

## **BOEM ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES**

**Region:** Gulf of Mexico, OCS

**Title:** Improving Capacity for Institutional Analysis for the Oil and Gas Industry  
(GM-09-01-05)

**Planning Area(s):** Gulfwide

**Total Cost:** \$ 809,106

**Period of Performance:** FY 2009-2015

**Conducting Organization:** Coastal Marine Institute, Louisiana State University

**BOEM Contact:** [Dr. Harry Luton](#)

### **Description:**

Background: The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEM) Gulf of Mexico Region (GOMR) is refining its approach to the assessment of the onshore social and economic consequences of offshore petroleum activities in Federal waters, from the identification of oil-related offshore activity to the evaluation of its onshore social and economic consequences. This reevaluation brings in-house efforts together with several ongoing studies to address issues concerning: (1) the identification of sale-related activity, (2) the allocation of onshore effects, (3) the delineation of onshore impact areas, and (4) the assessment of effects within these areas.

BOEM has made (and is making) considerable investments in addressing the first two issues through past and ongoing research on industry sectors, offshore-related infrastructure, and input-output modeling techniques for estimating offshore, sale-related activity and allocating their effects onshore. BOEM is also focusing considerable resources on the latter two issues. With regard to the last issue, BOEM is refining its modeling of regional employment and economic effects onshore. It is also exploring supplementary approaches that might extend the Gulf Region's existing capacity by addressing other linkages between the OCS industrial complex and socioeconomic conditions in the regions that support the complex.

Objectives: This project represents the first step in a broader research agenda aimed at assessing the potential linkages between community institutions and the oil and gas industry in the GOMR. The overall objectives of this Phase I project are:

1. develop a detailed description of oil and gas related employment for counties/parishes and larger geographic aggregations (e.g. commuting zones) in the GOMR.
2. assess potential linkages between oil and gas employment and two key intermediate mechanisms of socioeconomic change for GOMR communities: population change and the fiscal health of local governments; and
3. explore potential linkages between oil and gas related employment and the longer term institutional impacts on education and place-based well-being

**Methods:** The study will be multi-method. The study will estimate population change from employment changes in the GOMR in two phases: descriptive and multivariate regression analysis. To examine the distribution of the local growth effect across GOMR counties, it will first use Geographic Information Systems (GIS) to conduct an exploratory data analysis. These analyses will identify the spatial distribution of local growth effects and assess the degree to which these local growth effects are spatially dependent. The second phase will use multivariate regression analysis of local growth effects. An effort to identify oil and gas-related employment and explore linkages to place-based well-being will use a variety of methods build on the literature review and the findings from the population/employment component and will focus on the WholeData CBP to develop a more holistic measure of oil and gas-related employment in the GOMR and to then conduct exploratory analyses of the linkages between such employment and measures of place-based well-being. The analysis will primarily be a descriptive effort aimed at revealing spatial variation in oil and gas-related employment in the GOMR. These data will be mapped at the level of counties, commuting zones, and possibly other county aggregations using Geographic Information System (GIS) software. Basic correlations between oil and gas-related employment and various measures of place-based well-being will be explored including measures related to health, education, the economic well-being of families and households, and the fiscal status of local governments. Fuzzy set typologies will be used to provide a descriptive picture of the institutional impact of OCS activity at the county/parish level in the GOMR and to enhance capacity for assessing impact on education, and other local institutions affecting the well-being of coastal populations. This effort will first use a fuzzy-set approach to assess industry impact on educational investment in Louisiana. Based on these results, further analysis of the effects of OCS activity will be conducted on employment, population trends, well-being, local investment in human capital, and local government financial health. An exploratory analysis of the financial health of local government institutions as a result of OCS activities will be conducted. This exploration will include the calculation of financial health indicators and then evaluate similarities and differences in these indicators between political jurisdictions over time to assess the possible extension of parametric analysis into a second project phase. The first step is a descriptive analysis using financial ratio analysis tools to measure the static financial health of local governments.

**Products:** Quarterly reports, technical meetings, draft reports for each study component, final technical report and associated data bases.

**Importance to BOEM:** BOEM is responsible for the assessment of the environmental impacts of the OCS leasing program. The assessment of its socioeconomic effects faces particular problems in the GOMR because they occur onshore distant from offshore activities, because assessments are done prior to any industry development plans, and because the Gulf already hosts a large, active OCS-related industry. Given these difficulties, BOEM continually seeks to improve its socioeconomic assessments. This study provides considerable support to these efforts; it addresses stakeholder concerns (e.g., the State of Louisiana) about the accuracy and inclusiveness of these assessments; and, it supports parallel BOEM in-house and research efforts to improve other aspects of its assessment approach.

**Current Status:** The study has been extended an additional twelve months to allow for more comprehensive research covering all five GOM states. BOEM has attended working meetings as part of this effort.

**Final Report Due:** September 2015

**Publications:** None

**Affiliated WWW Sites:** None

**Revised Date:** February 3, 2015

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