Traditional Ecological Knowledge an Introduction

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A Working Definition

- The evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment.
- This knowledge is specific to a location and includes the relationships between plants, animals, natural phenomena, landscapes, and timing of events that are used for lifeways, . . .

Working Def, cont.

- Accumulating body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (human and non-human) with one another and with the environment.
- It encompasses the world view of indigenous people which includes ecology, spirituality, human and animal relationships, and more.

Differentiations

McIntosh 2005

- TEK is shared and agreed upon direct experience that is passed from one generation to the next and integrated at the cultural level.
- Local knowledge is shared, recent experiences; the hypotheses need to be tested and positive correlation made prior to becoming part of TEK.
- User knowledge is direct experience of an individual that when experienced by others can become local knowledge.

TEK as Part of Culture

Hardison 2005

"Traditional knowledge systems are common property systems with complex internal rules."

- Social obligations
- (Who, what, when, where, why, how)

Comparing TEK and Western Science

(from Barnhardt and Kawagley 2005)

TEK

- Oral tradition
- Holistic approach
- Learned from observation and experience
- Environment as part of social and spiritual relationships
- Based on cumulative, collective experience

Western Science

- Written tradition
- Reductionist
- Taught and learned mostly analytically
- Hierarchical and compartmentalized organization
- Based on laws and theories

Comparing TEK and Western Science

(from Barnhardt and Kawagley 2005)

TEK

- Mainly qualitative
- Data generated by resource users
- Long time within one location
- Integrated and applied to daily living and traditional subsistence practices

Western Science

- Mainly quantitative
- Data collected by specialists or experts
- Short time-series over a large area
- Hypothesis falsification and model building

Common Ground

(from Barnhardt and Kawagley 2005)

- Knowledge is always subject to modification or improvements
- Empirical observations in natural settings
- Pattern recognition
- Verification through repetition
- Inference and prediction

Additional Premises

(from Pierotti 2010)

- The Western way tends to see man as "dominant over" the world whereas indigenous peoples consider themselves "connected to and part of" the natural world.
- The scale at which Western knowledge and Indigenous knowledge can be applied differs
- Indigenous stories and oral tradition are functionally the equivalent to basic concepts

Additional Premises

(from Pierotti 2010)

- Responsibility towards those sharing the same environment creates a need for honor and respect—Clans, Societies, Ceremonies, Dances
- All my relations—all things connected, all things related
- Change is constant and requires adaptability v. change is an aberration to be dismissed

Collection of TEK

- Identify a mentor/Contract
- Permission from the Tribal Council
- MOU
- Follow Tribe's research protocol
- Identification of who to interview
- Update Tribal Council throughout process
- reciprocity

Ethnography

- Ethnography is the process by which the researcher interprets indigenous people's lifeways
- Researcher gets more info than needs
- Retention of info by Tribe/Tribal College
- Is NOT government-to-government consultation
- Allows for a mutually beneficial relationship

Social Science Methods

- Literature Review
- Semi-directed Interview
- Focus Groups
- Participant Observation
- Linguistics

Cautions

- Not for the novice researcher
- Stay within side boards of MOU
- Unintended consequences
- Long-term impacts

USFWS, Traditional Ecological Knowledge - Windows Internet Explorer

http://www.fws.gov/nativeamerican/TEK.html

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U.S. Fish & Wildlife Service

Native American Liaison

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The term Traditional Ecological Knowledge, or TEK, is used to describe the knowledge held by indigenous cultures about their immediate environment and the cultural practices that build on that knowledge. Traditional ecological knowledge includes an intimate and detailed knowledge of plants, animals, and natural phenomena, the development and use of appropriate technologies for hunting, fishing, trapping, agriculture, and forestry, and a holistic knowledge, or "world view" which parallels the scientific discipline of ecology (Berkes 1993).

