Area Business Continuity Management
Scalable Cross Sector Coordination Framework of Disaster Management for Business Continuity

Japan International Cooperation Agency
Why the “Area BCM” initiative?

- Intensifying Disaster
- Increasing economic loss
- Globalizing Impacts
- Importance of Local Economy
- Private sector’s role highlighted

Source: large photo: AFP PHOTO / Pornchai KITTIWONGSAKUL (Photo credit should read PORNCHAI KITTIWONGSAKUL/AFP/Getty Images), Small photo: AP Photo/Apichart Weerawong, Chart: Global economic loss of disaster by EMDAT.
Why the “Area BCM” initiative?

BCMS is standardized as ISO22301 and disseminated in many business enterprises around the world. In Great East Japan Earthquake, however, the efficacy of prearranged Business Continuity Plans (BCP) in private enterprises becomes insufficient due to disruption of common resources such as energy, water, transportation and communications.

Lessons from catastrophes
Limited function of single BCM
New concept is required
Why the “Area BCM” initiative?

Lack of critical resources in affected area

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<tr>
<th></th>
<th>Human</th>
<th>Substance</th>
<th>Finance</th>
<th>Information</th>
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<tbody>
<tr>
<td><strong>Internal Resources</strong></td>
<td>Managers, Workers, Employees,</td>
<td>Buildings and facilities, Equipment, Parts and row materials, fuels, Value chains, etc.</td>
<td>Money and Assets, Account system, Contract, Insurance, etc.</td>
<td>Computer systems, Operation data, Business documents, Archives, etc.</td>
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<tr>
<td><strong>External Resources</strong></td>
<td>Public officers, Public workers</td>
<td>Energy (Electricity, Gas, etc.), Water (Supply, Sanitary and sewerage), Transportation (Road &amp; Rail, Port &amp; Airport, etc.), Food and medical supplies, Logistic services, Accommodation, etc.</td>
<td>Capital, Transaction system, Stock market</td>
<td>Internet, Tel and Fax, Communication system</td>
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Difficult decision making on how effectively restore and allocate those scarce resources to various entities of the affected local society
Why the “Area BCM” initiative?

Private sector’s view points necessary for area wide scale of disaster

- Each enterprise is one of the members of the local community
- Companies are affected by disaster along with the community in a region
- It is expected to take a role as noble Cooperate Citizenship that is beyond the concept of CSR (Cooperate Social Responsibility)
- Business continuity of local enterprises can sustain the long term reconstruction and development of the locality
- Each enterprise benefits from social infrastructures (essential resources such as energy, transportation, services) and environment (water, air, land, nature)
- Key action that should be taken in the normal state is to share the information about BCPs which have different interests
Why the “Area BCM” initiative?

It was expected to have a common protocol to enhance the resilience of the local community that corresponds to the interdependency in this networking world.

Individual Resilience by each BCM
- Company, Group of companies
- National and local governments
- Public organization
- NPO, NGO

Cooperated Resilience by BCMs
- Supply chains
- Government administrations
- Industry associations
- Economic organizations

Societal Resilience by Area BCM
- Local society
- Public Private Coordination
- Unified actions
What is “Area BCM”?

The area-wide Business Continuity Requires:
- Public Private Coordination
- Probabilistic Analysis of Risks and Impacts
- Management of Critical External Resources*
- Area-wide Scalability of Management

Centrally to Internal resources, such as company’s buildings, facilities, parts and raw materials, the External resources*, such as energy, water and transportation infrastructures, are managed normally by public sector and not controllable by private enterprises. The external resources are also distributed not only for business purposes but also for securing community life. Therefore, in case of emergency that imposes limited allocation of those resource, collaborative efforts are required between the private sector, public sector and the local community to maintain the critical external resources.

What is “Area BCM”? 

Scalable Cross Sector Coordination Framework of Risk Management for Business Continuity

Area BCM Cycle
- Understanding Risks and Impacts
- Reviewing & Improving System
- Implementing Measures & Exercising
- Developing Area BCP (Plan)
- Integrating Area BCM into Disaster Risk Management
- Sharing Area BCM Strategy
- Mainstreaming Disaster Risk Reduction into Local Economy
What is “Area BCM”?

