



# Strategic Risk Management and Trade Resumption Planning



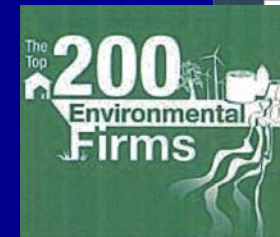
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# Tetra Tech Inc.

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- Tetra Tech has nearly 8,500 professionals in approximately 275 offices worldwide.





# Integrated Port Services

- Risk Assessment, Mitigation, and Management
- Development of Port-wide Risk Management Strategies
- Resource Analysis For Risk Management Strategies
- Concept/Continuity of Operations
- Trade Resumption and Resiliency Planning
- Security Systems Design
- Cost and Value Engineering





# Security is key

- **Security** – The ability to:
  - Detect (and assess);
  - Delay; and
  - Respond to malevolent acts.

Security is key to the development and sustainability in the port commerce environment.



# Strategic Risk Management Planning (SRMP) Goals

*The primary goals of the SRMP process are to:*

- Develop a comprehensive strategic risk management plan for an area
  - Utilize and build upon the conclusions and recommendations from previous assessments if available
- Develop a long term investment plan to reduce risks associated with vulnerabilities to the port community



# What does a SRMP do?

- Systematically prioritizes facilities, functions, interdependencies, and resources;
- Emphasizes port-wide and region-wide partnering opportunities to optimize regional risk management; and
- Establishes a forward-looking risk management strategy to increase security, survivability, and interoperability by decreasing vulnerabilities port- or region-wide.

# The SRMP Process

- Evaluate Previously Completed Risk Assessments
  - Scope and Methodologies
  - Threats
  - Vulnerabilities
  - Consequences
- Develop Data Gap Analysis Summary
- On-site Validation
- Establish Current Qualitative Risk Baseline





# The SRMP Process, cont.

- Define target (end-state) risk goals
- Identify end-state risk reduction measures to “fill in the gaps” and achieve goals
- Determine future port- or region-wide risk





# The International Risk

## ■ Critical Issues

- Piracy
- Emerging Threats (e.g., extremist groups, etc.)
- Internal Response Force Integrity
- International Task Force Response
- The Security / Development Nexus



# Trade Resumption and Resiliency (TRR) Goals

- Develop mitigation strategies for rapid restoration of critical facilities
  - Includes elements of preparedness, survivability, and resiliency.
- Develop simplified cost-benefit model to identify and prioritize projects



# TRR Methodology

- Conduct Regional-scale Economic Modeling
- Identify and Analyze Port-wide Systems
- Assess Recovery and Response Capabilities
- Identify and Prioritize Mitigation Gaps
- Perform Cost-benefit Analysis of Mitigations
- Develop Business Continuity and Trade Resumption Plan



# Awareness, Prevent, And Protect Mission Area Gap Analysis

- Maritime Domain Awareness
  - Multi-agency Information Centers
  - Interoperable Communications
  - Intelligent Radar
  - Private Sector Information Sharing
  - Security Awareness Training



# Awareness, Prevent, And Protect Mission Area Gap Analysis

- Prevention
  - Electronic Systems to Monitor the Waterway
  - National Police and Coast Guard Operations on the Waterway
  - Coordinated International Task Force Operations
  - Private Sector Security Management



# Awareness, Prevent, And Protect Mission Area Gap Analysis

## ■ Protection

- CCTV Surveillance, Intrusion Detection, and Access Control for Critical Infrastructure (e.g., bridges, pipelines, etc.)
- Facility Access Control for Dock Workers
- Enhanced Security For Vessels In Coastal Areas



# Response and Recovery Mission Area Gap Analysis

- Emergency Response Gaps
  - Interoperable Communications
  - Information Sharing
  - Lack of Planning, Equipping, Training, and Exercising (PETE), Special Teams in Police, Fire, Hazmat, EMS and Public Health
  - Inadequate Marine Fire Resources and Training to National Standards
  - Limited Marine Patrols / Presence

# Response and Recovery Mission Area Gap Analysis



- Recovery
  - Short-and Long-term Recovery Plan
  - Private Sector Resource Usage Strategy
- Trade Resumption and Resiliency Gap Analysis
  - Integrated Logistics and Transportation Concept of Operations





# Trade Resumption and Resiliency Gap Analysis

- The most critical support systems and elements for trade resumption and resiliency are typically:
  - Availability of a Skilled Workforce;
  - Electricity;
  - Transportation (i.e., rail, road, as well as maritime); and
  - Communication.

# Resumption Prioritization

- Based on economic impacts, system interdependencies, and sector resiliencies
  - Industry Prioritization
  - Vessel Prioritization





# Implementation of the SRMP mitigations will:

- Help promote a safe and secure (i.e., risk-based) operational environment;
- Promote the economic viability of ports, terminals, intermodal centers, and carriers; and
- Implement a dynamic trade resumption and resiliency plan.



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