

Social Science on the Coast and in the Estuaries: A Practical Guide

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The Basic Challenges.....

- **Helping to solve a problem!**
- Having a conceptual framework
- Identifying the mandates
- Fleshing out the mandates
- Finding funding
- Finding expertise
- Integrating with larger, longer-term data architecture, constituent involvement, and policy and management process – **having a plan!**

Ecology?

An inter-related set of components whose individual
and collective characteristics and interactions can be
described
(system focused)

and/or

An organism in its environment
(organism focused)

The Three Major “Ecologies”

Biophysical Ecology

Human (Constituent) Ecology

Institutional Ecology

Biophysical Ecology

The biophysical ecology, or ecological sub-system, is defined by a set of non-human, biophysical resources and environments, such as:

- A politically bounded system such as a county, state or country
- A particular watershed and its nearshore contiguous area
- A biophysical system defined by a migratory fish pathway

and their associated human-built artifacts



Human (Constituent) Ecology

The human (constituent) ecology, or ecological sub-system, is defined as those humans and human behaviors that affect, are affected by, or are otherwise concerned with a defined biophysical ecology



Institutional Ecology

The institutional ecology, or ecological sub-system, is defined as those governance institutions that govern, or affect, the behavior of those people in the human ecological system



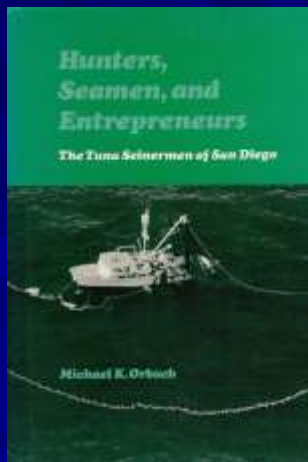
The “Total Ecology”

The “Total Ecology” consists of the mapping of these three

- Biophysical
- Human
- Institutional

ecological subsystems onto one another

The Eastern Tropical Pacific Tuna Fishery



Florida Spiny Lobster Fishery



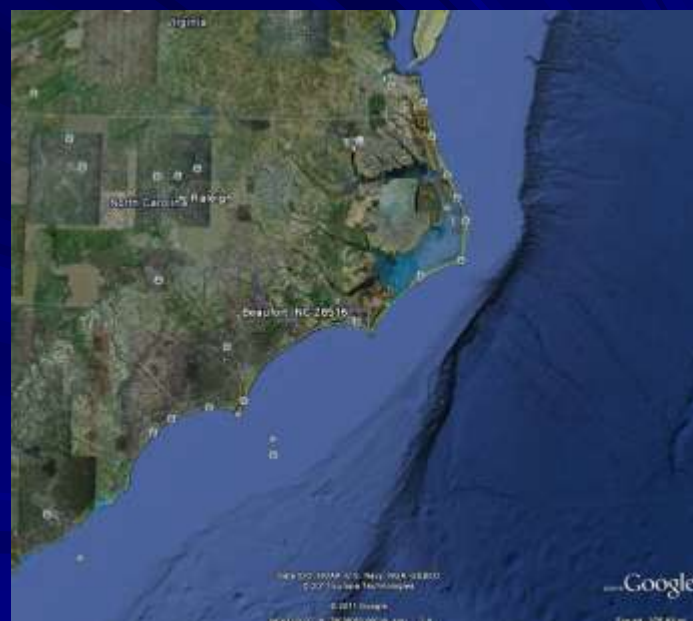
Aleuts of the Seal Islands



Photograph 11: Village of St. George (1936-7)



Photograph 10: St. George Church (1936-7)



Ecosystem Management

- The management of human behaviors
- Towards specific objectives
- Through a specific governance system
- Which affect, or are affected by, a specific biophysical environment

The Nature of Ecosystem-Based Policy and Management

All ecosystem-based policy and management decisions have biophysical, social and economic objectives

AND

biophysical, social and economic impacts

The Nature of Ecosystem-Based Policy
and Management (continued)

