



OSMEP



THE JTI FOUNDATION

# Training of Trainers

## Certificate Program on Business Continuity Planning (BCP) for SMEs

### 2.3 Business Risk Assessment

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TOKIOMARINE

### **Module 1: BCP Framework**

Part 1.1: Importance of BCP

Part 1.2: BCP Framework

### **Module 2: Risk Identification**

Part 2.1: Prioritized Activities and Recovery Time Objective

Part 2.2: Necessary Resources for Recovery

Part 2.3: Business Risk Assessment

### **Module 3: Business Resumption Strategies**

Part 3.1: Pre-disaster preparedness and mitigation for SMEs

Part 3.2: Immediate Survival from Disruption

Part 3.3: Business Continuity Strategies

### **Module 4: PDCA (Plan-Do-Check-Act) Cycle**

Part 4.1: PDCA Exercise

Part 4.2: BCP Review (Management Review)

# Module 2: Risk Identification

- ❑ Identify the Prioritized Activities (PAs) of your company.
- ❑ Identify the impact (timeline) of total disruption to the PAs.
  - Assessing how soon would the total disruption of these activities become unacceptable to your company. (The period is called Maximum Tolerable Period of Disruption / MTPD).
  - Identify the Recovery Time Objective (RTO) of the PAs of your company.
- ❑ What resources are necessary to keep those PAs operating?
  - These steps are called **Business Impact Analysis (BIA)**.
- ❑ Identify risks, such as natural disasters or accidents, which most likely to seriously damage the company's assets, businesses, and supporting resources.
  - This step is called **Risk Assessment (RA)**.

# Step 4 Risk Assessment

## – Know Your Disaster Scenarios



- ☐ Identify risks which may seriously threaten your company by
  - List up the kinds of risks your company is exposed to.
  - Analyze and evaluate the risks, and select risks with 'high priority'
  - Estimate damage to your critical resources by selected risks
  - Assess period to restore such damaged resources
  - Compare the estimated restoration period with your company's Recovery Time Objective (RTO) , and determine which resources are critical to avoid catastrophic scenarios



# Step 4 Risk Assessment

## – Know Your Disaster Scenarios

- ❑ First, enter the risks your company is exposed to in the left column.
  - For example, risks to your company might include natural disasters such as earthquakes, floods, and typhoons, or industrial disasters such as fire, explosion, blackout, leakage of chemical substances or intentional acts such as terrorist attacks, sabotage.

Form 4-1 Risk Impact and Likelihood Comparison Chart (sample)

Risk	Impact	Likelihood	Priority
Earthquake	H M L	H M L	1
Flood	H M L	H M L	2
	H M L	H M L	
	H M L	H M L	

# Step 4 Risk Assessment

## – Know Your Disaster Scenarios

- ❑ Next, evaluate the “Impact” and “Likelihood” of each risk, marking each as either H (high), M (medium), or L (low) in the columns indicated.
- ❑ Indicate the priority number in the rightmost “Priority” column.

Table 4-1 Risk - Likelihood/Impact Scoring Scale

Rank	Likelihood	Impact
High	Likely	Disastrous, Severe damage Threatening the company Death, multiple injuries
Middle	Moderate likely	Medium level damage Affecting operations, Multiple injuries
Low	Unlikely	Insignificant damage Minor injuries