The utilization of resources and how people adapt to their ever changing environment

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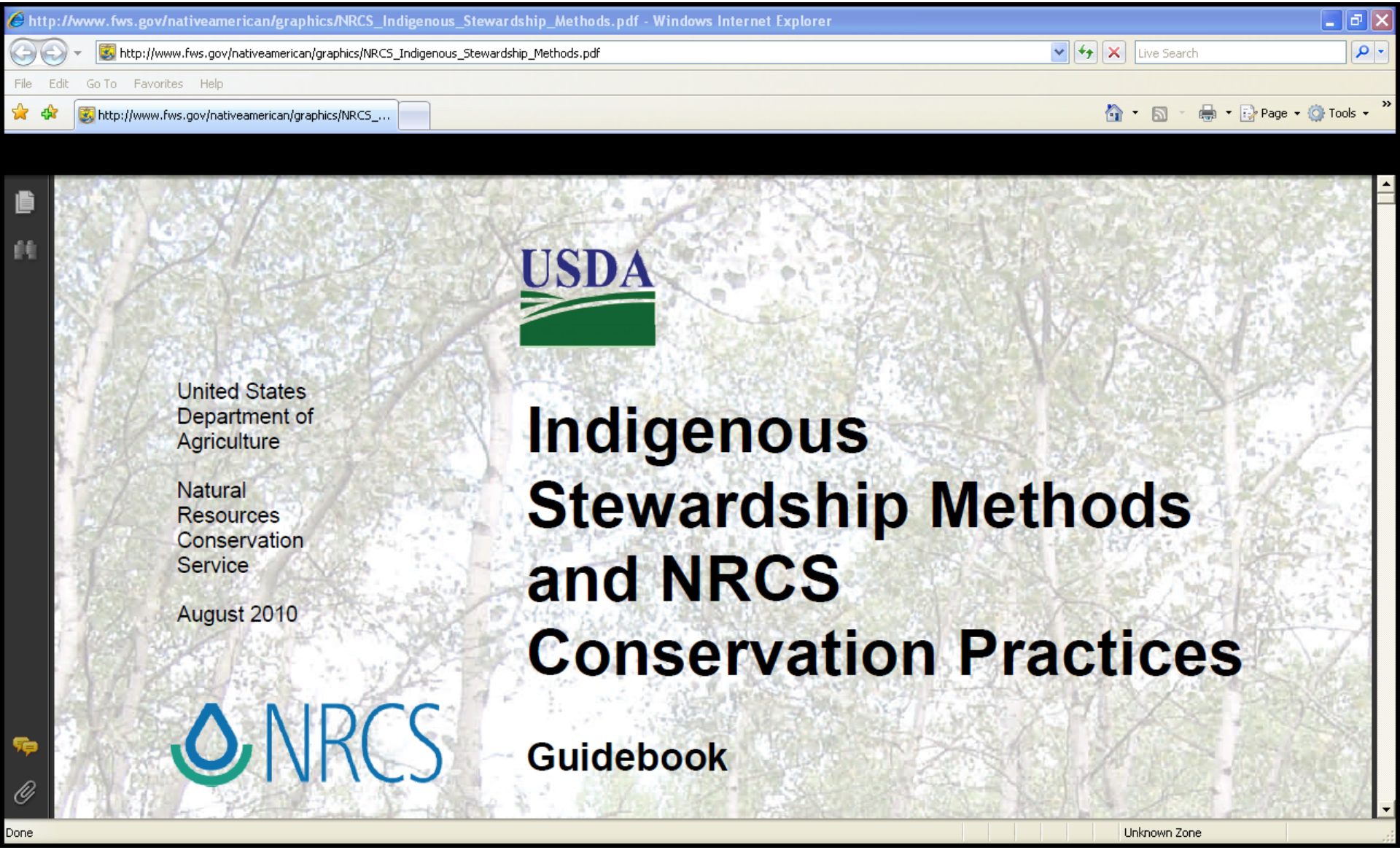
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Natural Resources Conservation Service
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Guidebook
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Suggested Reading

- Indigenous Knowledge, Ecology, and Evolutionary Biology by Raymond Pierotti
- Research Review Checklist for American Indian and Alaska Native Communities By Puneet Chawla Sahota, Ph.D.
- Human Problems in Technological Change, A Casebook by Edward H. Spicer
- The Ethnographic Interview by James Spradley