Risk and Impact Analysis

Identify Predominant Hazard

Hazard Simulation

Risk Assessment

Vulnerability of Infrastructure, utilities and the area

Current measures by public sectors and private enterprises

Understanding Risks and Impacts

Reviewing & Improving System

Sharing Area BCM

Business Impact Analysis

Disaster Scenario

Disaster Scenario

Probability

Impact to Business Continuity
What is “Area BCM”?

Stakeholder’s forum
- Sharing risk and impact information
- Strategy and direction of business continuity of the area
- Scope of Area BCM coordination among public and private sectors
What is “Area BCM”?

Formulating/developing the Area BCP

Area Business Continuity Plan

Understand Vulnerability and Risk of the Area

- Area BCM organizational structure
- Leading industry of the area
- Dominant hazard, risk and impact
- Business impact analysis

Strategy of Area BCM

- Challenges in the Area BC
- Direction of actions

Formulate the Area BCP

- Area BCP, including preparedness and contingency plans

Implement measures and Evaluate the performance

- Performance evaluation
- Continuous improvement

Understanding Risks and Impacts

Sharing Area BCM Strategy

Developing Area BCP (Plan)
What is “Area BCM”? 

Measures should be balanced in all stages of Disaster Management Cycle of:

- Prevention and Mitigation,
- Preparedness and Response, and
- Rehabilitation and Reconstruction.

Combined tactics:

- Strengthening existing area-wide capacity of DRR,
- Preparing alternative measures, and
- Making temporary back-ups.

Multi-Scheme

- Cooperation with other stakeholders to share essential resources for business continuation,
- Making new investment for area-wide resilient development, and
- Transferring the risks by insurance or public compensation.
What is “Area BCM”? 

**ANALYZE (UNDERSTAND)**
- Organize Stakeholders
- Understand Area and its function
- Analyze Regional Hazards, Vulnerability and Risks
- Evaluate resilience of infrastructure and other business resources

**DESIGN (STRATEGY)**
- Sharing Concepts of Area BCP/BCM
- Preparing Disaster Risk Scenario
- Business Impact Analysis
- Problems/Bottlenecks for Area Business Continuity

**DEVELOP (PLAN)**
- Analyze Existing DM
- Area BCP Strategy
- Planning Area Business Continuity by:
  - Critical Infrastructure Protection
  - Coordinated Disaster Preparedness and Response
  - Quick Recovery, Supply Chain Cooperation, etc.

**IMPLEMENT (ACTIONS)**
- Effectuate Area BCP
- Measures to reduce risks, preparedness and effective response
- Simulation Trainings by utilizing Area BCP
- Alternative coordination measures

**EVALUATE (MONITOR)**
- Advise
- Evaluation and feedback to improve the Area BCM System

**Fundamental Issues**
- Area BCP Planning
- Area BC Management

Evaluation of economic benefit through the probabilistic analysis of hazards, damages and mitigations

- **Accumulated Damage Costs of Multiple Hazards in certain Probability**
- **Period total or Annual average of damage cost in the area**
- **Expectable Mitigation of Damages by Area BCM actions**
- **Comparing with Disaster Risk Reduction Investments**

Understanding Risks and Impacts
Continuous Process with Multi hazard & Multi scenario
Implementing Measures & Exercising Developing Area BCP (Plan)
What are the Benefits of Area BCM?

- **Enhancing Resiliency**: Increase responsibility under the Area BCM; start establishing own BCP/BCM.

- **Self-Support**: Increase asset value for investment; attract other enterprise; pull down the disaster insurance cost.

- **Outside-Support**: Enhance supply chain coordination network, promote cooperation among line industry.

- **Public-Support**: Cooperate with other partners and clients of each enterprise through enhanced communication.

- **Community-Support**: Add redundancy of different schemes.

