Corporate Engagement
in Disaster Preparedness, Response, and Recovery

A manual prepared by the Public-Private Partnerships for Disaster Management in China Initiative June 2008
# Index of Abbreviations

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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AmCham</td>
<td>American Chamber of Commerce in China</td>
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<tr>
<td>ASIS</td>
<td>American Society for Industrial Security International</td>
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<tr>
<td>BCLC</td>
<td>Business for Civic Leadership Center (USA)</td>
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<td>CEC</td>
<td>Chinese Enterprise Confederation</td>
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<tr>
<td>CFPA</td>
<td>China Foundation for Poverty Alleviation</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>DRM</td>
<td>Disaster Risk Management</td>
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<tr>
<td>DRR</td>
<td>Disaster Risk Reduction</td>
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<tr>
<td>EHS</td>
<td>Environment, Health, and Safety</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency (USA)</td>
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<tr>
<td>MOCA</td>
<td>Ministry of Civil Affairs (China)</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
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<tr>
<td>PPP</td>
<td>Public-Private Partnership</td>
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<tr>
<td>PQMD</td>
<td>Partners in Quality Medical Donations</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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Aim of the Manual
This manual aims to highlight the relevance and importance of participation from the private sector in disaster management and to provide concrete steps for corporate disaster preparedness.

A component of the program to promote public-private partnerships for disaster management in China, this manual provides information and case studies to be used by multinational companies in developing their own strategies and approaches to disaster preparedness, response and recovery. Historically, governments have taken the lead in disaster management while the private sector and non-governmental organizations (NGOs) have played supplementary roles. Recent disasters, such as the snowstorms in Southern China and the catastrophic earthquake in Southwest China, saw greater involvement from private sector entities. Moving forward, taking steps to effectively increase corporate involvement would benefit efforts in mitigating risks of and in responding to natural disasters.

As will be illustrated by examples, the private sector can play a crucial role during times of crisis. Companies also can provide expertise and services to mitigate the threat of future disasters as part of efforts in preparedness.

As corporate involvement can and would ideally occur in various ways as part of corporate social responsibility (CSR) initiatives, this manual is aimed at several entities within a company: operations, strategy, communications, and human resources, among others. While each of these entities can drive one component of the disaster management plan, coordination amongst all parts of the business remains imperative.

Beyond the corporation, this manual will address the public and non-profit sectors, key partners for disaster preparedness, response, and recovery efforts. Having individuals and departments within NGOs and governmental organizations understand the corporate perspective and likewise having the private sector gain an increased awareness of the public and non-profit sector will facilitate partnerships among these entities.

The manual includes the following:

- Overview of disaster preparedness, response, and recovery
- Guidelines on corporate disaster preparedness
- Guidelines on corporate involvement and opportunities for public-private partnership
- Case studies

This manual should serve as a general guide. Readers are, of course, responsible for their own actions and should verify local laws and regulations that might apply.
Letter to Corporate Executives
In the past few years, natural disasters have shaken communities at the city, country, and even global level, harming human lives, destroying infrastructure, and incurring billions of dollars in losses. The tsunami in Southeast Asia (2004), Hurricane Katrina (2005), the snowstorms in Southern China (2008), and the earthquake in Sichuan Province (2008) – a few of the more recent and dramatic examples – all highlighted the need for greater risk reduction and risk management. These disasters also underscored the importance of multi-pronged strategies for response and recovery.

In recent years, our world has experienced rapid social, economic and environmental change. On the positive side, change can lead to development and growth; on the negative side, it can be disruptive and destabilizing for a range of entities. To facilitate smooth and sustainable operations, businesses naturally seek a stable environment and they increasingly understand that playing a pro-active role as a responsible corporate citizen contributes positively to creating healthier and more prosperous communities.

Natural disasters epitomize some of the most dramatic and rapid change. Within minutes, entire cities, provinces, and/or countries can be destroyed. In such a situation, there is no time for planning, meeting and developing objectives and goals. Rather, planning must be done in advance. Research indicates that every dollar spent on preparedness can save from two to ten dollars in relief. While the statistics are convincing, prevention could still be prioritized at a higher level.

The Public-Private Partnerships for Disaster Management Program is a joint initiative of The Asia Foundation, the Ministry of Civil Affairs, the American Chamber of Commerce China, the American Chamber of Commerce Shanghai, and the Chinese Enterprise Confederation. The program, supported by the Office of U.S. Foreign Disaster Assistance of the United States Agency for International Development (USAID), is aimed at fostering collaboration via increased awareness, knowledge sharing, capacity building and hands on support. Part of a multi-phased initiative, this manual seeks to shed light on the benefits of preparing for natural disasters and on the effectiveness of a public-private approach.

