RC089



Contents lists available at ScienceDirect

## **Environmental Science and Policy**

journal homepage: www.elsevier.com/locate/envsci

Review

# Evaluating the best available *social* science for natural resource management decision-making



Susan Charnley<sup>a,\*</sup>, Courtney Carothers<sup>b</sup>, Terre Satterfield<sup>c</sup>, Arielle Levine<sup>d</sup>, Melissa R. Poe<sup>e,m</sup>, Karma Norman<sup>e</sup>, Jamie Donatuto<sup>f</sup>, Sara Jo Breslow<sup>e</sup>, Michael B. Mascia<sup>g</sup>, Phillip S. Levin<sup>e</sup>, Xavier Basurto<sup>h</sup>, Christina C. Hicks<sup>i,j</sup>, Carlos García-Ouijano<sup>k</sup>, Kevin St. Martin<sup>1</sup>

- <sup>a</sup> USDA Forest Service, Pacific Northwest Research Station, 620 SW Main Street, Suite 400, Portland, OR 97205, USA
- <sup>b</sup> University of Alaska Fairbanks, College of Fisheries and Ocean Sciences, 1007 West 3rd Avenue, Suite 100, Anchorage, AK 99501, USA
- <sup>c</sup> Institute for Resources, Environment and Sustainability, University of British Columbia, 429-2202 Main Mall Vancouver, BC V6T 1Z4, Canada
- <sup>d</sup> Department of Geography, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-4493, USA
- <sup>e</sup> NOAA Northwest Fisheries Science Center, 2725 Montlake Blvd, E. Seattle, WA 98112, USA
- <sup>f</sup> Swinomish Indian Tribal Community, 11404 Moorage Way, La Conner, WA 98257, USA
- <sup>8</sup> Moore Center for Science, Conservation International, 2011 Crystal Drive, Suite 500, Arlineton, VA 22202, USA
- <sup>h</sup> Nicholas School of the Environment, Duke University, 135 Duke Marine Lab Rd, Beaufort, NC, 28516, USA
- <sup>i</sup> Center for Ocean Solutions, Stanford University, Monterey, CA 93940, USA
- <sup>j</sup> ARC Centre of Excellence for Coral Reef Studies, James Cook University, Townsville, QLD 4811, Australia
- <sup>k</sup> Department of Sociology and Anthropology and Marine Affairs, University of Rhode Island, Kingston, RI 02881, USA
- <sup>1</sup> Department of Geography, Rutgers, The State University of New Jersey, NJ 08854-8045, USA
- <sup>m</sup> Washington Sea Grant, University of Washington, 3716 Brooklyn Avenue NE, Seattle, WA 98105-6716, USA

#### ARTICLE INFO

Keywords: Best available science Qualitative social science Environmental management U.S. Forest Service

#### ABSTRACT

Increasing recognition of the human dimensions of natural resource management issues, and of social and ecological sustainability and resilience as being inter-related, highlights the importance of applying social science to natural resource management decision-making. Moreover, a number of laws and regulations require natural resource management agencies to consider the "best available science" (BAS) when making decisions, including social science. Yet rarely do these laws and regulations define or identify standards for BAS, and those who have tried to fill the gap have done so from the standpoint of best available natural science. This paper proposes evaluative criteria for best available social science (BASS), explaining why a broader set of criteria than those used for natural science is needed. Although the natural and social sciences share many of the same evaluative criteria for BAS, they also exhibit some differences, especially where qualitative social science is concerned. Thus we argue that the evaluative criteria for BAS should expand to include those associated with diverse social science disciplines, particularly the qualitative social sciences. We provide one example from the USA of how a federal agency - the U.S. Forest Service - has attempted to incorporate BASS in responding to its BAS mandate associated with the national forest planning process, drawing on different types of scientific information and in light of these criteria. Greater attention to including BASS in natural resource management decision-making can contribute to better, more equitable, and more defensible management decisions and policies.