- **Unifies the efforts of the area, directs toward a common goal; achieve restoration quickly, efficiently and effectively.**

- **Encourage public sector to invest more robust infrastructure.**

- **Foster local economy and employment.**
Case study of Area BCM

Bekasi - Karawang Industry area, Indonesia
Case study of Area BCM

Scenario for BIA, Bekasi - Karawang Industry area, Indonesia

Buildings in industrial park
- Karawang City and surrounding area is inundated more than 2 weeks.
- Industrial parks however are not inundated, facilities are not damaged.

Electric power and Lifelines
- Two Substations in Karawang are inundated over 2m depth and stop the operation for two weeks.
- Some of base stations of telephone and mobile phone stop the operation because of the shortage of electric power.

Transportation infrastructure
- Freeway is closed both in west and east of Industry Park for more than 2 weeks.
- Primary Road in Karawang City is closed for more than 2 weeks.

Workers of Industrial Parks
- Many employee will be absent because of the inundation of their houses.
- Traffic condition becomes worse and induces the workers staying home.

Stakeholders are formulating BCP for strengthening transportation networks, alternative port development, power sub stations protection, backup of business resources, environment of stranded workers, etc. The Area BCM System is established and expanding its scope.
How the Area BCM guide you?

Applied methodology in the pilot areas will be summarized to be disseminated for guiding any local economy to raise resilience to disasters.
Good practices of Area BCM in Japan

• Otemachi Marunouchi Yurakucho Area (Central Tokyo)
  – Disaster risk management council is formulated in PPP
  – Stranded workers sheltering, emergency resource management, information sharing, coordinated exercise, ...

• Kashima Industrial Complex
  – Factory directors round-table
  – Enhanced communication, quick Information sharing, ...

• Akemi Industrial Park (Aichi prefecture)
  – Joint disaster management plan
  – Quick evacuation, effective coordination, joint exercise, ...

• Industrial associations in areas of Kanagawa and Niigata (remote places)
  – Alternate production consignment agreement to make effective business continuation
Otemachi Marunouchi Yurakucho Area
(central Tokyo)

- Target area of 120 ha
- Over 290,000 workers in 4,000 companies
- 91 groups of business and land owners
- Symbolic business center of Japan since Meiji era
Otemachi Marunouchi Yurakucho Area Disaster risk management council

- The Council (Tokyo Station disaster risk management Tonarigumi) is established in 2004
- Consideration if disaster strikes, of long commute times, congestion and confusion for citizens to move
- Aiming to find ways to secure safety and peace of a locality around Tokyo Station as the typical urban city
- Thinking of how we realize it as a local town, gathered volunteers of the district within the company, brainstormed the knowledge, and do necessary activities
Otemachi Marunouchi Yurakucho Area
Examples of actions

- **Stranded workers shelter**
  - Spaces, electricity, sanitary, mat and blanket, ...
  - Information dissemination
  - Experienced the GEJE when 1,500 people sheltered, now the capacity is more than 5,000
  - Participatory exercise of sheltering every year
  - Stockpiling foods and goods

- **Emergency power management**
  - Generators to share electricity
  - Multi source Fuel system
  - Redundant electric supply network

- **Water resource management**
  - Emergency goods storage
  - Water Recycling system
  - Emergency wells and purifying filter
Standardization of Area BCM

Private sector seeks for more effective standard expanded from the target area (business community) of existing BCM
Standardization of Area BCM

Public sector also seeks to establish standard protocol for effective disaster management (public services) coordinating various entities.
Standardization of Area BCM

Public Private Coordination in Common BCM Standard

- Incident response (22320)
- Exercise (22398)
- Partnership agreement (22397)
- Public warning (22322)
- Color code alert (22324)

BCMS (22301, 22313)
Data elements and codes (22351, 22352)
Emergency capacity assessment (22325)
Mass evacuation (22315)
ISO223XX Families for Social Security

Mainly for individual organization

- Capacity evaluation of emergency operation (22325 UD)
- BCMS Guideline (22313)
- Organizations’ resilience (22316 UD)

Requirements for BCMS (22301)

- Terminology (22300)

Emerging information sharing and communication

- Warning (22322 UD)
- Color code for warning (22324 UD)
- Video surveillance (22311)

Preparedness of organizational interoperability

- Area BCMS Guideline (223XX UP)
- Requirements for incident response (22320)
- Multi-agency coordination (22397 UD)
- Exercise (22398)

