

Phase 1: Using Social Indicators to Guide, Evaluate, and Accelerate Implementation of State-Level Nutrient Reduction Strategies

Water quality problems that have accumulated over many decades often take decades to correct. This is the case when considering the complexity, scale, causes, and impacts of Gulf of Mexico hypoxia. The social dimension plays a key role. Every individual, community and culture has a set of beliefs and attitudes that guide decision-making and influence behavior. Because the success of nutrient reduction strategy implementation in state-designated priority watersheds depends upon a large percentage of watershed stakeholders understanding both the water quality impacts of their land use activities and the importance of conservation, an important measure of progress should include confirming that awareness and attitudes are changing and behaviors are being adopted that serve to mitigate the problem.

Social indicators provide consistent measures of social change and can be used by planners and managers at the national, state, and local levels to estimate the impacts of their efforts and resources even while a lag exists for monitored improvements in water and habitat quality. In addition, social indicators can inform planners and managers of changes needed to their nutrient reduction strategies to increase the effectiveness of their efforts.

The goal of this project is to refine social indicators for agricultural and water management with an emphasis on nutrient reduction, and establish a foundation for an active social indicators users community among policy researchers and regulatory agencies throughout the Mississippi/Atchafalaya River Basin (MARB) and the Gulf of Mexico. One of the tasks of this project includes the expansion of the existing Social Indicators Data Management and Analysis Tool (SIDMA) and the Social Indicators Planning and Evaluation System (SIPES)¹. In addition, improvements to the database of social indicators will be accomplished by directly *engaging the GOMA Water Resources Team*, the social science research community, and appropriate stakeholders to gather all available studies on social responses that address water management projects in the MARB and Gulf of Mexico, including published and unpublished information. This information includes: reports, surveys, gray (non-published reports) and white (peer-reviewed) literature, and conference presentations.

The rationale for this approach is threefold. First, a large amount of intellectual capital has been invested in the development, refinement, and maintenance of SIDMA and SIPES which were developed by land grant university faculty and staff working closely with state and federal agencies, and local stakeholders for use with nonpoint source water quality management projects. This project is designed to build upon that successful base of primary research and tools to ensure relevance across the states and to extend our body of knowledge. Second, despite the recognized importance of addressing nutrient contributions to the Gulf of Mexico from agriculture, a meta-review of relevant published literature noted, "...environmental awareness and farmer attitudes have been inconsistently used and measured across the literature." Inconsistent measures make it nearly impossible to compare pre - and post-intervention changes in beliefs, attitudes, motivations, and constraints associated with

¹ <http://35.8.121.111/si/home.aspx>

project activities, and makes it equally impossible to make comparisons across regions, states and basins. The third rationale for this particular initiative recognizes the wide variations across the basin in landscapes, agricultural management systems, and institutional structures supporting natural resources and environmental management.

Phase 1 Questionnaire

As part of the social indicators users and community engagement, we will begin the collaboration with the GOMA Water Resources Team, during the all hands meeting. In this process we aim to identify all available studies and information on social responses that address water management projects in the Gulf of Mexico, including those with an emphasis on nutrient reduction. To assist in preparation for this effort, please answer the following questions:

1. Please provide your name and affiliation

Name and contact info of additional suggested participants

2. Have you directly or indirectly work in projects implementing social indicators for water management? If so please list them.

3. Are you aware of social indicators projects currently being performed in your state? If so please list them and provide a contact info if it's the case.

4. Are you aware of grey literature implementing social indicators for water management-nutrient reduction in your state? Grey literature includes: Agencies and federal reports, conference abstracts/presentations/proceedings, non-published reports, work ongoing. Please list the title-author and contact information of the author(s)/agency to obtain a copy.

Thank you for your consideration and assistance. When possible, please send your responses to: sandra.guzman@ssrc.msstate.edu

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