



International  
Labour  
Office  
Geneva



# Multi-hazard Business Continuity Management



Guide for small  
and medium enterprises

ILO Programme  
on Crisis  
Response and  
Reconstruction  
(ILO/CRISIS)





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# Preface

He who fails to plan, plans to fail.  
Proverb, Anonymous

Since 2006 the ILO, through its Influenza Action Programme, has assisted governments, workers and employers in South-East Asia to strengthen their preparedness for a possible major disruptive event. Teams were set up in affected countries to provide policy advice to government authorities, constituents, and small / medium enterprises on good practices from health, safety and managerial stand points, gradually refining knowledge and approaches.

During the period 2006-2009, the trigger for this essential risk reduction and preparedness programme was the pandemic threat which disrupted for several months businesses and services around the world and then subsumed into more contained dimensions. Nevertheless there remained a lingering concern for workers and employers across continents.

It soon became evident that the work done to enhance pandemic preparedness was an excellent foundation to tackle and possibly mitigate the effects of other natural disasters from having such negative impacts on the economy, the well-being of communities and the resilience of small and medium enterprises. Small businesses, which bear the brunt of sudden disasters, are often less well equipped than larger enterprises and multinationals to defend themselves and make necessary contingency plans. It is a daunting task for enterprises, their personnel and communities to prepare and respond with adequate means in the face of the "unexpected".

As a result of the traditionally limited focus on business continuity in the face of major disasters (all highly disruptive, whether provoked by earthquakes, floods, landslides, droughts or other sudden tremors and shocks – not to mention technological disasters such as nuclear alerts, oil spills or other forms of water, soil and atmospheric contamination which escape our analysis) a number of countries have requested support to strengthen the whole of society readiness to address possible vulnerabilities across a range of different sectors.

To meet these needs, the ILO devised a user-friendly model business continuity management plan which aims at supporting small and medium-sized enterprises (SMEs) in their effort to develop contingency plans to protect their workers and businesses from the consequences of sudden disasters.

This model business continuity plan was presented for the first time at an ILO Technical Workshop in Geneva, entitled "Enhancing Pandemic Preparedness through Social Dialogue" on 29 October 2009. This same manual was then adopted by the Bangkok sub-regional Office and the Office in Jakarta (and translated in local languages) for an extensive multi-hazard preparedness and prevention campaign, which is still on-going.

In view of the importance of this area of work, ILO CRISIS, with the support of the International Organization of Employers (IOE) and as part of the International Recovery Platform (IRP) capacity development work plan, invested in the development of a new manual entitled: "Multi-Hazard Business Continuity Management" which is now being released for testing with the intention of contributing further to increase constituents' resilience, mitigate risks and enhance preparedness for crisis and business recovery.

Easily adaptable to workshop formats, this Guide will be soon packaged for systematic training events.

I sincerely hope that this new instrument will be of value to the ILO and partner organizations in dealing with multifaceted crises. Being work in progress in a constantly evolving area of work, ILO CRISIS would appreciate readers' feedback to improve subsequent versions of this publication. This Guide enlists a series of sound practices and evidence-based advice for the benefit of small and medium sized enterprises. The Guide applies an integrated risk management approach, taking into accounts the need to plan for business continuity to protect enterprises, workers and the surrounding communities. The focus is for enterprises to use a value chain approach of inputs and outputs to keep business "in business" when a crisis strikes. Whereas business continuity planning normally refers to allocation of resources and decision making, our "Business Continuity Management" includes crucial phases such as data collection, analysis, plan implementation and the evaluation of the whole process for learning purposes.

This guide has been conceived by Donato Kiniger-Passigli who worked jointly with Francesca Battistin (main researcher), Elisa Selva and Janet Asherson of IOE.

Easily adaptable to workshop formats, this Guide will be soon packaged for systematic training events.

I sincerely hope that this new instrument will be of value to the ILO and partner organizations in dealing with multifaceted crises. Being work in progress in a constantly evolving area of work, ILO CRISIS would appreciate readers' feedback to improve subsequent versions of this publication.

A handwritten signature in black ink, appearing to read 'A. Lazarte-Hoyle', with a stylized flourish at the end.

Alfredo Lazarte-Hoyle  
Director ILO Program for Crisis  
Response and Reconstruction  
(ILO/CRISIS)

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# Authors' note and acknowledgement

In the intention of the authors, this Guide responds to the need of many who ask themselves: "...If a disaster happens...What do I do?" It is hard to prepare for the undefined and the unpredictable, especially when confronted with sudden-onset natural disasters. In our work, we tried to capture the essence of the many questions that arise prior to the occurrence of a likely disaster and present options for a possible response.

The need of many entrepreneurs to stay in business and protect their workforce and assets has no end. It is a continuous process which should be articulated around a flexible plan. A plan to be enacted when and if the disaster strikes. Preparing for emergencies requires predetermined actions by trained individuals with clearly defined roles: hence a "flexible" style of preparedness is required. In times of crisis it is even more necessary to share our sense of uncertainty and to build bridges across societies, communities, big and small enterprises. As we are all connected, interdependence is an obvious element of our preparedness plan and therefore we placed particular emphasis on collaboration and collaborative practices among stakeholders.

Other elements play a pivotal role in "better preparedness", above all: innovation and the cultural change that accompany all transformations. A necessary change that brings new opportunities for improvement and possible benefits to companies, households and communities. This guide intends to provoke new thoughts and stimulate new approaches; the reader and user will be ultimately responsible for its own Business Continuity Management plan.

Many thanks for their contribution to this work go to Federico Negro who helped setting the project in motion, Ariane Allgöwer, Miguel Solana, Yousra Hamed, Dorit Kemter, Jaime Arevalo and the many ILO colleagues who reviewed the drafts and provided useful suggestions and case studies.

Donato Kiniger-Passigli (Coordinator)

and the editorial team comprising Francesca Battistin, Janet Asherson and Elisa Selva

Plans are nothing; planning is everything.

*Dwight D. Eisenhower*



# Acronyms

BDS	Business Development Services
BCM	Business Continuity Management
BCP	Business Continuity Planning
DMTP	Disaster Management Training Program
GDP	Gross Domestic Product
GRIP	Global Risk Identification Program
HR	Human Resource
ILO	International Labour Organization/Office
ILO/CRISIS	ILO Programme for Crisis Response and Reconstruction
IOE	International Organisation of Employers
IRP	International Recovery Platform
ISDR	International Strategy for Disaster Risk Reduction
MFI	Micro Finance Institutions
UN	United Nations
UNDP	United Nations Development Programme
VCA	Value Chain Analysis
WB	World Bank



# Overview

## About Business Continuity Management

**Business continuity** is about keeping key business activities on-going after an adverse event, with the human, material and financial resources available at the time. Inevitably, disasters reduce the quality, quantity and availability of resources for an enterprise. The extent of the reduction is proportional to the direct and indirect impact of the crisis on the enterprise and its suppliers, customers and clients along the same value chain. Without a certain level of assets, business operations cannot run, thus interrupting or suspending the firm's capacity to deliver goods and services.

**Business continuity management** is a process that enterprises can set in place in order to ensure a pre-established level of continuity of operations after a crisis strikes. The wording "business continuity planning" is more commonly used than "business continuity management". Nevertheless, we decided using the latter because "planning" is only a segment of management; it is the one mostly dealing with decision-making, allocation of resources and time, and sequencing of activities. On the other hand, BCM is a broader process, including: data collection and analysis for decision making; implementation of the plan of action; and evaluation of the whole process for learning purposes.

Business Continuity Management (BCM) is a management process that identifies potential impacts that threaten an organisation and provides a framework for building resilience and the capability for an effective response which safeguards the interests of its key stake holders, reputation, brand and value creating activities (Business Continuity Institute (BCI) & BS 25999).

There are many elements to BCM such as disaster recovery, business recovery, crisis management, incident management, emergency management, product recall, contingency planning and just plain old 'plan B'.

It is an integral part of a good management system and can be a purely voluntary internal company initiative or it can be externally validated and certificated. Such certification can be advantageous when seeking to provide evidence of a robust system to a supplier, customer or contract awarding body.

In BCM, the greatest part of the effort is to be done before the crisis, and the success depends on: how well the chain of catastrophic events has been anticipated, how accurately the response has been designed and communicated to team members.

According to the structure of the BCM process presented in this Guide, Step 1 through Step 8 are to be executed **before a crisis occurs** and entail all actions you must carry out to come up with a good plan. Step 9 is executed **as soon as the crisis hits** and consists of the actual implementation of the plan. Finally, Step 10 should be implemented **after the closure of the plan**, to take stock of successes and challenges, to learn from the experience and disseminate the learning, and to transit towards normal operations.

## About this Guide

This Guide is built on pre-existing materials produced by the ILO in 2009 to support Business Continuity Planning in response to the Pandemic Influenza, H1N1. More specifically, the ILO Office in Geneva developed a set of Guidelines for BCP in 2009; these were adapted by the ILO Office in Jakarta as part of a series of awareness raising initiatives targeting employers' associations in Indonesia. BCP trainings were conducted across South-East Asia by the ILO Office in Bangkok with remarkable results.

The structure of the business continuity management process has been revisited, and the contents have been adjusted and expanded accordingly. The scope goes beyond the pandemic influenza; it covers different types of major-scale, natural hazards, i.e. geophysical, hydrological, meteorological, climate and biological. It should particularly be noted that often one threat leads to others. Multiple hazard, complex emergencies and technological disasters are not specifically treated here, but the reader shall note that principles, considerations and core steps are the same.

In addition to the different scope, this Guide – differently from the previous ones - put the accent on the importance of a supply chain perspective in managing business continuity. In fact, the disruption of supply chains may well jeopardize all BCM efforts set in place by one enterprise along the chain.

## Target Audience of this Guide

This Guide is designed for small and – to some extent - medium enterprises in emerging and developing countries. The commonly used criteria at the international level to define SMEs are the number of employees, total net assets, sales and investment level. Different countries categorize enterprises according to different parameters and values. For the sake of simplicity, here we will refer to small enterprises when they employ between ten and 49 workers, and medium enterprises when their staff comprises 50 to 250 employees.

In developing countries, own-account workers comprise the vast majority of the small business sector. Often this is due to the lack of formal sector jobs available for the poor, who resort to self-employment not by choice, but out of necessity. The ILO uses the wording "own-account worker" (more commonly known as self-employed workers) to indicate those workers who run a business without employing anyone else but themselves. Generally, these businesses have no structure and operate casually, nevertheless they are often part of an informal network of such local businesses.

Business continuity management – and by consequence this Guide – provide a structured approach that is not appropriate for the more ad hoc arrangements of own-account workers. However, own-account workers are often an important part of the supply chain of SMEs and relevant consideration of their involvement and impact should be included in the enterprise planning process.

In addition, this Guide is intended for private enterprises producing goods and services. Although this guidance is not aimed at other types of organisations such as public and non-profit organisations, these often have crucial roles in the event of disruptions or disasters that the enterprise should be aware of.

The specific audience for this Guide is decision makers in small and medium enterprises, as well as business associations and business service providers. Financial service providers shall refer to the sections providing guidance on financial matters and insurance.

## Objectives of this Guide

This Guide is intended to inform and guide decision makers and technical service providers on how to manage business continuity vis-à-vis the multiple hazards that may threaten the production and delivery of services and goods.

## Contents and Structure of this Guide

The Guide is structured in five chapters. Each chapter is introduced by an overview, including the main messages to be retained and the point in time when specific guidance should be applied, i.e. before, during or after a crisis. There is nothing expert or highly complex in them, it is a structured common sense approach to a particular business challenge.

- ❖ The **first chapter** provides you with the **basic concepts and terminology** that will be used across the Guide. You may already be familiar with some or great part of the contents presented in this chapter. If so, you may skip it.
- ❖ The **second chapter** focuses on the **assessments** you should carry out to collect and analyse the information you need for the planning phase. Assessments will include: a business impact analysis to identify critical business activities; an assessment of the critical inputs, assets and operations; and, finally, a risk assessment of these critical components.
- ❖ The **third chapter** concerns the core of the **planning efforts**. In this phase, the findings of previous assessments will be used to take decisions on: what needs to be done, by whom, by when, with which resources, and for what final purpose.
- ❖ **Chapter 4** is about **communication and training** on the BCP. To become effective and to be successfully adopted by the firm, the plan needs to be known by the employees (at least those who have a role to play). Also external stakeholders should be aware of this plan and of the way they will be asked to collaborate with your firm. Finally, the BCM team needs to become fully familiar with what they will need to do in the event of a disaster: the training will ensure the firm has the capabilities to implement the plan successfully.
- ❖ **Chapter 5** provides guidance on the last step of the BCM process, i.e. the **collection of lessons learnt** following the implementation of the plan and its consequent adaptation to remove shortcomings and address gaps.

The body of the text is complemented by a series of boxes containing specific highlights and/or complementary information. Such text boxes are checked off by the following icons:



Useful terminology that you will find in the glossary.



Complementary information and highlights.



Fictitious or real-life examples, included for the sake of facilitating understanding.



Space where you can take note of your thoughts, ideas answers to the questions.



Tools you can use when developing your business continuity plan. Empty templates are also contained in the annexes.



Recommended readings and bibliographic references.

## How to Use this Guide

The Guide has been designed to suit enterprises belonging to different sectors of the economy and producing a wide range of goods and services. In addition, they apply to different types of disasters caused by natural hazards and, where pertinent, offer highlights on one or the other type of natural hazard.

There is no ambition of being exhaustive and detailed. Therefore, users should be mindful of the fact that business continuity practices should be proportional to the size of the business and customized to the risk profile of the enterprise.

Rather than providing immediately applicable and prescriptive guidance, this Guide offers a framework for analysis and underpinning principles that you, as a user, will be able to adapt on a case-by-case basis.

Enterprises may find it useful and appropriate to set up an internal task force in charge of developing the business continuity plan and implementing it. The task force (or continuity team) shall include representatives from key enterprise functions (departments), and including delegates of the workers. This Guide will provide them with a useful basis for structuring their discussions and decisions around BCM.

This guide can be used by enterprises on an individual basis, but also by groups of enterprises along the same value chain. Representatives from key suppliers and contractors could also be involved in the BCM process, for instance as occasional members of the task force, especially when the enterprise is highly dependent on their products and services.

Finally, it is important to emphasize that the BCM process is meaningful only when aligned with the local level, community response to a given disaster: it is a collaborative practice to stay in business and protect jobs and community.



# Chapter 1

## Terminology and Basic Notions

### 1.1 Overview

#### Outline chapter 1

- 1.1. Overview
- 1.2. Risks and Related Concepts
- 1.3. Business Continuity Management (BCM) and Planning (BCP)
- 1.4. Disaster risk: what to do
- 1.5. Supply Chains and Business Continuity Management

The purpose of this chapter is to provide an overview of the main concepts analysed in this Guide and to allow the readers to familiarize themselves with the basic terminology.



**Process** describes the series of actions or decisions that need to be made to reach a goal. These actions or decisions are set out in a proper order and are dependent on each other. They must be undertaken in the correct order.

In particular we will explore: the meaning of business continuity management; the **process** of managing continuity; the meaning of risks, disasters and how these relate to business continuity management. Finally, we will look at value chains highlighting the importance of using a value chain approach when managing business continuity.

### 1.2. Risks and related concepts

#### What is a Risk?

Risks are uncertain events, in the sense that we do not know if they will actually occur, when, and what will be their magnitude. Often, the chain of consequences is also unpredictable or difficult to predict. Risks are dynamic in nature and the capacity of businesses to mobilize resources and take actions effectively may determine success or failure in making necessary changes to respond to those risks and hazards.



**Risk:** It is an uncertain event that has a given probability to realise and produce an impact that can be more or less severe. Risks are measured through the product of their likelihood and expected impact. They are generated by a specific cause and their treatment has a cost.

*The likelihood of suffering harm or loss<sup>1</sup>*

**Preparedness** and flexibility are, in general, the recommended attitude towards risk. A contingency plan is aimed at getting prepared; it makes one feel a little less lost when a hazardous event occurs and provides a focus to rapidly get back on track. Likewise, a business continuity plan is to think over possible turns of events, and manage the contingency of things when they do not go as expected.

<sup>1</sup> Source: ODI, *Resilience: A risk management approach*, Tom Mitchell, Katie Harris, Background Note, January 2009.

## How is Risk Measured?

Basic parameters to define a risk are: cause, likelihood of occurrence, and severity of the impact, i.e. expected loss. The magnitude of a risk is measured by the product of its likelihood multiplied by the severity of the impact. Risk management is based on the analysis of these parameters and the treatment of one or more of them to prevent the occurrence of the hazard (e.g. by eliminating the cause), to minimize the negative impacts that it triggers, to transfer the resulting costs, or to accept and retain the possible consequences.

The risk matrix below<sup>2</sup> provides a simple but effective method to calculate the risk magnitude and to support making decisions on appropriate risk management strategies. On the "y" axis is "likelihood", with five possible values: very unlikely, unlikely, moderate likely, likely and very likely. On the "x" axis is "severity of impact", with five values: insignificant, minor, moderate, serious, disastrous. The numbers noted inside each cell represent the risk magnitude. The formula used here is the product of the likelihood by the square value of the impact; in this way, the magnitude increases exponentially with respect to the potential severity, by a factor "2".

$$\text{Risk} = \text{probability of hazard} \times \text{severity of outcome}$$



### Tool 2: Risk matrix to calculate risk magnitude

	Very likely	5	20	45	90	125
	Likely	4	16	36	64	100
	Moderate likely	3	12	27	48	75
	Unlikely	2	8	18	32	50
	Very unlikely	1	4	9	16	25
		Insignificant	Minor	Moderate	Serious	Disastrous
<b>Likelihood</b>						
						<b>Severity</b>

<sup>2</sup> Source: Global Risk Identification Program (GRIP), by the United Nations Development Program (UNDP), 2010.

The ones **highlighted in green** are acceptable risks not requiring any specific preventive measure because, even though having an increasing probability to occur, their impact is insignificant. In such a case, identifying and setting in place preventive measures may be more expensive than dealing with the consequences of the risk. **Risks highlighted in blue** are also acceptable but only to a certain extent: the potential impact is minor but not fully negligible, hence the higher the likelihood the risk it occurs the better is to take preventive measures. **In yellow and orange** are the risks that require preparedness and mitigation: they become more and more likely, with an increasing potential impact; it is more convenient to invest in reducing the risk magnitude rather than shouldering the costs of the damage. On the top-right corner (**in red colour**) of the matrix are the risks that should either be avoided or transferred because their magnitude is very high: there are many chances they will occur, and when they do, the impact will be catastrophic.

## What is a Disaster?

While a risk is a potential event, a disaster is the occurrence of an event, it is a fact. The term “disaster” is relative to the magnitude of the impact that a natural hazard may have on humans. We refer to a “disaster” only when a natural hazard is such to provoke very important, human and material losses and damages on settlements, infrastructures, environment, assets and livelihoods. The damage is such that it requires extraordinary efforts by the affected community to respond and recover, as it goes beyond its normal capacity to cope with shocks (ILO, 2002). We would not refer to it as a disaster when a natural hazard hits a non-inhabited area.



**Disaster:** occurrence of a major event or a series of events which result in loss of life or damage to property, infrastructures, essential services or means of livelihoods on a scale which is beyond the normal capacity of the affected community to cope and where extraordinary interventions are required to save lives, livelihoods and environment, and to undertake rehabilitation and recovery measures.

Source: ILO 2002

Natural phenomena that can trigger disaster situations comprise the following ones:

**Geological:** earthquakes, volcanic eruptions, and tsunamis.

**Hydro-meteorological or climatic:** tropical storms, over-floods, flash flows, mud flows, droughts, and desertification.

**Geological-climatic:** soil failures such as landslides (that can be caused by seismic vibrations or dampening), soil liquefaction caused by intense earthquakes, soil settlement, or swelling of the soil due to the presence of water.

In terms of their speed, they can be rapidly occurring phenomena, such as earthquakes; or slowly developing phenomena, such as droughts and desertification.

“Disasters however, are rarely natural. Only hazards are.” Disasters are the consequence of how people cope with their daily lives. “When a storm or a volcanic eruption rains down its fury, the vulnerability of our community, the fragility of our homes, the exposure of our lands, property and livelihoods determine whether and how much we will suffer. The human factor is the difference between a natural event and a disaster”.<sup>4</sup>



## Increasing disaster impact and climate change

Of the ten disasters with the highest death toll since 1975, at least half occurred during the five-year period between 2003 and 2008. In addition, four out of the ten most expensive disasters occurred in the same five-year period (Source: UN 2009).

Climate change and important societal changes (such as massive urbanization) are altering hazard pattern, their spatial distribution, frequency and magnitude. Exposure to risk is increasing.

The impact of climate change and disasters is expected to be particularly harsh on low-income households and businesses, because their income is directly or indirectly generated through agricultural activities, which depend on weather and climate.<sup>3</sup>

<sup>3</sup> For more informations see: Towards an ILO approach to climate change adaptation, 2011.

<sup>4</sup> Source: Disasters in Asia: the Case for Legal Preparedness, IFRC, Geneva, 2010.



### Examples of typical effects of tsunamis, drought and floods

**Tsunamis** can be particularly devastating: the water smashes on the coastal area with an intense force; then it retrocede carrying everything with it. Houses may be washed away; infrastructures get flooded and damaged; harvests, food stocks, livestock and fishing boats may be lost. Sea water incursion, carrying debris and sewage, may render land infertile and contaminate drinking water.

**Drought** mainly damages crops and livestock, with possible extreme consequences of famine for the local population. The destruction of crops and livestock due to major drought events can trigger consequences over years. The scarcity of water has large and detrimental impact on the everyday life of people, on hygiene, food preparation and health. It also affects certain businesses that require water.

With respect to **floods**, the speed, depth of the water and area covered by the water are very important parameters for the analysis of the exposure of people and assets. Fast flowing water has a devastating force; the deeper it is the higher will be the power of devastation. Infrastructures, poorly built houses, assets, crops, livestock, and food stocks are washed away. Water-borne diseases are likely to spread out and clean drinking water is contaminated.

Source: UNDMTP 1992

Disasters can be profiled along the following variables:

The causal phenomena, which define the **subgroup**: geophysical (e.g. earthquakes, volcanoes, landslides); meteorological (e.g. storms, hurricane, typhoons); hydrological (e.g. floods, landslides); climatologic (e.g. drought, wildfire); and biological, which are caused by the exposure of living organisms to toxic substances and germs (e.g. epidemic, insect infestation) (Source: EM-DAT website). You shall be able to detect which types of disaster are likely to occur in your firm's location.

The **speed of onset** and the **duration**: they may occur suddenly – without warning - and be over quickly (e.g. earthquake), or they build slowly before they reach a peak of intensity (e.g. drought and famine). The key questions at this regard are: can we predict a disaster? How much time do we have from the warning till the event unfolds and reaches its peak? Rapid onset disasters require rapid reactions both before (if the hazard gave some warning) and after the event occurred; hence, preparedness is essential.

The **level of predictability** that affects the timing, degree of accuracy and ability to communicate warnings to populations settled in the disaster-prone areas. For

certain events and under determined conditions, prediction is possible with some degree of confidence on the timing, impact and geographic coverage (e.g. floods, hurricanes, storms, tsunamis). For others (e.g. earthquakes) no device exists to detect precursor signals with short-term precision. Unfortunately, even when prediction is technically possible, **warning** is not always available, for instance because of a failure in producing and disseminating information to the concerned populations.

The **typical negative effects** on human lives, settlements, property and environment. Being aware of the typical effects informs the selection of the most appropriate mitigation and preparedness measures.

The **magnitude of the impact** of previous events, which in turn is defined by the number of casualties, the number of total affected people, the number of houses damaged/destroyed, the cost of the economic damages, etc.

The **frequency of the event**, which can be likely to occur often and with a regular pattern over the months/years (e.g. hurricanes in the Atlantic Coast of the United States of America and Caribbean; floods in Bangladesh), or irregular and rare (e.g. earthquakes and tsunamis). Needless to say, regular and frequent natural hazards are easier to predict; their likelihood encourages taking certain measures such as risk transfer.

The **spatial dispersion**, referring to the area that is affected by the event.

A disaster affects an enterprise and its capacity to deliver products and services to the markets and the community. In this way, the impact affects also other enterprises along the same **supply chain**, as well as communities who consume the disrupted services and goods.



**Supply Chain.** *It indicates systems of enterprises providing services and goods to each other in a sequence that can be described by an input-output relationship. With respect to a specific producer, the chain is constituted by vendors, and vendors of vendors.*

If you are unaware of the disaster-risk profile of your area, you do not have the necessary knowledge to mitigate the risks and get prepared for possible hazards. Conversely, if you are aware that your firm is located in an area highly susceptible to be affected by an earthquake, you may consider retrofitting the facilities in order to make them earthquake resistant. If your farmland is located in a flood plain, you may consider insuring your crops, building a protection wall, stocking your seeds in a safe area, and/or elevating equipment and facilities.

