CLUSTERING LOUISIANA COMMERCIAL FISHERY PARTICIPANTS FOR THE ALLOCATION OF GOVERNMENT DISASTER PAYMENT: THE CASE OF HURRICANES KATRINA AND RITA

by

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A REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Statistics
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2011

Approved by:

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Abstract

The purpose of this study is to evaluate the effectiveness of the methods used for allocating disaster funds to assist commercial fishery participants as a result of Hurricanes Katrina and Rita of 2005 and to examine alternative methods to aid in determining an efficient criterion for allocating public funds for fisheries assistance. The trip ticket data managed by the Louisiana Department of Wildlife and Fisheries were used and analyzed using a cluster analysis. The trip ticket data managed by the Louisiana Department of Wildlife and Fisheries were used and analyzed using a cluster analysis.

Results from the clustering procedures show that commercial fishermen consist of seven clusters, while wholesale/retail seafood dealers consist of six clusters. The three tiers into which commercial fishermen were originally classified can be extended to at least eleven (11) clusters, made up of three (3) clusters in tier 1 and equal number of clusters (4) clusters in tier 2 and tier 3. Similarly, the original three tiers of wholesale/retail seafood dealers can be reclassified into at least nine (9) clusters with two clusters in tier 1, four (4) clusters in tier 2 and three (3) clusters in tier 3.

As a result of the clustering reclassifications, alternative compensation plans were developed for the commercial fishermen and wholesale/retail seafood dealers. These alternative compensation plans suggest a reallocation of disaster assistance funds among individual groups of fishermen and among individual groups of dealers. We finally recommend that alternative classification methods should always be considered in order to select the most efficient criterion for allocating public funds in the future.