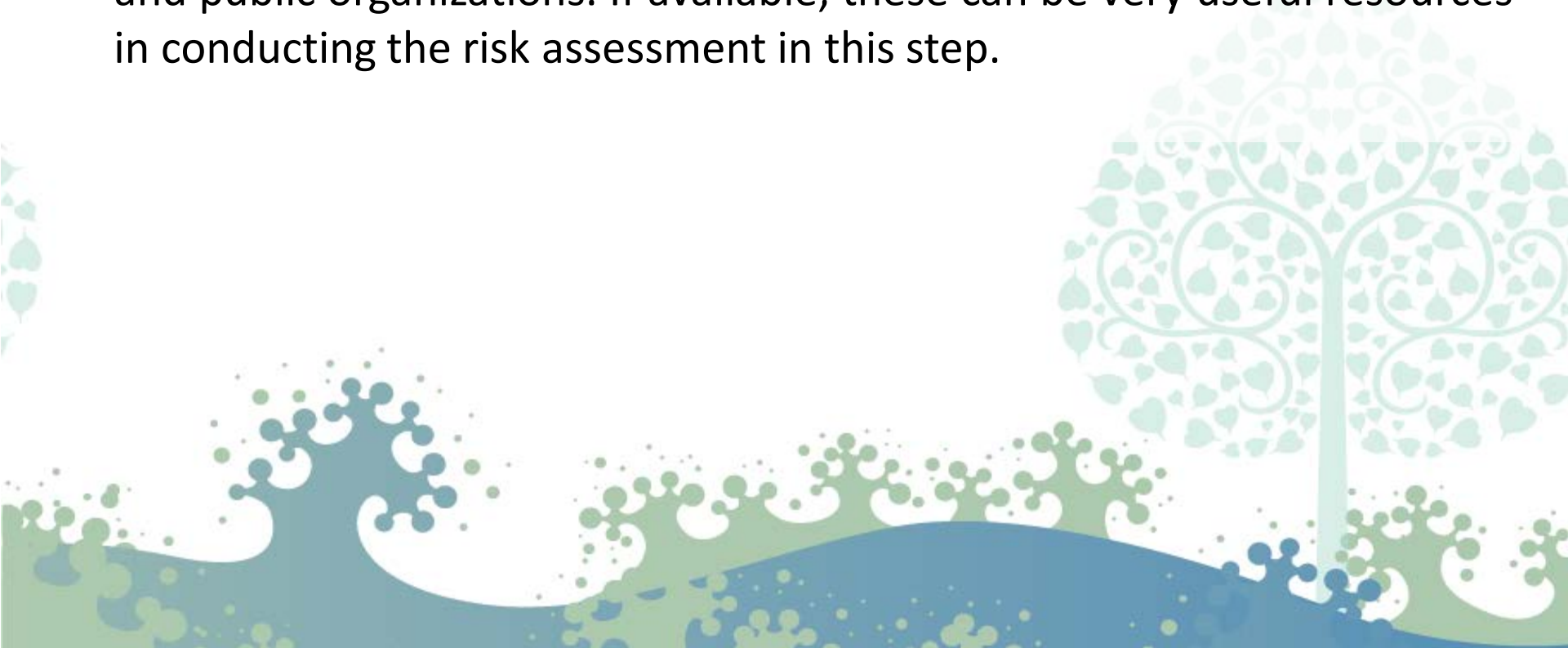
# Case

Risk	Impact	Likelihood	Priority
Earthquake	H M L	H M L	1
Typhoon	H M L	H M L	7
Floods	H M L	H M L	3
Electricity Blackout	H M L	H M L	6
Pandemic	H M L	H M L	4
Fire	H M L	H M L	2
IT failure	H M L	H M L	5

# Step 4 Risk Assessment

## – Know Your Disaster Scenarios

- ❑ The past history of such natural disasters, hazard maps, and risk information for your local area may be published by local governments and public organizations. If available, these can be very useful resources in conducting the risk assessment in this step.





# Potential Risk by APEC Study 2011

<i>*more than 3 answers</i>	Earth quake	Tsunami	Hurricane / Wind storm	Flood	Snow	Fire	Wild fire	Volcano eruption	Drought	Insect Infestation	Pandemic / Epidemic	Blackout	Terrorism	Nuclear
Australia	3	1	3	4	1	2	1	0	3	0	2	3	2	0
Brunei Darussalam	3	0	0	3	0	2	0	0	1	1	3	2	0	1
Indonesia	13	10	2	12	0	8	2	11	2	2	8	6	11	1
Japan	99	58	29	35	7	57	4	15	3	2	43	69	31	29
Korea	7	2	5	4	2	12	0	1	0	0	2	6	2	4
Malaysia	6	4	3	19	2	12	5	3	4	5	7	12	6	3
New Zealand	8	3	4	1	1	5	0	2	0	1	4	1	1	0
Peru	24	15	0	7	0	13	0	0	3	4	3	3	15	2
The Philippines	74	21	26	62	0	57	5	20	13	13	21	43	26	8
Russia	44	12	39	41	14	79	17	5	14	14	22	70	36	20
Singapore	10	5	4	12	1	27	1	3	1	2	27	23	20	6
Chinese Taipei	40	15	27	22	4	31	3	3	4	3	16	30	10	14
Thailand	14	11	7	22	2	11	3	4	6	3	5	10	14	8
USA	7	5	7	9	6	6	1	2	1	1	7	4	7	4
Viet Nam	5	3	2	5	0	4	2	2	0	0	1	3	3	2