AND

All ecosystem-based policy and
management decisions involve

TRADEOFFS

Among these objective and impact categories

THAT IS THE PROCESS OF GOVERNANCE

The Nature of Ecosystem-Based
Policy and Management
(continued)

THEREFORE,

IF WE DO NOT HAVE FULL DATA AND
INFORMATION ON ALL THREE OF THE
ECOLOGICAL SUBSYSTEMS, WE WILL
NOT KNOW HOW TO JUDGE THESE
NECESSARY TRADEOFFS

Social Science Research

- What is it?
 - Reliable, objective, valid
 - Quantitative and Qualitative
- Who does it?
 - Trained professionals (MS/MA, PhD, certificates)
- Who pays for it?
 - Science agencies, line agencies, foundations, users
- NOT ‘everything except biophysical science’

Social Science Disciplines

- Anthropology
- Economics
- Geography
- History
- Political Science
- Psychology
- Sociology

Action-based Disciplines

- Environmental Education
- Landscape Architecture
- Law
- Management
- Marketing
- Mediation and Consensus-building
- Planning

Use and Transmission of Social Science

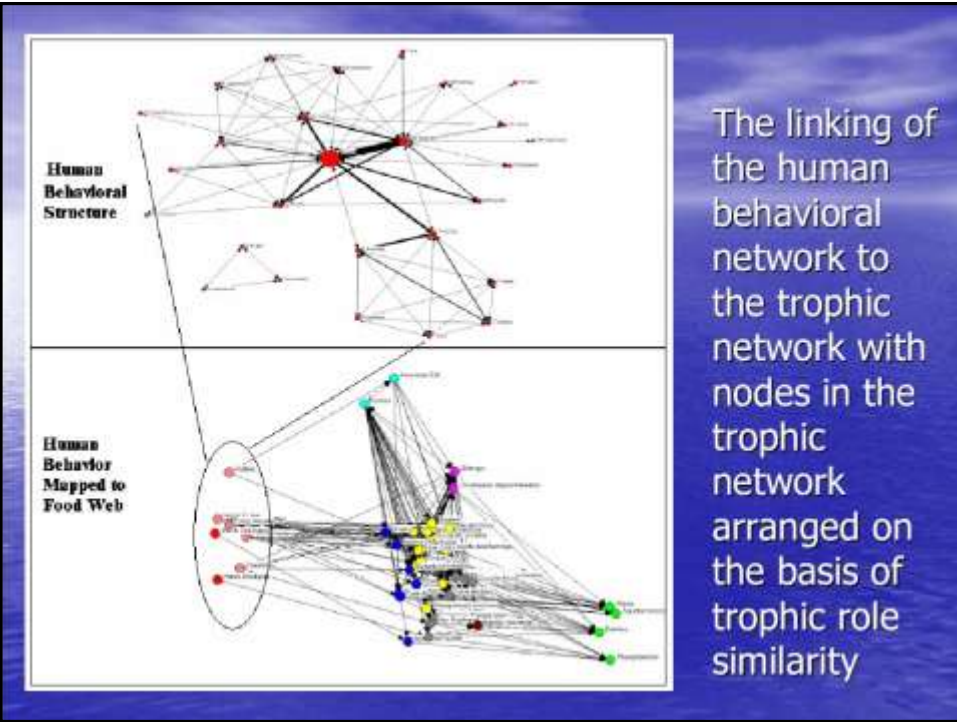
- The form of the product
- The target audience/client
- The context
- The message
- The program

Making the System Move...

- Facilitation – Getting people together in the proper forum for discussion, with good information
- Consensus-building – Coming to agreement
- Advocacy – Effectively presenting a case

Special Problems...

Is it really Science?

