CASE STUDIES

- **The Arctic Updates for the Alaska Yukon Arctic Ecoregional Assessment** TNC's Alaska Program produced updates on progress and products during the Alaska/Yukon ecoregional assessment and sent them electronically to partners. Updates can be found at http://nature.org/wherewework/northamerica/states/alaska/preserves/art13301.html

[2] http://www.natureconservancy.ca/files/frame.asp?lang=e_&region=8&sec=bc_welcome&screen=171
[3] http://edcw2ks41.cr.usgs.gov/website/tnc_cerp

- **Southeastern United States freshwater biodiversity assessment final report and supplementary CD** *Priority Areas for Freshwater Conservation Action: A Biodiversity Assessment of the Southeastern United States* is a publication for a broad audience summarizing the intent, partnerships, approaches, methods and products of a four ecoregion assessment. The report is distributed with a CD that provides the report, databases and links to spatial data to allow further analyses.

- **EDMT**- Among other purposes, the Ecoregional Data Management Team set out to design a data management tool which would facilitate easy sharing of data and products from ecoregional assessments in the Northwest. A data model and custom GIS software have been completed. While the tools developed are still being tested and therefore not publicly available, a comprehensive summary of the development and use of these tools can be accessed here. For more information contact Steve Farone (sfarone@tnc.org)

Product Examples

- **Arizona Data Products.** To share new data products developed by The Nature Conservancy in Arizona products have been made available on a website www.azconservation.org. To promote these products they have developed brief synopses of completed scientific assessments and an introduction to the website which are disseminated to external audiences at meetings.
  - Loss of Natural Flow 1 Page Graphical Summary
  - Native Fish 1 Page Graphical Summary
  - Website Home Page and Description

- **Cook Inlet Ecoregional Brochure.** TNC's Alaska Program produced a brochure summarizing the intent, processes and products of the Cook Inlet ecoregional assessment. Layout and production was managed by the communications manager in Alaska and the Creative Services Manager out of Seattle, Washington. Each brochure contained a CD with the assessment report, an ecoregional atlas, target list, terrestrial and aquatic system models and an information gap report. Contents also found online at http://nature.org/wherewework/northamerica/states/alaska/preserves/art12944.html

- **Identifying Conservation Priorities in the Hudson River Estuary Watershed: Linking Perspectives Across Multiple Scales.** A publication that summarizes ecoregional assessment goals and objectives, and provides terrestrial and freshwater conservation priorities derived from the Lower New England/Northern Piedmont ecoregional assessment that are within the Hudson River watershed. It clearly defines what an ecoregional priority is, and what the necessary next steps are to inform conservation actions. Comparisons to finer-scale ecological assessments and alternative priorities are made. Next steps in conservation planning are covered.

- **Tennessee Cumberland and Mobile Basin Rivers at Risk** A publication summarizing TNC ecoregional assessment outcomes, dominant threats, WWF priorities for actions within the ecoregion and descriptions of the priority areas.

- **Washington Freshwater Updates** Are a series of brief publications used to keep partners, public and stakeholders informed about TNC freshwater activities in Washington.

- **Canadian Rocky Mountains Conservation Assessment.** This ecoregional assessment can be downloaded from the Nature Conservancy Canada website. The report, appendices, and associated collection of maps are available to the public in pdf form and are broken into sections for easier download.

- **A Conservation Assessment of the Cobar Peneplain Biogeographic Region (Australia).** This is an exemplary example of a well written report that transparently presents approaches, methods, rationales and products. In addition to a comprehensive report, shorter, more focused documents were produced including a series of technical reports, booklets and information sheets catering to the needs of expected audiences.

- **Ecoregional Planning in Marine Environments: Identifying Priority Sites for Conservation in the Northern Gulf of Mexico.** A peer-reviewed publication of the approaches, methods and products from the Northern Gulf of Mexico marine ecoregional assessment. This assessment is available from Conserve Online.

- **Ecoregion-based Conservation in the Carpathians and the Land-use Implications.** A peer-reviewed publication of ecoregional conservation vision and a summary of threats and approaches towards managing land-use issues.

- **Northwest Coastal Ecoregional Assessment Updates-** Similar to the Arctic updates, periodic documents were produced and made available via the internet. To view products that focus on marine methods and issues, look at the following updates:
  - Update #1: The nearshore/coastal marine environment
  - Update #2: Nearshore/coastal marine analysis and site selection

- **Willamette Basin-Puget Sound-Georgian Bay brochure and CD.** A visually pleasing, concise brochure targeting external partners. Attached CD allows interested users to find more detail. The CD contains the full report, many maps, data organized in CPT and has interactive mapping feature

- **Guide to information for assessing quality of and threats to biodiversity of freshwater systems**. DePhilip, M. (1999). This report presents an extensive review of data available for freshwater threats assessment and make this information available to the conservation planning community.

Examples of data sharing agreements and memoranda of understanding

- MOU between TNC AZ and the Bureau of Land Management

- NatureServe and TNC data sharing agreement

TOOLS

Guidelines, a worksheet and a case study for creating a communications strategy can be found in appendices B, C and D in WWF (2004). Ecoregion Action Programmes: A guide for practitioners. Washington, DC.

Marketing Resources Center (MRC) is TNC's internal resource for most marketing and communications needs. State chapters can partner with MRC to varying degrees. Learn more about MRC services for FYO5.

TNC Intranet sites:

Conservation Planning Tool. In addition to managing data, CPT can also be used to share data particularly within TNC and among ecoregional assessment teams. Click here for more information on CPT.

Remote Publishing Tool RPT is the Conservancy's web publishing tool. Access and training are available through TIS.

The Field Link Publishing Tools page houses a long list of tools useful for making products, methods and supporting data publicly available.

RESOURCES

Websites

Conserve Online is a central repository for conservation related publications. All ecoregional assessments from TNC are made publicly available on this web site. Further examples of data and assessment products can be found here. (conserveonline.org)

Field Link is The Nature Conservancy's marketing website available through the intranet. This website contains info about, and products from, Field Marketing and MRC. It also provides a wealth of resources to assist with the production and publication of Conservancy products. Templates, fonts, color schemes, boiler plate language, copyright information and training are just a few of the resources available.

Web Publishing Standards Guide- This website, available through the intranet, contains a style guide for nature.org, ConserveOnline and the Intranet, guidelines on web site management, useful contacts and general information about TNC and the web.

Standard Operating Procedures—TNC has developed SOPs, available on the intranet, pertaining to publication of information that need be considered before dissemination of data and assessment products.

Confidential Information – Internal and External Disclosure
Intellectual Property Rights - In Scientific Data Products
Intellectual Property Rights - In Application Software
Rights in Materials Created by Employees
Corporate Visual Identity and Use of the Name and Logo in Publications
Protection and Use of Trademarks/Service Marks

TNC Mapping Services (TNC intranet) through the Conservation Systems Office can assist in designing and producing maps.

Publications

Weeks, P. and J. M. Packard (1997). "Acceptance of scientific management by natural resource dependent communities." Conservation Biology 11(1): 236-245.

WWF (2004). Ecoregion Action Programmes: A guide for practitioners. Washington, DC.

WWF (2002). Ecoregion Conservation: Securing Living Landscapes through science-based planning and action. A users guide for Ecoregion Conservation through examples from the field. Washington, DC. CD available from Suzanne Palminteri at: Spalminteri@earthlink.net