This manual can be beneficial to companies seeking to establish and/or improve their corporate disaster preparedness plans. Members of teams focusing on strategy, operations, human resources, CSR, and communications, among others, can further reflect on the relevance of disaster preparedness to their particular business functions. With deeper understanding, the company as a whole can take steps to prepare its internal and external responses. This manual was developed at the time when the devastating earthquake hit Southwest China and as initial relief took place. We hope you will use and keep this manual as a resource and engage in efforts to create more safe and sustainable communities.

We all have a role to play. The challenge for all of us is to more effectively leverage the skills and resources of the public and private sectors to prepare for and manage disasters in our shared global community.
Disaster Preparedness, Response, and Recovery
What is a disaster?

A disaster can be defined as an occurrence causing widespread destruction and distress.¹

Natural disasters are those caused by natural forces and include hazards such as earthquakes, floods, droughts, blizzards, hurricanes, typhoons, tornados, etc. This manual focuses on natural disasters; however, principles and tactics featured here may also apply to managing man-made disasters.
Earthquake
One of the most frightening and destructive phenomena of nature is a severe earthquake and its terrible after effects. Earthquakes strike suddenly, violently, and without warning at any time of the day or night. If an earthquake occurs in a populated area, it may cause many deaths and injuries and extensive property damage.

Flood
Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states. However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.

Landslide and Debris Flow (Mudslide)
In a landslide, masses of rock, earth, or debris move down a slope. Landslides may be small or large, slow or rapid. They are activated by:
- storms
- earthquakes
- volcanic eruptions
- fires
- alternate freezing or thawing, and
- steepening of slopes by erosion or human modification.

Debris and mud flows are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud or “slurry.” They can flow rapidly, striking with little or no warning at avalanche speeds. They also can travel several miles from their source, growing in size as they pick up trees, boulders, cars, and other materials.

Tsunami
Tsunamis (pronounced soo-ná-mees), also known as seismic sea waves (mistakenly called “tidal waves”), are a series of enormous waves created by an underwater disturbance such as an earthquake, landslide, volcanic eruption, or meteorite. A tsunami can move hundreds of miles per hour in the open ocean and smash into land with waves as high as 100 feet or more.

Winter Storms and Extreme Cold
Heavy snowfall and extreme cold can immobilize an entire region. Even areas that normally experience mild winters can be hit with a major snowstorm or extreme cold. Winter storms can result in flooding, storm surge, closed highways, blocked roads, downed power lines and hypothermia.

Hurricane /typhoon/tropical storms
Hurricanes can cause catastrophic damage to coastlines and several hundred miles inland. Winds can exceed 155 miles per hour. Hurricanes, tropical storms, and typhoons can also spawn tornadoes and microbursts, create storm surges along the coast, and cause extensive damage from heavy rainfall.
**Natural Disasters and Human Behavior**

While the term natural disasters may indicate that these types of hazards are strictly attributable to phenomena in nature, it is also important to highlight the role of human behavior in increasing the likelihood of natural disasters. Land misuse, high levels of toxic emissions, and other forms of pollution can increase vulnerabilities, and thus the probability and voracity of natural disasters and their subsequent damage.

On the other hand, human behavior can reduce the negative impact of disasters as well. Development efforts that succeed in strengthening early warning capabilities, infrastructure, and other measures and systems for preparedness can help mitigate the hazardous effects of a natural disaster.

**What is the prevalence and impact of disasters in China?**

China is one of the most disaster-prone countries in the world. The most prevalent natural disasters in China are earthquakes, floods, droughts, hurricane, typhoons, and winter storms.

On average, approximately 380 million people/times are affected and thousands of people are killed in disasters every year in China. Annual economic losses account for three to four percent of GDP. In 2007 alone, disasters claimed 2,325 lives, left 14.9 million people homeless, and cost RMB236 billion (US$33 billion) in direct losses, according to statistics from the Ministry of Civil Affairs of China. This was caused by the severe floods, landslides and drought that affected China in 2007, exceeding annual averages and extending beyond the usual typhoon and flood season into September. As of this printing, the severe May 12 earthquake in Southwest China had claimed nearly 70,000 lives, and left another 17,000 missing, hundreds of thousands injured and 5 million people homeless. Earlier in 2008, vast swaths of the country witnessed the worst snow storms and cold weather in more than 50 years.

