

**TECHNICAL SUMMARY**

STUDY TITLE: Subsistence Study for the North Aleutian Basin

CONTRACT NUMBER: M08PC20053

SPONSORING OCS REGION: ALASKA

APPLICABLE PLANNING AREA: North Aleutian Basin

FISCAL YEARS OF PROJECT FUNDING: FY 2008 - FY 2012

COMPLETION DATE OF PROJECT: July 2012

COSTS: FY 2008-2012 ISU \$339,793

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**BACKGROUND**

The 2005 MMS-sponsored "North Aleutian Basin Information Status and Research Planning Meeting" identified 31 studies that could provide useful information to upcoming National Environmental Policy Act (NEPA) Environmental Impact Statements, analysis of potential mitigation of impacts, and post-sale needs such as for use in NEPA reviews of exploration or development plans. Of those, this Subsistence Study was identified by the Alaska OCS Region as a time-sensitive and important decision-applicable information need, given the high dependency of the region's residents on wild subsistence foods and commercial fisheries. This study is responsive to the Bureau of Ocean Energy Management's Statement of Work entitled "Subsistence Study for North Aleutian Basin" (M08PS00075). As part of the Alaska Environmental Studies Program (ESP) that evaluates upcoming exploration, developments, current and potential lease sales, and exploratory activities, this study focuses on the North Aleutian Basin and contains a comprehensive ethnographic description of the peoples, cultures, economies, and especially subsistence food harvests and distribution behaviors in four communities proximate to the North Aleutian Basin (NAB) oil and gas lease sale area. These communities are the home of Aleut and Alutiiq residents who rely primarily on wild resources for economic and sociocultural survival. The study communities have relatively recent establishment dates and histories, having been created in the past two centuries from consolidation of shrinking villages located nearby. The study administered a comprehensive OMB approved survey instrument that gathered individual and household data on demographics, subsistence harvests levels for all available species, sharing of wild foods and wild food products, relative availability, harvest locations, crew composition, employment and other income sources, household expenses, subsistence expenses and equipment owned, dependency and support networks, questions on support and potential impacts of oil and gas exploration and development, and observed changes in wildlife health and abundance. The study summarizes and analyzes relevant data from fieldwork undertaken in 2008-2010 and 2012 in the four communities of Akutan, False Pass, Nelson Lagoon, and Port Heiden.

## **OBJECTIVES**

This study provides key subsistence baseline data for the region in Akutan, False Pass, Nelson Lagoon, and Port Heiden. Objectives were to:

- Gather current household and community data on subsistence harvest and sharing activities, economics, traditional knowledge, spatial data, and environmental observations, using an OMB approved survey instrument.
- Supplement survey data with local ethnographic and qualitative data, investigate the social dynamics of subsistence and commercial harvests within each community, and use these data to inform interpretations of survey results.
- Identify and evaluate predominant patterns and networks of subsistence activities by household and community, ranges of variation, and vulnerabilities.

## **DESCRIPTION**

This is a community baseline study that describes four communities as they currently exist and the potential changes that may accompany offshore oil and gas exploration and development in the North Aleutian Basin. The study investigated each community's subsistence and commercial harvest activities, economic structure, demographic characteristics, infrastructure, and sociocultural systems for its residents, and examined each community in the context of the greater southern Bering Sea region. Historical trajectories for each community are also explained, and may indicate future responses to exploration and development.

## **SIGNIFICANT RESULTS AND CONCLUSIONS**

The four study communities are experiencing many negative changes (school closures, population outmigration, unpredictable fisheries, increasing living costs, e.g.) and positive changes (infrastructure improvements, development, e.g.), thus oil and gas exploration and development would be encountering an already rapidly changing social and economic environment. The majority of leaders in these communities support oil and gas exploration and development, while the views of the village populaces are mixed, influenced in part by concerns over the Pebble Mine project in Bristol Bay. The volatility of commercial fishing corresponds to a volatility of support for non-fishing economic exploration and development.

The commercial fishing monetary economy both contributes to the ability to subsistence harvest and is also a pursuit in and of itself. In many cases involving fishing, commercial and subsistence harvesting practices are blurred. Income is not a predictor of subsistence provision, but boat ownership is. This means that a sudden influx of new wealth will not translate into more subsistence, unless that wealth is converted to commercial permits and boats. Salmon are keystone species for False Pass, Port Heiden and Nelson Lagoon. Caribou and geese are keystone species for Nelson Lagoon and Port Heiden. Seals, salmon and shellfish are key species for Akutan. Several keystone species have been closed to harvesting due to population concerns for the past several years. Increases in non-local harvesters through guided hunts, tourism, or as commercial fishermen is a growing concern for the Alaska Peninsula communities. Petroleum industry workers may exacerbate these concerns.

Sharing of wild species is a frequent and universal practice across all four communities, and 98% of all individuals identified in the survey can be connected in one massive network. Exchange networks are structured around a few higher status key providers and, for nearly all species, these providers have direct access to the commercial fishing industry and, especially, to fishing vessels. The most durable and resilient networks are those focused on what might be considered traditional species, organized as cluster networks. Networks involving less traditional taxa, such as crab or cattle, are more vulnerable to the loss of the provider, displayed as star pattern networks. The subsistence economies of these communities have become specialized on a few species, and the loss of a single species results in diluted, less resilient networks. The "30/70 rule" identified by the Subsistence Division, where 30% of households are responsible for 70% of the harvests, holds true for total community harvests. The Return Index (RI) for providers of subsistence goods and receivers of subsistence goods indicates, across every category of resource, that the providers give away significantly more than they get back, at least in relation to foods.

## STUDY PRODUCTS

Reedy-Maschner, K. 2012. Networks of Net Work in Coastal Villages of the Southern Bering Sea. Paper presented at the American Anthropological Association meeting, November, San Francisco, CA.

Reedy-Maschner, K. and H. Maschner 2012. Networks of Sustainability in North Aleutian Basin Communities. Paper presented at the Alaska Marine Science Symposium, January 17-20, Anchorage.

Reedy-Maschner, K. 2011. Flexible Networks: Managing Social Economies and Development in Fishing Villages in the Southern Bering Sea. Paper presented at the 4<sup>th</sup> International Conference of Arctic Social Sciences (ICASS IV), Akureyri, Iceland, June 22-26.

Reedy-Maschner, K. 2011. "Natural Resource" Dependence and the Revaluing of Wild Foods in the Southern Bering Sea. Paper presented at the Society for Applied Anthropology annual meeting, Seattle, March 29-April 2.

Reedy-Maschner, K. and H. Maschner in review. Traditional foods, corporate controls: Networks of household access to king crab and cod in southern Bering Sea villages. *Polar Record*.

## MAP OF STUDY AREA

