

Science, Service, Stewardship



Guidance for the Use of Social Science in Fishery Management

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New Council Member Training
Silver Spring, MD
October 30, 2014

**NOAA
FISHERIES
SERVICE**

Why include Social Science if we are managing fish?

- Fishery managers don't manage fish; they manage people's access to fish ...
- Allocation decisions (from ACLs to ITQs), involve and affect cultural, sociological and economic patterns in society ...
- Conflict management requires the use of social science information and analysis...



What is social science?

- The social sciences study the ways that people live and work: who we are, and how we got that way.
- The social sciences are broad: looking at everything from how people use scarce resources for competing needs, how they organize themselves, to their knowledge, values, and ways of viewing the world.
- What I like about being a social scientist in NMFS is that it allows me to try to bring the voices of fishermen, their families and their communities into the management process



Where in an EA/EIS do you find social impacts?

- Kinds of social analyses
 - Social Impact Assessment (SIA)
 - Affected Human Environment (AHE) descriptions
 - National Standard 8
 - Environmental Justice
 - Cumulative Impacts
- Levels of Analysis
 - individual, household, firm, and community levels
 - variety of participants and affected groups



SIA Defined

- An SIA is a scientific method of gauging the social and cultural consequences of alternative fishery management actions or policies
- An SIA determines socio-cultural conditions in human populations likely to be affected by the action or policy; projects future socio-cultural effects of continuing the status quo, and then estimates the socio-cultural effects of policy or action alternatives relative to the status quo
- Official Guidance vs. Technical Guidelines



Social Impact Assessment

- **The Social Impact Assessment (SIA) is an essential part of the fishery management process**
- **Together with the Ecological and Economic Impact Assessments, the SIA describes the “Human Environment”**
- **Without an SIA, an FMP or amendment will not be considered complete**



Legal Authorities for SIA

- NEPA [40 CFR 1508.14] “human environment”
- MSA [MSA 303(a)(9)] “fishery impact statement”
- MSA [MSA 301(a)(8)] “sustaining fishing communities”
- MSA [MSA 303(b)(6) and 303A] “limited access programs”

NEPA's Human Environment

- CEQ defined “human environment” to “include the natural and physical environment and the relationship of people with that environment”
- NEPA requires “the integrated use of natural and social sciences in planning and decision-making”
- NEPA requires consideration of “unquantified environmental amenities and values” on a par with quantifiable values.



Fishery Impact Statement

- **An FMP must assess, specify and describe the likely effects of conservation and management measures upon participants in a fishery and upon affected fishing communities**
- **This requirement provides the basis for all socio-cultural assessments in the FMP**



: Sustaining Fishing Communities

- National Standard 8 requires that policies and regulations take into account the importance of fishery resources to fishing communities by utilizing economic and social data
 - (A) to provide for sustained participation
 - (B) to minimize adverse economic impacts as much as possible

MSA: Limited Access Programs - 1

- Section 303(b)(6) is old, Section 303A is new and requires expanded analysis.
- FMPs must show in-depth consideration of socio-cultural factors, historical and present participation in and dependence on the fishery for participants and fishing communities.
- Access privileges must be fairly and equitably distributed among participants.



MSA: Limited Access Programs - 2

- **Limited access programs (catch shares) include:**
 - License limitation
 - Sector allocations
 - TURFs
 - IFQs
 - ITQs
 - Fishing allocations to cooperatives
 - Community quotas
 - Permit stacking programs



Other MSA Mandates - 1

- **Use of social factors in determining OY**
- **Consideration of impacts on commercial, charter and recreational fishing**
- **Fair and equitable allocation of fishery resources among user groups**
- **Consideration of impacts upon Treaty Tribes and indigenous peoples of the USA**



Other MSA Mandates - 2

- **National Standard 2 requires that social science meets the best available science standards**
- **National Standard 2 requires that social science be used in formulating management decisions**
- **The MSA requires that Science and Statistical Committees be interdisciplinary and able to provide peer reviews of all scientific studies used by Councils**



Issues in Social Analysis

- Social and cultural systems are sensitive to change
- Small changes can have large cumulative impacts on fishery participants
- Analysis is comparative (diachronic) to a baseline data set



Categories of Social Factors

- **Size and demographic characteristics of fishery work force and community**
- **Cultural norms, beliefs and values of fishermen, other stakeholders and communities**
- **Social structures and organizations related to fisheries, families and communities**
- **Non-economic aspects of the proposed action**
- **Historical participation in and dependence on the fishery by stakeholders and communities**