### *How is Natural Hazard Measured?*

Natural hazards are just like as any other risk, with the difference that their outcome is always negative. They are defined by likelihood and impact. Disaster likelihood is the probability that a disaster will occur; the number of times the disaster occurred in a given timeframe is an indicator of its likelihood. The severity is represented by the amount of losses and damages that the disaster may cause if it occurs; as the impact is both on human lives and on the economy, it can be measured through indicators of mortality and portion of the Gross Domestic Product that may be impacted.

## 1.3. Business Continuity Management (BCM) and Planning (BCP)

What is Business Continuity Management? What is it for?

Business continuity management (BCM) is a management process which is practiced to counteract the negative impacts of possible threats on the continuity of organisational activities.

As such, we could consider BCM as a subset of broader **risk management** strategies and processes, which are aimed at treating the wide range of risks identified within an enterprise and its environment.

On the other hand, BCM focuses only on those risks that threaten the continuity of critical business activities. Not all risks are so catastrophic to potentially result in business suspension or interruption; some may cause an affordable increase in production costs, such as a fluctuation of the exchange rate for firms importing and/or exporting goods and services.



**Business Continuity Management** is a management process aimed to counteract the negative impacts of possible threats on the continuity of organisational activities. BCM does so by strengthening resilience through risk preventive and mitigation measures, as preparedness arrangements.



**Risk Management** is a process to identify measure, prioritize and treat the risks affecting an organisation. It is a core part of corporate governance and it entails making judgments on how to allocate resources. Response options include: avoidance, reduction, transfer and retention (or tolerance).

The ultimate goal of BCM is to build the organisation's resilience and to ensure the delivery of essential goods and services even after an external shock has damaged assets and challenged the access to necessary resources. Essentially, this is done to limit the direct and indirect economic loss that may derive from a catastrophic event and the consequent business disruption. BCM does so by reducing the identified weaknesses, mitigating their impact, and bringing the situation back to normal as soon as possible after an adverse event.



### Risk Management vs. Business Continuity Management

Although in this Guide we describe BCM as a subset of risk management, you should note that there is not a consensus on the positioning of these two disciplines with respect to each other. There are at least two more points of view:<sup>5</sup> those who acknowledge the link between the two functions, but without any order of hierarchy; and those who think that BCM is an evolution of risk management. You will figure out the conceptual approach that is most meaningful according to your experience and knowledge.



### Prevention , Preparedness and Response

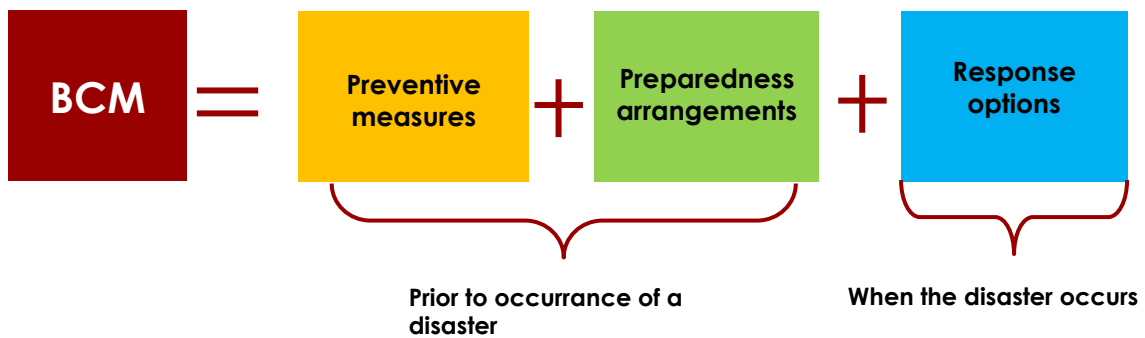
**Example of preventive measure:** relocate the critical stocks in a geographic location subject to lower or no risk of disaster.

**Example of preparedness arrangement:** make an inventory of reliable alternative suppliers and establish a first contact with them.

**Example of response option:** contact alternative suppliers in case of supply chain disruption.

BCM is made of **preventive measures** as well as **preparedness arrangements** and **response options**. While prevention is to reduce the likelihood of a risk, preparedness is to stand ready in case the risk realises and to control/minimize damages and losses. Response options are those that you roll out after the disaster hits.

<sup>5</sup> Source: Andrew McCrackan, author of "Practical Guide to Business Continuity Assurance".



In post disaster situations, losses can comprise both “hard” and “soft” assets. Hard assets are the tangible assets such as business facilities, equipment, tools and materials; while soft assets are the intangible assets – among others - the skills, the networks, the information, and even the reputation of an enterprise.

**ABC** **Network** is the whole of personal contacts, direct and indirect, possessed by the stakeholders. The contacts influence and determine the type of ‘institutional’ relationship built between the stakeholders.<sup>6</sup>



**Example: Farmers network in Ethiopia**

A community in Genda Ara, (Ethiopia) confronted by drought and recurrent landslides realized the importance of a network to confront these hazards. They formed a network of people living in lowland and one of those living on the highlands. If it rains in the highlands, responsible members of the network inform via mobile phones those on lowlands and indicate the amount of the rainfall. Based on this information, they direct the flood water to irrigate their land or they evacuate the area if the rains are too heavy.

This is an effective example of a Community managed Disaster Risk network and of an early warning system which consists of bringing people together within the same community to enable them to collectively address a common disaster risk and to put in place disaster risk reduction measures.<sup>7</sup>

Damages to both types of assets eventually result in financial losses for an organisation; the main difference between the two is that it is easier to quantify the loss of hard assets because they have a well-defined market value. Handling a crisis in a successful manner with minimized losses and delivery delays will certainly contribute to enhance the reputation of the firm and the confidence of its customers.

Losses as a result of an event can occur in different time frames: they are usually seen as immediately observable losses or ones that develop after some time which are future projected losses.

<sup>6</sup> Source: Gasser M., Piñeiro J., Coto Moya L.G., 2005. Up cit.

<sup>7</sup> Source: Cordaid and IIRR, *Community managed disaster risk reduction experiences from the horn of Africa*. Cordaid, The Hague; IIRR, Nairobi, 2011.

## What are the Other Benefits of Business Continuity Management?

Besides the direct benefits arising from having a plan to deal with a disruptive event, BCM can generate other advantages for the enterprises adopting it as an integrated management process:

- ❖ it often reveals differences between what was thought to happen (plans) and what actually does happen (execution);
- ❖ it can generate ideas about more efficient ways of working;
- ❖ it demonstrates that it will be ready to continue delivering products and services on time and under difficult circumstances;
- ❖ it also shows that it cares for its workers and clients and indicates high standards of professionalism.

As a result, this commitment enhances the firm's credibility and trustworthiness. In turn, this makes the enterprise and its offer more attractive for both clients and investors in comparison to your competitors. Consequently, your firm may have more chances to win contracts if you have a viable BCM process and plan in place.

As a matter of fact, companies are increasingly including BCM as a requirement for prospective contractors to participate in procurement selection processes; by doing this, they aim at contracting the most reliable and resilient suppliers. Hence, the possession of a business continuity plan becomes a competitive advantage. For some enterprises (e.g. pharmaceuticals, health providers, financial institutions), having a suitable BCP is a factor to meet regulatory requirements and be authorized or licensed to operate by certain competent authorities.



### BCM Legislations, Regulations and standards

BCM is regulated by national and international legislations, regulations and standards. The Business Continuity Institute (BCI) has produced a document attempting to provide list of the most recent and significant initiatives and reference documentation on this matter. As laws, rules and standards evolve over time and are constantly reviewed the document is not a definitive one and requires periodic revisions. You can download it from the official website of the BCI at the web page <http://www.thebci.org/>

BCM also encourages firms to reflect on what are their business priorities, to identify the trustworthy suppliers and dismiss the less credible ones, to make decisions on outsourcing or in-house production as well as on operations sites. In a way, business continuity management helps



**Corporate Social Responsibility** is practiced by companies to ensure their compliance with laws, international standards, ethical norms and environmental protection requirements. With CSR, companies take responsibility for the spillover effects they generate where they operate, and they adopt a proactive role to benefit employees, consumers, communities, the environment and other stakeholders as a whole.

re-shape supply chain strategies, to make an enterprise more resilient and effective. Finally, setting in place a BCM can be viewed as a component of corporate social responsibility.





### **Example: BCM and Corporate Social Responsibility**

Very eloquent examples of how firms' disasters can impact on environments and communities are: the oil spill caused by the offshore drilling rig of British Petroleum in April 2010, in the Gulf of Mexico; the earthquake-triggered explosion of a reactor at the nuclear power station of Fukushima (Japan), in March 2011. When an enterprise disaster can have such impact on people's life and on the environment, it is a matter of ethics for the enterprise to ensure measures are in place to contain the negative spill-over effects.

#### *What are the Key Steps to Manage Business Continuity?*

In this Guide we propose a ten-step approach. Other manuals that have been written on this subject matter suggest slightly different processes, but the essence is very similar: there is a phase of data collection and analysis on the risks and their impacts on the business, a phase of decision making and planning to successfully address (part of) these risks by mitigating their impact and preparing for a response, a phase of implementation of the plan which starts by communicating it to the stakeholders and training employees. The process should be concluded by gathering lessons learnt and adapting the plan according to the lessons from experience.

The ten steps in this guide are:

- ❖ **Step 1:** Determine your business priority
- ❖ **Step 2:** Identify critical assets and inputs for your priority
- ❖ **Step 3:** Identify the time-critical operations;
- ❖ **Step 4:** Map-out internal and external risk areas impacting the necessary inputs
- ❖ **Step 5:** Prepare a set of possible threat scenarios
- ❖ **Step 6:** Design and validate the business continuity plan (BCP)
- ❖ **Step 7:** Design and roll-out communication procedures
- ❖ **Step 8:** Design and deliver training on BCM
- ❖ **Step 9:** Activate and close the BCP
- ❖ **Step 10:** Gather lessons learnt and adjust the BCP

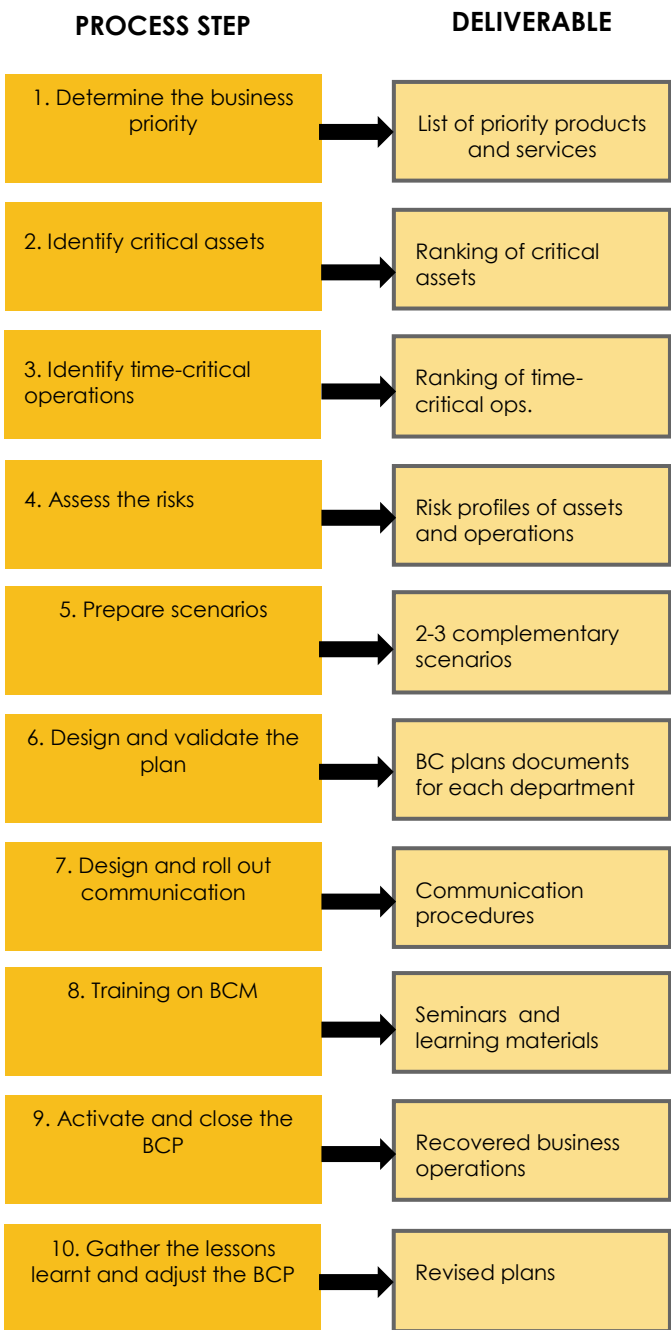
Step 1-8 take place before the risk occurs; step 9 during the crisis and step 10 after the crisis. As you can see, most of the BCM effort is to be carried out prior to the disaster.

**Step 1:** The continuity management process has to start by determining what you, as decision maker, want your enterprise to be able to continue doing after a disaster has hit. That is, you will have to determine which products and services are essential and should be maintained (at a reduced scale, if necessary) even after a disaster. In fact, you may deem that interrupting such business activities would be too expensive (in terms of current or projected costs) and unaffordable for the enterprise and its stakeholders. Also the image and reputation of an enterprise are at stake, especially in comparison with other enterprises within the same supply chain. This process needs to be done on a regular basis as business, suppliers, customers and major contracts change. Assessing the access to financial services at this point will be key to set up a strategy that starts with a budgeting activity that will allow you to determine what the cost of the different activities is and what would be the best financial service to fund the business continuity plan among a choice of savings, credit and insurance.

**Step 2:** The second step deals with the inventory of operations, assets and inputs that you must factor into the production of the services and goods you have established as essential. You will need material, human and financial resources that are available internally or must be procured through external sources. In this analysis you must specify the location and origin of each of these resources (internal or external), and identify the current and alternative suppliers, including their location and distance. Geographic information tools might be helpful to complete this exercise and visualise the network of resources on a map. These tools are not only useful to facilitate understanding and planning, but also to depict the post-disaster situation and guide the response.

**Step 3:** The third step is to identify time-critical operations, i.e. those operations that can be done for a shorter period of time with respect to others. Beyond that time, which is called "tolerated downtime period", they have to be resumed; alternatively, costs would be unaffordable.

**Step 4:** Once you know what resources you need to keep certain businesses functions ongoing, it is essential to anticipate how a disaster can impact on the availability and access to essential assets and on the ability to perform critical operations. In fact, these are probably at the core of the "continuity problem" when you attempt to make forecasts on the negative impacts that a crisis might have on the essential activities you intend to maintain. This is about getting an understanding of the variety of risks that exist in the enterprise environment: the risks linked to the location of certain assets, the risks linked to the business continuity capacity of your suppliers, etc. It is about asking the question "what if?" In this Guide, we will focus only on natural hazards, but you should bear in mind that BCM can be applied also to address other types of risks, such as those linked to political instability and social unrest. Different natural hazards may generate



different kinds of disruptions. You need to generate a sense of likelihood of the adverse events and the effect that they have on the enterprise. If there are very likely events with a high potential impact you should give priority to the mitigating factors. Identifying the existing risks will allow you to assess whether there are suitable insurance products on the market that would cover for financial losses, as well as other financial products such as accumulated savings or emergency loans. This strategy enables you to finance the restart of your activities.

**Step 5:** Once risks are identified, you should proceed with identifying a set of possible scenarios and differentiating likely from unlikely events in which you provide a narrative description of potential contingencies in terms of access and availability of the resources you need. The scenarios take into account the uncertainties you detected in the previous step and present realistic, plausible combinations of the same. The scenarios are simplification of possible realities, and are helpful for you to reflect upon how you should act in one or the other situation.

**ABC**

**Scenarios** are approximate descriptions of possible future realities. Scenario planning consists of developing story lines linking underlying factors in a causal relationship that can be demonstrated. The line closes with a result that is one of the many possible future environments we will have to deal with. The better we are prepared for the most important disaster scenarios, the less costly it will be if the event happens.

**Step 6:** Determining how you should act in these possible scenarios belongs to the following step: the design of the business continuity plan. The plan needs to be tested by simulating the scenarios, and then it shall be adjusted in accordance with the findings of the pilot test; the purpose of testing the plan is to avoid (or at least minimize) surprises during the crisis phase, and to introduce improvements.

**Step 7:** After the plan is designed, it must be communicated to the stakeholders. Communication must be fluid both prior to the disaster to ensure everybody knows their roles and gets familiar with the crisis response process. It has to function properly also during the emergency, to ensure that the response is well coordinated. Finally, once the emergency is over, communication serves to accompany the stakeholders towards the return to usual activities and previous organisation of the work. Awareness rising is also important and is mostly addressed to external stakeholders whose decisions are outside the enterprise's control but can affect its capacity to enact its business continuity plan. Awareness rising can be addressed to public authorities, media, enterprises in the same supply chain, business associations, business service providers, etc. Even if the enterprise does not have direct control on their decisions, it can nevertheless sensitize them on important topics and encourage them to take a stand and make efforts that would help its BCM.

**Step 8:** Training follows communication and targets those who, within the enterprise, have a precise role to play in the implementation of the business continuity plan. While communication of BCM must be as inclusive as possible, training needs to be well targeted and tailored to the concerned functions.

**Step 9:** When a disaster occurs, you have to determine in which scenarios you are among those you crafted in the fourth step of this process. Most likely you will not find among your scenarios one that precisely describes your actual situation: they are just approximations of possible realities, so you must choose the one that is closest to yours. Hence you activate the plan and you implement it till the end. Probably, you will need to make adjustments on the way, as the process unfolds and as the situation around you evolves.

**Step 10:** Finally, when the plan implementation is over, it is time to take stock of the lessons identified through the process and feed them into a better plan. This step is usually forgotten, because crisis management drains so much energy that, once it is over, the tendency is to rapidly turn the page. Nevertheless, the time spent in gathering lessons learnt and in adjusting the BCP is an investment that will pay off in the next crisis.

## Stakeholders: Who Does What in Business Continuity Management?

Achieving resilience in times of crisis is in the interest of the organisation itself and of its key stakeholders (e.g. customers in the supply chain, workers, suppliers, responders).



**Stakeholders.** Refers to a group of individuals who are participating or might participate in any action/project/program either through their own efforts in partnership with an organization. Individuals within a stakeholder group share similar interests (i.e. group of farmers, fishermen, widows, youth, small business owners, etc.)

**Employers** are at the forefront of the effort to protect their own business activities in the event of a disaster or of any other source of disruption: they initiate, endorse or even sponsor the design of business continuity plans and take necessary arrangements to implement them. Being effective in managing business continuity requires being flexible in adapting the organisation of the work to overcome bottlenecks. For example, delocalization of certain enterprise functions, re-deployment of personal to the most critical areas, outsourcing of certain activities, and tele-working are possible solutions in the event that people can't get to work. Enterprises operating in the same areas

It is important you perceive your enterprise as an entity around which a multitude of stakeholders have interests and a role to play in case of disaster. An enterprise has internal and external **stakeholders**. You shall be able to identify them and involve them at the right timing and in the appropriate way, in order to make the BCM process solid, pertinent and viable, and in order not to undermine the reputation of the firm.

First of all, your enterprise carries on its work thanks to its **workers**, in any of the core functions/departments, i.e. production, marketing and sales, purchasing, personnel, general management, etc. Workers bring along their skills and their tacit knowledge: they are precious resources hence they have to be protected from hazards that could compromise their safety, health or wellbeing. You can make sure that their interests and needs are fully taken into account by involving the relevant trade unions in every step of the BCM process.

**Trade unions** can help shape and review current programmes, plans, and policies and assess whether they are suitable to deal with the issues related to an unexpected negative event. They can recommend specific changes to make existing plans more thorough and to adjust policies that may affect workers during the emergency (for instance, introducing/ensuring work shift flexibility, work from home when possible, paid sick leave). Similarly, they can contribute to the development of new plans that include essential elements for workers' protection. And when it comes to plan implementation, trade unions can be a valuable ally in encouraging workers' active participation in recurrent training.

**Suppliers** provide services (e.g. transportation, recruitment, IT), raw materials, utilities (e.g. gas, water, electricity), finished products, parts of products. You may have outsourced some of the critical processes of your firm (e.g. production of parts of products, assembling). Suppliers and suppliers of suppliers constitute your supply chain which is a potential source of business interruption. Your interest is in that your suppliers are able to deliver the product/service at the requested quantity, quality and time. These issues are treated in depth in section 1.4.

**Customers** are the downstream segment of the value chain where you operate. With respect to your firm, they fundamentally bear the same expectations that you have vis-à-vis your suppliers. They buy the value you produce, and expect you to deliver on time and as per contractual terms. They do not care about your business continuity issues and do not intend to be affected by your own disasters.

**Business associations** perform different roles in their communities: they offer technical counselling and training to associated enterprises; they create occasions for networking, marketing, information and experience sharing among businesses; and they produce critical information and knowledge. Their mission is to support business growth within a market. In pre and post-disaster contexts, the production of certain information should be best taken care of by business associations or groups of concerned stakeholders, with a view to maximize efficiency of resource allocation and to attain a common and comprehensive vision of the situation from a multitude of perspectives. Business associations can also help in the development and delivery of trainings on BCM.

**Financial (including insurance) service providers** are very important both before and after a disaster has occurred. Disaster risks can be transferred to professional agencies to mitigate the recovery costs emerging from a disaster, while pre-built savings and capital has to be quickly mobilized in order to cover such costs.



**Recovery.** Refers to a wide-ranging process (the re-building of livelihoods, housing, services, local government, etc) following a crisis, with the aim of regaining a level of stability in the area. This lays the basic foundations for the transition from the immediate emergency response to medium-term and long-term development.

**Public authorities**, at different levels, have the responsibility of protecting citizens, their life and property, as well as community assets, from disasters and their impact. More specifically, the role of central and local governments is to generate and disseminate timely information before, during and after the crisis, and to coordinate the response. The latter will initially be aimed at saving lives and minimising further human losses through rescue operations; at a later stage the effort will be focused on restoring disrupted services and businesses, and damaged/destroyed assets. In order to accomplish such a mission, the government is required to set in place legislation and policies, and must allocate sufficient resources accordingly, at the central and local level.

Enterprises are also responsible vis-à-vis the community as a whole: they create employment and income for local households; they prompt the development of correlated business along the supply chain; and their activity may have an impact on the environment. Public opinion will therefore be interested in how an enterprise is coping with a disaster when it occurs.



**Value chain.** It is a supply chain seen from the perspective of the customer and not the producer. Along a supply chain, the traded good/service is transformed; its value, as perceived by the customer, grows at each link. Members of the same supply chain may be situated in different value chains, because their capacity to produce value for customers is not homogeneous.



**Example: The role of public authorities for recovery in Sichuan Province, China:**

“During the Wenchuan Earthquake of 2008, local public utilities were extensively paralyzed and facilities were destroyed in large numbers. Public utility recovery practice was rather weak, prior to the earthquake. The villagers' limited lifelines were also badly damaged and needed to be rebuilt or restored. Public authorities devised a programme to rebuild the utilities in parallel with the recovery plans of villages. The central government encouraged the use of simple technologies, local building materials and a local labour force to rebuild highways, village roads, water and electricity supplies, rural infrastructure, garbage collection and sewage systems by taking local conditions into proper consideration.”<sup>8</sup>

The **media** produce and disseminate information, which is an essential good in both disaster prevention and response. Information influence decision makers, on what is the most urgent action to be taken and how scarce resources should be allocated among affected groups, geographic locations and specific interventions. The production and use of information can be manipulated. Enterprises should interact regularly with media agents to share information with them and counter rumours.

<sup>8</sup> Source: *Livelihood Recovery through (Re) starting Businesses: Report on implementation of livelihood Recovery in Sichuan Province* – MoHRSS, ILO and DFID (2010).