#### 1. Introduction

The science relevant to natural resource management is increasingly being produced using sustainability science, social-ecological systems, and resilience thinking frameworks and approaches (Bettencourt and Kaur, 2011; Clark, 2007; Folke, 2006). These approaches recognize social and ecological sustainability and resilience as being inter-related, highlighting the importance of including social science in natural resource management decision-making. Social science can help natural resource managers (1) identify and evaluate social as well as ecological tradeoffs associated with different management options; (2) make decisions that are better for the environment *and* human well-being, given that social-ecological systems are integrated and influence one another (Liu et al., 2015); (3) make decisions that are more appropriate

E-mail address: scharnley@fs.fed.us (S. Charnley).

http://dx.doi.org/10.1016/j.envsci.2017.04.002

<sup>\*</sup> Corresponding author.

Received 29 March 2016; Received in revised form 29 January 2017; Accepted 6 April 2017 1462-9011/ Published by Elsevier Ltd.

# Alaska Department of Fish and Game Alaska Boards of Fisheries and Game Policy on Government-to-Government Relations With the Federally Recognized Tribes of Alaska

#### Purpose:

This policy articulates and reinforces a government -to-government relationship between the Alaska Department of Fish and Game (ADF&G) and Boards of Fisheries and Game (boards), and the federally recognized tribes in Alaska through consultation on significant matters of mutual concern.

This department policy provides guidance to all tribes and employees of the department involved in any department or boards action(s) that significantly or uniquely affect a tribal government in Alaska and pertaining to any tribal action that significantly or uniquely affects the department or boards. It also reinforces the foundation for establishing and maintaining effective government to-government communications between the department and tribes, and between the boards and the tribes, and promotes consultation and coordination with these tribes, with the goal of ensuring the department conducts consultation in a culturally sensitive manner.

#### Policy:

The department and boards are committed to consulting with tribes in Alaska as early in the department's decision-making process as practicable, and as permitted by law, prior to taking action or undertaking activities that significantly or uniquely affect a tribe or tribes, except that the department is not required to consult with a tribe in those instances described in "Exclusions" below. Department and board actions shall favor meaningful participation of the affected tribe, with the goal of achieving informed decision making

informed decision-making.

### **Responsibilities, Process, and Protocols:**

To ensure the department's processes and procedures throughout all of Alaska are generally uniform and consistent, while maintaining necessary flexibility, the department will adhere to the following steps when consulting with a tribe:

1. <u>Notice to Affected Tribe</u>. The department will make a good faith effort to notify a tribe, at the earliest practicable time, of any proposed department actions that will significantly or uniquely affect the tribe's access to or use offish, wildlife, or habitat. The boards will notify tribal contacts by mail or other means used to inform the public about potential regulatory actions that may have an effect on the tribe's access to or use offish, wildlife, or habitat. When circumstances permit, the department will afford the tribe reasonable time to respond to any notification and to participate in consultation with the department. Consultation should continue throughout the

Page 1

department's decision-making process, to the extent practicable, except where expressly prohibited by law or subject to limitations described below. If the department determines that any state or federal law expressly prohibits continued consultation at a specified point in the decision-making process, the department shall so inform the tribe at the outset of the consultation process, or as soon as possible after the department becomes aware of the prohibition.

2. <u>Dissemination of Information</u>. At the outset of the consultation process, prior to the first consultation meeting, the department and boards should provide the affected tribe with sufficient information about the proposed action to ensure that the tribe can properly assess and respond to the action or proposed action.

3. <u>Identification of the Participants</u>. The department will identify their representatives for the consultation process and the affected tribe will be expected to do the same. The department should work with the representative of the affected tribe to identify any other affected tribe(s) that should be involved in the consultation.

4. <u>Authorized Initiators</u>. Any member of the department with decision-making authority regarding an action that may significantly affect a tribe is authorized to initiate a request for consultation with the tribe. The department will likewise accept an unsolicited request for consultation from any representative of a tribal government who has decision-making authority on behalf of that tribe. The department member will provide timely notification to the department's "key contact" regarding any consultation.

5. <u>Consultation Process</u>. Consultation should incorporate processes for ongoing communications. The department shall work with the tribe to develop a timeline, list of participants, and method and frequency of communication to be used during the consultation. The department will notify the tribe of any final decision on a proposed action within a reasonable time period prior to the time the decision takes effect, unless extraordinary or emergency circumstances preclude it.