Conducting a Social Impact Assessment

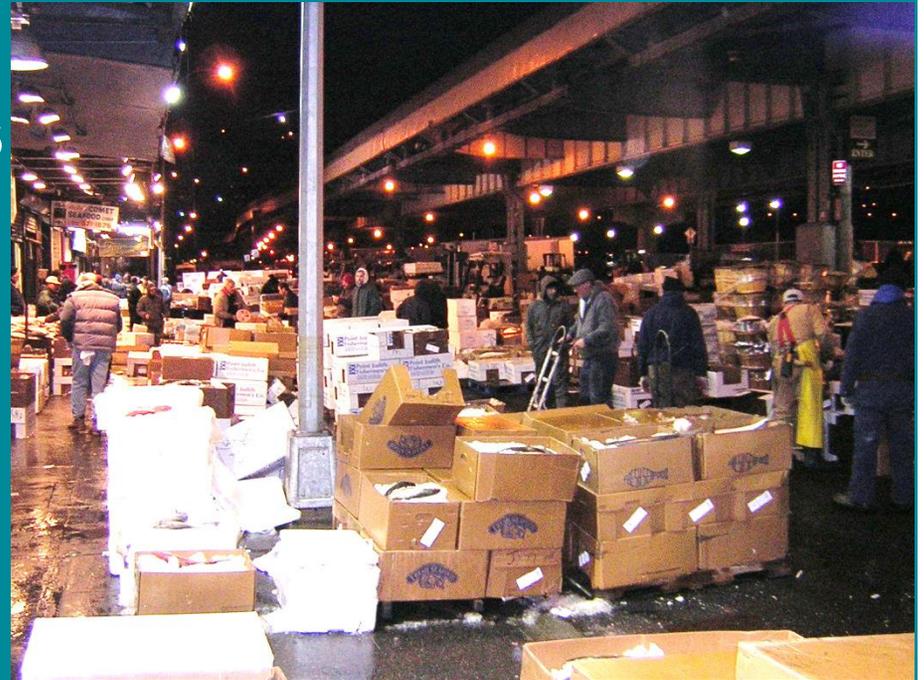
- **Focus on the social structures, groups, communities, and social issues identified in the scoping process and in Council alternatives**
- **Social variables should be sought in an analytic rather than encyclopedic manner**
- **Before collecting new data, all existing databases should be scrutinized and used if appropriate**

Level of Social Assessment

➤ The fishery impact statement “winnows” the issues and factors

➤ Level of analysis selected must be appropriate to the action considered

➤ Fishery conflicts, limited access, and environmental justice issues will require a high level of analysis and data inputs



Who is involved?

- In a fishery SIA it is assumed that
 - Fisherman = any commercial, recreational and/or subsistence fisherman
 - Vessel = any commercial, recreational, and/or for-hire vessel
 - Fishing industries and/or services = businesses primarily and directly associated with subsistence, commercial, and/or recreational fisheries
 - Fishing-related industries and/or services = businesses that provide inputs to fishing industry businesses (e.g., chandleries, netmakers, boat builders)



Social and Cultural Entities Involved in a Fishery

- **Commercial, Recreational, and Subsistence Fishery Participants including Treaty Tribes**
 - **Fishing Vessel Owners**
 - **Operators (Skippers/Captains)**
 - **Crew**
 - **United States Fish Processors**
- **Fishing Communities**
- **Fishery-Dependent Service Industries**



An MSA Fishing Community

- Is a geographic place;
- Includes some or all of the participants/entities described above; and
- Is substantially dependent on fishery resources to meet community social and economic needs, and/or
- Is substantially engaged in the harvest and/or processing of fishery resources to meet community social and economic needs
- MSA 3(17) and 301(a)(8)



More on MSA Fishing Communities

- Are there any MSA fishing communities defined yet?
- What information is available to identify fishery engagement, and/or dependence, of a community?
- Is there a standard process for defining MSA fishing communities?



Not MSA Fishing Communities – but still covered under the MSA

- **Communities not substantially engaged in or dependent on fishery resources to meet community social and economic needs BUT that are still ports of landing**
- **An avocational group, such as sport fishermen**
- **An occupational or professional group, such as gillnetters or small-boat fishermen or scallopers**

Environmental Justice

➤ An issue not well covered in many cases...

➤ EO 12898 mandates all Federal agencies to address disproportionate and adverse effects of agency action on low-income and/or minority groups

➤ Assessment of environmental justice is required regardless of the significance of environmental impacts under NEPA



Environmental Justice - 2

- **Environmental Justice is an issue whenever a Council or NOAA action disproportionately impacts a sector of a fishery with a high proportion of poor people or a large minority population.**
- **The social impact assessment in Environmental Justice issues should be the same as the one prepared for an EIS**

Cumulative Impacts

- Another topic not well dealt with...
 - NEPA requires an analysis of the proposal's cumulative impacts, including interactions with other fishery or non-fishery-related activities



- “the incremental impact of the action when added to *other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.*”



Ecosystem-based Management

- **Spatial focus:**
 - **fits well with integration of communities of people as well as fish**
 - **can pay attention to where people fish and not just how much they land**
 - **connects to Coastal and Marine Spatial Planning initiatives, Coastal Zone Management and other land and sea-based human activities**

EBM will require changes

- **Integrated Ecosystem Assessments (IEAs)**
- **New methods of governance**
- **Transition from FMPs by species or species groups**
- **Greater coordination with other agencies**
- **Some Regions are further ahead in these changes than others**

Current Big Issues with Important Social Science Components

- **Catch Shares**
 - **Controversial in many Regions**
- **Ecosystem-based Management**
 - **Level of implementation varies by Region**
- **Climate Change**
 - **Assessing social impacts depends on knowing biological impacts**
- **Food systems – a new issue for NMFS**
 - **Fish as food: e.g., how is it distributed, who has access, is it domestic or imported**



NMFS-wide implementation of social and economic indicators

➤ Fishery performance Indicators

- Financial Viability
- Distributional Outcomes
- Governance
- Stewardship
- Well-Being

➤ Community Social Vulnerability Indicators

- Social Vulnerability
- Commercial and Recreational Fisheries Dependence (Reliance+Engagement)
- Gentrification Pressure Vulnerability
- Coming soon – climate change vulnerability, social capital, infrastructure

