OAS More rights for more people

HudsonTrident Maritime Security Management

CIP Inter-American Committee on Ports

Improved Disaster Risk Management for Caribbean Ports

Training Module 3 of 6

March 2022

Background

OAS More rights for more people

CIP Inter-American Committee on Ports

The following training materials have been developed by HudsonTrident for the Organization of American States (OAS) Inter-American Committee on Ports (CIP) in the context of the CIP Project 'Improved Disaster Risk Management for Caribbean Ports'. The training materials have been reviewed in collaboration with the Caribbean Disaster Emergency Management Agency (CDEMA), Caribbean Shipping Association (CSA), OAS Executive Secretariat for Integral Development (SEDI) Risk Management Division, and the United States Coast Guard (USCG), and address key components of efficient Disaster Risk Management (DRM) in ports.

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Creating a Disaster Planning and Response Organization

The first step in creating a Disaster Planning and Response Organization is to identify an internal team. The Team may include members from the following departments:

- Operations
- Human resources
- Security
- Finance
- Public Information
- Telecommunications

Creating a Disaster Planning and Response Organization

Next, the team should identify what services/functions are to be outsourced. Examples may include:

- 1st responders
- Police
- Fire Department
- Environmental Services
- Medical

Creating a Disaster Planning and Response Organization

Stakeholder Engagement

It is important to conduct a stakeholder analysis in order to:

- Identify all stakeholders
- Understand the level of influence of each stakeholder
- Understand the degree of criticality of each stakeholder to your port
- Understand the degree of criticality of your port to each stakeholder

Next, create a Stakeholder Engagement Plan. Elements to consider include:

- Overlapping concerns/resources of each stakeholder
- Grouping stakeholders based on common interests/concerns
- Frequency of engagement/meeting with stakeholder groups

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Preplanned Responses to Disasters

A port can prepare responses ahead of time for those disaster that are most likely (based on geography, prevailing weather, economic factors, etc.).

Some examples of disaster plans that can be made ahead of time include:

- **Mass Evacuation:** from a cruise ship or ferry
- **Oil Spill/Hazardous material spill:** spill at sea response, spill on port facility response
- **Hurricane/Severe Weather:** preparations to minimize damage
- **Communications Plan** (covered in detail in Lesson 2)
- **Personnel:** shelter in place, modified work scenarios, automatically authorized overtime pay
- **Decision-making protocols:** who has authority to make decisions in the absence of key personnel
- **Emergency Operations Center:** site location, staffing and training

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Risk Assessment and Register

Ports may use various sources to help determine their most likely risks:

- Extra-governmental bodies (such as CDEMA)
- Regional entities that measure natural disasters
- Case studies
- History
- Personnel injury records
- Financial history following previous disasters

WARNING: The Port Executive Team and the Project Team should beware of the danger of anecdotal or personal experience. While personal experience can be valid, it may cause a loss of objective evaluation of data and can draw too much focus to a specific type of disaster in comparison to documented disasters.

Risk Assessment and Register

The sources of information mentioned in the previous slide can assist the Port Executive Team and Project Team in determining what are the most likely and most damaging disasters the port may encounter. These risks are then entered into a Risk Register. Examples of types of disasters may include:

- Power outage
- Hurricanes / Severe weather
- Sabotage / vandalism
- Fire / arson
- Terrorist attack
- Cyber attack
- Earthquake
- Ship grounding

Risk Assessment and Register

The next step is assessing the identified risks. This is most often done using a Risk Assessment formula.

It should be noted that there are many formulae for evaluating risks. The true value of employing a Risk Matrix is using a consistent paradigm from which your port can arrive at consistent evaluation for each identified risk.

Examples of risk assessment formulae include:

- Risk = Probability x Consequence
- Risk = Threat x Vulnerability x Consequence
- Risk = Threat x Vulnerability x Consequence / Current Mitigation

Risk Assessment and Register

Risk Assessment Formulae often use a matrix to graphical demonstrate the evaluation process and visually compare the risk assessment results.

The input into any Risk Assessment Matrix is subjective, therefore the result is subjective even if it looks scientific.

Any Risk Assessment Model you choose must be useful and user-friendly to your organization.

Matrices should be updated on a periodic basis to remain abreast of changing circumstances and conditions.

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Prioritize Risk and Response Scenarios

The Risk Assessment process, including the Risk Matrix, then allow the Project Team to prioritize the identified risks in terms of preparation and investment of resources.

A possible scenario could be:

- In the Caribbean, hurricanes are assessed as being a **HIGHLY LIKELY** disaster and **HIGHLY DAMAGING** disaster in combined evaluation.
- A Mass Evacuation from a ferry or cruise ship is determined to be **MEDIUM LIKELY** and **HIGHLY DAMAGING** (since safety of life is always highest priority) .
- Finally, a terrorist attack is deemed **LESS LIKELY** but **HIGHLY DAMAGING**.

Prioritize Risk and Response Scenarios

(Previous scenario cont.)

- The Risk Assessment process has identified hurricanes as the highest priority risk for which to prepare responses.

- Both mass evacuation and a terrorist attack are determined to be **HIGHLY DAMAGING**. However, since a mass evacuation is determined to be more likely than a terrorist attack, the Project Team should prioritize preparing responses for a mass evacuation.

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Developing Response and Mitigation Plans

Armed with the results of the Risk Assessment process, the Project Team can then develop Disaster Response and Mitigation Plans. Plans may include:

- Alternate sources of electricity
- Maintenance program to ensure disaster response equipment will work during disasters
- Site Relocation if facilities are damaged (For ports, this most likely applies to finance and administrative functions)
- Service Agreements with Vendors to provide emergency services
- Back-up communications
- Fire fighting equipment and/or fire department coordination
- Firewall for IT systems and Strong-Password requirements
- Delineating frequency of IT back ups
- Locks on restricted areas
- Temporary security measures, perimeter control
- Internal emergency coordination protocols and SOPs can be included

Summary

- **Identify** Internal Teams
- **Identify** services/functions to be outsourced
- **Preplan** for most likely disaster
- **Identify** risks using risk assessment formulae
- **Ensure** Risk Assessment Model is useful and user-friendly to your organization
- **Develop** Disaster Response and Mitigation Plans based on Risk Assessment