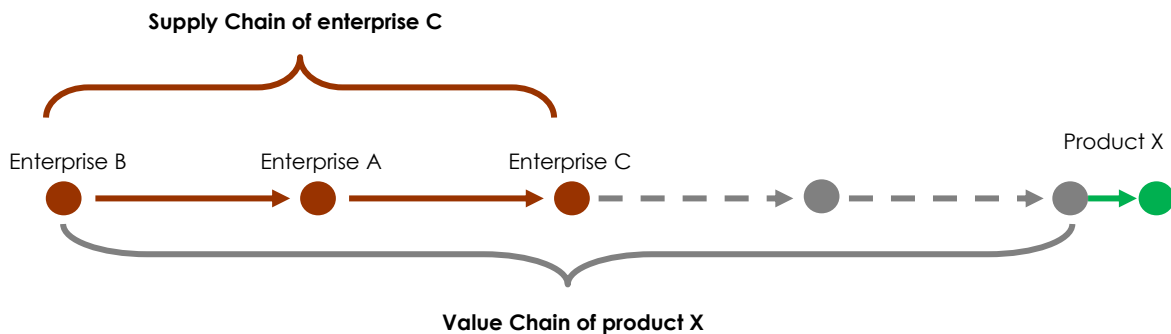
Table 2. Stakeholders and BCM

Stakeholder	Impact	Stake	Role in BCM
Employers	Loss of capital assets; loss of materials for production; loss of income; disruption of business activities	Resume activities as soon as possible; minimize losses; maintain a good reputation of the firm and brand	Make strategic decision; lead the development and management of business continuity; allocate and re-deploy resources as needed; take care of the workforce
Workers	Trauma; personal losses; absenteeism; increased workload; difficulty to reach the workplace; increased family responsibilities	Continue receiving salary; obtain sick leave/days off; have enough time and energy to take care of personal issues generated by the crisis; do not lose the job	Participate actively in the business management process, possibly as members of BCM teams
Suppliers	Disruption of the supply chain and of business networks	Do not lose a client; do not have to cancel contracts because of the client's inability to absorb products and services	Collaborate with the clients to design integrated business continuity strategies; share information before, during and after the disaster
Customers	Disruption of the value chain and of business networks	Be delivered the contracted product or service at an acceptable quality and price, and at the required timing	Collaborate with suppliers to design integrated business continuity strategies; share information before, during and after the disaster
Business associations and business service providers	Disruption of the supply chains and networks of businesses	Satisfy members of the association and clients ; maintain supply chains working	Design and deliver training; provide technical counselling; prompt networking; collect and disseminate information (possibly acting as main centre of information production and dissemination)
Financial (including insurance) service providers	Increased requests for releasing funds either savings or emergency loans; peak in insurance claims	Minimize costs; maintain a good reputation; do not lose clients	Provide different financial services, develop insurance products that are tailored to the risk profiles of the concerned geographic areas and businesses; deliver a whole set of services to clients by providing professional advice and training
Public authorities	Increased workload in the response; coordination responsibilities	Human and material losses are minimized; be remembered as the administration who managed well the crisis	Coordinate rescue operations and the recovery response
Media	Increased workload to cover the event	Sell news, attract the audience, provide a valuable service to the community and be appreciated	Produce and disseminate information on disaster risks and BCM before, during and after the crisis. Media have the power of influencing the public opinion

## 1.4. Supply Chains and Business Continuity Management

### What are Value Chains and Supply Chains?

The term “supply chain” is used to indicate systems of enterprises providing services and goods to each other in a sequence that can be described by an input-output relationship. Along the chain, the traded good/service is transformed; its value, as perceived by the customer, grows at each link. For this reason, when seen from the perspective of a customer who purchases a product or a service, the supply chain is a chain of increasing value, i.e. a value chain. On the other hand, a producer is focused on the upstream links of the chain, i.e. on vendors, and vendors of vendors.



The value chain approach is particularly useful to analyse the degree of integration of businesses within a market and to identify possible bottlenecks (i.e. the weak links of the chain) that slow down or impede growth of single enterprises or of groups of them, and that reduce the capacity to create value. On the other hand, individual enterprises use the supply chain approach to minimize costs and business risks, and to reduce waste.

We can integrate the supply chain and value chain approached by stating that an enterprise operates to bring more value to customers by transforming goods and services, while optimizing costs, minimizing waste and maintaining an acceptable level of risk.

### Why should we Use a Supply Chain Perspective in BCM?

The supply-chain approach in business management acknowledges that productive and commercial activities are not isolated but are part of a system, characterized by vertical and horizontal dynamics. A chain links suppliers, wholesalers, retailers and consumers. Economic activities in a given supply chain are linked one to another and, as such, affect each other's performance.

Supply chains can have a limited or an expanded geographic scope, thus making economic actors in different locations interdependent and somehow vulnerable to each other's disaster risks. As a result, one of the typical effects of disasters in an economy is the destruction of trading relationships, either temporarily or permanently (de Mel, McKenzie, Woodruff 2010).



#### Vertical and Horizontal Dynamics in Supply Chains

In a supply chain, vertical dynamics describe the interaction of producers with their suppliers (upstream) and clients (downstream). On the other hand, horizontal dynamics are the relations of collaboration, alliances, information sharing or competition among producers within the same supply chain. Vertical and horizontal dynamics from the networks among enterprises.

You could have the best business continuity plan in place but, if your key supplier(s) do not and are also affected by a disaster, you will not be able to procure the goods and services you need to continue running your activity. A good business continuity plan is the one that takes this matter into account and that incorporates and treats risk areas that affect the capacity of the supply chain to properly function after a shock.

Hence, your BCP must also contain strategy options to tackle a supply chain interruption, also for cases where your firm has not been directly affected by a disaster.

Small companies are supply chain partners of larger companies and they are inextricably linked to their respective vulnerability. As demonstrated by the 2005 Hurricane Katrina in the United States, where small businesses were the hardest hit, these companies can prove to be the weakest link and can cause significant disruption to larger businesses situated elsewhere.

Hence, organisations will need to learn to work together with not only their peer companies but also their partners and suppliers on a regular basis setting in place efficient business continuity.

### *How to Apply a Supply Chain Perspective in BCM?*

In concrete terms, incorporating the supply chain approach means adopting business continuity strategies as part of supply chain management:

Managing risks in an integrated manner. In BCM is not enough to be aware of the direct risks that affect your enterprise and to treat them. As we said above, any enterprise operates in a system and can be indirectly affected by the damages and losses suffered by interdependent enterprises and services. For this reason, you have to analyse also the risks affecting your key suppliers and consider how mature their business-continuity capacity is. Ideally you should take these precautions at the stage of selecting a vendor; alternatively, you will have to make arrangements on the way. You may consider that the most appropriate manner to mitigate the risk of having a supplier, who fails in delivering, is to change suppliers, or have several suppliers, possibly located in different areas, not all prone to the same disaster in the same period of the year. Guidance on this matter is contained in step 3.

Identifying business continuity strategies in consultation with suppliers, ahead of possible disasters. As your BCP will focus on one or a few business activities that you consider a priority in case of disaster, you shall identify those suppliers that provide you the inputs and resources necessary for those specific business activities. With them you will discuss arrangements aimed at maintaining the supply chain functioning, especially in cases where the one directly affected by the disaster is the supplier. Guidance in this respect is provided in step 2.

Including business continuity requirements on providers within the contracts you establish with them.

Establishing information sharing procedures with key providers along the same supply chain, in order to keep abreast of critical decisions they make and of unforeseen events affecting them. Being informed in a timely manner gives the chance to make decisions and act rapidly if and when necessary. In case you notice that information is not shared transparently, set in place your own monitoring processes to track supply chain incidents (Kildow 2011).

Educating suppliers and sensitizing them on BCM issues and good practices. Your firm can use legal and financial incentives to encourage suppliers in developing their own BCP and in strengthening a continuity culture of their own.



## 1.5. Disaster Risk: What to do

### What Can You Do About Disaster Risk?

Our ability to act vis-à-vis risks and disasters entails different actions, depending on the point in time where we situate, which can be before, during or after a disaster occurred. Before disaster occurrence we face a risk, which means that we may or may not experience the disaster in the future. At this point in time, we can be proactive by preventing the risk; transferring the risk to others; mitigating the impact of a possible disaster; preparing for the disaster.

When the disaster occurs, our room for manoeuvre consists of reactive actions. The response will be aimed at limiting the damages and re-establishing the pre-existing situation or improving it. In short, risks can be tackled through prevention, mitigation and risk transfer, while disasters are tackled through preparedness, pre-disaster recovery planning, response and recovery.

In risk management there are four possible approaches towards risk:

**Avoidance:** You eliminate the risk by withdrawing and not getting involved in the risky situation. For instance, you can close down an enterprise that was situated in an area prone to volcanic eruptions. Avoiding risks is actually the only way not to have to deal with their consequences; however, it also means missing on the opportunities to gain out of it. Every investment comes with a risk and the higher the investment, the higher the risk, but also the higher the potential gain. As it is commonly said: *no pain, no gain*.

**Reduction:** This is about mitigating the potential impact of the disaster by bringing it to a lower level of magnitude that you (and the stakeholders) deem acceptable and affordable. For instance you can relocate stockpiles of raw materials, semi-finished and finished products in a non-hazard prone area, in a way that you will not lose them in case of disaster. If your enterprise is in an earthquake prone area, you can retrofit your establishment to make it more resistant to earthquakes. Impact mitigation can also be achieved by putting in place measures that help respond to an adverse event in a timely manner through an appropriate and effective organization of who-does what-with what resources-in what sequence.

**Sharing or transfer:** This is when you decide to transfer part of the risk to an external counterpart who accepts it. This is what typically happens when you get insurance, but – in some way – also when you outsource certain activities. As a matter of fact, the penetration of insurance in lesser developed countries is very low; this is because of the scarcity of financial means and for the lack of a preventive culture, but also for the high costs of insuring assets that are exposed to a particularly high risk - in terms of frequency and magnitude.

**Retention:** This is the approach you adopt when you think you can afford to sustain the consequences of a disaster and you budget for the expected costs.



#### Disaster Risk Reduction

ISDR defines disaster risk reduction as a cross-cutting element of disaster management. It includes preparedness and emergency management, but also prevention and a better understanding of the underlying vulnerabilities that increase disaster risk. In step 4, on the assessment of risks affecting enterprise assets and operations, you will appreciate how vulnerabilities can be identified and factored into decisions for better protecting assets and operations.

Source: IFRC<sup>9</sup> and ISDR<sup>10</sup>



<sup>9</sup> The graphic can be downloaded from <http://www.ifrc.org/what/disasters/management/index.asp>.

<sup>10</sup> Presentation by Neil NcFarlane (ISDR) at the conference Towards a Safer World, in Rome, 15-16 September 2011.

Business continuity management is certainly not about avoiding a risk in its entirety, but about finding an appropriate balance between reduction, sharing and retention. In a word, business continuity is about **resilience**, which refers to the ability of people to cope with a **disaster**, by absorbing its costs and recovering.



**Example: Community Resilience in Bangladesh and Nepal**

*Along the Jamuna's shore in Bangladesh local communities affected by cyclical floods are used to consolidate their dams with old and disused fishing nets, thus creating a solid but permeable barrier. In northern Nepal, communities build flood barriers with stones, bamboo reeds and wood to control the river streams. These examples suggest that resilience can be enhanced with adaptive capacities which allow communities and businesses to anticipate, plan, react and learn from shocks and stresses.*

*What to do in the face of climate change?*

The severity of increasingly devastating disasters has reinforced the urgency to reconcile the needs for economic growth, social justice and the protection of the environment. Climate change may determine an environmental degradation which was unforeseen until recently.

New disaster risks may be induced by **climate change**. "Climate change and natural disasters such as landslides and

floods are putting millions of people at risks, especially women and children. Their vulnerability is exacerbated by ongoing environmental degradation, more people living in exposed areas, increased frequency of extreme weather events and wrong policy decisions."<sup>14</sup> Climate change represents an increasing concern for all businesses, considering the impacts that it may have on different locations, goods and services. The extent of its impact is not easily predictable and measurable but varies across localities and economic sectors. The sectors most likely affected are the ones directly dependent on weather, agriculture and tourism. This is a worrying reality, considering that agriculture continues to be the largest employer in the world, despite the trends in the economic structure worldwide. In front of this perspective, flexibility and adaptation to new patterns of production, consumptions and employment become a must, in order to avoid possible losses and seize emerging opportunities.

Options have to be explored, on the basis of the analysis of possible scenarios. **Green jobs** contribute to the adaptation to climate change consequences on human activities, to the reduction of disaster risk and to

the mitigation of subsequent effects on livelihoods.<sup>13</sup>



**Climate change**

*The changes in climate, caused directly by human activity, that alter the composition of Earth's atmosphere over and above the natural variability of the climate observed during regular periods of time<sup>12</sup>*



**Resilience**

*The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a shock or a stress in a timely and efficient manner.<sup>11</sup>*

*Disaster resilience is a process that must be understood and shaped at a local level and in a local context. Resilience must also be seen as a capacity of a system to deal with disturbance, to recover from a hazard and to build better practices.*

*The respect of the ecosystem and the use of traditional techniques associated with cultural values and practices normally reinforce community resilience.*

<sup>11</sup> Source: ODI, Resilience: A risk management approach, Tom Mitchell, Katie Harris, Background Note, January 2009.

<sup>12</sup> Source: Disaster reduction, Living in harmony with nature, Julio Kuroiwa: Peru, 2004

<sup>13</sup> Source: (ILO Crisis, Brief Note No. 16, ILO Note for the International Recovery Forum 2009, Kobe



### Green Jobs

Jobs are green when they help reducing negative environmental impact ultimately leading to environmentally, economically and socially sustainable enterprises and economies. More precisely green jobs are decent jobs that

- ❖ Reduce consumption of energy and raw materials
- ❖ Limit greenhouse gas emissions
- ❖ Minimize waste and pollution
- ❖ Protect and restore ecosystems<sup>14</sup>

Green jobs are employment opportunities that not only reduce the environmental impacts of production and consumption to sustainable levels, but also offer decent work and contribute to disaster-risk reduction at the same time."<sup>15</sup>

slow onset events, such as droughts"<sup>16</sup> Microinsurance must not be seen as a stand-alone solution, but as one of several financial products and one of several instruments to manage disaster risk. Low-income families and businesses must also acknowledge the importance of complementing risk transfer with prevention and preparedness. Risk awareness and perception, and cultural factors play an important role in disaster management. In addition, products must be tailored to the needs and livelihoods of households in both rural and urban areas. While farmers are undoubtedly vulnerable to natural hazards, also poor people living in highly populated urban centers, in proximity to natural hazards, are very vulnerable and require specific protection.

Different financial services will allow the small and medium enterprise to come up with strategies that should enable the best management of risk catastrophic situations.

**Budgeting** is the activity that allows understanding the cash flows of the enterprise and therefore the financial needs to carry out different activities. A budget helps to figure out what should be the revenues coming from economic activities and what are the different expenses faced. In the case of a disaster, having this information at hand, helps an enterprise to take quick decisions that enable business continuity. Once the budgeting activity is carried out the organization can evaluate what are the different financial institutions providing services in their location. Three different financial services can be used in order to manage economic activities. These three products are (a) savings, (b) credit and (c) insurance. The right understanding of each product and its utilization should allow for better risk prevention

### The role of insurance to confront disaster risk

Insurance can provide coverage against disaster losses and can help financing businesses to rebuild assets and prompt recovery. In most low income countries coverage for natural disaster can be extremely limited. Hazard coverage, is sometimes limited to major industrial and commercial properties, and some wealthier households. Still "Microinsurance can help to break this cycle by providing low-income households, farmers, and businesses with rapid access to post-disaster liquidity, thus protecting their livelihoods and providing for reconstruction. Micro disaster insurance can cover sudden-onset events, such as earthquakes, floods, and cyclones, as well



### Example of Microfinance services in Haiti

Following the earthquake in 2010, Fonkoze a microfinance institution in Haiti, developed a formal catastrophe recovery product: *Kore W* (Catastrophe insurance for microfinance clients). It offers a catastrophic insurance coverage for 50,000 microcredit clients. This coverage is meant to protect small entrepreneurs in the event of hurricanes, earthquakes, floods, or storms. The product is mandatory for all clients when they take a loan. The cost of the premium is 3% of the loan's principal. In the event of a natural disaster, approved clients are eligible for :

- ❖ a \$125 indemnity payout
- ❖ the cancellation of their loan with Fonkoze
- ❖ the ability to take a new loan as soon as they are ready to re-start their businesses

A rapid loss assessment is carried out by a network of credit centers at territorial level. The *Kore W* team quickly assembles a team of facilitators that within a few days is able to meet with community members and determine which clients qualify for payouts.<sup>17</sup>

<sup>14</sup> Source: ILO, The Green Jobs, Programme of the ILO, Employment Sector.

<sup>15</sup> Source: Decent Work, Climate Change and Disaster Risk Reduction, ILO, Kobe, January 2009.

<sup>16</sup> Source: CCD, *The Role of Risk Transfer and Insurance in Disaster Risk Reduction and Climate Change Adaption*, Margaret Arnold:Kräfftriket, March 2008

<sup>17</sup> Source: The Microinsurance Network Newsletter. The Newsletter can be downloaded from <http://www.microinsurancenetw.org/newsletter.php>



### Example of Insurance products in Kenya

The International Livestock Research Institute (ILRI) in Kenya seeks to reduce poverty and promote sustainable development for poor livestock keepers and their communities. ILRI, have developed a research program that produces market-mediated index-based insurance products targeted at livestock keepers, particularly those in arid and semi-arid lands (ASALs) to reduce the vulnerability of pastoralist households and the impacts of drought risks due to climate change. Promotion campaign through radio and outdoor activities bundled with broader risk-management education seemed to be effective in building awareness. Complementary technical assistance seeks to influence economic decisions for mitigation.

Source: ILO/CRISIS

planning and mitigation for business continuity.

**Savings:** you want your savings to be secure, with low transaction costs, an appropriate design, and, if possible with real returns. Savings can be targeted to the realisation of an objective, in this case, for an unpredictable event. While insurance can cover for asset replacement, savings can be used for the working capital or to bridge the loss of income before the activity recovery.

**Emergency credit:** is an immediately available loan (given by a bank to a non-bank institution or organization when no other source of credit is available) to assist you to cope with unexpected expenses. It can be used interchangeably with savings though not always accessible neither advisable as it can lead you into over indebtedness.

**Insurance:** can provide different sets of products that allow covering from the losses incurred when a risk materializes. Property insurance for example covers the losses for damages in case of fire, floods, theft and other perils both in the property as well as stocks of materials that may be needed for production. Catastrophic microinsurance covers for extreme events like hurricanes (destruction caused by wind or rain) and earthquakes. Agricultural microinsurance can allow farmers to cope with extreme climate events that go beyond the average climatic behaviour in their regions by providing a financial safety when a loss occurs.

### The role of social protection to confront disaster risk

Social protection is seen as an investment in social and economic development that diminishes the transaction costs of necessary economic and labour market adjustment processes, acts as an automatic stabilizer in times of crisis, helps societies to be more resilient to adverse shocks and facilitates the adaptation of people's livelihoods to disaster induced settings. Notwithstanding, it should be noted that the primary role of social protection is the protection of the population -workers and their families, from falling into poverty after a shock.

The role of social protection in ensuring business continuity after the occurrence of a natural hazard is particularly important: natural hazards may affect workers in a direct way, also their dependants; they may disrupt and sometimes destroy people's livelihoods, leading families into poverty.



**Social protection floor:** social protection floors, containing basic social security guarantees that ensure that over the life cycle all in need can afford and have access to essential health care and have income security at least at a nationally defined minimum level. Social protection floor policies should aim at facilitating effective access to essential goods and services, promote productive economic activity and be implemented in close coordination with other policies enhancing employability, reducing informality and precariousness, creating decent jobs and promoting entrepreneurship.

While adopted as a global concept, existing social protection floors have been nationally shaped within a framework of country-specific institutional structures, economic constraints, political dynamics and social aspirations. Their implementation process will usually be progressive and gradual according to national priorities and capacities, building on existing social protection schemes and based on sustainable funding sources.<sup>18</sup>

(ILO,2011a, para. 9)

<sup>18</sup> Social Protection Floor: For a Fair and inclusive Globalization, Rapport of the advisory group, chaired by Michelle Bachelet, Convened by the ILO with the collaboration of the WHO: Geneva, 2011.

Evidence from major crisis supports the idea that workers in small and micro-enterprises with access to social protection and similar schemes have been able to cope with the immediate effects of crisis, thus recovering much faster than workers without access to such mechanisms. Cash transfers and other type of social protection measures have been used in areas affected by natural hazards as an important response mechanism to handle with the interruption of income flows and the destruction of the main productive assets, especially of small and micro-enterprises. The aggregate of these income support measures have proven to be crucial in helping boosting domestic demand and kick-starting markets and business networks."

In June 2012, the International Labour Conference adopted a Recommendation concerning national floors of social protection, which will provide helpful guidance to countries in building their social protection floors for all, including after crisis or catastrophes".

The ILO 2011 report on Social Protection Floor reminded that employment guarantees and **cash transfer programmes** are especially important in protecting household assets and productive capacity in the context of high and fluctuating unemployment. As an example, the report mentions that Cape Verde has started to extend **social insurance** to various groups in the informal economy, such as independent workers, domestic workers and workers in **micro- and small enterprises**. The measures to extend social protection coverage have contributed significantly to the reduction of the poverty rate from 36.7 per cent of the population in 2001 to 26.6 per cent in 2007.<sup>19</sup>

<sup>19</sup> Social Protection Floor: For a Fair and inclusive Globalization, Rapport of the advisory group, chaired by Michelle Bachelet, Convened by the ILO with the collaboration of the WHO: Geneva, 2011.



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## My Notes

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# Chapter 2

## Assessments for Business Continuity Management

### 2.1. Overview

#### Outline chapter 2

- 2.1. Overview
- 2.2. Step 1: Determine Your Business Priority
- 2.3. Step 2: Identify Critical Assets and Inputs for Your Priority
- 2.4. Step 3: Identify the Time-critical Operations
- 2.5. Step 4: Analyse Internal and External Risk Areas

This chapter describes **steps 1 to 4** of the business continuity management process. It focuses on all basic assessments that you should carry out to inform the preparation of your business continuity plan. Producing reliable and accurate information is essential to making solid strategic decision at a later stage. Essentially, what you need to know is:

What **products and services** are critical for your enterprise and must be delivered in order to ensure an acceptable level of profitability of your firm, and

Which **operations and assets** must be preserved and/or resumed as soon as possible after a crisis because they are essential to the production of such priority goods and services.

Once you have identified them, the following step consists of detecting and quantifying the risks that may affect your capacity to deliver the priority goods and services, and to perform critical operations. The risks can be internal (e.g. linked to the storage of the necessary raw materials, or the functioning of machinery and equipment), or external (e.g. linked to the services and goods you purchase from suppliers in the market).

### 2.2. Step 1: Determine Your Business Priority

#### *What is a Business Priority?*

A business priority can be either a **good** or a **service** (hereinafter we will refer to either one or the other as "product") that your firm produces and delivers to the market. It is critical because of the higher share of revenue, customers and reputation it generates compared to the other products. If your firm fails to deliver that specific product over a period of time, the whole spectrum of business activities may be compromised. A certain period of disruption can be tolerated, but beyond that period, losses become unaffordable. This interval helps set the target recovery time (or **recovery time objective**).

The impact of not delivering the priority product is ultimately financial. However, the disruption of certain activities triggers other negative consequences affecting the firm, such as:

**Profitability and solvency**, because that business activity represent a great portion of the organisational income and cash flow;

Capacity to respect **contractual commitments** with customers and suppliers;

Capacity to abide by **regulatory or statutory requirements**.

Products that are not selected as business priorities are not to be ignored or dismissed by the enterprise: their production will be resumed when conditions return back to normal (ILO 2009b).

If a product or service is identified as critical, then all resources and actions employed in its production and sale will be critical as well; they must be preserved and secured.

### *Why do You Need to do this?*

In BCM you need to be focused because, inevitably, a disaster will cause multiple losses to your firm and the environment in which it operates. Disasters make resources scarcer, more expensive and more difficult to procure and/or maintain. If resources are available but are particularly scarce, they must be allocated to the delivery of products that are relatively more important than others, according to predetermined parameters.

That is why decision makers will have to be strategic about which activities must be kept going “no matter what”, and what other activities, on the other hand, can be temporarily suspended. In this way, damage is controlled and resources are allocated where the return is the highest (or the loss the lowest).

By setting the business priorities, you are explicitly defining the scope and goal of the BCM process in your enterprise, which will influence how the firm’s resources will be allocated in case of disaster.

### *What do You Need to Know and Consider?*

To decide which business activities you should keep on running after a disaster, you need to know the impact of non-delivery of each of your products and services. You will choose those products and services whose direct and indirect cost of non-delivery is the highest, having come to the conclusion that the enterprise cannot afford not to deliver them.

You firstly need to have a clear picture of all services and goods your business is producing and delivering. To take a rational decision, you must set qualitative and quantitative criteria/indicator, measure them, score them on a comparable scale, and use the scores to rank your business activities in a hierarchy of importance.

### *What Do You Need to Do?*

**Task 1:** Make an inventory of the products produced and delivered by your enterprise to the market;

**Task 2:** Set qualitative and quantitative parameters to determine the degree of importance of a business activity in your firm;

**Task 3:** Establish a scoring system, as simple as you can;

**Task 4:** Calculate the score of each of the parameters;

**Task 5:** Rank the products and services according to the final score and single out the priority services and products;

**Task 6:** Ensure that all decisions made are formally endorsed by the firm’s leadership and the members of the BCM team, and are communicated to stakeholders.

#### **Task 1: Make an inventory of all products and services delivered to the market**

The title of this task is self-explanatory. This task should be very easy to implement if you have a fair knowledge of the enterprise.

#### **Task 2: Set qualitative and quantitative parameters**

The guiding question to accomplish this task would be: “Which attributes determine the relative importance of each of the firm’s products?”. These attributes may describe qualitative or

quantitative aspects concerning the products. As we use them to measure and rank the importance of products, we will refer to them as parameters. A few examples are proposed below; note that they may not suit your case and you will have to establish ad hoc ones:

- ❖ The **relevance** with respect to the firm's mission. It could simply be rated as high, moderate or low;
- ❖ The **trend of sales volume**, in a given period of time which must be long enough to show trends without being biased by seasonal peaks (unless your business is primarily seasonal);
- ❖ The **percentage of the income** generated through the sale of the product/service out of the total organisational income;
- ❖ The **costs involved in failure to deliver on time**.

