“Using BCP in Chilean Ports and its preparation methodology developed by WG4b”

FELIPE CASELLI
GROUP 4B
• Chile is a coastal country (*average width 180 km*)

• In disaster scenario → possible disconnection

• 95% of international trade is conducted by sea → 63% of GDP

• Port early recovery: Benefits on emergency logistics and the restoration of the local economy
Outcomes

A methodology to improve recovery capacity by utilizing ports and harbors after a tsunami disaster is developed

• Guideline to Business Continuity Management on Ports.
• Business Continuity Plan for Iquique Port
Effect of robustness

RLO: Recover Level Objective
RTO: Recover Time Objective

Note: RLO: Recover Level Objective
RTO: Recover Time Objective

With BCP/BCM

Effect of quick recovery

Resiliency

Drop-out from the Market

Come back to the market

Without BCP/BCM

Effect of robustness

Increase in recovery speed

Business activity level

Normal Level (100%)

RLO (Minimum level for continuity)

No Operation (0%)

$t_0$

$t_0$

Tiempo

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Process of decision making

1. Problem identification
2. Identification of decision criteria
3. Assigning weights to the criteria
4. Development of alternatives
5. Selecting an Alternative
6. Implementation of alternative
7. Effectiveness evaluation

Sin BCP

Action 1
- Option 1
- Option 2
- Option 3

Action 2
- Option 1
- Option 2
- Option 3

Action 3
Proceso de toma de decisiones

1. Problem identification
2. Identification of decision criteria
3. Assigning weights to the criteria
4. Development of alternatives
5. Selecting an Alternative
6. Implementation of alternative
7. Effectiveness evaluation
Initial outcomes

- Study of problems on utilization of ports after a disaster
- Analysis of differences of port activities and systems between Japan and Chile
- Analysis of existing standards and methodologies
Overview of a BCMS

BCMS

Business Continuity Management System (BCM + records + audits)

BCM

Business Continuity Management (BCPs + training + improvement)

BCP

CONTEXT OF THE PORT

Business Impact Analysis (BIA)

Risk Assessment (RA)

CONTINUITY POLICY

ISO 22.301

Business Continuity Planning
Suggested procedures for preparing port BCPs

**Policy development of Port BCM**

→ Priority of port functions to be secured

**RA (Risk Assessment)**

**Identifying and appraising risks**

→ Risk mapping and positioning

**BIA (Business impact analysis)**

**Selecting core port business**

- Deciding MTPD
- Deciding RTO/RLO

**Identifying important business operations**

- Finding mobilized resources
- Dependency of resources
- Finding resource bottlenecks

**Evaluation of damage of the port users**

eg. shut down and recovery of port user industries and other related sectors.

**Evaluating fragility of resources**

eg. loss of power supply, personnel, port facilities and equipment, ICT systems, offices.

**Preparing possible recovery options of operational resources**

- Predicted resource recovery time (PRT)

**Business continuity strategy**

- Demand side approach
- Supply side approach

- PRT ≤ RTO
- New PRT

- Yes
- No

- Preparing risk response plan

**Documentation of BCPs**

(incl. institutional arrangement and action programs)
Guidelines to develop BCP/BCM

- Overall view of a BCMS
- Analysis of the context of the port
- Establishment of policies
- Business Impact Analysis

Business Impact Analysis file

- Screening/selection core business
- List of business activities
- List of business operation resources
- Classification of business op. resources
- Dependency of business op. resources
- Dependency matrix of business op. resources
- Deciding MTPD/RTO/RLO
- Necessary resources to maintain RLO

Risk Assessment file

- List of RLO specific resources
- Evaluated resource resiliency
- Resource recovery strategy

Resource bottleneck evaluation file

- Result of tracking dependency
- Identified resource bottleneck

Worksheet1 → Worksheet2 → Worksheet3 → Worksheet4 → Worksheet5 → Worksheet6 → Worksheet7 → Worksheet8 → Worksheet14

List of bottleneck resources
Resource interdependency
Benefits of a participative Methodology (Case of Iquique)

Port Authority
Concessionaire
Maritime Authority

Transporters Union
Port Works Bureau (Ministry of Public Works)
ONEMI (National Emergency Office)

Formation of relationships between actors of the port system

Implements intersectoral knowledge about the disaster

Decreased response times after the disaster
Final remarks

• BCP development offers advantages and challenges for the Chilean port system
• BCP/BCM Guidelines: Focus on BIA and RA for create BCP
  – Includes all elements to create a BCMS
• Continuation of study techniques for risk analysis
• Incentive to develop business continuity plans in state ports
  – The greater the number of participants in the port, greater complexity (prioritization)
• Emphasis on generation of communities for continuity
Continuity of the System

Risk appraisal and scenario development:
- Sharing risk scenario → developing common target

Port BCP target:
- (Critical port functions, and MTPD, RTO, RLO, of the entire port)

Missions of the parties (inclusion in BCP):
- Sharing information
- Reviewing port risks and plans
- HRD, Training and Information

Facilitating business continuity of the Port
- Concerted actions of the respective party
Thanks

Felipe.caselli@uv.cl