Understanding the human dimensions of lake communities:

using social science to enhance and protect Wisconsin treasures.

Often, the public's attitudes, perceptions, and beliefs strongly influence lake stewardship activities and management decisions made on lakes. Social science tools and methods are used by lake communities to help leaders identify the relationship between the community and lake resources.

Social science helps leaders, lake managers, and citizens understand communities through a better appreciation of specific:

- Attitudes and perceptions;
- Social organization and structure;
- History and culture;
- Population characteristics;
- Governments, institutions, and processes.

Social science can help answer these types of questions:

1. How can I measure SOCIAL IMPACTS of resource use?

Human changes to the environment may have social impacts on the lake community. Examining these impacts may help lake communities: determine the root cause of changes; target areas for management actions; and reveal motivations for behavior change.

- Tools and methods that can be used to answer this question: Observation; Interviews; and Focus groups.

2. How can I estimate NON-MARKET VALUE?

Non-market valuation helps calculate the monetary value of environmental resources not normally traded in conventional markets. This information allows lake communities to: better justify the need for protection; show the value of the lake resource over time; and determine the amount of compensation in the event of damage or degradation.

- Tools and methods that can be used to answer this question: Non-market valuation; Cost-benefit analysis; and Interviews.

3. Who are the DECISION-MAKERS?

Identifying a lake community's key decision makers and change agents as well as who influences them may help lake citizens: focus outreach and education efforts more effectively; involve decision makers in lake stewardship and management processes; determine concerns or issues that should be avoided; and identifying conflicting mandates.

- Tools and methods that can be used to answer this question: Interviews; Demographic analysis; and Focus groups.

4. How is my lake community linked to the LOCAL ECONOMY?

Community members usually have varying degrees of dependence on lake resources. Knowing these levels of dependency and interactions between economic sectors can help lake communities: identify revenue sources and flows; provide some clarity to

economic impacts of lake management decisions; and provide a framework for referencing the community dependence on local lake resources.

- Tools and methods that can be used to answer this question: Demographic analysis; Stakeholder analysis; and Surveys.

5. What is my lake community's PERCEPTIONS of lake management?

Lake resource users often have preconceived ideas of management agencies, lake organizations, and water policies. Understanding these perceptions may help lake communities; address misunderstanding; recognize and address concerns; identify potential conflict; and promote increased stewardship and compliance.

- Tools and methods that can be used to answer this question: Surveys; Content analysis; and Focus groups.

6. Who are the primary STAKEHOLDERS in my lake community?

Stakeholder groups in your lake community may include tourism, recreation, real estate, industry, and commerce organizations. Knowing who has a stake in your lake community may help you identify: who is impacted by lake stewardship and management decisions; sources of conflicts; who should be involved in the decision-making process; and where to best direct your lake educational efforts.

- Tools and methods that can be used to answer this question: Stakeholder analysis; Observation; and Demographic analysis.

7. How can I characterize RESOURCE USE in my lake community?

Knowing who uses natural resources and how those resources are used may help your lake community identify: who is impacted by lake stewardship and management decisions; potential sources of conflicts; who should be involved in the decision-making process; and where to best direct your lake educational efforts.

- Tools and methods that can be used to answer this question: Observation; Surveys; and Content analysis.

8. How well are local TRADITIONS and CULTURE understood?

Traditions and culture often influence the way people interact with their environment and their lake community. A better understanding of these traits and habits may help lake communities: promote sensitivity to culture and diversity; increase local support for lake stewardship and management decisions; reduce conflict between groups; and improve the sense of community and support for each other.

- Tools and methods that can be used to answer this question: Focus groups; Demographic analysis; and Observation.

9. What is the root causes of local USER CONFLICTS?

Lake conflicts often arise when an activity negatively impacts another user's experience. Understanding the root causes of these conflicts may help lake communities: improve understanding of multiple perspectives; determine how best to target stewardship activities and management efforts; and improve communication and relationships with and within the lake community.

- Tools and methods that can be used to answer this question: Focus groups; Content analysis; and Interviews.

Tools and Methods

This table contains summaries of a combination of selected social science tools and methods that can be used in research design, data collection, and data analysis. Source: NOAA Coastal Services Center < http://www.csc.noaa.gov/socialscience/tooltable.html >.

Tool/Method	What Is It?	What Can It Be Used For?
Case Study Research	An in-depth investigation of issues at specific instances and locations.	To identify the attitudes, perceptions, and beliefs of most groups involved, as well as the interactions among those groups.
Comparative Research	An analysis, that compares attributes, characteristics, or particular treatments across two or more situations.	Lake communities can compare specific characteristics of different groups or compare the same group over time (also called "longitudinal comparison").
Content Analysis	An analysis of interview transcripts, newspapers, books, or other text to quantify specific terms and determine both context and meaning or quantify occurrences of key words, phrases, or themes.	To help identify patterns and trends in discussions about biological, social, and political phenomena.
Cost-Benefit Analysis	A tool for comparing the benefits of proposed projects with the costs to identify the alternative with the maximum net benefit (benefits minus costs).	To understand the social costs and benefits of lake project outcomes to stakeholders or to identify alternatives that are the most cost-effective.
Demographic Analysis	A study of the characteristics and changes of human populations, such as income, gender, age and education.	To identify population characteristics and highlight trends over time and space.
Ethnographic Research	A method for obtaining an in-depth understanding of the history, practices, values, customs, traditions, and circumstances of the groups and surrounding resources being studied.	To help managers better understand the stakeholder groups with whom they interact. Also, to reveal cultural values and practices, helping lake communities identify how these values and practices affect lake stewardship and management.
Focus Groups	A group discussion about a specific topic, typically involving around 10 people, focused on estimating the response of a larger group.	To identify opinions, attitudes, and perceptions about a specific idea. Focus groups can also be used to inform survey development.
Geographic Information System (GIS)	A compilation of hardware, software, and data that enables users to manipulate, analyze, and display geographically referenced information.	To document human use patterns, identify culturally sensitive areas, prioritize regions for additional public access, or highlight demographic trends within a community.
Historical Research	A review or analysis of past resource use and the social and population characteristics related to a particular geographic resource.	To determine how past social structure population characteristics have evolved or changed over time.

