

IIITD AAC

Homeland Infrastructure Threat and Risk Analysis Center

IIITD AAC

2010 Hurricane Season: Tools for Understanding Risk

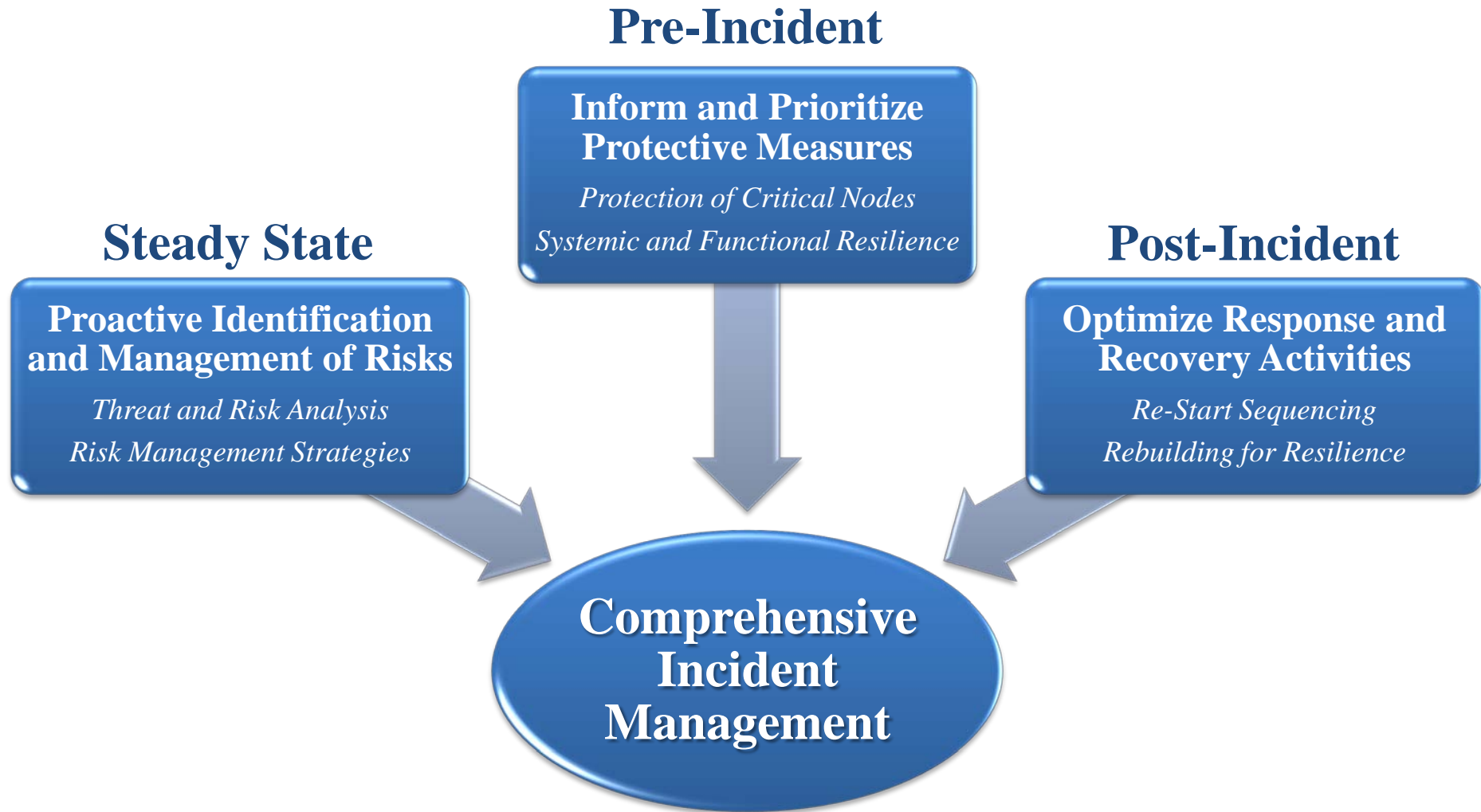


Homeland
Security

Informing the Decisions that Protect the Nation

- HITRAC is the Department of Homeland Security's infrastructure-intelligence fusion center incorporating analysts from the Office of Infrastructure Protection and the Office of Intelligence and Analysis.
- The Department established HITRAC to create timely, actionable, risk-informed analysis and strategies for Federal, State, local, tribal, territorial, private sector, and international partners.
- HITRAC also manages the National Infrastructure Simulation and Analysis Center (NISAC), a congressionally-mandated center combining the advanced infrastructure modeling, simulation, and analysis capabilities of Los Alamos and Sandia National Laboratories.

