EMERGENCY PREPARATION AND RESPONSE

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OVERVIEW

Emergency preparedness and response
- Definition
- Statistics
- Planning and implementation
  - Phases in emergency management
  - Continuous improvement

Lessons learned
- A Cayman Port experience
What is a workplace emergency?

An unforeseen situation that threatens:

- Workers
- Customers or the public
- Disrupts or shuts down operations
- Causes physical or environmental damage
What is a workplace emergency?

Natural or Manmade

• Hurricanes
• Tornadoes
• Earthquakes
• Floods
• Chemical spills
PORT AUTHORITY OF THE CAYMAN ISLANDS: CAYMAN PORT

STATISTICS

NATURAL DISASTERS

• According to Munich Re, insured losses in 2017 resulted from 710 natural disaster events

• Insured losses totaled $135 billion, up from $50.7 billion in 2016

Source: © 2018 Munich Re, Geo Risks Research, NatCatSERVICE. As of January 2018.
According to Swiss Re, insured losses in 2016 resulted from 136 manmade disaster events.

- Insured losses totaled $7.8 billion.

<table>
<thead>
<tr>
<th>MANMADE DISASTERS</th>
<th>No. of Incidents</th>
<th>Deaths</th>
<th>Insured Loss ($millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All manmade disasters</td>
<td>136</td>
<td>4,014</td>
<td>$7,797</td>
</tr>
<tr>
<td>Major fires, explosions</td>
<td>47</td>
<td>766</td>
<td>$4,643</td>
</tr>
<tr>
<td>Maritime disasters</td>
<td>36</td>
<td>1,596</td>
<td>$2,463</td>
</tr>
<tr>
<td>Aviation disasters</td>
<td>11</td>
<td>384</td>
<td>$248</td>
</tr>
<tr>
<td>Rail disasters (includes cableways)</td>
<td>11</td>
<td>318</td>
<td>$87</td>
</tr>
<tr>
<td>Mining accidents</td>
<td>8</td>
<td>166</td>
<td>$184</td>
</tr>
<tr>
<td>Misc. (terrorism, social unrest, other)</td>
<td>20</td>
<td>684</td>
<td>$173</td>
</tr>
</tbody>
</table>

Source: Swiss Re.
PLANNING AND IMPLEMENTATION

PHASES IN EMERGENCY MANAGEMENT

- Preparedness
- Prevention
- Response
- Recovery
- Mitigation
<table>
<thead>
<tr>
<th>Step</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Establish a Team</td>
</tr>
<tr>
<td></td>
<td>Dependent on the facility’s operation, requirements and resources</td>
</tr>
<tr>
<td>02</td>
<td>Analyse Capabilities and Hazards</td>
</tr>
<tr>
<td></td>
<td>Gather information on current capabilities</td>
</tr>
<tr>
<td>03</td>
<td>Vulnerability Assessment</td>
</tr>
<tr>
<td></td>
<td>Identify and quantify vulnerabilities in a system</td>
</tr>
<tr>
<td>04</td>
<td>Develop the Plan</td>
</tr>
<tr>
<td></td>
<td>Asses and plan for basic elements necessary for the successful implementation of the plan, protection of life and property</td>
</tr>
</tbody>
</table>
5 STEPS IN EMERGENCY MANAGEMENT PLANNING

05

Implement the Plan
Acting on recommendations made during the vulnerability analysis
CONTINUOUS REVIEW & IMPROVEMENT

- Disaster planning should incorporate a continuous improvement process to the implementation phase.

- An ongoing evaluation of the plan should be conducted based upon evaluations, drills, and assessments of the plan when used.

- Potential problems and shortcomings of the disaster response can be identified and corrected.

- Changes in potential threats should be evaluated on an on-going basis and changes to the disaster response plan made as deemed appropriate.
LESSONS LEARNED

- Hurricane Ivan – Category 4 hurricane, 150mph sustained winds, with gusts of 220mph
- Estimated $429 million in damage sustained to the Cayman Islands
**A CAYMAN PORT EXPERIENCE**

- Damages to the Cayman Port estimated at $22 million
- Operations restored within 5 days after the passing of Hurricane Ivan
  - Implemented its Hurricane preparedness plan

**MAIN LESSONS**

- Never underestimate the probability of a catastrophe
- Be prepared
LESSONS FOR THE ISLANDS

- Hazard Management Cayman Islands (HMCI) was launched in 2007, also responsible for the management of the National Emergency Operations Centre (NEOC).
- Development of National Hurricane Plan
- Government Agencies enhanced hurricane plans
SUMMARY

While we cannot prevent 100 percent of disasters / emergencies, we can develop emergency preparedness and response plans to mitigate their effects.

It is also important for these plans to take on a holistic approach, involving discussion with stakeholders and policy makers.
QUESTIONS?

Thank you.

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