UD: Under Development
UP: Under Preparation
Epilogue

<Improved incentives, self regulation and accountability>

<Applicability of Area BCM>

<Uniqueness or difference from other incentives>

<Ownership of Area BCMS, as a challenge>
Thank you

Area Business Continuity Management

Japan International Cooperation Agency

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<th></th>
<th>サプライチェーンを構成する企業間の連携</th>
<th>地域内連携</th>
<th>業界内連携</th>
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<tr>
<td>概要</td>
<td>➢ IT等を活用した自社・パートナー情報の可視化による資料配置とサプライチェーンの再設計 ➢ BCP/BCMの目標や優先順位を復旧すべき事項等を明確化、その内容について取引先と共有 ➢ 中小規模事業者への支援</td>
<td>➢ 企業間、自治体との連携を深めるため、地域協議会等を活用、地域内の実態ネットワークを形成 ➢ 地区全体での共同訓練の実施、共同の災害備蓄・自家発電設備等の整備 ➢ 企業間連携による委託代替生産協定の締結 ➢ 企業と自治体との連携協定の締結</td>
<td>➢ 業界内の企業間での協力、情報共有 ➢ 競争に直結しない部分品等の標準化を検討 ➢ 業界としてのBCP/BCMに関するガイドライン等の策定 ➢ 業界としての共同訓練等の実施</td>
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<td>先進事例</td>
<td>➢ (ITメーカー) ITを活用し、サプライチェーン情報を可視化。必要生産の需要管理を徹底し、問題発生抑制と解決期間の半減を達成 ➢ (小売会社) 品目別に自社、サプライチェーンの在庫量を把握したうえで、増産可能性を推計、さらに自社の物流センター内に備蓄基地を設置 ➢ (物流会社) 大規模災害時に不通区間が生じた場合は、トラックや内航船による代行輸送を実施</td>
<td>➢ 鹿児島県コンビナートでは、工場長懇談会等を通じ、平時よりコミュニケーション基盤を構築、信頼構築と情報共有の下、迅速に復旧 ➢ 大丸有地区では企業と行政等から構成される協議会を設置し、予め「地域防災計画」を策定。自治体と連携して「帰宅困難者対策訓練」を実施 ➢ 愛知県の明海地区工業団地では共同の「避難計画」を策定、「共同訓練」を実施 ➢ 神奈川県と新潟県の遠隔地の工場組合合同で、「委託代替生産協定」を締結 ➢ ある小売会社は、複数の自治体と、災害対策等を含め多分野に渡り、連携協定を締結</td>
<td>➢ 通信業界では、無線LAN回線の共同利用などの協力を検討 ➢ 石油業界では、関係官庁と調整し、施設の共同利用等の仕組みを構築 ➢ 飲料業界では、被災時に代替供給先からの調達が容易となるよう、缶容器の規格を統一 ➢ 損害保険業界では、業界統一のマニュアルのもと、被災地域の被害状況を業界各社の共同により調査 ➢ 銀行業界では、業界団体加盟各社が関係官庁等とともに、合同訓練を実施</td>
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Where is the Area BCM going?

**2005**
- Intensifying Disasters, Increasing Catastrophes, Global Impacts

**2015**
- The adoption of HFA

**HFA2 (the successor framework to the HFA)**

- Mainstreaming DRR in Development
- Breaking away from the cycle of disaster and poverty
- Realization of sustainable development by Disaster Risk Reduction

**Area BCM**
- Scalable Cross Sector Coordination Framework of Disaster Management for Business Continuity
- DR²AD
  - Macro economic model to prospect DRR effectiveness

**Highlighted Resilience of Local Economy, Increasing Importance of Private Sector Participation**

**Establishment and Strengthening of Disaster Management Systems**
- Understanding Disaster Risk
- Prevention Mitigation
- Preparedness Response
- Rehabilitation Reconstruction

**Promotion of common understanding and accurate grasp of natural disaster risk**

**Implementation of risk reduction measures for sustainable development**

**Rapid and effective response with better preparedness**

**Restoration and reconstruction to a more disaster-resilient society**