A Comprehensive Approach to Incident Management

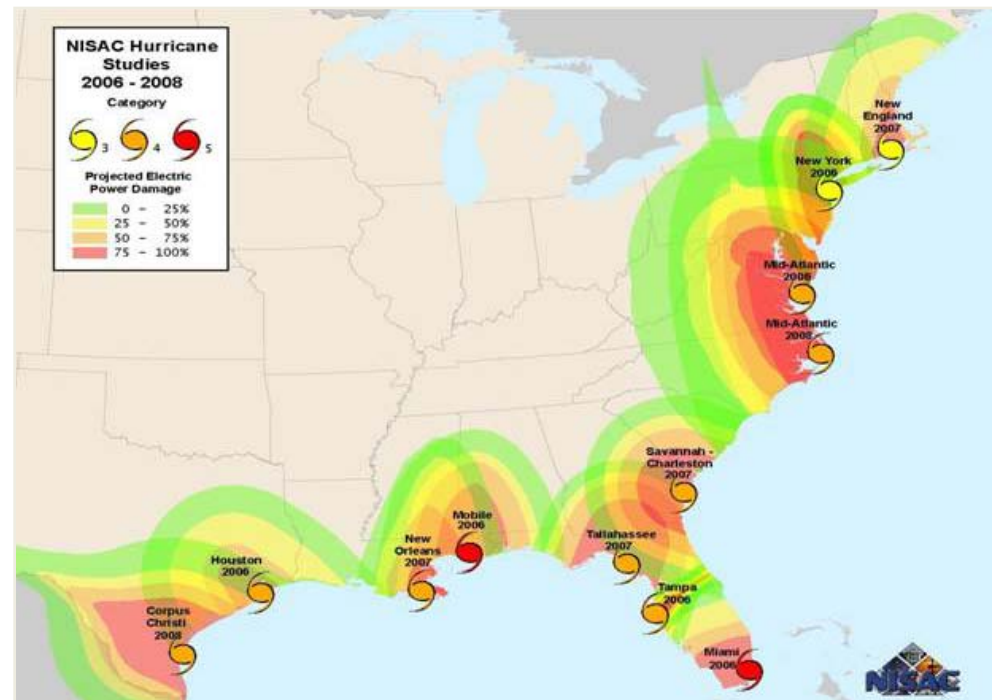


Proactive Identification and Management of Risks

- HITRAC strives to identify risks *before* they become critical.
- Early warning maximizes the number of risk management options available to partners and reduces the costs.
- HITRAC analyzes current, emerging, and future risks through formal assessments, and then works with partners to identify effective risk management strategies.
- Examples of the all hazard product lines targeted at the proactive identification and management of risks include:
 - National Risk Estimates;
 - National Risk Profile;
 - Sector and Regional Threat and Risk Profiles; and
 - NISAC Comprehensive Assessments.

