

<p>Project Title: Assessing Maritime Infrastructure along the Mississippi: Chokepoints and Implications for Food Security</p>
<p>Project Abstract (Brief Description): The Mississippi River is a major part of the MTS and has been referred to as ‘America’s inland hydro highway’. It is a critical food security corridor functioning as a major trading thoroughfare for US goods and commodities to and from the rest of the world. The complex river system is considered one of humanity’s greatest civil engineering feats. However, the strain on the river system is only becoming more acute due to ageing infrastructure and the impacts of climate change. Up and down the Mississippi River, new pressures are being put on river, impacting the environment and wildlife, and cities and towns along the river banks. In recent times, cities and farms near the river have been inundated by record precipitation and flooding. Of particular interest is the impact of these pressures on the creation of chokeholds and vulnerabilities to the food and agriculture supply chains. These supply chains are inherently complex due to their interdependency with critical infrastructure systems including maritime and multimodal transportation with the largest risk to agricultural trade resulting from age and inadequate or inappropriate infrastructure. It is imperative to close the infrastructure gap, which is not just a function of more construction; new developments must be smart and able to withstand increasingly hostile weather and elements of climate change as they age. Consolidating the evidence around the importance of chokepoints on the Mississippi River Delta to food security, and enhancing understanding of the nature of hazards and vulnerabilities are key steps in converting chokepoint analysis into policy and strategic action.</p>
<p>Describe Implementation of Research Outcomes - Key outputs of the project include developing GIS maps of maritime transportation infrastructure along the MS River Delta, database and maps on physical and policy chokepoints along the MS River Delta, a journal publication on maritime transportation climate change and food security. Major anticipated outcomes and impacts, however, include information and analyses that can be used by decision makers in designing smart & sustainable maritime infrastructure; collaborative partnerships with key stakeholders; improved engagement of stakeholders in climate change, disaster response and transportation planning and increased research capacity and computing skills of faculty and students in the College of Science, Engineering and Technology at Jackson State University. Other key outcomes include public awareness of the i) elements & value of maritime transportation; ii) chokepoints within maritime infrastructure; iii) impacts of these chokepoints; and iv) connections between maritime transport and food security.</p>
<p>Impacts/Benefits of Implementation - The analysis will have significant value to transportation officials, urban planners, researchers and the general public, not only in Mississippi but nationwide as well with important implications for the nation’s economic prosperity, national security and future well-being. As ongoing pandemic-related delays and closures exacerbates issues of poor maritime infrastructure and climate hazards, the importance and efficiency of a resilient, sustainable, competitive and agile transportation system is heightened. The project has enormous potential as it seeks to bridge the gap between maritime transport, trade and climate change, all very important elements of the Biden Administration’s agenda. This project will also expand the dialogue to determine the infrastructure issues and needs for the Mississippi River Delta region. The competitiveness of maritime commerce was at risk as maritime commerce along the Mississippi River was slowly recovering after 2019 and 2020 rains and floods.</p>
<p>Web Links: martrec.uark.edu</p>

Budget (Funding) Amounts & Source(s) (US DOT +Match(s) =Total Costs): MarTREC 55,000 + JSU 27,500 = 82,500.

Project Start and End Dates: 11/01/2021 to 09/30/2023 Complete

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