Bear in mind that here we make a figurative use of the term "costs". By "cost", we refer to a wide range of negative consequences, which sometimes can be quantified monetarily (e.g. a missed income, a penalty), and other times cannot.

Costs of non or delayed delivery can be classified in four groups: (1) **legal** such as penalties applied by the client and/or by the competent public authority; (2) **financial**, such as revenue loss, low-performing cash flow, loss of future revenue; (3) linked to **productivity and efficiency**, such as waste of perishable resources, unproductive labour; (4) associated to **reputation and clients' confidence**.

### Task 3: Establish a scoring system

Since parameters can be either quantitative or qualitative, and can have different units of measurement, you need to come up with an appropriate scoring system. The simplest way is to use a scale from 1 to 5 for all criteria, but you can apply another mechanism if you prefer. The higher is the score the more critical is the product for the enterprise.

- ❖ **Relevance** with respect to the firm's mission, with a scale including the values: very low=1; low=2; medium=3; high=4; very high=5.
- ❖ **Trend of sales** volume: the trend can be rated as increasing, stable, or decreasing. Increasing trends may indicate that the market is expanding and that there is potential for growth, which makes the product particularly strategic. Conversely, decreasing sales may indicate that the market lifecycle is in its decline stage. The scale could be: rapidly decreasing=1; decreasing=2; stable=3; increasing=4; rapidly increasing=10.
- ❖ **Percentage of the income**: as for relevance.
- ❖ **Costs of non-delivery**: as for relevance.

### Task 4: Calculate the score of each parameter

At first, you will focus on the costs.

You should start by identifying the types of non-delivery or delayed delivery costs that your enterprise would have to shoulder under each of the above-mentioned categories (i.e. legal, financial, productivity, and reputation). In the sample table below we have proposed a few examples of typical costs; you will have to figure out which others best apply to your specific case.

Costs of non-delivery should be determined with respect to a set of reference periods that you must define according to the production and delivery cycles of your firm. For instance you may refer to three scenarios, i.e. short, medium, and prolonged, each with a specific number of days. Once you have determined types of costs and intervals, you proceed by providing a narrative description of the costs in the different scenarios; you can use a table like the one proposed below.



Tool 3: Sample table for the identification of business interruption costs for each product/service

Category	Type of cost (examples)	Narrative description		
		1 <sup>st</sup> Interval [No. Days: ...]	2 <sup>nd</sup> interval [No. Days: ...]	3 <sup>rd</sup> interval [No. Days: ...]
<b>Legal</b>	Penalties by client			
	Penalties by authority			
<b>Financial</b>	Loss of current revenue			
	Loss of expected revenue			
	Credit costs			
	Loss of investment			
Efficiency/ <b>productivity</b>	Wasted materials			
	Idle workers			
<b>Reputation</b>	Brand & label			
	Clients' confidence			

By looking at the narrative description of the costs and consequences associated with non-delivery, decide the score of each category of costs in the three intervals. Finally, sum them up by reference interval (column) and calculate the simple or weighted average (last column on the right). If you prefer to use the weighted average, you must establish weights according to the relative importance of each category of costs. The average of all costs is the "cost score" (bottom right cell).



Tool 4: Sample table to rank non-delivery costs of each product/service

Category	1 <sup>st</sup> Interval [No. Days: ...]	2 <sup>nd</sup> interval [No. Days: ...]	3 <sup>rd</sup> interval [No. Days: ...]	AVERAGE
<b>Legal</b>				
<b>Financial</b>				
<b>Efficiency</b>				
<b>Reputation</b>				
<b>GRAND TOTAL</b>				<b>Cost score</b>



## Tool 5: Sample matrix for the identification of critical products

Product	Relevance to the mission	Sales volume	% income	Costs of non-delivery	Final score
Product A					
Product B					
Product C					
Service A					
Service B					

### Task 5: Rank goods and services and single out the priority ones

At this stage you have all elements to rank your products according to their score. The ones scoring the highest will be the most critical to your firm. You will retain a number of products that you deem you will be able to handle in the disaster aftermath.

With respect to the products and services that, according to your analysis, are less critical for your business, you will have to decide if:

**Outsourcing** them to external suppliers;

**Insuring** the critical assets and inputs needed to produce them, although this allows business resumption only indirectly, by providing money in exchange for a loss or damage;

**Suspending** or terminating their production, or introducing changes;

**Tolerating** the risk, as the inconvenience of putting in place continuity measures is too onerous.



Outsourcing decisions are based on how good is your staff in doing a certain thing without extra efforts; how convenient it is to produce that specific thing internally in terms of costs; how easy would it be to commission the production to a contractor while guaranteeing that the good or service is delivered when you need it and according to the quality standards you require.

### Task 6: Ensure that decisions are endorsed by key stakeholders

Finally, make sure that the most relevant stakeholders and decision makers (e.g. leadership, department's heads, investors and shareholders) agree with the ranking and the resulting decision. Their involvement and endorsement is essential for the success of the whole BCM process.

### What Will Be the Outcome of This Step?

The outcome of this step will be the **list of your products and services ranked** according to a multitude of factors that you have pre-established. Priority needs to be given to those essentials that will form the foundation for business after recovery from the disaster, often at the expense of less important items.

## 2.3. Step 2: Identify Assets and Inputs for Your Priority

### *Which Ones are the Critical Assets and Inputs?*

The components that you use in the production and delivery of a certain good or service that you have identified as business priority are the critical assets you must make sure are available, in the right quantity and at the right time. Such critical assets, whether owned or procured, include for example: human resources; raw materials; packaging; equipment, machinery and facilities for production, assembling, packaging and storage; information and communication technologies and tools; financial resources; vehicles.

### *Why do You Need to do this?*

Having a complete inventory of the critical assets and inputs is a pre-condition for identifying how to secure them in case of a disaster, so that you can attain your business priority.

### *What do You Need to Know and Consider?*

The output of the previous step, which consists of a list of priority products and services, is essential to identify critical assets and inputs in your firm. For each of the priority products and services, you will need to know three essential pieces of information:

#### **Inputs from the previous step**

List of products and services whose production must be resumed on a priority basis

- ❖ What activities you need for the whole process;
- ❖ What human, material and financial resources you need;
- ❖ Where these resources come from and how much they cost. The greater the dependency on external resources, the more difficult it will be to ensure business continuity.

### *What Do You Need to Do?*

Essentially, what you need to do is a value chain analysis of the priority products/services you identified in step 1. The analysis identifies all the inputs and the added value of the outputs. Overall, the tasks are:

**Task 1:** Trace the lifecycle of the priority product/service within your firm, from the procurement of inputs, to the production and sale of the outputs;

**Task 2:** Decompose each step into individual assets and inputs and note down key information.

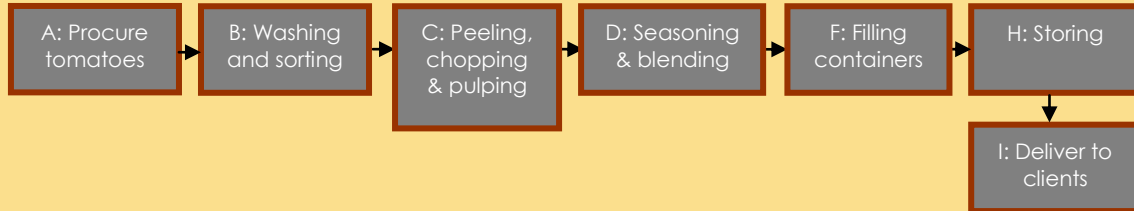
#### **Task 1: Trace products' and services' lifecycle**

The sequence of steps in the process can be schematized using an "actigram", which contains more information than a simple diagram of process flow. The actigram is developed by answering the following questions: What happens? With what inputs? To deliver what product? The boxes aligned horizontally represent the core actions describing the process; the arrows on the left and on the right of the main boxes represent the in-coming and out-going flows; the bottom of the boxes displays the resources needed to carry out that specific action; and the top of the boxes contain information on the rules and controls to be applied across the action.



### Example: Flowchart representing the production of tomato sauce

For instance, if (one of) the core products of your firm is the sauce, its lifecycle can be deconstructed into the following main activities: purchase of tomatoes; washing and sorting; peeling, chopping and pulping; seasoning and mixing; filling and closing containers; storing finished products in warehouse; and delivery to clients. The diagram below describes part of this process flow.



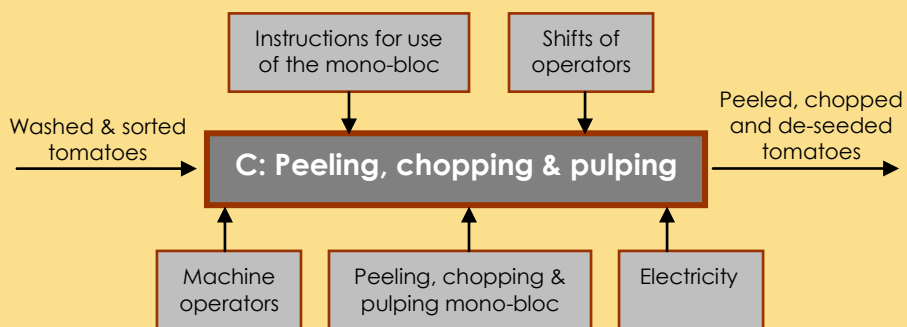
### Task 2: Unpack the steps into elementary assets and inputs

In turn, each of the activities of the process can be further described by detailing the inputs (entering from the left and from the bottom), the outputs (exiting on the right) and the "rules/instructions" (coming from the top) guiding the activity. Below is an example of this exercise; you should bear in mind that the example is a simplification of the actual process of peeling, pulping and refining tomatoes.



### Example: Flowchart representing the production of tomato sauce

Let's take for instance the step C of the production process, i.e. peeling, chopping and pulping. Inputs to step C are washed and sorted tomatoes, obtained from the output of step A. The assets required to peel, chop and pulp tomatoes are listed underneath the main box: machine operators, mono-bloc, and electricity. Assets are used according to the instructions, procedures and rules listed above the central box.



By using a matrix similar to the one below, you can provide further information. Now you can note down key information (unit costs, source and its location/origin) concerning the inputs used in the activity you are analysing. You can do it by using a matrix like the one proposed below, but you can also customize it according to your needs. Such additional information will be helpful in the third step of the BCM process, when you will assess the risks associated to each of the critical assets.



## Tool 6: Sample matrix to profile core assets

Activity B: Peeling, pulping and refining of tomatoes				
Asset	Cost/unit (US\$)	Internal / external	Name of supplier	Location/ Origin
Washed and sorted tomatoes	...	Internal	N/A	Warehouse
Peeling, pulping and refining mono-bloc	...	Internal	N/A	Main plant
Electricity	...	External	National Electricity Society	City ABC
Machine operators	...	Internal	N/A	List of cities

### *What Will Be the Outcome of This Step?*

The outcome of this step is twofold: (1) an actigram describing the work flow of the delivery process, inputs and outputs of the core business activity; and (2) a matrix containing information on sources and costs of critical inputs employed in the activity. The information contained in such matrix can be used to produce a map helping to locate where each of the resources are situated and come from.

## **2.4. Step 3: Identify the Time-critical Operations**

### *Which Ones are the Critical Operations?*

Enterprise functions are the operational arms of an enterprise. Business operations are the tasks carried out by each of the enterprise departments as part of their functions; for instance, payroll is an operation of the Human Resource department. Enterprise functions use assets to deliver products and services. Hence, to maintain the continuity of business necessary assets must be available and contributing functions must be operational.

The objective of this step is to determine the time criticality of business operations. The most time-critical are those whose interruption for a certain period results in the highest costs.

The concept of "tolerated downtime period" that we have used for products and services, applies also to business operations. Among the operations performed in an enterprise, there are some that cannot be suspended or that can be interrupted for a shorter period of time than others. After the tolerated downtime period they must be resumed, otherwise legal, financial, productivity and reputation costs would be unaffordable. Each enterprise department has its own critical operations.

It should be noted that all operations are important and have a reason to exist in your enterprise; the point here is that they might not have all the same time criticality (Kildow 2011). This is because the firm's capability of delivering its core products and services may more or less depend on them in the short run.



## *What are the Typical Enterprise Functions?*

Businesses can be very different from each other in a variety of ways. Some are smaller, others are bigger; some have separated operations in multiple sites, others operate in one only site; some produce goods, while others produce services; some have local suppliers and customers, while others have suppliers and customers in different locations.

Whatever the differences, all businesses have similar “core” functions. Below is an indicative list of typical enterprise functions; bear in mind that your enterprise might present significant differences in the way processes are structured, so you should list and analyse your own business functions.

- **Purchasing**
- **Personnel**
- **Information management and communication**
- **Production**
- **Marketing and sale**
- **Finance**
- **Public relations**

Within the bigger enterprises, functions are generally distributed across dedicated departments or business units; while in smaller firms it is more common to have fewer staff allocated to a particular department, and sometimes covering more than one function.

Not all firms perform all functions and related operations internally. In fact, especially in small-scale enterprises, it may be more cost-efficient to outsource one or more of them without any significant impact on the firm's competitiveness. Even if performed externally, it is still necessary to consider these functions within the BCM process and ascertain their relative importance with respect to priority product delivery.

Assets and facilities are managed and employed by these functions/departments to deliver the enterprise's products and services. The most important functions in your firm should have their own business continuity plan, with its assignation of roles, budget and timeline of activities. You will decide what is the degree of detail and complexity of each of these BCPs according to the size of the firm and the relative importance of each function within your enterprise.

Below, you will find a description of: the mission of each of the mentioned critical functions; the possible disruptions that can affect related operations, facilities and assets; the objective they have to pursue in BCM; the things they have to consider when planning for business continuity; and some pieces of advice that you may want to apply when writing the business continuity plan. None of the advice is prescriptive, and you can consider or disregard them according to their pertinence to your specific case.

### *Overview of Purchasing*

#### **Mission**

It ensures that goods, raw materials (including power and water) and services are procured at competitive prices and are available when needed. This business unit is in charge of: selecting suppliers; establishing contracts with them and preparing necessary documentation; maintaining the business relationship to ensure that contracts are honoured; detecting the conditions justifying penalties; liaising with Finance and other business units to finalise the payment.

#### **Possible disruptions due to a disaster**

- ❖ Inability of the supplier to deliver, because of damages to or destruction of stocks, productive assets, and access issues;
- ❖ Increased prices of critical goods and services, undermining profitability and firm's competitiveness.

## Objectives in BCM

- ❖ Maintain flow of supplies as per BCP requirements, ensuring timeliness and quality.

## What to consider when designing the BCP

- ❖ Your firm may not be directly affected by a disaster, but one or several of your suppliers may be;
- ❖ Suppliers can be very helpful and supportive in case a disaster strikes; it is in their ultimate interest to manage well the relationship with client enterprises;
- ❖ A way to address the impasse created by a disruption of the supply chain would be to have this type of risk covered in your business interruption insurance;
- ❖ If you rely on a diversified group of critical-assets suppliers (for instance located in different geographic areas), you are less vulnerable to the internal and external risks affecting them. How diversified is your group of suppliers?
- ❖ Your suppliers may be well aware of their risks and prepared to address them through relevant risk management measures and a BCP, or – conversely – could be completely unprepared. To secure your supply chain, you would certainly prefer that suppliers are aware and prepared. How prepared are your critical suppliers for the event of a disaster?

## Key advice for the BCP

- ❖ BCM requirements on providers should be included in formal terms in the contract, to safeguard continuity of critical supplies;
- ❖ You should test, audit and request information on suppliers' BCM arrangements; liaise with them regularly;
- ❖ The plan should include instructions to contact all (major) vendors (especially those of the critical inputs) as soon as disaster warnings or news on a current disaster are received;
- ❖ If you can afford it, keep redundant capacity ready (e.g. stocks of finished products and parts, machinery, suppliers) to be deployed in case a disaster hits (Sheffi 2007);
- ❖ Increase supply chain flexibility through interchangeable parts and components, alternative production sites, versatile employees (Sheffi 2007);
- ❖ Spread the risk of supply chain disruption by maintaining multiple suppliers, from diverse geographic locations.



### **Example: Good and bad practices in responding to supply chain disruptions**

*In 2000, a Phillips plant producing special chips for cell phones in New Mexico was struck by a lightning. While the disaster seemed to be a relatively small-scale one, the consequences proved to be quite significant. Phillips immediately informed its two major clients, Nokia and Ericsson, that there would have been a one-week delay to bring the chips production back to normal.*

*The two multinationals reacted very differently to the warning: Nokia started to work very closely with Philips, to monitor the developing situation; Ericsson trusted the first warning and waited for the resumption of Philips operations. Nokia realised very soon that the disruption would last much longer than one week, and immediately contacted alternative suppliers; it had to pay extra costs for the quick set up and delivery, but this proved to be a successful and worthwhile move. Ericsson's reaction, on the other hand, was to wait and, when it tried to purchase from other suppliers, it turned out that the worldwide supply had been fully taken over by Nokia. Consequences were severe and long-lasting: about a year later, Ericsson withdrew from the handset market.*

*Source: Sheffi 2007*

This example teaches at least four very **important lessons**:

- ❖ Risk management and business continuity is a supply chain issue;
- ❖ Suppliers and clients must work together and share critical information, both before and after a disaster hits;
- ❖ Early detection of and early response to the disruption are crucial to control damages;
- ❖ Alternative suppliers should be detected before the event and possible increased costs should be budgeted for.

## Overview of Personnel

### Mission

It ensures the proper management of human resources, from its selection and recruitment to its training, payment, provision of benefits, occupational safety and health, and dismissal. HR management must ensure that personnel with the required competences are available in the needed quantity and at the appropriate time.

### Possible disruptions due to a disaster

- ❖ Injuries, illness, death of employees and of their family members;
- ❖ Impossibility or difficulty for the employees to reach the workspace;
- ❖ More or less widespread absenteeism.

### Objectives in BCM

- ❖ Ensure the safety of employees, of their families and of customers;
- ❖ Ensure that human resources are available to perform the critical tasks for the continuation of essential business activities;
- ❖ Continue executing essential activities, such as payrolls and leave records.

### What to consider when designing the BCP

- ❖ Depending on the time of the day, the number of personnel at risk may vary;
- ❖ After a disaster – and depending on the type of disaster – the workplace may not be safe for the firm's employees. Employees should not be exposed to further unnecessary risk and it may be necessary to allow only emergency services access to the premises;
- ❖ Employees' families are key stakeholders of the businesses. The BCP shall consider the emerging needs caused by the disaster. Families will most likely contact the firm to locate their beloved and know their health status: many calls and questions may need to be handled when the disaster hits;
- ❖ Major disasters cause psychological trauma; in the immediate aftermath affected employees may not be as productive as they used to be;
- ❖ Disasters may generate accessibility issues for which employees may not be able to reach the workspace;
- ❖ Bear in mind, although it seems quite obvious, that the higher the degree of absenteeism the lower the operational and productive capacity of the firm;
- ❖ People-dependent businesses (e.g. food processing, energy, healthcare, education, waste management) are more affected by disasters causing widespread absenteeism (Asherson 2010). Is your business people-dependent?
- ❖ If critical roles are interchangeable among colleagues, there will be more chances to get things done even if the first-line responsible person is absent. Did you assign critical tasks to other suitably trained employees, in order to ensure that they are performed regardless of the absence of those having the main responsibility?

### Key advice for BCM

- ❖ Ensure that there is one focus of communication for all information to be given to employees, families, communities and the media. Personal communications and public relations functions should liaise accordingly;

- ❖ Ensure that employees are trained on the business continuity plan;
- ❖ In crisis time, the HR team must be able to provide information regarding personnel. For this reason they have to work closely with the civil defence/firemen/police or other bodies involved in rescue operations;
- ❖ When a disaster hits, check the presence of personnel at the workspace, especially in affected premises;
- ❖ Collect information on the health conditions of employees and on which hospitals the injured are taken to in order to notify their families;
- ❖ Ensure that key personnel have at least one (or several) alternate who could replace him/her effectively in case of absence; establish procedures for back-up personnel to take over when needed;
- ❖ If replacements are not available internally, consider sources of alternative labour, such as individuals who left the organisation, retired staff members, etc. (Asherson 2010);
- ❖ Set in place procedures and terms and conditions regulating absenteeism, use of vacation days and sick leaves in cases of disasters and force majeure;
- ❖ Make forecasts of the costs that the above mentioned procedures may imply under scenarios of different gravity, and budget for such cost;
- ❖ Check the status of transport infrastructure before the disaster (to spot risk areas) and after the disaster (to verify accessibility);
- ❖ After a disaster hits, assess the safety of the workplace and decide whether it is best to relocate operations or not;
- ❖ Provide for the transportation of key staff in the event of lack of access;
- ❖ Decide the level of post-disaster production and business operations depending on the degree of absenteeism, on the surge capacity of alternative labour, and on the related costs.

## *Overview of Information Management and Communication*

### **Mission**

Information management and communication is a cross-cutting function supporting all activities and processes of an enterprise: allow and facilitate collaboration among departments and colleagues; management of customers' and suppliers' relations and contracts; management of relations with authorities and compliance with regulations; management of human resources, their performance, benefits and payrolls; management of stocks of raw materials, parts and finished products; and general project management. Information management and communication entail data collection, storage, analysis, documentation and dissemination to internal and external stakeholders. Information is essential to take solid decisions; communication supports awareness rising among internal and external stakeholders and operationalization of such decisions. Information management and communication are increasingly digitalised, with the progressive reduction in the use of paper.

### **Possible disruptions due to a disaster**

- ❖ Loss (or inaccessibility) of data and official documentation, on paper or soft (which can even lead to breach of laws and regulations);
- ❖ Damage to IT systems and infrastructures with consequent slower or interrupted communications and information sharing.

### **Objectives in BCM**

- ❖ Maintain record of key information and documents as established with internal stakeholders (i.e. employees) and external stakeholders (i.e. suppliers, customers and authorities);
- ❖ Allow informed and rapid decision making to respond to the disaster.

### **What to consider when designing the BCP**

- ❖ If your information management system and communication processes perform poorly before a disaster, you cannot expect they will be successful in an emergency situation;

- ❖ Disruption of information management and communication can paralyse business processes; as a matter of fact, business continuity management was first conceptualised as a practice to respond to IT disruptions.
- ❖ Networks and information exchange across the supply chain can avoid duplication of efforts, allow triangulation and verification of critical information, and fasten response to the crisis;
- ❖ For the sake of efficiency especially in times of crises, some functions (such as information production and dissemination) could be provided by external bodies with ample outreach to local businesses. Business associations, chambers of commerce and federations of employers could perform this role for the entire business community;
- ❖ Insurance on information management systems can help recovering financial resources necessary for the resumption of such systems;
- ❖ Critical messages before and especially after a crisis must be circulated in the language that everyone can understand;
- ❖ Rumours and false or partially false information are a frequent phenomenon in an emergency situation, when controlling sources and reliability of information is not possible or affordable. Rumours can generate unnecessary panic and jeopardize the continuity process.

### **Key advice for the BCP**

- ❖ In preparedness of disruption events, make an inventory of crucial documents and data on: suppliers, clients, financial flows, stocks, sales, order flows, insurances. These are the documents you shall be able to protect above all others;
- ❖ Replicate hard and soft records;
- ❖ Store information and data in safe locations and formats;
- ❖ Make sure that several employees within and outside the Information and Communication unit are aware of where key paper documents and files are stored;
- ❖ When a disaster hits, keep abreast of the its impact and evolution over time;
- ❖ Pre-establish call lists;
- ❖ Establish emergency numbers that are activated in case of crisis for employees, their families and – if appropriate – a wider public.

## *Overview of Production*

### **Mission**

It deals with the production of pre-established services and goods minimizing the costs while maintaining quality standards.

### **Possible disruptions due to a disaster**

- ❖ Damages or destruction of production equipment and facilities;
- ❖ Incapacity to produce at the established quality and quantity.

### **Objectives in BCM**

- ❖ Resume the production of the priority goods and services within the shortest delay possible

### **What to consider when designing the BCP**

- ❖ Production requires raw materials, machinery, human resources, information, facilities and services from providers. A disruption in any of these may affect productivity.
- ❖ It may be necessary to resume production at a lower level for a certain period of time. The production unit and the marketing & sales unit must work out together the details of the strategy, which inevitably will affect customers.

### **Key advice for the BCP**

- ❖ Consider the purchase of an insurance on production facilities and equipment;

- ❖ Consider relocation if the production facilities have been damaged to the extent they cannot be used, are inaccessible or have been destroyed

## *Overview of Marketing and Sale*

### **Mission**

It ensures that goods and services are delivered to the customers at the requested time. This business unit is also in charge of expanding the client base and managing relations with customers.

### **Possible disruptions due to a disaster**

- ❖ Increased prices of critical goods and services with impact on the final price of the firm's products and net profits;
- ❖ Customers unable to contact sales or access information.