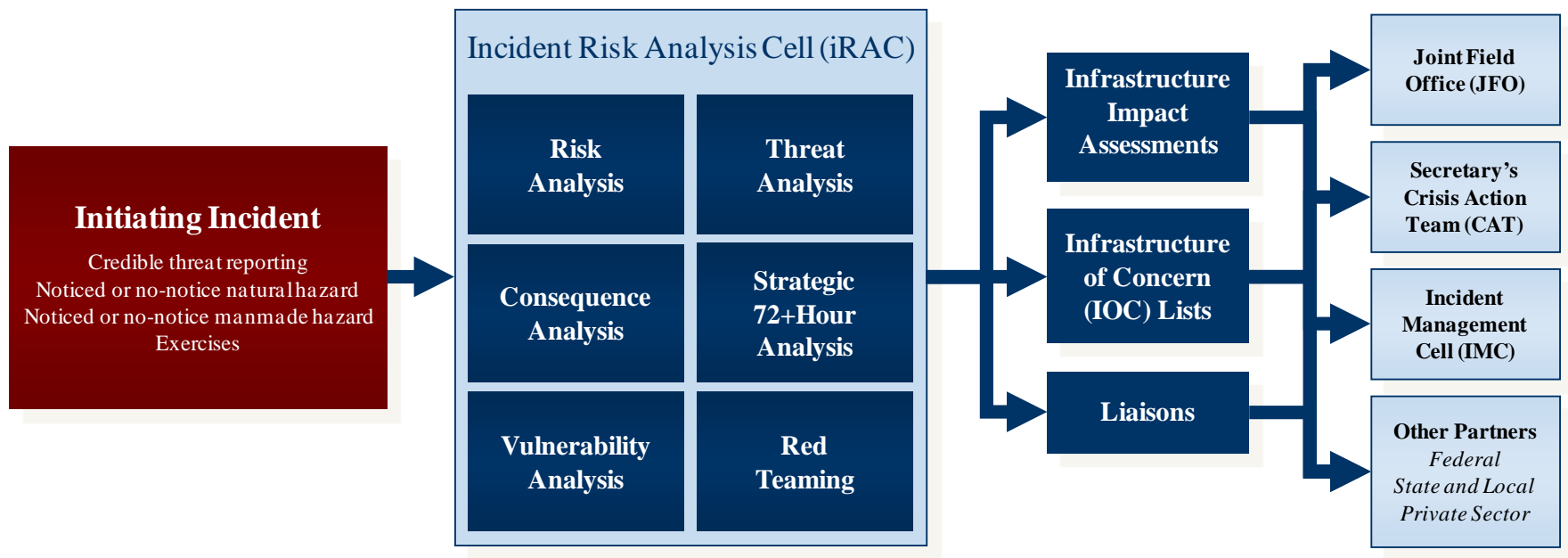
Proactive Identification and Management of Risks

- For hurricanes, proactive identification and management of risks can make the difference between a significant incident and a catastrophe.
- NISAC assessments are available for the Gulf and East Coasts, and provide information on the consequences partners should plan for based upon historical hurricane strikes.
- The reports allow partners to take proactive measures to manage their greatest risks, and can be used to inform exercises and steady state planning activities.



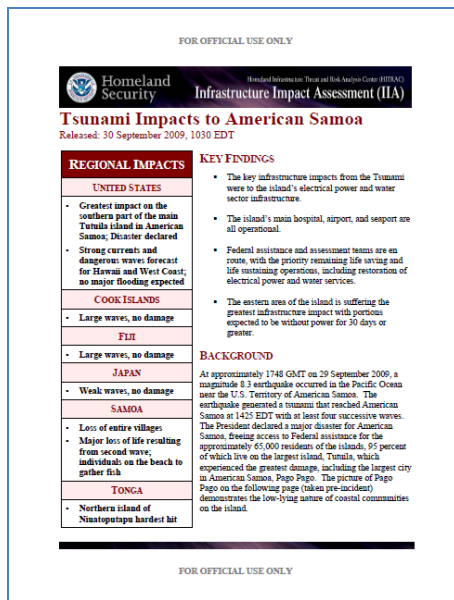
Inform and Prioritize Protective Measures

- When faced with an imminent hazard or threat, HITRAC analysis shifts to inform resource allocation and help partners achieve the greatest reduction in risk possible given available resources.
- The Incident Risk Analysis Cell (iRAC) serves as an integrating structure for HITRAC's analytic programs.



Inform and Prioritize Protective Measures

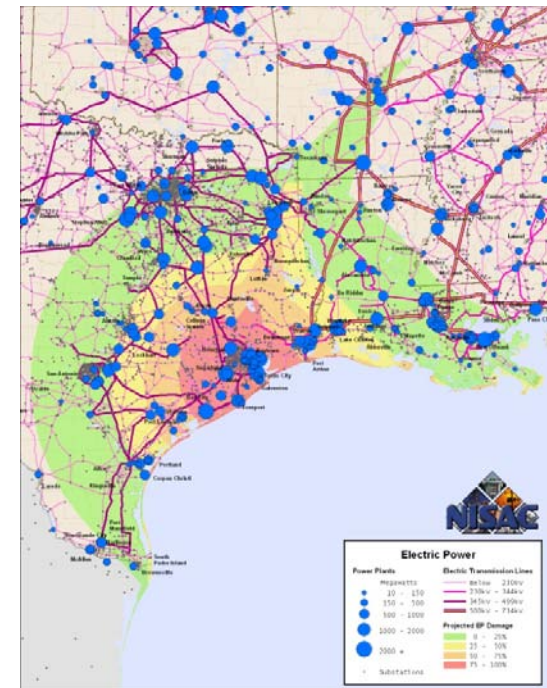
- Infrastructure Impact Assessments (IIAs) capture the results of HITRAC's analysis, and include incident-specific Infrastructure of Concern (IOC) lists.
- Infrastructure Impact Assessments describe the threat timeline, asset-specific and systemic vulnerabilities to the threat, and the potential consequences of likely, worst-case, and other loss scenarios.



- Infrastructure Impact Assessments also include a suite of recommended protective measures, including strategies to protect critical nodes, if relevant, as well as approaches to achieve systemic and functional resilience.
- The majority of HITRAC's incident-related products are available on the Homeland Security Information Network – Critical Sectors (HSIN-CS).

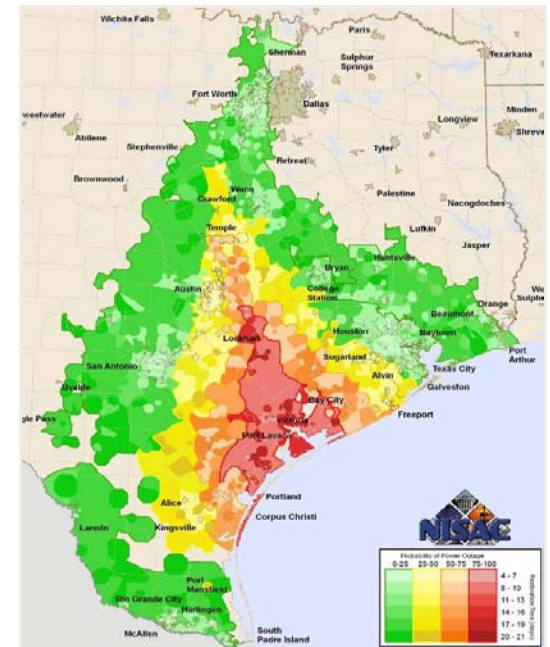
Inform and Prioritize Protective Measures

- For major hurricanes (Category 3 or higher), HITRAC leverages NISAC's advanced modeling, simulation, and analysis capabilities to supplement the Infrastructure Impact Assessments.
- NISAC analysis provides invaluable information on expected:
 - Evacuation areas and housing impacts;
 - Power and other infrastructure outage areas and outage duration;
 - Economic and supply chain impacts by geographical area and industry;
 - Storm surge and flooding; and
 - Other factors, as warranted by the incident.



Optimize Response, Recovery, and Reconstitution

- As major hurricanes approach, a portion of HITRAC's analytic resources shift to developing response, recovery, and reconstitution recommendations.
- The reconstitution priorities are captured in the Infrastructure Impact Assessments, and will include infrastructure critical to response and recovery efforts, the provision of lifeline services, and nationally-critical infrastructure.
- The priorities will evolve as information becomes available about the status of infrastructure in the impacted region, and as progress is made by partners on the ground.
- The more information provided by partners, the better the analysis.



Lessons Learned and Best Practices

- Following incidents, HITRAC identifies lessons learned and best practices through post mortem analysis, which in turn inform HITRAC's steady-state , pre-incident, and post-incident risk management recommendations.

Lessons Learned and Best Practices

- *Proactive Identification and Management of Risks*
- *Inform and Prioritize Protective Measures*
- *Optimize Response, Recovery, and Reconstitution Activities*

- HITRAC can also develop strategies to help partners better-protect their critical infrastructure facilities and communities from future hazards by integrating resilience approaches into their rebuilding efforts.

The Role of Partnerships in Hurricane Analysis

- Partners who invest in building a relationship with HITRAC *before* incidents benefit from more robust, higher fidelity analysis *during* incidents.
- Information provided *before* incidents allows HITRAC, through NISAC, to build better modeling and simulation tools, which during incidents become the driving force behind HITRAC's analysis.
- Information provided *during* incidents allows HITRAC to fine-tune and tailor its modeling, simulation, and analysis to the on the ground realities partners face.
- *Before* incidents, partners interested in closer collaboration can contact RISK@hq.dhs.gov, or their relevant Sector or Regional Risk Analyst.
- *During* incidents, partners with incident-specific information of interest should contact the National Infrastructure Coordinating Center (NICC), which operates 24 hours a day, 7 days a week, 365 days a year (NICC@dhs.gov).