

*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 23, 2013

**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 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

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## 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.**

# MSA's 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**

# MSA: 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.**

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## 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**

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## 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

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## 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)

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## **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?
- Databases: What information is available to identify fishery engagement, and/or dependence, of a community?
- Is there a standard process for defining MSA fishing communities?

# Are Community Profiles the Same as MSA Fishing Communities?

➤ All Regions now have a set of community profiles:

➤ See Abbott-Jamieson and Clay in your briefing books, footnote 41

➤ BUT all communities profiled are not necessarily 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 in general**
- **An occupational or professional group, such as gillnetters or small-boat fishermen or scallopers in general**

# Environmental Justice

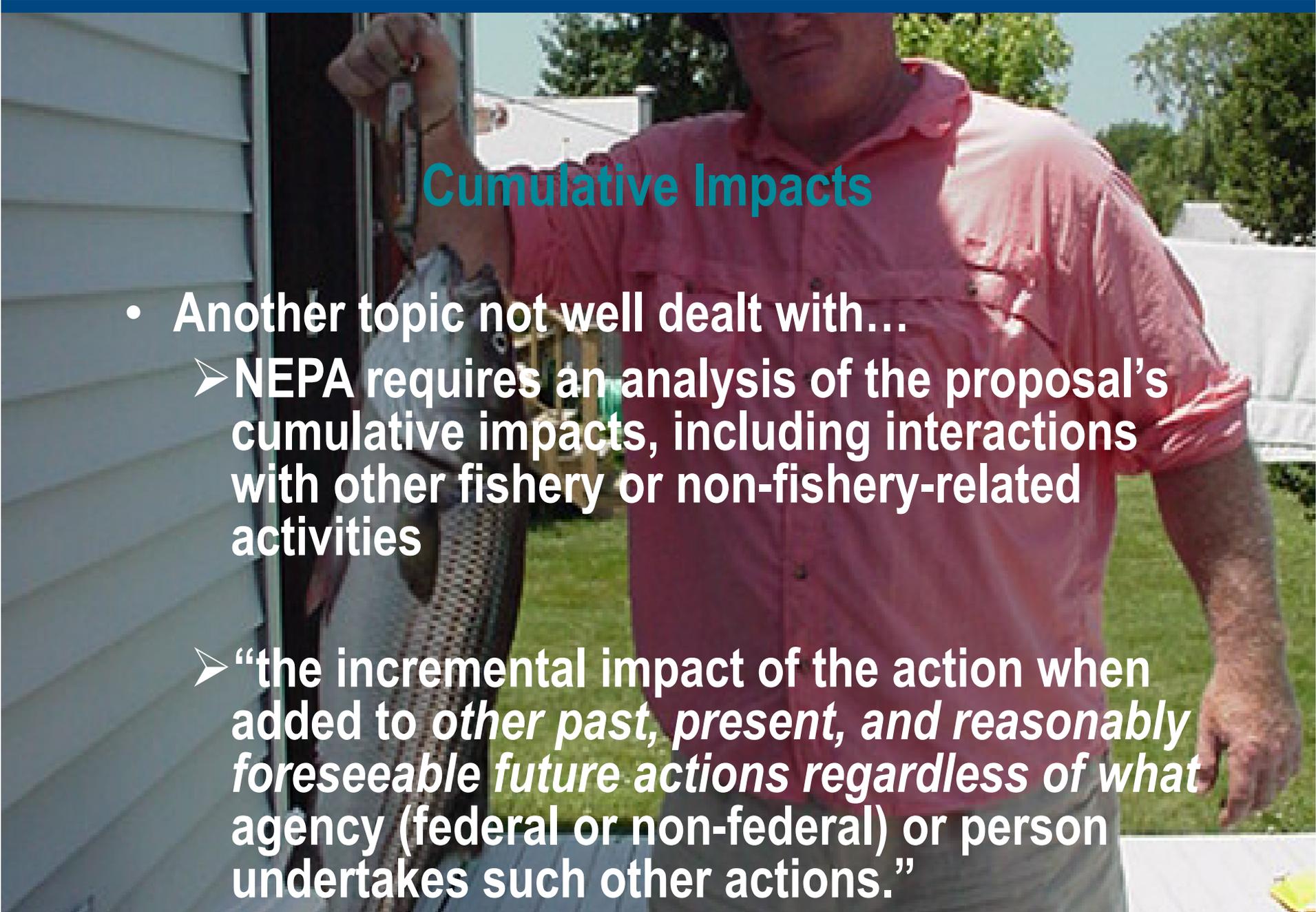
- An issue not well covered in many cases...
  - EO 12898 mandates all Federal agencies to address disproportionate and adverse effects of agency action on low-income and/or minority groups
  - Assessment of environmental justice is required regardless of the significance of environmental impacts under NEPA

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## 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**



A man in a pink short-sleeved button-down shirt is holding a large, speckled fish vertically by its gills. He is standing outdoors in front of a white building with horizontal siding. The background shows green trees and a clear sky. The text 'Cumulative Impacts' is overlaid in a teal color on the upper part of the image.

## 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.*”



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# Ecosystem-based Management (EBM)

- **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**



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## **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