### **Objectives in BCM**

- ❖ The general objective is to maintain good relations with customers even in time of crisis, in order not to undermine the firm's reputation and clients' confidence;
- ❖ Provide accurate information on customers' expectations and minimum level of service before they turn to other suppliers;
- ❖ Establish mutually convenient arrangements with clients in case of disruption of communications or access.

### **What to consider when designing the BCP**

- ❖ Accessibility issues between customers and the firm may result in the firms' inability to meet contractual requirements with consequent penalties and loss of confidence;
- ❖ Reduced productivity due to disruptions affecting the production unit, will result in the inability to meet customers' expectations. This issue should be handled in consultation with the clients to find solutions with which they feel comfortable.

### **Key advice for the BCP**

- ❖ In the event of a crisis, you should contact (major) clients to keep them informed of the measures taken in response to the disaster and to consider with them mutually viable options to tackle disruptions in supplies.
- ❖ Marketing activities may not be vital in the immediate aftermath of a crisis.

## *Overview of Finance*

### **Mission**

It is responsible for the good financial management of the enterprise, in a way that money is spent efficiently, effectively and transparently. It keeps record of financial activities, releases payments and raises the required capital to run business operations, in compliance with corporate procedures and rules and with auditors' and public authority's requirements. The Finance department assesses and manages all financial risks.

### **Possible disruptions due to a disaster**

- ❖ Temporary or permanent loss of data, IT equipment and documentation;
- ❖ Inability to track financial flows;
- ❖ Delays in processing due payments.

### **Objectives in BCM**

- ❖ Safeguard sensitive and critical information and documentation, in order not to breach internal and external rules and procedures;
- ❖ Resume the capacity to process payments as soon as possible;
- ❖ Release and keep track of the financial resources to implement the business continuity plan.

### **What to consider when designing the BCP**

- ❖ Just as any other project, also the development and implementation of the business continuity plan requires financial resources. Directors of financial departments may be reluctant in allocating the needed money to the BCM project; therefore, the sponsor/leader of the initiative must highlight the financial benefits of having in place a BCP.
- ❖ Delayed payments may result in penalties by the suppliers. In a business continuity mode at least the most urgent payments shall be handled. Urgency of payments is not only defined by their timeframe, but also by the penalty and the expected consequences in terms of reputation and customers' confidence;
- ❖ In the aftermath of a disaster it might be appropriate to freeze and renegotiate upcoming orders and avoid new financial commitments;

### **Key advice for the BCP**

- ❖ Rank payments according to their criticality and urgency, by taking into account their due timeline, the associated penalties, the importance of clients;
- ❖ Identify critical documentation that must be safeguarded from possible loss or damage. Store it in different locations and format and ensure that it will be easily and quickly accessible in case of disaster;
- ❖ When in the continuity mode, guarantee that documentation of all financial transaction is still produced and maintained.

## *Overview of Public Relations*

### **Mission**

It ensures the timely collection and dissemination of reliable data and information to stakeholders in the "outside world", i.e. to vendors and clients.

### **Possible disruptions due to a disaster**

- ❖ Communication may be challenged by the interruption of information flows and damage to equipment

### **Objectives in BCM**

- ❖ Maintain the public opinion informed of the BCP implementation

### **What to consider when designing the BCP**

- ❖ Many small companies may not have public relations functions but should have arrangements to establish one in the event of an incident;
- ❖ The perception of the firm's performance in handling business continuity after a disaster is a strong determinant for the firm's reputation;
- ❖ Rumours and false or partially false information are a frequent phenomenon in an emergency situation, when controlling sources and reliability of information is not possible or affordable. Rumours can generate unnecessary panic and jeopardize the continuity process.

### **Key advice for the BCP**

- ❖ Ensure arrangements are made for consistent and coherent communications;
- ❖ Pre-establish relations with key institutions (including, police, civil defence, public administration, the office of emergency management, the media, other businesses in the supply chains);
- ❖ Consult local emergency services and their response plans;
- ❖ Provisions contained in the strategies and plans of disaster management authorities;
- ❖ Be in touch with rescue services.

## What Do You Need To Know And Consider?

- ❖ The operations that are performed by the enterprise in its day-to-day functioning;
- ❖ The legal, financial, productivity and reputation costs of suspending such operations during different periods of time;
- ❖ The maximum period of time (in days) that a business operation can remain suspended;
- ❖ If an externalised operation turns out to be critical for the priority business, then you may want to re-consider your strategy: if the supplier is equally or more vulnerable than your firm to the same types of risks, then it might be appropriate to internalise the operation in order to have more control on its continuity in the event of a disaster. Vulnerability will be analysed in the next step (i.e. Step 4).

## What Do You Need To Do?

- ❖ **Task 1:** Make a list of the enterprise functions/departments and the respective operations (i.e. their main tasks);
- ❖ **Task 2:** Identify and measure the costs of suspending such operations for different time intervals;
- ❖ **Task 3:** Establish for how long each operation can remain suspended without compromising the delivery of the core product/service.
- ❖ **Task 4:** Rank the operations according to their tolerated downtime.

### **Task 1: Make a list of enterprise functions/departments and respective operations**

Each enterprise function or department is in charge of certain tasks that in this Guide is referred to as “operations”. The first task in step 3 consists of making a list of all operations.

### **Task 2: Determine and quantify the costs of non performing operations**

The categories of costs resulting from the suspension of certain operations are the same of those described in task 2 of step 1, i.e. legal, financial, productivity/efficiency and reputation/clients' confidence. Likewise, they can be measured with the same scale of values: very low=1; low=2; medium=3; high=4; very high=5.

The task is also performed in the same way as described in task 4 of step 1. You will: identify the types of “suspension costs” under each category; establish the time intervals that make most sense in your business; provide a narrative description of the costs in the different scenarios, by using a table like the one below; measure the score of each category of costs by interval; calculate the average score of each interval (simple or weighted).



You can use the same tools proposed in task 4 of step 1, i.e. tool 2 and tool 3



Tool 7: Sample matrix to list business operations

Function/Department	Operations
<b>Purchase</b>	Identification of suppliers Contracting of suppliers Warehouse management ...
<b>Personnel</b>	Recruitment Payroll Training Safety and wellbeing ...
<b>Customer service</b>	...
...	...

Task 3: Establish how long operations can be suspended (tolerated downtime)

By looking at the trend of suspension cost of each operation across time, establish for how many days (approximately) it is affordable to suspend each of them, at most.

Task 4: Rank operations according to their tolerated downtime

Rank operations from the shortest tolerated downtime to the highest. The ones with the shortest tolerated downtime period are the most time-critical.

*What Will Be the Outcome of This Step?*

The outcome of this step is the ranking of operations according to their time-criticality. The most time-critical operations are the most expensive to suspend: you must ensure that they are either maintained or restored as soon as possible after a disaster.

**2.5. Step 4: Analyse Internal and External Risks Areas**

*What is the Analysis of Internal and External Risk Areas?*

Step 3 in the BCM process represents the link between standard corporate risk management and business continuity planning. If risk-management concerns the way a firm deals with risks in general, then BCM is the way an enterprise handles disruptions that (may) cause business interruption. BCM treats those risks that for different reasons have not been eliminated, or transferred or reduced prior to the disaster and as a part of the risk management effort. Should the risk assessment process detect a set of "uncovered" risks, then the BCM process should address this exposure.

By internal and external risk areas we intend, respectively, risks affecting resources that are available/produced internally and resources to be procured through suppliers. Clearly, you have more control on the internal risks rather than on the external ones and it is easier and less expensive to continue business activities that are not highly dependent on external sources. Risks can affect the availability, access and functioning of assets, as well as the ability to carry out time-critical operations within the tolerated downtime period.

## Why Do You Need To Do This?

In order to be able to handle a risk, you first need to be aware of it. The risk analysis is aimed to identify and qualify the most probable threats jeopardizing the availability, accessibility and functioning of a resource that is critical for your priority business.

Although it is difficult to determine the exact magnitude and type of consequences resulting from a disaster, the process of thinking about the threats that can realistically occur and affect your business often reveals important information on business operations.

Being aware of what type of disruptions may affect the critical operations and resources for your priority business enables you to develop the plan to minimize such disruptions and to recover operations as expediently and successfully as possible. In fact this step of the BCM provides the foundations for the entire business continuity effort.

## What Do You Need To Know And Consider?

As mentioned in the first chapter of this Guide, risks are defined and measured as a product of their **likelihood** and their **potential severity**.

You can gain an understanding of how likely a hazard is, by looking at how many times it happened in the past. The history of the area's proneness to natural hazard also helps determining its potential severity. The local community is a fundamental source of information in this regard. Further sources of information are probably less accessible but equally important: academia and research institutes, meteorological centres, UN agencies. Risk profiles, maps have been produced by research institutes and universities, the UN and the WB for areas that are particularly disaster-prone; reading materials may also exist on the geographic area where you work. Where this information has not been well documented and you are new in the area, local populations and other enterprises can help you retrieving important facts and figures.

### Inputs from the previous step

- ❖ List of critical assets
- ❖ List of time-critical operations
- ❖ Location (or origin) of critical assets
- ❖ Site of time-critical operations



### Disaster Risk Profiles by the Columbia University

The Centre for Hazard and Risk Research of the Columbia University, sponsored by the World Bank, has produced the disaster risk profile of 13 countries in the Indian Ocean, among the most prone to the risk of floods, landslides, earthquakes, cyclones, drought and volcanoes. The proneness to risk is measured through the global index of risk for each type of disaster. It may vary across different areas of the country. More than one disaster risk can overlap in the same area.

Data sources included the Emergency Events Database (EM-DAT) maintained by the Centre for Research on the Epidemiology of Disasters (CRED) and the Natural Disaster Hotspots: A Global Risk Analysis report edited by M. Dille, R. Chen, U. Deichmann, A. Lerner-Lam, and M. Arnold and published by The World Bank and Columbia University, 2005.

Source: <http://www.ideo.columbia.edu/chrr/research/profiles/>

You need to become well aware of the **potential disasters** affecting the geographic areas where the main facilities of your firm (production plant, warehouse) or of key suppliers (e.g. electricity, raw materials) are located, and what is the topography of the area. For instance, your warehouse may be located in a flood plain, which clearly exposes your materials to the risk of being flooded. Proximity to an active volcano is also a source of risk.

You should consider the **degree of accessibility** of the locations that are crucial for your core business activity (e.g. warehouse, production plant, suppliers, sources of power and water). In particular, pay attention to the presence, quality of construction and maintenance status of transport infrastructure and services, such as roads, bridges, airports, harbours.

The previous history in the **ability of suppliers** of utilities (e.g. water, power, waste collection) to continue their business or to recover expediently is an indicator of the degree of vulnerability to which your business is exposed.

For each of the critical assets and inputs of your core outsourcing the production; problems linked to the business, you need to anticipate which type of disruptions can happen due to a disaster. Resources can be affected in different ways: they can become **unavailable** because for instance they have been destroyed (e.g. destruction of warehouse and consequent loss of stored goods and materials); they can become **inaccessible** because of issues linked to their transportation from the original location to where they are used (e.g. destruction of a bridge with consequent lack of access to suppliers on the other side of the river); they can become **non-operational** when their functioning is damaged and they must be either replaced or repaired (e.g. damage to machinery in the production plant).

According to the **types of disruption** you will identify the most appropriate modality to address the negative consequences affecting business activities. Problems of access can be tackled by relocating disrupted activities or through the use of alternative suppliers; problems of availability can be addressed by replacing the missing resource with a valid substitute or functioning can be addressed by outsourcing the function covered by the damaged resource, repairing it or (temporarily) replacing it.

Finally, you should bear in mind that **risk profile can change over time**: new risk may emerge or become more likely; other risks may become more manageable thanks to technological improvements in the development and diffusion of timely and reliable forecasts; in certain cases, risk prevention or mitigation may improve thanks to the construction of more resilient infrastructures. An enterprise should review its risk profile regularly, and especially after significant changes in its operations or in the environment occur.



### How to measure the intensity of an hazard

**Earthquakes:** Mercalli and Richter scales.

**Tsunamis:** there are different scales to measure the intensity at specific locations: the Sieberg-Ambraseys scale (Mediterranean sea), the Imamura-Iida intensity scale (Pacific Ocean), the Soloviev-Imamura tsunami intensity scale (global)

**Tropical cyclones** (hurricanes, typhoons, cyclones): their intensity is measured by different scales, specific to the Ocean basis: Saffir-Simpson Hurricane Wind Scale (SSHWS) for the Atlantic and East Pacific Ocean; the Japan Meteorological Agency scale for the West Pacific Ocean; the scale of the India Meteorological Department for North Indian Ocean; the scale of Meteo France for South-West Indian Ocean; the scale of the bureau of meteorology of Australia; etc.

**Floods:** scientists refer to three factors: stage, which is the depth of the water; discharge, which is the volume of water that passes through a given area in a certain period; and area covered by the water.

**Volcanoes eruptions:** Volcanoes Explosivity Index, which depends on factors such as the amount of material ejected, ash column height and impact of eruptions.

**Drought:** Palmer Drought Severity Index (PDSI) used in the U.S.; the Surface Water Supply Index (SWSI); the Standardized Precipitation Index (SPI).

## What Do You Need To Do?

**Task 1:** Identify natural hazards that are likely to occur in the areas where the enterprise has assets and facilities.

**Task 2:** Produce the risk profile of the critical resources, including a measure of the magnitude of each risk;

**Task 3:** Establish the risk management strategy to preserve critical assets, **according to the risk magnitude**;

**Task 4:** Produce the risk profile of the critical operations that are susceptible to be affected;

**Task 5:** Validate the analysis by consulting relevant stakeholders, including the providers of the concerned resources;

**Task 6:** Review the analysis as new pieces of information are available or come to your knowledge.

**Task 7:** Explore in the market whether insurance and microinsurance products are available to cover for the identified natural hazards and other risks to reduce financial impact

### Task 1: Identify likely natural hazards

This task starts with producing a list of natural hazards that are likely to occur in the **locations** where the enterprise has assets and runs operations. The list of locations has been produced in the step 2, when you identified the critical assets. You can use a matrix such as the one below (Tool 10). If you have a small business with one only location, then you will not have much work to do. If, on the other hand, have operations at many sites which are characterized by significantly different topographies, then you will have to analyse each of them. On the left-hand column you will have the list of sites of your firm; next to it you will write down the **possible natural hazards** and the **proximity** of the site to the hazard. Whilst proximity is related to vulnerability it is always a direct relationship. Therefore, you should determine the **likelihood** of occurrence of the hazard, i.e. its probability of turning into an event. We remind that likelihood can be measured using a scale from 1 to 5: 1=very unlikely; 2=unlikely; 3=medium likely; 4=likely; 5=very likely.

With respect to intensity, you should bear in mind that there is a distinction between the intensity of the event itself, and the impact it can have on human settlements, i.e. its magnitude as a disaster. Natural events of the same intensity may produce major damages in certain areas and minor or moderate damages in others; the factor causing such difference is the degree of **vulnerability** of human settlements. At the stage of developing a BCP, you cannot predict the intensity of future natural events and must stand ready for different scenarios. In order to be prepared, you have to sketch out the major vulnerabilities of the area, facilities and assets. Guiding questions are “are the assets and facilities located in a vulnerable place?”; “are the facilities built to withstand the effects?”; “are transportation infrastructures resistant to the specific hazard?” etc. When they have a meteorological or hydrologic origin, natural hazards may follow some patterns of **seasonality** across the year (e.g. floods,



#### Vulnerability:

“The terms risk and vulnerability are sometimes used interchangeably because people or households that are at-risk are usually considered vulnerable, and vice versa. **Risk** is the probability of a loss or injury. Its potential negative impact may arise from some present process or future event. In the context of poverty analysis, **vulnerability** is defined by the World Bank as the probability or risk today of being in poverty or of falling into deeper poverty in the future. It is a key dimension of welfare, since a risk of large changes in income may constrain households to lower investments in productive assets and human capital. Vulnerability may influence household behavior and coping strategies and is thus an important consideration of poverty reduction policies. The fear of bad weather conditions or the fear of being expelled from the land they cultivate can deter vulnerable households from investing in more risky but higher productivity crops and affect their capacity to generate income.”<sup>20</sup>

“The propensity or predisposition to be adversely affected.”<sup>21</sup>

<sup>20</sup> Source: Aline Coudouel, Jesko S. Hentschel, and Quentin T. Wodon, PRSP Sourcebook, Chapter 1. Poverty Measurement and Analysis. World Bank, p. 54.

<sup>21</sup> Source: ODI, Resilience: A risk management approach, Tom Mitchell, Katie Harris, Background Note, January 2009.

landslides, cyclones). On the other hand, seasonality does not apply for geophysical phenomena (e.g. tsunamis, earthquakes).



**Enterprises' Vulnerability to Disaster Risk (Source: ILO 2009b)**

The impact of a disaster varies according to the degree of vulnerability of the enterprise. Vulnerability factors are:

- ❖ In **human resources**: poor education, lack of risk awareness, adoption of risky behaviours;
- ❖ In **production assets**: location of stocks; machinery and equipment in exposed facilities; degree of dependence on suppliers who are unprepared towards risks; reliance on electricity without alternative sources;
- ❖ In **facilities**: poor building codes, location in proximity to natural hazards;
- ❖ In **financial resources**: limited cash flow; credit burden and insolvency;
- ❖ In **purchase, marketing and sales**: limited market coverage; poor networks with suppliers and clients;
- ❖ In **information management**: poor or non-existent early warning systems and communication mechanisms involving all employees;
- ❖ In **safety and health**: limited personnel and equipment safety guards, inability of companies to provide safety equipment.
- ❖ Poor or non-existent preparedness plans and coordination mechanisms.



**Tool 8: Sample matrix for profiling natural hazards**

Location	Activity(ies)	Natural hazard	Proximity to hazard in Km	Vulnerabilities to the hazard	Likelihood	Season / month
Location 1		Hazard 1			Range: 1-5	...
		Hazard 2			Range: 1-5	...
Location 2		Hazard ...			Range: 1-5	...
Location 3		Hazard ...			Range: 1-5	...



### Type of Disruptions by Natural Hazards

- ❖ **Earthquakes:** damage or loss of structures or infrastructure; damage of water systems, pollution of open wells and changes in water table; casualties and fracture injuries. They may also provoke fires, dam failures, landslides, flooding, with consequent contamination of clean drinking water.
- ❖ **Tsunamis:** collapse of ports, settlements and other infrastructures next to the shore; flooding and incursion of salt water with consequent contamination of drinking water and soil infertility/damage; death caused by drowning and injuries provoked by debris; loss of crops, livestock, fishing boats, other assets and workplaces.
- ❖ **Floods:** Structures damaged by washing away, becoming inundated, adverse collapsing, impact of floating debris. Landslides from saturated soils. Damage effects greater in valleys than open areas. Deaths from drowning but few serious injuries. Possible outbreaks of malaria, diarrhoea and viral infections. Contamination of wells and groundwater possible. Clean water may be unavailable. Harvests and food stocks may be lost to inundation. Animals, farm tools and seeds might be lost.
- ❖ **Volcanoes:** Death from pyroclastic flows, mud flows and possibly adverse lava flows and toxic gases. Injuries from falling rock, burns; respiratory effects difficulties from gas and ash. Complete destruction of everything in the path of pyroclastic, mud or lava flows; collapse of structures under weight of wet ash, flooding, blockage of roads or communication systems. Destruction of crops in path of flows, ash may break tree branches, livestock may inhale toxic gas or ash; grazing lands may be contaminated.
- ❖ **Landslides:** damage of anything on top or in path of the landslide; roads, lines of communication and waterways blocked by rubble. Death can occur due to catastrophic debris slides or mudflows. Indirect effects: loss of productivity of agricultural or forest lands, flooding, reduced property values.
- ❖ **Cyclones:** Structures lost and damaged by wind force, flooding, storm adverse surge and landslides. Death and injuries may be caused by flying debris, or flooding. Contamination of water supplies may lead to viral outbreaks and malaria. Ground water may be contaminated by flood waters. High winds and rains can ruin standing crops, tree plantations and food stocks.
- ❖ Severe disruption is possible as wind brings down telephone lines, antennas and satellite disks. Transport may be curtailed.
- ❖ **Drought:** Reduced income for farmers; reduction of spending from agricultural sector; adverse increase in price of staple foods, increased inflation rates, deterioration of effects nutritional status, famine, illness, death, reduction of drinking water sources, migration, breakup of communities, and loss of livestock.

Source: DMTP 1992

#### Task 2: Profile the risk of disruption for each critical asset

It is important to note that the risk of natural hazard is a different thing from the risk that a specific disruption will occur within your firm. The latter is proportional to the former; however, the likelihood that a natural hazard will cause a certain disruption in your firm will also depend on other factors, such as the extent to which you have prevented and mitigated that specific risk. While you cannot prevent the occurrence of a natural hazard and the fact that it will possibly turn into a catastrophe for your community, you do have the power to prevent or mitigate disruptions WITHIN your business – at least up to a certain extent.

Key parameters for the risk analysis of critical assets are:

- ❖ The **location** of the asset. Note that employees could be at home or at the workplace depending on the time of the day.
- ❖ The **natural hazard(s)** to which the asset is exposed; the hazard characterizes the typology and likelihood of damages and disruptions in a firm.

- ❖ The **type of disruption(s)** that could be caused by the hazard, following the vulnerabilities identified in task 1. This would answer to the question: “what can go wrong if the disaster occurs?” Such disruptions can be classified as disruptions of the accessibility, the availability or the functioning of the asset. If, in the aftermath of a flood, stockpiles of raw materials are not damaged but the road linking the warehouse to the production plant is inaccessible, then you will be facing an accessibility problem, not an availability one. Disruptions depend on the vulnerability to the hazardous event.
- ❖ The **likelihood** of the business disruption. The key question is: “if the natural hazard occurs, how probable is that it will develop into business disruptions?” The likelihood is proportional to the likelihood and the intensity of the natural hazard (i.e. to its magnitude), but also depends on the vulnerability of the assets to possible disruptions, on the resilience of the infrastructures and facilities you have, and on specific prevention and mitigation measures you may have set in place. The higher the vulnerability, the higher the probability that the disruption will occur.
- ❖ The **severity of the impact** caused by the disruption on the business. The guiding question is: “to what extent will business activities be damaged if the disruption occurs?” For instance, if a machine which is essential for production is out of order but can be repaired within two working days, which is within the tolerated downtime period, then the damage will be moderate-serious (depending on the cost of repair). The severity of the disruption can be also measured with a scale from 1 to 5: 1=insignificant; 2=minor; 3=moderate; 4=serious; 5=disastrous
- ❖ Possible **seasonality** or month in which the natural hazard is most likely going to occur; since the risk of disruption is a function of the risk of natural hazard, they will also have the same pattern of seasonality, if any.

You can synthesize the information in a matrix (see example below). If you have the means to do that or to make it done by who does, you could produce maps showing the location of your facilities and critical suppliers, as well as highlighting disaster risk hotspots.

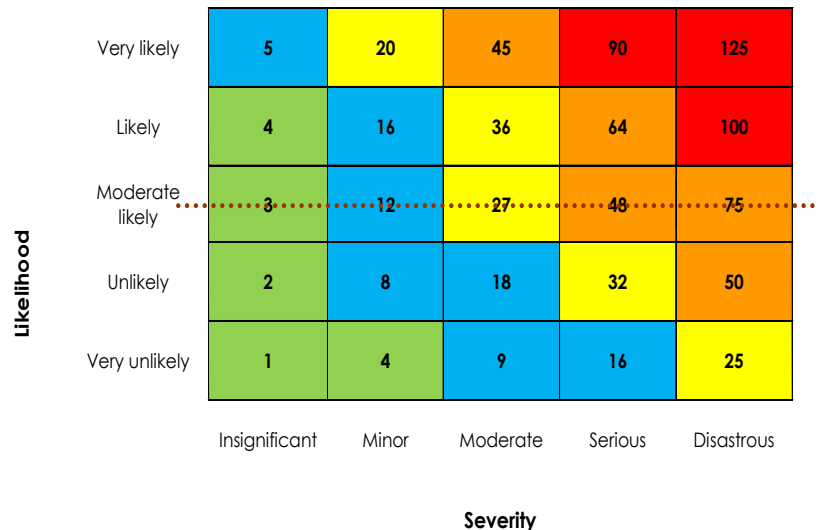


Tool 9: Sample matrix for profiling disruption risks

Asset	Location & topography	Natural hazard	Type of disruption	Likelihood	Impact	Season / month
Asset 1	Location 1	Hazard 1	Type of disruption 1	Range: 1-5	Range: 1-5	...
			Type of disruption 2	Range: 1-5	Range: 1-5	
	Location 2	Hazard ...	Type of disruption 3	Range: 1-5	Range: 1-5	...
			Type of disruption 4	Range: 1-5	Range: 1-5	
Asset 2	Location ...	Hazard ...	Type of disruption 5	Range: 1-5	Range: 1-5	...
			Type of disruption 6	Range: 1-5	Range: 1-5	
Asset 3	Location ...	Hazard ...	Type of disruption 7	Range: 1-5	Range: 1-5	...

### Task 3: Establish the risk management strategy to preserve assets

As explained in chapter 1 and mentioned above, an enterprise has different ways to prevent a risk and/or mitigate its possible impact. It can: (1) accept/retain the risk; (2) transfer the totality or part of the risk to others by insuring the critical assets and inputs or by outsourcing the production to external suppliers; (3) reject/avoid the risk by suspending or terminating the risk-prone activity (ies).



The risk magnitude, which is measured by multiplying its likelihood and potential impact,

will guide your decision on what to do in response to the risk. The risk matrix presented in chapter 1 and copied here for easier reference, is made for that purpose. In the same chapter, we also made some considerations with regard to the linkage between risk magnitude and risk management strategies. In general, risks positioned on the left hand of the matrix can be tolerated, while those on the right-hand must prevented, mitigated or even avoided.

### Task 4: Produce the risk profile for time-critical operations

In step 3 of the process you have identified the **operations** performed by each enterprise department and you have determined their time criticality. Now you have a list of time-critical operations whose tolerated downtime period is relatively short and that must be resumed within that time limit. They can be more or less vulnerable to the risk of suffering a disruption. If they are, then the BCP must tackle such risk.

The likelihood of operations being disrupted will depend on the **likelihood** of the natural hazard and the major **vulnerabilities** of the firm and its environment, which have been assessed in task 1 of this step. The greater the risk of the natural hazard the greater the likelihood that a disruption will occur.

The impact on the business depends on the length of the period the operation is expected to be down due to the disruption. If the **expected downtime period** is longer than the **tolerated downtime period**, then you have to set in place arrangements for reducing it. These measures will be the substance of the business continuity plan. The expected **seasonality** of the disruption indicates when (or by when) the arrangement must be activated.





Tool 10: Sample matrix for profiling disruption risks of time-critical operations

Time-critical Operations	Location & topography	Natural hazard	Type of disruption	Likelihood	Downtime period		Season / month
					Tolerated	Expected	
T-Critical Operation1	Location 1	Hazard 1	Type of disruption 1	Range: 1-5			...
			Type of disruption 2	Range: 1-5			
	Location 2	Hazard ...	Type of disruption 3	Range: 1-5			...
			Type of disruption 4	Range: 1-5			
T-Critical Operation2	Location ...	Hazard ...	Type of disruption 5	Range: 1-5			...
			Type of disruption 6	Range: 1-5			
T-Critical Operation3	Location ...	Hazard ...	Type of disruption 7	Range: 1-5			...

**Task 5: Validate the analysis with key stakeholders**

In order to generate a comprehensive inventory of all potential disruptions arising from possible natural hazards, you should involve representatives of all departments. They will help give a more complete view of the risks affecting the assets and operations under their responsibility. Ideas can be from face-to-face interviews, or through workshops. The risk management strategy conceived through the assessment should be approved by the firm's leadership, the chief of the directly and indirectly concerned departments, and Finance. The latter must assess the financial feasibility of the strategy and release the funds for risk prevention and mitigation measures.

**Task 6: Review the risk analysis periodically**

See the last paragraph of the section "What Do You Need To Know And Consider?"

**Task 7: Explore insurance and microinsurance products to cover for financial losses coming from different hazards.**

Once the different risks have been identified you can do an analysis to figure out whether there are suitable insurance and/or microinsurance products that can be used to mitigate the financial impact of these hazards. Property and household along with catastrophic and agricultural and livestock microinsurance are the best products that can cover for losses of income if certain perils materialize.

- ❖ Property and household multi risk products can be an option to cover for stocks of merchandise and production materials in events like floods, landslides as well as theft.
- ❖ Catastrophic microinsurance is suitable against natural catastrophic events like earthquake, hurricane, tsunamis, cyclones, etc
- ❖ Agricultural and livestock insurance (traditionally adjusted or by index) is a solution against changes in the average behaviour of climatic events for producers in rural environments.

The example below describes a situation where warehouse facilities and processing plant are located in different areas. Two of the three machine operators have to commute to the city where the processing plant is located, while the third lives in the same city and will most likely have better accessibility than his two colleagues. The electricity substation is located in city A while the transformer is in city XY. We assume that the disaster occurs outside working hours; hence workers are vulnerable in their own houses and villages.

Some of the concerned locations are situated in the flood plain of the river whose water level, in August, increases substantially due to the melting of ice and snow upstream. For instance, the electricity substation is located in city A and exposed to a moderate likelihood of floods, while the transformer is in city XY which is not prone to any disaster.

Resource	Location & topography	Natural hazard	Type of disruption	Likelihood <sup>22</sup>	Impact <sup>23</sup>	Season / month
Washed and sorted tomatoes	Warehouse 1 / Village XX, hill	Floods	Tomatoes are washed away	Unlikely	Disastrous	August
			Trucks cannot reach the warehouse	Unlikely	Disastrous	
	Warehouse 2 / Village Z, flood plain	Floods	Tomatoes are washed away	Very likely	Moderate	August
			Trucks cannot reach the warehouse	Very likely	Moderate	
Peeling, pulping and refining mono-bloc	Mono-bloc / City Y	Floods	The mono-bloc is out of order but reparable	Medium likely	Major	August
			The mono-bloc is out of order and cannot be repaired	Unlikely	Disastrous	
Electricity	Substation / City Y	Floods	Availability	Medium likely	Moderate	August
	Transformer / City XY	N/A	N/A	N/A	Moderate	N/A
Machine operator 1	Village X, flood plain	Earthquake	The worker dies	Very unlikely	Disastrous	N/A
		Floods	Access	Very likely	Moderate	August
Machine operator 2	City Y	Floods	Access	Medium likely	Moderate	August
Machine operator 3	Village Z, flood plain	Floods	Access	Very likely	Moderate	August

Resource	Likelihood	Impact	Qualification of risk	Measure
Washed and sorted tomatoes	Unlikely	Disastrous	High risk	Relocate stocks
	Very likely	Moderate	Moderate risk	Accept
Peeling, pulping and refining mono-bloc	Medium likely	Disastrous	High risk	Insure
Electricity	Medium likely	Moderate		Low risk, acceptable
	N/A	Moderate		N/A
Machine operator 1	Very unlikely	Disastrous		Moderate risk
	Very likely	Moderate		Moderate risk
Machine operator 2	Medium likely	Moderate		Low risk, acceptable
Machine operator 3	Very likely	Moderate		Moderate risk

<sup>22</sup> Range of possible values: very likely, likely, medium likely, unlikely, very unlikely.

<sup>23</sup> Range of possible values: disastrous, serious, moderate, minor, insignificant.

## What Will Be the Outcome of This Step?

The outcome of this step is a shared understanding of the risks affecting time-critical operations, crucial assets and inputs. The analysis shall include: the types of hazard, the likelihood, the severity, the types of disruption that such hazard can cause, and the coverage/non-coverage of the risk through preventive and mitigating measure that your firm or external actors have taken or will take.



### Reading and References

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### What are the benefits of these BCM steps for your firm?

	What did you learn?	What do you need to improve?	What are the benefits of this BCM step?	Key informations
Step 1: Business priority				
Step 2: Critical assets and inputs for your priority				
Step 3: Time-critical Operations				
Step 4: Analyse of Internal and External Risk Areas				



## My Notes

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# Chapter 3

## Planning for Business Continuity

### 3.1. Overview

#### Outline chapter 3

3.1. Overview

3.2. Step 5: Prepare a Set of Possible Scenarios

3.3. Step 6: Design and Validate the Plan

Planning is the phase when the information you have previously gathered (especially the risk assessment) is used to prepare a small number of possible, complementary scenarios and then use them to make decisions on responses. The BCM is driven by the findings of the analysis that establishes which business operations must be continued and which assets are critical. Keeping those activities running, or getting them back in operations quickly is the purpose of BCP. By having a set of scenarios and response strategies you will be better prepared to respond rapidly to the crisis. Ideally, this will help contain the damage.

Each scenario can be addressed through one or more business continuity options; in due time, the management team will decide which one shall be set in place. The plan itself will describe the response actions by providing information on the type and amount of resources needed to accomplish it, the timeline of the action, the cost of the necessary resources taking into account quantities and duration, and the lines of responsibility.

### 3.2. Step 5. Prepare a Set of Possible Threat Scenario

#### *What Are Scenarios?*

In a nutshell, scenarios are approximate descriptions of possible future realities.

Scenario planning is also referred to as scenario thinking, and is part of the wider science of systems thinking. It was originally used in military settings as a method to make strategic and flexible decisions in environments presenting a high degree of uncertainty.

The uncertainty of a system is linked to our inability to predict the future, what is going to happen, who it will effect, when and how.

We do not have a crystal ball to read the future, but we can make assumptions, based on previous experience and on the calculated degree of probability that things will happen in a certain way. On the other hand, we can count on some known facts, because they reproduce themselves quite regularly or with recognisable patterns; these are trends (Shoemaker, 1995).

To picture the difference between uncertain events and known facts, you can think of the monsoon: they occur on a yearly basis and they are very well known facts to the local populations, however, it is not possible to know whether these monsoons will evolve into a disaster or not.

We can therefore devise scenarios where these drivers combine and produce a variety of final results. Some of the scenarios are more plausible and/or more likely to occur than others,

depending on the individual probability of occurrence of each driver and on the combined degree of probability.

To sum up, scenarios are story lines linking underlying factors in a causal relationship that can be demonstrated. The line closes with a result that is one of the many possible future environments we will have to deal with. The better we are prepared for the most important disaster scenarios, the fewer expenses we will have to incur in case they are realised.

### *Why Use Scenarios in BCM?*

As mentioned in the first chapter, business continuity planning is part of the broader risk management practiced by an enterprise. An enterprise operates in a complex environment, where multiple factors come to play – including disaster risk. At one end, risk management requires thinking about possible events and establishing their probability in order to decide how to mitigate or prevent the negative impacts on business operations, and in order to be prepared for a prompt response to redress the situation.

Having said that, scenario planning appears to be an appropriate method for managers to make solid decisions to prevent and prepare for disasters that may affect their business.

By preparing disaster risk scenarios, business managers are able to disclose and anticipate hidden weaknesses and unpreparedness of their activities if faced with a catastrophic event. In identifying the bottlenecks that a disaster may cause to their priority activities, they will be able to decide which preventive and response mechanisms must be set in place. The objective is to reduce the identified weaknesses, mitigate their impact, and bring the situation back to normal as soon as possible.

### *How to Apply Scenarios in BCM?*

Scenario planning as applied in military settings and in businesses is generally aimed at making decisions *before the event* on strategic directions to be taken, without knowing how things will evolve. In these circumstances, decision makers are making a bet, on which scenario (or small group of scenarios) is the most suitable. They have to wait until the future unfolds to appreciate whether their forecast was correct, or at least close to the turn of events.

Instead, in BCM scenarios are used *after the event*, when the key, triggering event, i.e. the disaster, has taken place and you can observe the selected driving forces, understand their direction and magnitude. You will be able to select the scenario that is closest to reality and to enact the response plan accordingly. We could say that this type of application of the scenario planning method is less “hazardous” than the other described above.

In any case, you should bear in mind that any attempt to picture a complex environment or situation, will inevitably simplify and distort it. Scenario planning is not a science and has limitations.

### *What Do You Need To Do?*

Scenario planning shall be done at department.

**Task 1:** Select and describe the vulnerabilities defining a post-disaster scenario;

**Task 2:** Identify plausible combinations of vulnerabilities;

**Task 3:** Shortlist the scenarios;

**Task 4:** Write the scenarios.

#### **Inputs from the previous step**

- List of possible disruptions affecting the availability, the access or the functioning of critical assets
- List of possible disruptions causing a downtime period of time-critical operations that is longer than the tolerated period

### Task 1: Select and Describe the Vulnerabilities Defining a Post-disaster Scenario

The first task in designing scenarios is to define what the underlying descriptive elements are. In this case, such underlying elements are the vulnerabilities to which assets and operations are exposed.

In step 4 you have identified such vulnerabilities and you should describe them more in depth. In particular, you will have to describe how and why they could impact on your capacity to deliver the priority goods and services you have selected.

Scenarios consider both situations where the enterprise have been directly affected by a disaster and situation where other firms in your supply chain segment have been affected. Hence, you should not forget the vulnerabilities of your suppliers, which – indirectly – are also your vulnerabilities.

### Task 2: Identify Plausible Combinations of vulnerabilities

This action is aimed at identifying a set of different scenarios characterized by a mix of vulnerabilities. You have to do it by establishing linkages and causal relationships between vulnerabilities. There can be plausible and impossible linkages, so you have to rule out all those that do not make sense in reality.

### Task 3: Shortlist Scenarios

Not all scenarios need to be retained: some are redundant and some are less likely to occur or even have insignificant consequences. Once unimportant and redundant scenarios are discarded, you are left with a small group of scenarios that are ideally complementary to each other.

### Task 4: Write the Scenarios

This task is about producing a narrative description of the scenarios you have retained. Narrate it like a story, easy to read and understand. This is an important instrument of communication for workers and other enterprise stakeholders.

## 3.3. Step 6: Design and Validate the Plan

### *What Do You Need to Know and Consider?*

Besides the specific guidance provided above for each of the critical functions of the enterprise, while developing the plan you should make sure that it:

**Inputs from the previous step**  
Post disaster scenarios descriptions

Post-disaster scenarios descriptions

Is **flexible** enough to suit different post-disaster settings;

Is responsive to identified risks affecting each of the most crucial enterprise's departments;

Reflects the time of the day and period of the year in which a disaster may occur;

Clearly mentions the **timeframe of the response** and the sequence of actions to be taken, for instance by ordering them from the most urgent to the least urgent;

Considers the possibility of major disruption and loss of staff and, more generally, propose response actions that are commensurate to the extent of the internal and environmental damage;

**Assigns roles and responsibilities** and define who are the formal "owners" and major responsible for the process management; tasks must be formalised in the job description and performance objectives;

**Has the buy-in** and reflects the views of key stakeholders, including Trade Union representatives (if present in the organisation) and suppliers of critical assets and inputs. They should be consulted across the development of the plan.

### What Do You Need To Do?

- ❖ **Task 1:** Identify business continuity strategy options;
- ❖ **Task 2:** Assign roles and responsibilities;
- ❖ **Task 3:** Budget for necessary resources;
- ❖ **Task 4:** Write down the plan;
- ❖ **Task 5:** Test, adjust and get the plan endorsed.

#### Task 1: Identify Business Continuity Strategy Options

Business continuity strategy options are identified based on the previously prepared scenarios describing a disruption in business activities. Scenarios consider both situations where the enterprise have been directly affected by a disaster and situation where other firms in your supply chain segment have been affected.

Per each scenario that you have developed and validated, you will have to ask the following questions:

- ❖ How critical operations will be impacted by the scenario?
- ❖ What is the current capacity in place to face such a situation?
- ❖ How long will it take to resume operations with the current capacity? Is this timeframe compatible with the recovery time objective?

If you figure out that your current level of capacity would not allow you to resume activities within the recovery time objective, then you should adjust your capacity to bridge the gap and speed up activity resumption. Continuity strategy options must be aimed at that.

You can use a matrix like the one below to identify business continuity options for each critical enterprise function with respect to the resources to be protected from disruption.



Tool 11: Matrix to identify business continuity options

<b>Critical resource</b>	<b>Critical function</b>	<b>Business continuity options</b>
<b>Human resources</b>	Personnel	...
<b>Raw materials</b>	Purchasing	...
<b>Finished products</b>	Marketing and sale	...
<b>Warehouse</b>	Purchasing	...
<b>Production premises</b>	Production	...
<b>Machinery</b>	Production	...
<b>Information systems</b>	Information mgt	...
<b>Vehicles</b>	Marketing and sales	...



## Task 2: Assign Roles and Responsibilities

In order to be implemented successfully and smoothly, the plan needs to establish roles, responsibilities and authorities for each of the recommended actions. Uncertainty on “*who-must do-what*” can trigger delays and leave gaps that may ultimately disrupt the whole response process.

The division of roles and responsibilities is proportional to the size of the enterprise: in smaller organisations, responsibilities may tend to fall on a smaller group of employees; each of them may be asked to cover multiple roles. In bigger organisations, you could decide to expand the business continuity team by nominating staff for specific roles: information and data collection; periodic revision of BCM documentation; coordination of BC in the decentralised enterprise sites. The key roles that should be created and assigned regardless of the size of the organisation are: the **Business Continuity Manager** who is accountable for managing the BCM program and overseeing its development and implementation; the one of **Capacity Building Manager** ensuring that the organisation has the capabilities to implement the program; the **Business Continuity Team**, who participates in the planning phase and is in charge of responding to a disaster according to instructions contained in the plan (Kildow 2011).

The contact list of all employees involved in BCM should be circulated and maintained up-to-date; it should indicate the main responsibility of each employee in the implementation of the plan.

If an employee is assigned responsibilities in the BCM process, then these should be formalised and made explicit in the job description and in the performance objectives.

One of the objectives of the BCP test will be to verify that roles are clearly shared and identified, that there are no gaps, nor duplication of tasks

## Task 3: Budget for Necessary Resources

If your firm takes BCM with sincere commitment, a dedicated reserve of funds or an ad hoc budget should be made available to cover costs arising during the process.

Business continuity management generates several costs, such as: the development and regular update of the plan (including the risk assessment); the training of personnel; the payment of extra working hours; the recruitment of additional staff dedicated to the BCM; the payment of sick leave and vacations taken after the disaster; the rental/repair/purchase of alternative premises, machinery and equipment; the purchase of insurance schemes; the transaction costs associated with alternative suppliers, the activation of emergency helplines; etc.

Assets and inputs used in production could also become more expensive due to scarcity and costs associated with measures to overcome availability and accessibility issues. For instance, you may have to turn to a supplier who applies a higher price, or who is located further away than the previous one, with increased transportation costs.

The increased unit cost of a specific resource must be taken into account and noted down, next to the original cost. The cost increase will help taking a decision on a possible adjustment of sale price, making sales forecasts, and eventually determining the breakeven point and the quantity to be produced.



### Regulatory Authorities in UK

Regulatory authorities in the United Kingdom (UK), such as the Financial Services Authority, consider that BCM is a cost for the organisation, which should be properly resourced.

Source: BCI 2008

#### Task 4: Write down the plan

#### Task 5: Test, Adjust and Get the Plan Endorsed

The objective of testing the plan is obvious and is to test the assumptions and verify that:

- ❖ The **sequence** of actions is complete and logical, with each action producing outputs that are inputs for the following action;
- ❖ Each **task** is clearly and unambiguously assigned to one main responsible person, with alternates; no task must remain unassigned;
- ❖ **Roles and responsibilities** are assigned to the team members who are well equipped to deliver them without overburdening anyone;
- ❖ Overall the plan is **workable**.

Tests are rolled out in a safe and unthreatening environment, where life, physical safety and professional careers are not at stake. In a test we are allowed to make mistakes and to acknowledge the possible consequences of such mistakes, without major pressure or irreversible consequences.

Tests are done by pretending the occurrence of an event. Differently from real life, tests run faster and events are compressed into a short period of time. They should be run several times, with a frequency that depends on the pace of internal and environmental changes that may affect the magnitude or type of risk to which the enterprise is exposed. Subsequent tests should incorporate the outcomes of previous exercises.

There are different ways to test the validity of a plan; they differ with respect to the number of persons and business units involved the location, the process, the preparation time and the budget. The following overview of options to test the plan is based on *The Disaster Recovery Handbook* by Wallace and Webber, 2007.

- ❖ **Standalone testing:** the plan is reviewed by the author and someone else with similar background.
- ❖ **Walk-through testing:** all those mentioned in the plan must participate. The location is a meeting room. Each participant reviews out-loud the steps of the plan of action, by following the sequence; it is effective to detect omissions.
- ❖ **Table-top exercises:** a disaster scenario is simulated in a meeting room, with a facilitator progressively adding details defining the scenario;
- ❖ **Simulations:** similar to the table-top, with the difference that the exercise will be carried out in the locations supposedly affected by the disaster. It implies higher costs and longer preparation time.

#### *What Will Be the Outcome of This Step?*

The final outcome should be a document with the following features:

- ❖ It assembles **an organic and integrated set of business continuity plans**, each focusing on one of the critical functions of the enterprise;
- ❖ It is a document to which the **firm's leadership is committed**. The BCPs have been developed by a core group of employees with the strong support and sponsorship of the enterprise's leadership. This is a feature of the development process, but its fundamental to guarantee the buy-in of the final product;
- ❖ It **contains:** the description of the scope of the plan (i.e. what is IN and what is OUT); the findings of the business impact analysis with the list of critical products and services that the firm must continue producing; the findings of the risk assessments on the critical assets and inputs; the final expected outcome of the implementation of the plan; the contact list of key vendors and alternative suppliers; the division of roles and responsibilities with the contact list of participating employees and alternates; the resource requirements for an

effective implementation, including the budget and the indication of the source of funding.

- ❖ It has been **validated** through a test and amendments have been introduced to address detected shortcomings. The final test proved that the plan is workable: the sequence of action is logic and correct; resources to execute it are readily available; everybody knows what to do and when, and there are no unassigned tasks; all critical assets are eventually preserved and the loss is minimized.
- ❖ It is ready to be **circulated** internally and **communicated** to external stakeholders. Employees will be **trained** on how to implement it.



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## What are the benefits of these BCM steps for your firm?

	What did you learn?	What do you need to improve?	What are the benefits of this BCM step?	Key information
Step 5: Possible Scenarios				
Step 6: Design and validate the plan				



## My Notes

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# Chapter 4

## Communicating and Training on the Business Continuity Plan

### 4.1. Overview

#### Outline chapter 4

4.1. Overview

4.2. Step 7: Design and Roll-out Communication Procedures

4.3. Step 8: Design and Deliver Training on BCM

This chapter highlights the importance of communication and training towards the success of business continuity strategies and plans. Miscommunication itself can generate damages that add to the already challenging scenario of a crisis. Lack of competences and poor preparedness of continuity staff can undermine all the efforts and investments made throughout the development of the plan.

Both communication and training are aimed at one ultimate goal: to ensure that the BCP is fully integrated within the enterprise culture and that both employees and leadership adhere to it. Externally, other stakeholders also need to be aware of the plan.

### 4.2. Step 7: Design and Roll-out Communication Procedures

#### *Communication To Whom? Communication Of What?*

Communication that is relevant to BCM and post-disaster recovery can target either **internal** or **external stakeholders**. It can be produced **within the enterprise** or **externally**, by local/national/international media or other actors. Communication matters are managed (or should be managed) **before** and **after a disaster**, for preparedness and response purposes, respectively.

Internal recipients of communication messages include all employees, the firm's leadership, specific departments/functions of the enterprise and the BCM team. In preparation to a possible disaster, they all shall be informed about the BCM process, the business continuity strategy, the contents of the plan, and the roles and responsibilities assigned among employees and departments. Communication to these actors must be done before a disaster strikes in order for them to: (i) be aware of the steps taken by the firm to reduce risk and continue (or resume) business activities in case of a disaster; (ii) adhere to corporate strategies and buy-in to the plan; and (iii) be able to react appropriately in the event of a crisis by following the instructions contained in the plan.

External stakeholders include employees' families, customers, vendors, authorities, emergency response entities and the public opinion. In some cases, **customers** will solicit information on your BCM strategy as part of contract requirements. Essentially they are interested in knowing how you intend to continue to satisfy their demands if a disaster hits your firm; they need to figure out to what extent they can trust your firm, in order to plan for the worst case scenario and take their own business continuity measures. After a disaster hits your firm, it is important to contact them as soon as possible. If they do not hear from you in a timely manner, they may fear a disruption in their supplies and consider looking for other vendors.

With respect to **vendors**, you have the same concerns that your customers have towards your firm. The disaster may hit not only your firm, but also your suppliers. You need to make sure they are able to provide you with the supplies necessary to produce your critical goods and services; supplies must be timely. On the other hand, you may need to suspend some purchases when they are not critical for your priority business activity, because your efforts must be focused on what is essential. You can use communication to raise your vendors' awareness about the importance of BCM, so that they will also take business continuity measures; this will minimize the risk of supply chain disruption.

Prior to a disaster, **authorities** need to know if you are able to deal with emergencies and disruptions. In case of disaster, they must be informed of how well you are enacting your plan, if the impact on your firm may trigger consequences for the local community, if you are coordinating with emergency response entities, and if your actions are (unintentionally) generating negative effects for the community.

**Emergency response entities** can work with you prior to a disaster to develop sound evacuation and rescue plans. You should inform them about the risks to which your firm is exposed and have received expert opinion on how to best safeguard your employees' safety. In case of emergency, they should be the first ones you contact since your employees' safety is your first priority. They have professional expertise and specialised equipment to carry out rescue operations. The information you provide to them must be clear, precise and concise, driven by the purpose of optimising coordination and timely rescue.

In the table below you will find examples of information requirements by key stakeholders. The examples are not intended to be exhaustive but only indicative. Adjust the lists of stakeholders and requirements according to your firm's needs.

Table 3. Example of information requirements of internal and external stakeholders

Stakeholders		Prior to possible disasters	When a disaster strikes
Internal stakeholders	Employees	<ul style="list-style-type: none"> <li>What do we have to do if a disaster strikes?</li> <li>How do we evacuate?</li> <li>Who will notify our families? How?</li> <li>What is our individual role in the BCP?</li> <li>Does the employer offer transportation to get to work in case of disaster?</li> </ul>	<ul style="list-style-type: none"> <li>Where and when should we report to work?</li> <li>Is it safe to go to work?</li> <li>Are we exonerated from going to work? If so, for how long?</li> <li>Will we be paid while absent?</li> <li>Does the disaster affect my salary and/or my employment situation?</li> <li>How long will it take, approximately, before things get back to normalcy?</li> </ul>
	Leadership	<ul style="list-style-type: none"> <li>Why should we develop a BCP? Any specific requirements by authorities and/or customers?</li> <li>How much does the development of the BCP cost?</li> <li>How much will the implementation cost approximately, and under different scenarios?</li> <li>What is the return, in terms of financial gains/cost reduction in case of disaster, and reputation?</li> </ul>	<ul style="list-style-type: none"> <li>How many employees lost their lives/are injured?</li> <li>What is the amount of damages and losses?</li> <li>How long will it take, approximately, before things get back to normalcy?</li> <li>Are we able to satisfy our clients and honour our commitments?</li> <li>Has the supply chain been affected?</li> </ul>

<b>External stakeholders</b>	<b>Employees' families</b>	<p>Did the employer set in place measures to safeguard the lives of our family members employed in the firm?</p> <p>Who should I call in case of disaster? Who will notify me?</p>	<p>Is my family member alive?</p> <p>Is s/he injured? How bad is the injury?</p> <p>In what hospital is s/he?</p> <p>Will I get any compensation in case of injury/death?</p>
	<b>Customers</b>	<p>Do the vendors have sound BCP in place?</p> <p>What are the major risks affecting my vendors?</p> <p>Does the contract contain any continuity requirement?</p> <p>Who will notify me if a disaster affected my vendor?</p>	<p>Are my orders still on?</p> <p>Will I receive my supplies according to the timeline and quality agreed in the contract? If not, when will I receive them?</p> <p>Will supplies be re-routed to other location?</p>
	<b>Vendors</b>	<p>What are the business continuity requirements of the client?</p> <p>What are the penalties if we do not comply with the requirements?</p> <p>How will be audited/tested on BCM?</p>	<p>Is re-routing of supplies necessary (e.g. to other delivery locations, schedule)?</p> <p>Is there any change in orders (e.g. quantity of items, quality)</p>
	<b>Authorities</b>	<p>Does the BCM comply with regulations?</p>	<p>Will the damages and losses suffered by the enterprise have a wider impact in the community, for the environment and for the local economy?</p>
	<b>Emergency entities</b>	<p>What are the major risks run by the enterprise?</p> <p>How does the enterprise plan to react in case of emergency? Is there an evacuation plan in place?</p> <p>Who should we contact (or who will contact us) in case of emergency?</p>	<p>What is the severity of the disaster?</p> <p>Are there people in danger? If so, what is the estimated number?</p> <p>Can the affected site be reached by land? Through which vehicle?</p>
	<b>Media/Public opinion</b>	<p>How is the enterprise preparing for possible disasters?</p> <p>How is the enterprise safeguarding the interests and safety of its employees, and broader community?</p>	<p>Were they ready for the disaster or they were caught by surprise?</p> <p>Do they succeed in guaranteeing the safety of their employees?</p> <p>Will they keep up with their commitments (with employees, customers and authorities in particular)?</p> <p>How much do damages and losses will cost?</p> <p>Will the enterprises survive the disaster or else they will be expelled by the market?</p> <p>What will be the consequences for their employees?</p>

## *Information Produced Externally vs. Produced Internally*

While you can have control of the information that is produced internally, you do not have much power over information that is generated and disseminated externally with respect to your enterprise.

Generally, the external production and dissemination of information have a peak in the aftermath of a disaster, while they are scarce and sporadic before a crisis event and when the emergency is over. This is because prevention, preparedness and reconstruction do not make an interesting and attractive piece of news; on the other hand, catastrophic events do. Quite understandably, in the aftermath of a disaster media's attention is focused on life saving matters, if any. Gradually, attention tends to shift to the economic impact of the disaster and recovery issues.

Media are interested in knowing and communicating about how firms respond to a crisis. Were they ready for the disaster or they were caught by surprise? Do they succeed in guaranteeing the safety of their employees? Will they keep up with their commitments (with employees, customers and authorities in particular)? How much do damages and losses will cost? Will the enterprises survive the disaster or will they cease trading? What will be the consequences for their employees?

All these are very delicate matters. Employees, customers, vendors, authorities and investors will be attentive to what media have to say. The reputation of your firm is at stake and your public relations department will have to follow the situation very carefully. Beware that panic can easily spread-out in a post-crisis setting, thus preparing a fertile terrain for rumours.

This is why you should be proactive rather than reactive in the way you develop and handle your relations with media. The media can also serve as an important means for enterprises to communicate about their business continuity management to a broader audience. If your firm does a good BCM job, media can help leverage its profile to stakeholders, with positive effects in terms of reputation and competitiveness. However, to make this happen, enterprises should establish regular contacts with media and keep them informed of BCM efforts before a crisis strikes. This is the role of the public relations function within your enterprise.

## *Why is Communication Important?*

Clarity of purpose comes from a strategic direction and supporting objectives that are agreed, understood and sustained by all involved. This will enable the prioritization and focus of the response and recovery efforts (Janet L. Asherson, 2010). In short, the successful roll out of a business continuity plan starts with its communication to internal and external stakeholders. Communicating about BCM has different purposes according to the stakeholders, but in general we can identify a few, key objectives:

- ❖ Create a corporate understanding of BCM;
- ❖ Ensure buy-in of the BCP by key internal and external stakeholders;
- ❖ Make sure employees know what to do and how to do it in case of a disaster;
- ❖ Ensure internal and external coordination in case of disaster;
- ❖ Minimize damages and losses by making sure instructions are communicated timely and effectively;
- ❖ Create and disseminate a positive image and reputation of the enterprise;
- ❖ Maintain good relations with customers and do not lose any on the way;
- ❖ Avoid supply chain disruptions by raising awareness on the importance of BCM among vendors.



## What Do You Need to Know and Consider?

- ❖ Your power on information produced and disseminated externally is limited and mainly consists of adopting a proactive approach in public relations;
- ❖ Information you produce and disseminate must be truthful, reliable and timely;
- ❖ Information should be communicated in the tone and language that is understandable to the intended target audience;
- ❖ You shall stand ready to detect and control rumours before they spread causing damages to the enterprise;
- ❖ In the aftermath of a disaster, communication might be slower or disrupted due to damages to the IT systems; you shall be able to communicate in alternative ways.

### Inputs from the previous step

- ❖ Findings of the risk assessment
- ❖ Contents of the BCP

## How To Establish Communication Procedures?

**Task 1:** Identify the internal and external stakeholders to whom you should communicate about your BCM.

**Task 2:** Collect contact lists of employees, BCM team members (and their alternate), vendors, customers, authorities, emergency response entities, newspapers...Contact lists shall include office and house phone numbers as well as mobile phone number, work email and personal email addresses.

**Task 3:** Identify the information requirements of each of your stakeholders, before and after a crisis.

**Task 4:** Per each information item, establish the appropriate timeline of dissemination, e.g. before the crisis, as soon as the disaster hits, right after lifesaving messages have been circulated...

**Task 5:** Establish communication networks and procedures (i.e.

**who communicates – what - to whom – when - how**). Make sure that the responsibilities for keeping key stakeholders informed are clearly assigned and that employees do not give any statement to the media, unless authorized. A table like the one below can well summarize this information.

**Task 6:** Determine in what way you will convey the messages to each stakeholder (prior and after the disaster) and in which language;

**Task 7:** Identify possible disruptions that may affect communication and establish alternatives

**Task 8:** Produce and disseminate relevant information on your BCP, prior to the crisis.

**Task 9:** Roll out emergency communication procedures as soon as the crisis hits; provide frequent updates, as appropriate.



### Suggested order of emergency calls

1. Rescue
2. Authorities
3. Families of employees
4. Suppliers
5. Clients



Tool 12: Sample matrix to summarize BCM communication procedures

To whom	By whom	What	When	How (media and language)
...				
...				
...				

### 4.3. Step 8: Design and Deliver Training on BCM

#### *Why Training?*

Business continuity should be fully owned and implemented by all employees, though the degree of their responsibilities within a BCP varies according to their role in the firm.

Training employees on the business continuity plan is necessary because handling an emergency is not business as usual. There could be lots of confusion on what to do, what will happen, what instructions to expect and when. Training and also periodic refresher trainings are needed because business continuity instructions are not frequently practiced and could be rapidly and understandably forgotten.

In order to make training possible, its development and delivery costs should be adequately budgeted for, and the necessary amount of resources and time should be allocated.

#### *Training Who and on What?*

All employees should be knowledgeable about the business continuity plan and about the role they are asked to play in it. Knowledge of the continuity strategy is important even if some of the employees do not have any specific responsibility to fulfil within the BCP. Under such circumstances, one or more orientation sessions on the purpose, basic contents and implications of the BCP may be sufficient to make them familiar with corporate BCM initiatives. Safety and communication procedures are particularly important.

Training programmes and delivery methods should be tailored to on-the-job requirements and business continuity role of each employee or group of employees. There is no need to develop very sophisticated training programmes; it is sufficient to provide each employee with the knowledge and the skills s/he needs to feel confident and capable to respond when a disaster strikes. They must understand what to do, in which sequence and why; the consequences of not following procedures must be clear to them.

Also alternate business continuity team members should be trained: they have to be prepared and confident to intervene as the primary responsible persons.

Each core enterprise function may have developed its own BCP; in this case, they should also take responsibility for the development of the training for it. All departmental training initiatives should be coordinated by a capacity building manager who would be in charge of making sure that there are no gaps, contradictions and overlaps across programmes and that the whole package is consistent with the BCM strategy and mission. The bigger continuity picture should emerge clearly.

#### *What Do You Need to Do?*

Training initiatives, though encompassing a wide variety of delivery methods, follow a similar development process. If resources allow for it, a training specialist with sound expertise on adult learning methods can be hired to develop the training materials and facilitate the workshops. Ideally the training specialist should also possess competence in BCM.

#### **Inputs from the previous step**

- ❖ Findings of the risk assessments (Step 6)
- ❖ Contents of the BCP (Step 6)
- ❖ Communication procedures (Step 7)

- ❖ **Task 1:** Identify the target groups and detail their desired competencies;
- ❖ **Task 2:** Select the suitable training method (see following sub-section on the typical methods); the training must be suitable for all, such as females, young and older workers and must fit the cultural context;
- ❖ **Task 3:** Define learning objectives and design the training curriculum;

- ❖ **Task 4:** Define the logistic arrangements, including dates and venue, making sure that notice of training events is given well in advance and that employees save the date;
- ❖ **Task 5:** Prepare the training budget and allocate human and financial resources;
- ❖ **Task 6:** Develop the training materials (training contents and supports, e.g. manuals, facilitator's guide, activity instructions, power point presentation, videos, CD-ROMs);
- ❖ **Task 7:** Deliver the training according to the chosen method;
- ❖ **Task 8:** Evaluate learning and follow-up (including through refresher trainings).

### *How to Deliver Training?*

Below is an overview of a few capacity-building methods, taken from the ILO Local Economic Recovery Guidelines for Post-conflict Settings (ILO 2010). The list is not exhaustive and do not include simulations and drills, which are overviewed in chapter 3.

According to the objectives, the available resources and other types of restrictions, training programme may prefer one or the other options. However, blended modalities are generally the most effective in learning terms. In fact, each of the overviewed modalities is particularly strong in strengthening either attitudes, or knowledge or skills.

- ❖ **Face-to-face training;**
- ❖ **On-the-job training;**
- ❖ **Coaching and mentoring;**
- ❖ **Study tours;**
- ❖ **E-learning.**

## **FACE-TO-FACE TRAINING**

### **What is it?**

It refers to workshops, seminars and similar modalities where learning takes place in a venue gathering trainers (i.e. content experts), facilitators, resource persons and trainees. The learning experience is structured along a fixed timeline with a pre-defined agenda. The delivery approach can be more or less participative, with a variable proportion between lectures, group works and other types of trainees' participation. The training, as well as the training materials, has to be delivered in a language that is common to all trainees. To the greatest possible extent, the trainees' group should be homogeneous in terms of learning needs and educational background. Face-to-face training, which consolidates learning, can be blended with all of the other training modalities described below.

### **When to use it?**

- ❖ When learning objectives can be achieved within a limited timeframe
- ❖ When face-to-face contact among trainers, resource persons and trainees is a pre-condition for effective learning
- ❖ When trainees are allowed or have the possibility to leave their work post to attend the training

### **Advantages/disadvantages**

- ❖ Gives the possibility to learn from others, share experiences and debate
- ❖ Gives the chance to simulate the application of specific skills through group works
- ❖ Contents are versatile and, if they are not highly specific, the training can be replicated in other settings
- ❖ Requires availability and full attendance of trainees, who in most of the cases have working commitments
- ❖ Organisation and logistics can be complex and expensive
- ❖ Without any follow-up, learning achievements might be poor and/or easily dispersed
- ❖ Affiliated institutions might not have the funds to sustain the costs of trainees' attendance
- ❖ Attendance may be motivated by the additional benefits offered (e.g. daily allowance, travel expenses)

## Tasks

1. Design the training programme
2. Develop training materials, including facilitation guidelines, handouts and visual instruments
3. Organise logistical arrangements (venue, catering, travels)
4. Advertise the training, invite and enrol trainees
5. Identify, hire and train trainers, facilitators and resource persons
6. Deliver training (including pre-course induction activities if any)
7. Conduct a post-training evaluation of learning achievements and follow up
8. Ask trainees to evaluate the training service and products

## Tools and in depth-guidelines

ILO International Training Centre. *Competency-Based Training of Trainers* (online course)

## ON-THE-JOB TRAINING

### What is it?

It refers to training that is delivered at the work place and, generally, involves colleagues of the same firm. It is limited in timeframe and structured on the basis of well-determined learning objectives. It is tailor-made to the identified learning needs of workers, and programmes can be developed by involving both employers and workers. The trainer is an expert on the technical skills to be developed and/or strengthened in the trainees. It can even be an employee of the firm. Trainees form a homogeneous group and know each other.

### When to use it?

- ❖ When learning objectives mainly concern the acquisition of practical and technical skills
- ❖ When demonstrative exercises are indispensable to attain the learning objectives
- ❖ When demonstrative exercises require the use of specific equipment and the practice in specific settings
- ❖ When the concerned firm is undergoing a change (e.g. a new technology, equipment, approach, product)
- ❖ When trainees' profile is such that learning would not be effective in a classroom

### Advantages/disadvantages

- ❖ It is very specific and tailor-made to workers' needs and responds to employers' requests
- ❖ It allows for directly putting into practice the learned concepts and for encountering every-day situations
- ❖ It allows for trouble shooting as soon as problems emerge
- ❖ It allows for sharing the learning experience with colleagues and for post-training peer-to-peer support
- ❖ It does not involve logistical costs, except those related to new equipment, if any is needed
- ❖ It suits trainees with low educational background
- ❖ Contents are not versatile as they are highly tailor-made, hence might not be "recycled" for other trainees

### Tasks

1. Design the training programme, possibly with the participation of employers and workers
2. Develop training contents and handouts
3. Identify, hire and train the technical expert who will deliver the training
4. Deliver the training (including pre-course induction activities if any)
5. Post-training evaluation of trainees' learning achievements and follow up
6. Ask trainees to evaluate the training service and products

## COACHING AND MENTORING

### What is it?

Coaching refers to the provision of advice and assistance on a one-on-one basis or to very limited groups of employees with similar functions. It focuses on one or more professional and managerial functions as well as attitudes at work. It can be also used to address internal relational problems within a team as well as other issues affecting delivery. In order to be effective, it requires mutual trust and empathy between the mentor/coach and the targeted employees.

Mentoring is similar but it generally targets young employees in a management-level position who just joined the company/organisation; it mainly aims at instilling the “corporate” culture and at integrating the employee by teaching the right attitudes.

Mentoring and coaching are not as structured as the face-to-face and the on-the-job training, and the timeframe can be diluted over time. They are provided by confirmed experts on the subject matter; in the case of mentoring, it is generally a senior-level employee who takes on the role of mentor.

### When to use it?

- ❖ When learning objectives mainly concern professional and managerial functions (i.e. mainly soft skills, complexity)
- ❖ When the firm is undergoing a change (e.g. new management structure, new business approach/service, re-distribution of responsibilities and roles, new team)
- ❖ When the learning objectives are achievable only through the continuative support of an expert
- ❖ When relational issues have to be addressed within a team

### Advantages/disadvantages

- ❖ Can be diluted over time and the schedule can be arranged on a one-on-one basis, or with the targeted group
- ❖ Outcomes can be monitored in real-time and objectives/benchmarks can be re-adjusted
- ❖ It cannot be based on standardised training materials and contents, and hence does not allow for replication
- ❖ It requires very solid expertise in both monitoring and coaching, which can be rare in certain settings

### Tasks

1. Establish mentoring and coaching objectives and expected results per each of the targeted employees
2. Identify and hire the mentoring and coaching expert
3. Develop a monitoring and coaching plan inclusive of schedules and review meetings
4. Manage the whole mentoring and coaching programme
5. Monitor progress and introduce adjustments as needed
6. Evaluate and document the outcomes, and plan for possible follow up

## STUDY TOURS

### What is it?

It is generally introduced within face-to-face trainings or distance-learning programmes, with a view to consolidate learning and expose trainees to real practices and experiences. As such, it must be contextualised and conceived in such a way that can contribute to the achievement of specific and very well-defined learning objectives.

### When to use it?

Within the framework of face-to-face trainings or distance-learning programmes

### Advantages/disadvantages

- ❖ It is highly interactive and allows for real-time exchanges of information and knowledge
- ❖ It opens the window for further debate and the introduction to new topics within a training
- ❖ It exposes trainees to realities and best practices in fields of interest
- ❖ It requires logistical arrangements and involves costs of displacement

### Tasks

1. Identify the need and appropriateness of a study tour
2. Identify relevant good practices to which the trainees should be exposed
3. Define specific objectives and prepare a study-tour plan with the visited institution
4. Organise the logistics (transport, catering, venue, and others)
5. Conduct the study tour
6. Evaluate and document the outcomes

## E-LEARNING

### What is it?

There are three types of e-learning:

1. Distance learning occurs when trainers and trainees are in remote locations. It is generally limited in time, with a fixed enrolment period. If there are sufficient available resources (e.g. the trainers are engaged full time to the training), then enrolment can be tailored to the trainee's needs, as can the schedule of training activities and deadlines.
2. Computer-based training is similar to distance learning. The main difference is that it requires certain supports because the training programme is stored in hard-drives, diskettes and CD-ROMs.
3. Web-based training is also similar to distance learning and is based on the use of computers like CBT. Differently from CBT, training materials are more easily updated because they are not stored in any hard support and are available online.

### When to use it?

- ❖ When it is not possible and/or convenient to gather trainees in the same venue
- ❖ When trainees have clearly expressed the preference for distance learning
- ❖ When the timing of training delivery must remain somewhat flexible

### Advantages/disadvantages

- ❖ It provides access to training even to trainees in remote areas
- ❖ Trainees can organise their learning according to their working commitments; they can learn at their own pace
- ❖ The delivery is cheaper than the face-to-face training, as it does not involve logistical costs and displacements
- ❖ It allows for having more structured one-on-one feedbacks from the trainers, within the limits of the programme
- ❖ It requires the possession of computers and the access to internet
- ❖ It requires trainees to be self-disciplined and trainers to deliver timely assistance
- ❖ It does not allow for real-time debate and sharing of experience and knowledge
- ❖ It does not allow for real-time simulations

## Tasks

1. Design the training programme
2. Design the web-based learning platform
3. Identify, hire and train trainers on distance-training delivery
4. Develop and upload training materials and complementary knowledge tools (e.g. for the use of the platform)
5. Advertise the training
6. Register trainees and deliver the induction phase
7. Deliver the training and manage the learning platform
8. Conduct a post-training evaluation of learning achievements and follow up
9. Evaluate the training service and products

## Tools and in depth-guidelines

ILO International Training Centre. *Competency-Based Training of Trainers* (online course)



### Reading and References

Asherson, Janet L. 2010. *IOE Helping Employers. Emergency preparedness, Business Continuity and managing Risks from Pandemics*. International Organisation of Employers.

ILO, 2009a. *Business Continuity Planning: Guidelines for Small and Medium-sized Enterprises*. International Labour Office: Geneva, 2009.

ILO, 2009b. *Business Continuity Planning in Facing Pandemic Influenza: Guide and Workbook*. International Labour Office: Jakarta, 2009.

ILO, 2010. *Local Economic Recovery in Post-conflict Settings: Guidelines*. International Labour Office: Geneva, 2010.

Kildow, Betty A. 2011. *A Supply Chain Management Guide to Business Continuity*. American Management Association: New York 2011.

Wallace Michael, Lawrence Webber 2007. *The Disaster Recovery Handbook: A Step-by-Step Plan to Ensure Business Continuity and Protect Vital Operations, Facilities and Assets*. American Management Association: New York 2007.



### What are the benefits of these BCM steps for your firm?

	What did you learn?	What do you need to improve?	What are the benefits of this BCM step?	Key informations
Step 7: Design and roll-out Communicaion Procedures				
Step 8: Design and Deliver Training on BCM				





## My Notes

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# Chapter 5

## Implementing the Business Continuity Plan

### 5.1. Overview

#### Outline chapter 5

5.1. Overview

5.2. Step 9: Activate and Deactivate the BCP

5.3. Step 10: Gather Lessons Learned and Adjust the BCP

This is the final stage of the BCM process. At the end of it you will have attained the recovery objectives, you will have gathered lessons learned and you will have a continuity plan adjusted according to the learning. There are two steps: the first concerns the activation and deactivation of the plan; the second is about gathering and disseminating the lessons learned from implementation and testing of the continuity plan.

### 5.2. Step 9: Activate and Deactivate the BCP

#### What Do You Need to Do?

From the moment an organisation observes the occurrence of a disaster, the following steps should be taken:

**Task 1: Assess and rate the impact.** This entails collecting basic data to detect and quantify major losses and damages, at least approximately; based on the findings, you will rate the impact level ;

**Task 2: Establish if there are the conditions** to activate the plan, select the response strategy according to the scenario representing the current situation;

**Task 3: Notify key stakeholders** that the plan has been activated and, therefore, certain business activities will be suspended and other will be executed in continuity mode;

**Task 4: Gather the business continuity team** who will meet for a first briefing on the situation and the steps ahead;

**Task 5: Implement the actions** as instructed in the continuity plan;

**Task 6: Review BCP implementation**, by paying attention to the progress made along the plan, and the performance attained with respect to expectations and objectives;

**Task 7: Deactivate** the plan and re-establish the standard operational mode;

**Task 8: Notify key stakeholders.**

#### Task 1: Assess and Rate the Impact

In order to determine if the BCP must be activated, you have to start by assessing the status of the resources and processes you consider critical for your business. Without these resources and processes you will not be able to deliver the goods and services that determine the profitability and survival of your enterprise.

#### Inputs from the previous step

- ❖ Business Continuity Plan (Step 6)
- ❖ Communication procedures (Step 7)

Essentially, you need to know if and to what extent the pre-established critical processes and resources are available, accessible and functioning. The most knowledgeable sources of this information are probably the heads of concerned departments/business units; they must know about assets and operational requirements. The checklist of critical resources and processes shall be contained in the continuity plan, as well as the list of information to be collected.

This task requires being able to collect basic data per each critical resource and functions. Note that immediately after a disaster it might not be feasible to gather all the needed information, especially if sites are not safe and cannot be accessed. You shall start anyway with the means and modalities that are available, and by focusing on the pieces of information that you can collect: the full picture of the situation will appear gradually.

You could rate the impact by simply assigning four possible levels: null, minor, moderate and severe. Additional descriptions of the situation could be provided.

### **Task 2: Establish If There Are the Conditions and Select the Response Strategy**

If critical functions and processes can proceed without needing major adjustments, and if damages and loss of critical assets are below the acceptance ceiling, then there will not be need to launch the BCP. On the contrary, you will need to establish which response strategy is the most appropriate based on the assessment findings. A menu of response strategies is provided in the plan: chose the one that is closest to your current situation.

### **Task 3: Notify Key Stakeholders**

This is done immediately after the disaster situation has been ascertained. The accomplishment of this task must follow pre-established communication protocols, defining the sequence, the content of the message and the instrument to be used for conveying it.

### **Task 4: Gather the Business Continuity Team**

Now it is time to gather the business continuity team, if possible by calling a first, short meeting. The meeting, which could be chaired by the continuity manager, would be to officially kick off the activation of the plan. Even though the BC team is expected to review the plan periodically, it is worth to refresh the memory and go through main action points, very rapidly.