6. <u>Tribal Request for Consultation</u>. The department shall maintain a list of its Key Contacts, including phone and email addresses, and shall provide a copy of this list to the tribes. These are the individuals the tribes should contact when requesting consultation on a department matter that they believe will significantly affect the tribe, or a tribal action that may significantly affect the department.

7. <u>Inter-department Cooperation</u>. The department will work cooperatively with other state and federal agencies to accomplish the goals and responsibilities of this policy. Requests for consultation determined to be out of the department's purview will be referred to the appropriate "Key Contact" of another state department.

8. <u>Working Group Participation</u>. The department recognizes the importance of participation in the Working Groups established within the State-Tribal Forum to facilitate meaningful dialogue regarding issues of concern to the state and the tribes. The department will make a good faith

Page 2

effort to ensure its Key Contacts actively participate in meetings of any Working Group that includes the department.

9. <u>Exclusions</u>. The following actions are exempt from this policy: department participation in investigations relating to actual or suspected violations of state law, and initiation of the civil or criminal justice process; adjudicatory and rule-making decisions of the Commercial Fisheries Entry Commission; emergency order (EO) announcements and management actions; preseason management strategies, outlooks, or forecasts.

10. <u>Limitations on Consultation</u>. The department is not required to consult with Tribes if such consultation could result in an infringement or breach of any applicable privileges, including but not limited to the attorney-client privilege, executive privilege, work product doctrine, deliberative process privilege, and law enforcement confidentiality requirements or privileges.

11. <u>Other Considerations</u>. Consultation on development of regulations by the department and all regulatory actions of the boards will occur in accordance with the Administrative Procedures Act. Nothing in this policy is intended to prohibit constructive communication between the department and a tribe. Consultations on management plans may occur through specific agreements with affected tribes.

## **General Provisions:**

1. This policy is intended to promote constructive dialogue between the department and the tribes, and assure consistency within the different divisions and offices of the department.

2. This policy clarifies the department and boards' protocol for consulting with federally recognized tribes in Alaska in a government-to- government relationship.

3. This policy shall be effective upon signature of the Commissioner of the Department of Fish and Game and the board chairs.

4. This policy is not intended to expand, contract, or otherwise diminish or limit the sovereignty held by the state or any federally recognized tribe in Alaska.

## **Definitions**: For the purposes of this Policy:

1. "Tribe" means any tribe in Alaska that is on the list of federally recognized tribes published by the federal Bureau of Indian Affairs.

2. "Consultation" means the timely process of meaningful inter-governmental dialogue between ADF&G divisions and/or offices and tribes, and between the boards and the tribes, regarding a proposed department or board action that significantly or uniquely affects a tribe. When assessing what action will be subject to consultation, the department shall take into account the cultural and traditional activities of the tribe that may be significantly or uniquely affected by the

proposed action, as well as any relevant state and/or federal law. "Consultation" may take place by in-person meeting, teleconference, videoconference, and exchange of written documents, email, or other means appropriate to the circumstances.

3. "Department" means the State of Alaska, Department of Fish and Game including its divisions, offices, officials, and/or employees, the Alaska Boards of Fisheries and Game (Boards), and the Commercial Fisheries Entry Commission.

4. "Boards" means the Alaska Boards of Fisheries and Game

5. "Department Action" and "Board Action" means any proposed action, activities, decision, legislation, regulation, plan, policy, procedure, program, project, service, or other actions that significantly or uniquely affect on a tribe, except as identified under "exclusions," below.

Dated: May 1, 2002

*S* 05/01/02 Frank Rue, Commissioner Alaska Department of Fish and Game *S* 05/06/02

Ed Dersham, Chair Alaska Board of Fisheries

*S* 05/15/02

Ben Grussendorf, Chair Alaska Board of Game

### State of Alaska Department of Fish and Game RECORD OF CONSULTATION

Tribe: Tribal Representative: ADF&G Representative: Requestor: Date of Request:

Description of Departmental Action:

How does this action significantly affect the Tribe?

Consultation Participants:

Time line, frequency, method of consultation:

Outcome:

Notification to Tribe of Outcome: