



Disaster Response for Subsequent Sustainability

Sustainable Facilities & Infrastructure Program
Georgia Tech Research Institute

Research Questions (1)

- ◆ How do extreme event characteristics affect the range of effective opportunities for increasing subsequent sustainability?
- ◆ What contextual considerations determine the feasibility of sustainable technologies in specific disaster situations?
- ◆ What are the most effective methods to provide information and technical assistance to disaster stakeholders to maximize subsequent sustainability?

Research Questions (2)



- ◆ What are the drivers that should be managed to optimize response effectiveness in a post-disaster environment?
- ◆ How do stakeholders decide what mitigation strategies to adopt in a pre-disaster situation?
- ◆ How can existing data streams be fused to create enhanced predictive models of the impacts of extreme events?

Georgia Tech SFI provides:

- ◆ Technical assistance for disaster recovery
- ◆ Training and outreach to disaster stakeholders
- ◆ Identification of sustainability opportunities during the recovery process
- ◆ Facilitation of recovery efforts via decision support, documentation, and evaluation

Research Focus Areas (1)

A dark blue world map is visible in the background of the slide, showing the outlines of continents and countries.

- ◆ Response and mitigation process optimization
- ◆ Economics-based decision support for response design
- ◆ Disaster characterization data collection and modeling of built environment impacts
- ◆ Lessons learned documentation
- ◆ Development of evolutionary transitional infrastructure

Research Focus Areas (2)



- ◆ Evaluation of response program effectiveness
- ◆ Data fusion and model coupling for impact prediction
- ◆ Logistics of debris management and pre-disaster mitigation
- ◆ Prediction of the adoptability of new technologies

Benefits



- ◆ Immediate relief that transitions into...
 - ...new business enterprises
 - ...sustainable transitional solutions
 - ...permanent sustainable facilities and infrastructure
 - ...ultimately, sustainable redevelopment