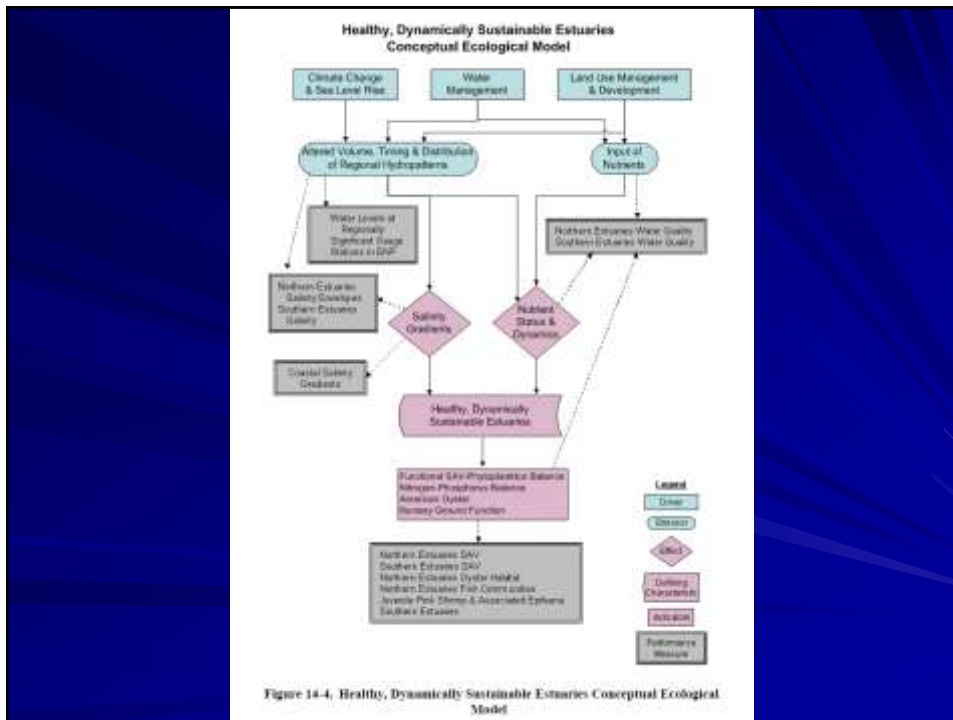


Special Problems...

Are there ever just
biological objectives?

Ways to look at the Everglades.....





Human and Institutional Conceptual Ecological Models (CEM)

- The analogs to the Biophysical CEM
- “Map” directly onto one another:

Institutional CEM



Human CEM



Biophysical CEM

Your current PSF Social Science Guide....

Social Science Measurements

- Puget Sound Quality of Life Index (2011): Common demographic factors including population, cost of living and median household income.
- Sound Behavior Index (2011): Adoption of Puget Sound-friendly practices among residents.
- Commercial fisheries wild harvest
- Percent of core swimming beaches meeting water quality standards during swim season.
- Acreage of shellfish beds re-opened
- Recreational fishing permit sales in Puget Sound

Framework Examples.....

Forest Service. Collect and Manage Social Science Information.

Minerals Management Service. Applied Social Science in MMS: A Framework for Decisionmaking.

National Park Service. National Park Service . A Social Science Plan for South Florida National Park Service Units.

National Marine Protected Areas Center. Social Science Research Strategy for Marine Protected Areas

For National Estuary Programs?

Social Science Research Themes

(from A Social Science Strategy for Marine Protected Areas, MPA Science Center, NOS, NOAA)

- Governance, Institutions and Processes
- Use Patterns
- Attitudes, Perceptions and Beliefs
- Economics
- Human Communities
- Cultural Resources

Problems in Incorporating Social Scientific Data and Information into Ecosystem-Based Management

- Lack of trained social scientists in the marine field
- Lack of social science professionals in the marine resource management structure
- Lack of funding for social science research and application
- Lack of understanding of the need for social scientific data and information

In Summary.....

- Social science and Human and Institutional Ecology must be a part of all policy-making processes
- Adequate resources must be identified to support social science
- Trained professionals must administer the social science program, and
- You need a plan!

