Disruptions to Rail- Impacts Analysis and Decision Support (DRIADS)

**Introduction**

This research explores the positive effects of combining Homeland Security issues with regional transportation infrastructure decision-making and economic development within the State of Mississippi and southeast region. This approach provides a geographically specific, but highly transferable demonstration of a solution relevant to the Department of Homeland Security (DHS) which integrates modeling systems with policy and decision-making.

**Study Areas**

Three specific rail disruption scenarios were identified. For example, the scenarios include an analysis of Gulf Coast CSX corridor, the Vicksburg, MS, rail-bridge, and the Memphis, TN, rail bridges. Freight flow modeling data that were forecasted by Oak Ridge National Laboratory with their Universal Rail Rerouting Model (URRM) were utilized to project freight flow patterns when rail disruption was experienced in the specific regions.

**On Going Efforts**

Ongoing efforts concentrate on integrating the forecasted freight flow disruptions patterns with specific economic modeling tools, such as REMI, to determine the economic impacts, which will be utilized to develop visualizations that illustrate the impact a man made and/or natural disaster would have on the region's transportation network. These research deliverables illustrate disruptions and economic impact patterns that will affect community and commerce flow so planners in economic development, transportation, land-use and emergency evacuation can work with identical data to find solutions toward resiliency.

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