Supplementary discussions for further improving BCM skills

Discussions @DPRI, Kyoto

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Disaster Prevention Research Institute (DPRI)
Kyoto University

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Damaged quay wall of port of Iquique
( Photo by Dr. Kumagai, DPRI)
Suggested procedures for preparing port BCP

**Policy development of Port BCP**
- Priority of port functions to be secured

**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**

**RA (Risk Assessment)**
- **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)**

**Risk response plan**
- RTO≥PRT
  - Supply side approach
  - Re-evaluating PRT

- **Risk finding for port logistics**
- **Identifying and appraising risks.**
  - Risk mapping and positioning

**Documentation of BCP**
- (incl. institutional arrangement and action programs)

Demand side approach

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# Business flow analysis for port operation

*(Application of job cards and IDEF0 techniques)*

## Resources for control and operations

<table>
<thead>
<tr>
<th>Outside supply</th>
<th>Human resource</th>
<th>Facilities /equipment</th>
<th>ITC systems</th>
<th>Buildings /offices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric/fuel/water supplies, Telecommunication service</td>
<td>CIQ officers, Port authority staff, Harbor master officer, Pilot, Line men, Stevedore's staff, Dock workers, Crane operator, Yard planner, track driver, RTG operator, Gate clerk,…</td>
<td>Access channel, Anchorage, Turning basin, Quay wall, Tug boat, Service vessel, Epron, Quay crane, Trailer/Chesse, RTG, Container slot, Reefer concet, Gate, Access road, CIQ inspection equipments,…</td>
<td>SeaNACCS, Port MIS (Management Information system), Port radio, Terminal operatin system, Port security system</td>
<td>Harbor building, Port authority office, Harbor master office, Harbor traffic control office, Shipping agent office, Terminal operation station, Stevedore's site office, Marine house</td>
</tr>
<tr>
<td>(5 items)</td>
<td>(18 items)</td>
<td>(24 items)</td>
<td>(5 items)</td>
<td>(9 items)</td>
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</tbody>
</table>
ANALYSIS PRACTICE AND ADVANTAGES

ANALYSIS PRACTICE, ISSUES AND POSSIBLE SOLUTION

Multi-layered structure of the worksheets and the step-by-step work procedures results in the excessive working load on the staff in charge of BIA, therefore resulting in the insufficient or incomplete analysis.

A case study of a container terminal in Japan, demonstrated the number of operational resources may reach to 100. It is likely humanly impossible to process these bulky and duplicative data. Computer assistance tool for developing worksheets is considered vital for mobilizing worksheet system to implement BCP required analysis.
### BIA worksheet system assisted by the macro programming techniques

#### Business activities: Entry into port

- **A1** Entry into port
- **A2** Anchoring offshore port
- **A3** Docking & mooring
- **A4** Loading & Unloading
- **A5** Release & Undocking

#### Mechanism resource: 

- **Control:**
- **Control entity:**
- **Control resource:**
Further challenges

1. Intensive discussions are to be undertaken by port community for maintaining business continuity at ports through concerted actions of the port stakeholders under the port BCP.

2. For effective BCP preparation and implementation, i) developing computer aided worksheet-system, ii) simple and cost-saving damage evaluation technique, and iii) establishing a framework to ensure port operation and rehabilitation resources supply is needed. Introducing market mechanism is awaited in this regard.

3. Human resource development and institutional arrangements for implementing port BCP. Mobilizing the leadership and expertise at the disaster site is of great importance.
Many thanks to Chilean colleagues for their efforts.

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