# Risk Profile

Disaster	Severity	Vulnerability	Management	Tendency
Flood	High	Medium	Medium	High
Landslide/Mudflow	High	Medium	Poor	High
Windstorm	Medium	Medium	Medium	Medium
Drought	High	Medium	Medium	Medium
Fire	High	Medium	Medium	Medium
Explosive	High	Medium	Medium	Medium
Earthquake	Low	Low	Poor	Medium
Accident	High	Medium	Poor	High
Tsunami	High	Medium	Medium	Medium

Source: UNDP in 2002, DDPM Adjust in 2010

# Step 4 Risk Assessment

## – Know Your Disaster Scenarios

- ❑ Next select a top priority risk and estimate the level of damage and length of time needed for the restoration.
  1. Enter the critical resources identified in Step 3 and the prioritized risk
  2. Enter an outline of estimated damages to your facilities and resources
  3. Enter estimated levels of damage
  4. Enter estimated periods for repair, restoration, or recovery
  5. Mark the graph bars to correspond to the length indicated in (4) item above
  6. Draw your RTO line (see your Form2-3)
  7. Determine whether measures need to be taken for each listed resource to achieve RTO and place a mark in the column indicated

Risk		Northern Tokyo Bay Earthquake	Assumed recovery period						Need measures	
Assumed damage		E/Q Intensity Lv5 (+) hits the region. The company sustains damages to various resources which disrupts its operation.	Day	Day (shown by graph)						
Necessary resources		Damage		3 ds	1 wks.	2 wks.	1 mo	2 mos.	3 mos.	
Internal Resources	Building	Main factory – no damage to the structure, but walls crack ,ceiling fall, piping damaged	25							◎
	Equipment Machinery	/ no severe damage but machines moves and need adjustments	30							◎
	Inventory	finished products and materials fall from shelves	30							◎
	People	30% staffs can not come to work	2							
	IT System	IT servers fall	10							
	Fund									
	(other )									
Essential Social Services	Electricity	disrupted for one day	1							
	Gas									
	Water	no disruption								
	Phone Communication	disrupted for one day	1							
	Traffic / Roads	no disruption								
	(other )									
Supply	Direct suppliers	material supplies may stop for 2-4 weeks	14-30							○
	2nd, 3rd Suppliers	material supplies may stop for 2-4 weeks	14-30							○
	Customer									
	(other )	repair companies of molding machines may delay to respond	10							○

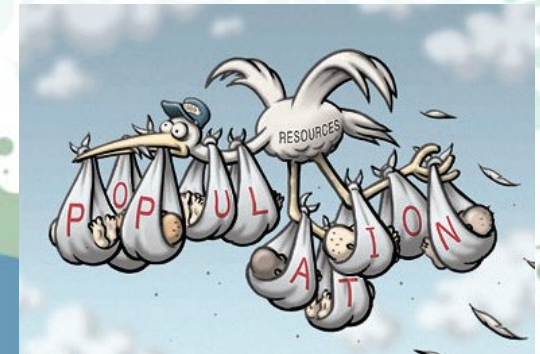
**Recovery time objective : 2 weeks**



# Step 4 Risk Assessment

## – Know Your Disaster Scenarios

- By comparing the estimated restoration period with your company's Recovery Time Objective (RTO) , and you can find out which resources are critical to avoid catastrophic scenarios.
  - If essential services such as electricity, water, phone etc, take a longer period for the service to be restored than your RTO, you may need to reconsider your RTO and wait until such resources and services become available.
  - Resource restoration period > RTO = X
  - < RTO = O



# To be continued.....

The measures to be taken will be reviewed in Steps 5 to 7 below.

Examples of such measures are as follows:

## 1) Protection (Prevention) and Mitigation

- Anti-earthquake reinforcements to buildings
- Installation of equipment restraints

## 2) Emergency Response (Incident Response)

- Evacuation plan formulation
- Development of safety confirmation procedures

## 3) Strategies for the Early Resumption of PAs

- Alternate site recovery & IT system back ups

# Group work 1

## Practice on Module 2

