

When a Maritime Disaster Strikes

Port Resiliency
Considerations:
Readiness for Recovery,
Restoration, and
continuity

Miami, Florida

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Organization of
American States
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AMERICAN SALVAGE
ASSOCIATION



Inter-American
Committee on Ports

Agenda

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- What is Resiliency and Why Does it Matter?
- What is Included in Resilience Planning?
- What are Some Leading Practices?
- How does Marine Salvage Fit?
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Who We Are

HudsonAnalytix is a US-based international business risk solutions company providing expertise and support to the world's leading commercial shipping, ports and terminals, insurance, and government sectors. Our clients include:

- Port Authorities and Terminal Operators
- National and Regional Port Systems
- Integrated Oil and Gas Companies
- National Oil Companies
- Global Maritime Transportation Companies
- Insurance Companies
- Governments

Operating Subsidiaries

Hudson Marine – Risk and Crisis Management

Hudson Trident – Physical and Cyber Security

Hudson Tactix – Consequence Management

Hudson Dynamix – Integrated Training Solutions

Hudson Systems – Management Systems Development and Improvement



Key Facts:

- Established in 1986
- Worldwide Presence:
 - Philadelphia (Global HQ)
 - Washington, DC
 - Seattle, WA
 - San Diego, CA
 - Houston, TX
 - Rome, Italy
 - Piraeus, Greece
 - Jakarta, Indonesia (JV)
 - Manila, Philippines



Port Resiliency

Highly Resilient Ports Have 3 Characteristics:

- A high level of quality and comprehensive resiliency planning;
- Broad engagement with a wide array of public and private stakeholders; and
- The inclusion of marine salvage planning and resource identification as a leading practice.



What is Resiliency?

Resiliency is the capability to absorb undesirable or unexpected events with minimal impact and to quickly recover full operations.



Why does Resiliency Matter?

- There are two primary reasons:
 - Increase in “Just-in-Time” delivery requirements; and
 - Economic impacts of port closures during 9/11, Hurricane Katrina, and other events, such as the Indian Ocean Tsunami of 2004.



Why does Resiliency Matter?

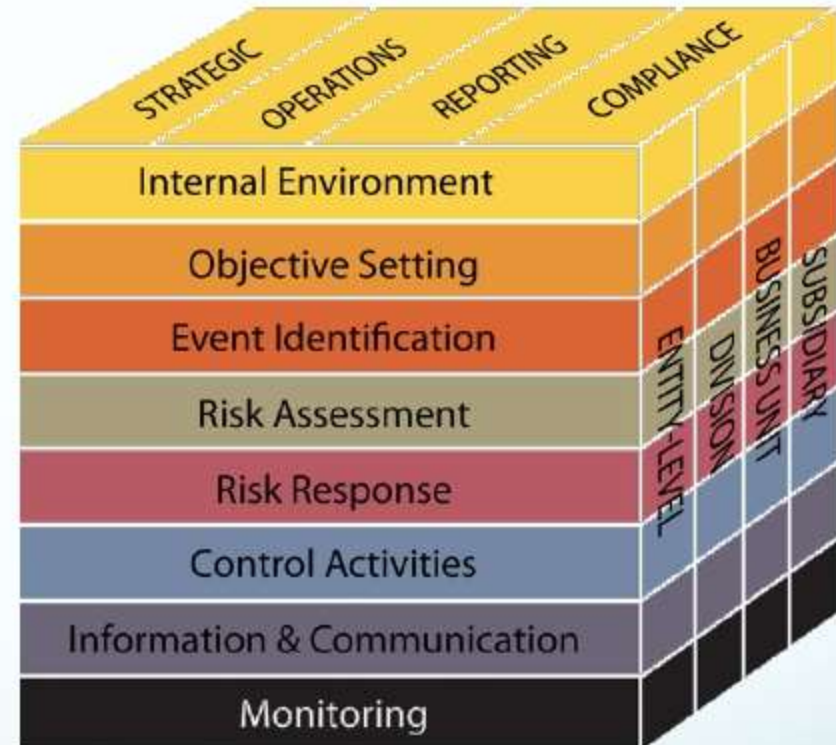
Inforum (InterindustryForecasting) Study:

	10Days	20Days
EmploymentDisruption	169,000Jobs	405,000Jobs
ReducedEconomicOutput (MeasuredbyLosstoGDP)	\$21.2Billion (0.12%ofGDP)	\$49.9Billion (0.29%ofGDP)
LossofHouseholdPurchasing Power	\$170per household	\$366per household
Lossofexports	\$3.3Billion	\$6.9Billion
Lossofimports	\$3.9Billion	\$8.3Billion
DailyCostofWestCoastPort DisruptiontoU.S.Economy (MeasuredbyLosstoGDP)	\$2.1Billion	\$2.5Billion

What is Included in Resilience Planning?

Resilience is a key element of Enterprise Risk Management and includes such areas as:

- Port operations;
- Cargo operations;
- Emergency management;
- Port security;
- Debris management;
- Hazardous material response and storage;
- Waterways management;
- Cyber and IT operations; and
- Landside access to the port via road and/or rail.



Leading Practices

Requirements for Resiliency Planning:

The U.S. government has, in recent years, increased its focus on port resilience:

- Area Contingency Plans focus on responding to port and waterways-related oil spills and hazardous material releases;
- Area Maritime Security Plans focus on port and maritime security planning, including the development of a Marine Salvage Response Plan to facilitate recovery; and
- Trade Resumption and Resiliency Plans.



Leading Practices

Effective Stakeholder Engagement:

Engagement with a wide array of stakeholders, both public and private sector is critical in proper resilience planning.

“The scene of an incident is not the time to be handing out business cards.”



Leading Practices

Effective Stakeholder Engagement:

Public sector agencies need to have a focused and coordinated approach across disciplines.



How does Marine SalvageFit?

Marine salvage, along with debris management, has garnered greater attention as a key component of port resilience.



CaseStudy: Indian Ocean Tsunami

Damage from the 2004 Indian Ocean Tsunami had a significant effect on port operations and maritime commerce throughout the Pacific Rim with ripple effects being felt globally.

In Banda Aceh, Indonesia alone, in addition to the massive loss of life, infrastructure along over 800 kilometers of coastline was destroyed or severely damaged, including 22 port areas. Over 700,000 people were rendered homeless.



Case Study: Indian Ocean Tsunami

Port assessments were delayed due to lack of access and communications.

Response organizations were reliant on airlift to move people and supplies due to the damage to the transportation infrastructure.

Initial response operations were disjointed with only ad hoc coordination among host nation, foreign militaries and NGO's.



CaseStudy: Indian Ocean Tsunami

Lessons learned:

- With port and associated transportation infrastructure damaged or destroyed, coupled with a massive humanitarian crisis, the support of the international community was essential but required coordination;
- A key recovery element was international support in reconstituting the seaports, including the training of staff to replace those killed. This is an ongoing, multi-year effort;
- The role of salvage in a major incident needs to be considered in advance of an incident with contracting mechanisms in place; and
- Even when port damage is not severe, the port's resilience is reliant on the associated intermodal transportation system such as roads and rail. Port resilience and recovery cannot be considered in a vacuum.

Conclusion

Port resilience planning and coordination is more important than ever and it is in the best interests of both governments and the private sector to develop and exercise comprehensive, robust and effective plans.



Thank You & Questions?