Interviewing	A collection of in-depth information, through direct contact, in person or over the telephone, from individuals about a specific topic.	To obtain information and opinions from a representative sample of stakeholders related to specific issues. To better understand individuals' perspectives, feelings, and concerns, or to gather information unavailable through other means.
Nonmarket Valuation	A method used to estimate the economic value of items that have no assignable market value, such as ecosystems and environmental services.	To estimate the value of a wetland, critical habitat, a fishery, or any other lake resource that has no assignable market value.
Observation	An information-gathering technique based on direct observation of human behavior or the results of this behavior.	To identify types or use, use patterns, user behavior, and associated impacts.
Predictive Modeling	A technique that uses a model to simulate real-world situations in order to predict future conditions.	To understand possible long-term impacts of lake stewardship activities and management decisions and to prevent future problems from occurring.
Rapid Rural Appraisal	A broad-level evaluation, usually through consultation with experts and stakeholders, that provides a general overview of the relationship between humans and natural resources.	To quickly identify issues, such as safety or access in a given area. Often used as a precursor to more comprehensive planning and to justify decisions needing to be made quickly.
Secondary Data Analysis	Analysis of data that were collected by individuals other than the investigator. These data include newspapers, census data, maps, etc.	To identify or analyze characteristics of a group, populations, or issue using existing data and information.
Social Assessment	A method of data collection and analysis used to characterize the social environment within which resources are managed.	To identify the principal stakeholders and to generate information about social structures, processes, and changes being produced in any given area or community and long term monitoring.
Social Impact Assessment	Used to predict impacts related to implementation in advance of management resources or policy changes.	To identify how people and communities could potentially react to proposed management and policy changes.
Social Network Analysis	A method used to measure and display relationships and paths of information exchange between individuals, groups, or organizations within a specific area.	To determine how information moves within a network of individuals, groups, or organizations. Also used to identify key players.
Stakeholder Analysis	An identification and characterization of individuals and groups who have something to gain or lose as a result of lake stewardship activities and management decisions.	To identify stakeholders and their relationships both to the lake resource and each other.
Surveys	A method of collecting information and data from individuals using a standard list of questions by mail, telephone, Internet, or in person.	To obtain information and opinions from a representative sample of stakeholders related to specific issues.

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Resource links:

UW-Extension Lakes - the World of Economic Values and Water:
< http://www.uwsp.edu/cnr/uwexlakes/economicsOfWater/ >

UW-Extension Lakes - Shorelands and Shallows - Community-based Social Marketing:
< http://www.uwsp.edu/cnr/uwexlakes/ecology/shorelands/community_based_social_marketing.asp >

UW-Extension Center for Community Economic Development:
< http://www.uwex.edu/ces/cced/ >

UW-Extension Environmental Resources Center (ERC):
< http://www.uwex.edu/erc/ >; < http://www.uwex.edu/erc/staff.html >

UW-Extension Local Government Center:
< http://lgc.uwex.edu// >

Department of Rural Sociology at the University of Wisconsin-Madison, Applied Population Laboratory (APL):
< http://www.apl.wisc.edu/about.html >

University of Wisconsin-Stevens Point and University of Wisconsin-Extension Center for Watershed Science and Education:
< http://www.uwsp.edu/cnr/watersheds/default.htm >; < http://www.uwsp.edu/cnr/watersheds/Staff/staff.htm >

University of Wisconsin-Stevens Point and University of Wisconsin-Extension Center for Land Use Education (CLUE):
< http://www.uwsp.edu/cnr/landcenter/ >; < http://www.uwsp.edu/cnr/landcenter/about.html >

University of Wisconsin-Stevens Point Geographic Information System (GIS) Center:
< http://www.uwsp.edu/geo/giscenter/aboutgis.aspx >; < http://www.uwsp.edu/geo/giscenter/people.aspx >

University of Wisconsin-Madison, Department of Agricultural & Applied Economics:
< http://www.aae.wisc.edu/research/people.asp?id=1 >

Community, Natural Resource and Economic Development (or CNRED) is a program within Cooperative Extension:
< http://www.uwex.edu/ces/cnred/about.cfm >; < http://www.uwex.edu/ces/cnred/countymap.cfm >

UW-Extension Basin Education Initiative:
< http://basineducation.uwex.edu/basins/staff/index.htm >

Your regional Wisconsin Department of Natural Resources lake coordinators and other lake contacts:
< http://dnr.wi.gov/lakes/contacts/index.asp?region=allregions >

UW-Madison Center for Limnology:
< http://limnology.wisc.edu/index.php?pr=Home_Page >; < http://limnology.wisc.edu/index.php?pr=Faculty >

UW-Madison Trout Lake Station:
< http://limnology.wisc.edu/Trout_Lake_Station.php >; < http://limnology.wisc.edu/Personnel.php >

Adapted by: Patrick Goggin, UW-Extension Lakes from the National Oceanic Atmospheric Administration (NOAA) Coastal Services Center's social science wheel "*Understanding the 'Human Dimension' of coastal management using social science*." More information at: < http://www.csc.noaa.gov/socialscience/index.html >; October 2010.