When a crisis strikes there is not much time to spend in meetings, and perhaps some of the members are not available in loco. Do what you can and bear in mind to always be action-oriented and to use at best the little time you have.

### **Task 5: Implement the Action Plan**

The implementation of the action plan should follow the instructions contained in the plan. Adjustments could be introduced as appropriate.

### **Task 6: Review BCP Implementation and Provide Updates**

This task is about monitoring the progress made towards recovery objectives, the performance of the process and of the team. This task is aimed at determining whether any change in the plan needs to be introduced if team members need more training, and if more or different resources must be mobilised.

Briefings of the continuity team will be more frequent at the beginning because set-up and adjustments on-the-spot require closer coordination. Once operations are well established and the roll-out proceeds as per plan, briefings can be more sporadic, though regular.

### **Task 7: Deactivate the plan**

You will deactivate the plan once (the original or revised) recovery objectives have been achieved. Project closure is typically affected by a team's fatigue: energies and focus have been concentrated on the recovery of business activities and one may feel that, as recovery is

achieved, we can relax and turn the page. Actually, deactivation procedures are as important as those instructing the activation of the plan.

Deactivation procedures should describe, among other things: the restart (and its sequence) of business activities that were temporarily suspended; how employees are called back to normal working schedule and working sites; the restoration and/or rerouting of supplies and deliveries; the relocation of business processes to previous sites, if appropriate; the restoration of production capacity to previous levels; the restoration of communication networks and of authority and reporting lines; and the documentation of continuity processes and results, to be submitted to key internal and external stakeholders as previously agreed.

### Task 8: Notify key stakeholders

Just as workers, suppliers and clients (among others) need to be informed that the BCP has been activated, they also need to be informed when execution is concluded. This will entail, among other things, the provision of figures and statements on how the continuity project went, what were the challenges, what are the outcomes and the pending actions to be taken. The 'lessons learned' are one of the most important communications for the future.

The key messages, crafted to maintain or enhance business confidence and reputation, can be conveyed in different ways, even though a press release or a celebration event that marks the end of a process, the closure of a chapter and the transition to a new mode of work (generally the one in place before the crisis, but hopefully a better one).

## 5.3. Step 10: Gather Lessons Learnt and Adjust the BCP

### What are lessons learnt?

Lessons learned are the result of a (self-) evaluation process carried out by individuals and groups of individuals at the end of a particularly important, new experience. They consist of a retrospective review of what has worked well and what did not, or performed less well than expected.

Lessons learned represent the knowledge we gain through experience. If shared, such knowledge can benefit others who are engaged in similar endeavours, currently or in the future. As such, "lessons-learned" can be considered as part of broader knowledge management processes.

The idea behind gathering lessons learned is to avoid that the same errors are repeated in the future, to reinforce and be able to repeat the positive aspects of the experience we lived, and to identify alternative (more successful) ways of implementing certain actions. Findings are generally synthesized by statements on the facts and the outcomes of certain actions, as observed by those who participated in the experience. They are complemented by recommendations that convert findings into concrete propositions and instructions for the future.

In principle, lessons-learned exercises can be carried out at the end of any experience where we presume the existence of some sort of learning. As such, we would not search for lessons learned at the end of a process that is part of the organisational routine. In general, individuals and organisations are more inclined and motivated to make such an effort when the experience being analysed presents elements of innovation and transformation with respect to the past. This is the case, for instance, when we carry out a pilot test of a process or project that is new to our organisation.



**Lessons learnt** are the knowledge we gain through experience. Lessons-learning can be considered as part of broader knowledge management processes. It is undertaken by reviewing what has worked well and what did not, or performed less well than expected. Steps include: identifying the lessons; documenting the lessons; reaching consensus on corrective actions; and sharing lessons learned and recommendations.

## Why Gathering Lessons Learned in BCM?

Business continuity management belongs to the above-described category of experiences. Implementing a business continuity plan is like executing a project, with pre-set objectives, timeframe and resources. It is a very peculiar project in the sense that it is activated in response to a series of circumstances that manifest themselves unexpectedly and often never occur in the same way. It is a project we have to implement reluctantly and that we wish we would not have to implement again in the future. Business continuity management could be a painful experience; however, we can use it to learn.

Because of its uniqueness, we may doubt that the lessons we learn through the implementation of a business continuity plan will be helpful in the future. Nevertheless, lessons-learning in BCM produces multiple benefits:

- ❖ It can serve to rationalise about aspects and unintended impacts we did not foresee when developing the plan;
- ❖ It helps the team closing a (sometimes painful) chapter of their work within the organisation;
- ❖ It is an occasion for reviewing the steps of the plan and consolidating knowledge about business continuity management;
- ❖ It provides guidance to review business continuity documents and procedures, in light of the previous experience;
- ❖ It helps determining if the team requires more training on the whole process and/or on specific topic and steps.

It will be re-assuring for the key stakeholders to know that you intend to learn from the successful and less successful practices: it will show your commitment to improvement.



### Example: Lesson learnt in Sri Lanka

In the aftermath of the tsunami in Sri Lanka, the government announced that no new construction would be allowed within 100 meters of the sea on the southwest coast and 200 on the northeast one.<sup>24</sup> This measure, aimed at protecting the population, compelled fishermen and the fishing industry to reorganize themselves and reallocate equipment and food processing to safer areas. Business owners learned to position **provisions, stocks and equipment** on higher grounds, on shelves, in safer places instead of on the ground floor of their dwellings. In case of floods, these materials will be better protected. This is an example of preventive measures. It is a consequence of major disaster that businesses organize themselves differently according to new business continuity models.

## How To Face the Resistance To Lessons Learnt?

As any evaluation process, identifying “lessons learned” may encounter some resistance. Individuals may see this exercise as critical of their actions rather than as an opportunity for collective growth and improvement.

Others may not be willing to set time aside for it, caught by the rush of turning the page and quickly moving to the next project. If we do not set aside the time to look back at what we have done, the price we paid for the mistakes along the way will be in vain; on the contrary, when we search for improvements, the price turns into an investment for a better future.

It should be clear to those who participate to the exercise, that lessons can be gathered around successes not just failures. There should be a healthy balance between the two, so as to reward the team for its attainments and to provide incentives for proposing solutions to bottlenecks and shortcomings. Turning the lessons into an actionable recommendation is not only necessary for the completion of the exercise, but also as a way to transform a negative experience into

<sup>24</sup> Source: DFID UKaid, *Defining Disaster Resilience: A DFID Approach paper*, London, November 2011.

constructive propositions. The attitude of the facilitator(s) of the process and its participants should not be judgemental, but should encourage transparency and a “no-blame” culture.



**Example: A participatory approach – Indigenous knowledge for disaster risk reduction**

An example of knowledge in action emerges in South Africa's Kosovo and Masiphumelele communities, where a significant number of community members indicate that they rely on such “unofficial” early flood warnings as observations of the colour and formation of clouds and the flight of birds in a particular direction. Often such intuitive forms of knowledge are incorporated into “official disaster risk assessments, planning instruments or early warning. The incorporation of local indigenous knowledge into disaster preparedness programmes is essential.”<sup>25</sup>

*What Do You Need to Know and Consider?*

Lessons learned on organisational endeavours shall be a **collegiate exercise**, performed by the group of individuals who actively participated in the experience or had a stake in it.

The advantage of adopting a **participatory approach** is that different individuals have a multitude of perspectives on the same subject, according to their background, expertise and focus of interest. While a participatory process may require more time and efforts it allows a consensus view of solutions to be developed. The final result is a multifaceted, constructive analysis of the knowledge jointly developed by a group of individuals. The more people own and agree on the lessons, the more chances there are that

lessons will be used.

“Lesson-learning” is a less structured process than formal evaluation which generally follows checklists of key parameters to be analysed, such as efficiency, effectiveness, relevance with respect to needs, and consistency with respect to pre-set objectives. The exercise should be carried out soon after the business continuity plan has been deactivated, in order to benefit from the fresh memories on the experience. The longer the interval, the less the motivation of the team and the less vivid and meaningful will be the memories of what happened, how and why.

**Inputs from the previous step**

- ❖ Business Continuity Plan (Step 6)

*What Do You Need To Do?*

A lessons-learning exercise is made of four different stages, whose overall outcome is a list of actionable recommendations.

**ABC** *Participatory approach is an approach that guarantees that all entities/people involved influence and share the control of initiatives, decisions and resources*

- ❖ **Task 1:** Identifying the lessons;
- ❖ **Task 2:** Documenting the lessons;
- ❖ **Task 3:** Reaching consensus on corrective actions;
- ❖ **Task 4:** Sharing lessons learnt and recommendations.
- ❖ **Task 5:** Adjusting the business continuity plan

**Task 1: Identifying the lessons**

It is quite common to think that, to learn lessons from experience, it is enough to identify them. Well, this is not true. The identification is only the first step of the process.

Identifying lessons is about thinking back to what happened throughout the implementation of the BCP; identifying learning points by comparing what was expected to happen with what actually happened; analysing the reason for such a deviation; making a general conclusion to avoid similar failures and repeat successes. It can be done through workshops, brainstorming sessions and even structured surveys, depending on the time and resources available, as well as on the geographic location of team members. Ideally there should be a facilitator, who is

<sup>25</sup> Source: *Disaster in Africa: The case for legal preparedness*, IFRC, Geneva, 2011

neutral with respect to the findings of the exercise and who is able to conduct participatory processes.

### **Task 2: Documenting the lessons**

This is about preparing a report of the lessons learned; by doing that, knowledge is more easily transferable across time, locations and individuals, departments, offices. The report should be succinct and straightforward: if your colleagues are busy professionals, they have limited time to read documents and are mostly interested in the action points.

### **Task 3: Reaching consensus on corrective actions**

When you become aware of what went wrong, then you need to take corrective measures and establish specific recommendations for the future. The list of corrective actions should be complemented by the assignation of responsibilities, the timeline for completion, and the description of objective to be achieved.

### **Task 4: Sharing lessons learnt and recommendations**

Incorporating lessons into future experiences is the ultimate purpose of lessons-learning. If experiences are not documented, they cannot be shared, among teams and across time; if they are not shared, the opportunity is missed to capitalize on previous successes and failures.

### **Task 5: Adjust the Plan According to Lessons Learned**

The actionable recommendations agreed upon during the lessons learning process must be executed. They will most likely consist of recommendations on how to adjust the business continuity plan (Wallace and Webber 2007):

- ❖ Increasing the degree of detail of certain instructions and adding missing steps;
- ❖ Removing and replacing inappropriate instructions that caused impasse or did not work as planned;
- ❖ Providing guidance to tackle contingencies that were not explored in the previous plan;
- ❖ Modifying the assumptions that proved to be (partially) wrong, including on recovery time and costs of the effort;
- ❖ Revising the composition of the business continuity team;
- ❖ Updating the list/database of contacts.



## **Reading and References**

*ILO, 2009a. Business Continuity Planning: Guidelines for Small and Medium-sized Enterprises. International Labour Office: Geneva, 2009.*

*ILO, 2009b. Business Continuity Planning in Facing Pandemic Influenza: Guide and Workbook. International Labour Office: Jakarta, 2009.*

*ILO, APINDO impact of the Tsunami and Earthquake of 26 December 2004 on Apindo's Enterprises in Aceh Province, Rapid Assessment: Banda Aceh, March 2005.*

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*Kildow, Betty A. 2011. A Supply Chain Management Guide to Business Continuity. American Management Association: New York 2011.*

*Wallace Michael, Lawrence Webber 2007. The Disaster Recovery Handbook: A Step-by-Step Plan to Ensure Business Continuity and Protect Vital Operations, Facilities and Assets. American Management Association: New York 2007.*







# Glossary<sup>26</sup>

## **Business Continuity Management**

BCM is a management process aimed to counteract the negative impacts of possible threats on the continuity of organisational activities. BCM does so by strengthening resilience through risk preventive and mitigation measures, as preparedness arrangements.

## **Business Development Services**

A wide range of non-financial services used by entrepreneurs to help them operate efficiently and develop their businesses. Focuses on promoting the access to and use of these services by small, and medium scale enterprises. May include training, consultation services, marketing services and information resources that help firms gain access to services usually enjoyed only by larger firms.

## **Climate change**

The changes in climate, caused directly by human activity, that alter the composition of Earth's atmosphere over and above the natural variability of the climate observed during regular periods of time.<sup>27</sup>

## **Corporate Social Responsibility**

It is practiced by companies to ensure their compliance with laws, international standards, ethical norms and environmental protection requirements. With CSR, companies take responsibility for the spillover effects they generate where they operate, and they adopt a proactive role to generate benefits for employees, consumers, communities, the environment and other stakeholders as a whole.

## **Disaster**

Occurrence of a major event or a series of events which result in loss of life or damage to property, infrastructures, essential services or means of livelihoods on a scale which is beyond the normal capacity of the affected community to cope and where extraordinary interventions are required to save lives, livelihoods and environment, and to undertake rehabilitation and recovery measures.

## **Green Jobs**

Are employment opportunities that not only reduce the environmental impacts of production and consumption to sustainable levels but also offer decent work and contributes to disaster-risk reduction at the same time.<sup>28</sup>

## **Hazards/Shock/Stress**

An element that causes adverse effects.<sup>29</sup>

## **Informal economy**

Absorbs workers who would otherwise be without work or income. Represents a growing labour force mainly consisting of women and youth. Characterized by the lack of social protection, representation, property rights, access to legal and judicial system, neither to public infrastructure and services.<sup>30</sup>

<sup>26</sup> Most of the terms presented in this glossary have been taken from the ILO publication *Local Economic Recovery in Post-conflict Settings: Guidelines* (2010).

<sup>27</sup> Source: *Disaster reduction, Living in harmony with nature*, Julio Kuroiwa, Peru, 2004

<sup>28</sup> Source: *Decent Work, Climate Change and Disaster Risk Reduction*, ILO, Kobe, January 2009.

<sup>29</sup> Source: ODI, *Resilience: A risk management approach*, Tom Mitchell, Katie Harris, Background Note, January 2009.

<sup>30</sup> Source : <http://www.ilo.org/public/english/employment/infeco/>

## **Livelihoods**

Livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers & Conway, 1991).<sup>31</sup>

## **Lessons learned**

Are the knowledge we gain through experience. Lessons-learning can be considered as part of broader knowledge management processes. It is undertaken by reviewing what has worked well and what did not, or performed less well than expected. Steps include: identifying the lessons; documenting the lessons; reaching consensus on corrective actions; and sharing lessons learned and recommendations.

## **Microfinance**

The sustainable provision of financial services (e.g. credit, savings, micro-insurance, leasing) to small entrepreneurs and other individuals with low incomes, who do not have access to commercial financial services.<sup>32</sup>

## **Microinsurance**

Can help to providing low-income households, farmers, and businesses with rapid access to post-disaster liquidity, thus protecting their livelihoods and providing for reconstruction. As insured households and farms are more creditworthy, insurance can also promote investments in productive assets and higher-risk/higher-yield crops. In addition insurance has the potential to encourage investment in disaster prevention if insurers offer lower premiums to reward risk-reducing behaviour.<sup>33</sup>

## **Network**

The whole of personal contacts, direct and indirect, possessed by the actors' representatives. The contacts influence and determine the type of 'institutional' relationship built between the actors.<sup>34</sup>

## **Participatory approach**

An approach that guarantees that all entities/people involved influence and share the control of initiatives, decisions and resources.

## **Planning**

It is a decision making process aimed at describing what needs to be done (sequence of actions), for what purpose (objective), by when (timeframe), by whom (roles and responsibilities), with what means and at which cost (budget). Planning is aimed at making sure that everything is thoroughly thought out before activities begin.

## **Process**

Describes the series of actions or decisions that need to be made to reach a goal. These actions or decisions are set out in a proper order and are dependent on each other. They must be undertaken in the correct order.

## **Recovery**

Refers to a wide-ranging process (the re-building of livelihoods, housing, services, local government, etc) following a crisis, with the aim of regaining a level of stability in the area. This lays the basic foundations for the transition from the immediate emergency response to medium-term and long-term development.

## **Resilience**

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner. (United Nations International Strategy for Disaster Reduction).<sup>35</sup>

**Risk** : [http://www.recoveryplatform.org/assets/Guidance\\_Notes/INTERNATIONAL\\_LIVELIHOOD\\_150910.pdf](http://www.recoveryplatform.org/assets/Guidance_Notes/INTERNATIONAL_LIVELIHOOD_150910.pdf)

<sup>32</sup> ILO, 2005. Employment for peace (CD ROM). Short guide on microfinance.

<sup>33</sup> Source : Source: CCD, *The Role of Risk Transfer and Insurance in Disaster Risk Reduction and Climate Change Adaption*, Margaret Arnold, Kräftriket, March 2008

<sup>34</sup> Source: Gasser M., Piñeiro J., Coto Moya L.G., 2005. Up cit.

<sup>35</sup> Source: ODI, *Resilience: A risk management approach*, Tom Mitchell, Katie Harris, Background Note, January 2009.

It is an uncertain event that has a given probability to realise and produce an impact that can be more or less severe. Risks are measured through the product of their likelihood and expected impact. They are generated by a specific cause and their treatment has a cost.

### **Risk management**

It is a process aimed to identify measure, prioritize and treat the risks affecting an organisation. Response options include: avoidance, reduction, transfer and retention (or tolerance).

### **Scenario**

Scenarios are approximate descriptions of possible future realities. Scenario planning consists of developing story lines linking underlying factors in a causal relationship that can be demonstrated. The line closes with a result that is one of the many possible future environments we will have to deal with. The best we are prepared to the most important disaster scenarios, the fewer expenses we will have to incur in case they realise.

### **Stakeholders**

Refers to a group of individuals who are participating or might participate in any action/project/program, either through their own efforts or in partnership with an organization. Individuals within a stakeholder group share similar interests (I.e. groups of farmers, fishermen, widows, youth, small business owners, etc.)

### **Supply chain**

It indicates systems of enterprises providing services and goods to each other in a sequence that can be described by an input-output relationship. With respect to a specific producer, the chain is constituted by vendors, and vendors of vendors.

### **Value Chain**

It is a supply chain seen from the perspective of the customer and not the producer. Along a supply chain, the traded good/service is transformed; its value, as perceived by the customer, grows at each link. Members of the same supply chain may be situated in different value chains, because their capacity to produce value for customers is not homogeneous.

### **Vulnerability**

The propensity or predisposition to be adversely affected.<sup>36</sup>

<sup>36</sup> Source: ODI, *Resilience: A risk management approach*, Tom Mitchell, Katie Harris, Background Note, January 2009.



# Annexes: Tools



## Tool 1: Enterprise Rapid Needs Assessment<sup>37</sup>

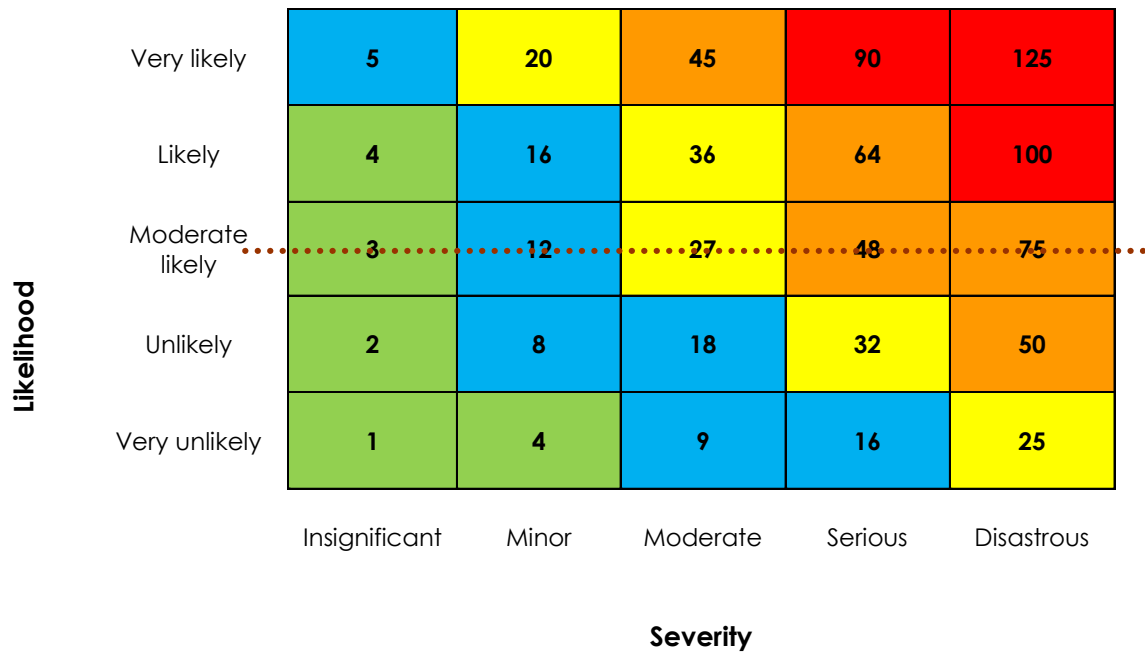
Name of Company			
Head of Company			
Business Sector			
		Pre-Disaster	Post-Disaster
Number of Staff	Full-time		
	Part-time		
Skills	Specialised		
	Skilled		
	Unskilled		
Average age of labourers			
Productivity			
Annual budget			
Annual Expenditure			
Infrastructure	Workshop		
	Office		
	Other		
Hardware	Office Furniture		
	Computers		
	Cars		
	Bus, etc.		
	Other		
Any provincial, national, or international financial assistance (private, public, international)?			
<b>OPEN QUESTIONS</b>			
How do you estimate the productivity reduction due to crisis? (%)			
Any rehabilitation already ongoing?			
What is needed restart? (assets, financial resources, etc.)			
What is needed to recuperate 100% productivity?			
What is needed allow for marketing distribution/retailing, etc.?			
Operational Capacity (%)			
<b>COMPANY HIGHLIGHTS</b>			
Structure of Organisation (small/medium size)			

<sup>37</sup> Source: ODI, *Resilience: A risk management approach*, Tom Mitchell, Katie Harris, Background Note, January 2009.

Sector (field of business) % of market covered by your company	
Was there any training provided to the staff before the disaster?	
Any particular early warning awareness?	
Have you received any support from the Chamber of Commerce and Industry	
<b>BUSINESS IN DISTRICT</b>	
Sectors available	
Number of companies	
Union Representation?	



## Tool 2: Risk matrix to calculate risk magnitude







**Tool 3: Sample table for the identification of business interruption costs for each product/service**

Category	Type of cost (examples)	Narrative description		
		1 <sup>st</sup> Interval [No. Days: ...]	2 <sup>nd</sup> interval [No. Days: ...]	3 <sup>rd</sup> interval [No. Days: ...]
Legal				
Financial				
Efficiency/ productivity				
Reputation				



**Tool 4: Sample table to rank non-delivery costs of each product/service**

Category	1 <sup>st</sup> Interval [No. Days: ...]	2 <sup>nd</sup> interval [No. Days: ...]	3 <sup>rd</sup> interval [No. Days: ...]	AVERAGE
Legal				
Financial				
Efficiency				
Reputation				
GRAND TOTAL				Cost score



### Tool 5: Sample matrix for the identification of critical products

Product	Relevance to the mission	Sales volume	% income	Costs of non-delivery	Final score



### Tool 6: Sample matrix to profile core assets

<u>Activity title: ...</u>				
Asset	Cost/unit (US\$)	Internal / external	Name of supplier	Location/ Origin



### Tool 7: Sample matrix to list business operations

Function/Department	Operations



### Tool 8: Sample matrix for profiling natural hazards

Location	Activity(ies)	Natural hazard	Proximity to hazard in Km	Vulnerabilities to the hazard	Likelihood	Season / month
		Hazard ...			Range: 1-5	...



### Tool 9: Sample matrix for profiling disruption risks

Asset	Location & topography	Natural hazard	Type of disruption	Likelihood	Impact	Season / month



### Tool 10: Sample matrix for profiling disruption risk of time-critical operations

Time-critical Operations	Location & topography	Natural hazard	Type of disruption	Likelihood	Downtime period		Season / month
					Tolerated	Expected	



### Tool 11: Matrix to identify business continuity options

Critical resource	Critical function	Business continuity options
Human resources	Personnel	...
Raw materials	Purchasing	...
Finished products	Marketing and sale	...
Warehouse	Purchasing	...
Production premises	Production	...
Machinery	Production	...
Information systems	Information mgt	...
Vehicles	Marketing and sales	...



### Tool 12: Sample matrix to summarize BCM communications procedures

To whom	By whom	What	When	How (media and language)

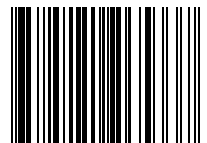


## Tool 13: Matrix to identify business continuity options

Critical resource	Critical function	Business continuity options
Human resources	Personnel	...
Raw materials	Purchasing	...
Finished products	Marketing and sale	...
Warehouse	Purchasing	...
Production premises	Production	...
Machinery	Production	...
Information systems	Information mgt	...
Vehicles	Marketing and sales	...

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