**Impacts**

Natural disasters have a range of impacts:

<table>
<thead>
<tr>
<th>Tangible/material</th>
<th>Intangible/abstract</th>
<th>Occurrence/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>• People</td>
<td>• Social structures</td>
<td>• Immediate</td>
</tr>
<tr>
<td>• Property</td>
<td>• Cultural practices</td>
<td>• Short term</td>
</tr>
<tr>
<td>• Economy</td>
<td>• Livelihood</td>
<td>• Mid term</td>
</tr>
<tr>
<td>• Infrastructure</td>
<td>• Cohesion</td>
<td>• Long term</td>
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<tr>
<td>• Environment</td>
<td>• Motivation</td>
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</table>
What is disaster management?

Disaster management is a collective term encompassing all aspects of planning for and responding to emergencies and disasters, including both pre- and post-event activities. It refers to the management of both the risk and the consequences of an event. In essence, disaster management is more than just response and relief; it is a systematic process aimed at reducing the negative impact and/or consequences of adverse events.

**Goals of disaster management:**
- Minimizing loss via more effective preparedness and response
- Creating more effective and durable recovery

There are three main phases in the course of disaster management:
1. **Preparedness:** efforts conducted prior to the disaster, and often related to a company’s risk management initiatives
2. **Response:** efforts put forward during the disaster, including relief
3. **Recovery:** efforts put forward following the disaster

(The disaster management cycle: Adapted from USAID, *Disaster Management: Participants’ Workbook,* (2001) pp. WB 4 - 2.)

As the field of disaster management has developed in the last decade, more specific terms have come into use and will be covered in this manual. The following section will delve into each of these phases and also address disaster risk management and disaster risk reduction – currently the two key driving forces in efforts by governments, multi-lateral organizations, and other public sector entities.

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**Disaster Preparedness**

Disaster preparedness involves specific measures taken before disasters strike, usually to forecast or warn against them, take precautions when they threaten, and arrange for the appropriate response.

Disaster preparedness involves a range of players including governments, NGOs, and companies, and each of these entities has a role to play. While there may be some overlap in steps taken by each of these groups in developing a preparedness plan, the actions below are core steps for companies:

- Conduct disaster risk assessments
- Integrate broader social and environmental issues into business strategies and operations
- Enact measures and systems that reduce risks
- Develop plans for response and recovery
Disaster Risk Management and Disaster Risk Reduction

Disaster risk management (DRM) is a systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risk. Disaster risk reduction (DRR) entails measures to curb disaster losses by addressing hazards and people’s vulnerability to them.\(^5\)

The most effective disaster risk management often happens before disasters occur, continues after a disaster and incorporates lessons learned, thus mitigating risks to future disasters.\(^6\)

Disaster risk reduction is about modifying hazards, reducing vulnerability, increasing capacity.

Disaster Response

Disaster response refers to actions taken during and immediately after a disaster to ensure that its effects are minimized, and that people affected are given immediate relief and support.\(^7\) These include providing food, water, shelter, and medical aid, removing people from danger, among other outreach efforts.

Disaster Recovery

Disaster recovery refers to the coordinated process of supporting disaster-affected communities in reconstruction of physical infrastructure and restoration of emotional, social, economic and physical well-being.\(^8\) This includes rebuilding houses and businesses, and providing medical aid and counseling, among other efforts.
Disaster = Hazard + Vulnerability – Capacity

Social and economic development are crucial components of disaster preparedness, however initiatives in development must be undertaken with caution and greater understanding of risks. Development can increase or reduce vulnerability, depending on how programs are designed and run. On the other hand, while natural disaster may seem to counter development goals, they can also offer development opportunities (e.g. rebuilding disaster affected areas in a more sustainable manner).

(Source: USAID, Disaster Management: Participants’ Workbook (2001), pp. WB 4 - 6.)
## Impacts of Natural Disasters

<table>
<thead>
<tr>
<th></th>
<th>Tangibles</th>
<th>Intangibles</th>
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<tbody>
<tr>
<td><strong>Floods</strong></td>
<td>Everything located in flood plains or tsunami areas. Corps, livestock, machinery, equipment, infrastructure. Weak buildings.</td>
<td>Social cohesion, community structures, cultural artifacts.</td>
</tr>
<tr>
<td><strong>Volcanic eruption</strong></td>
<td>Anything close to volcano. Corps, livestock, people, combustible roofs, water supply.</td>
<td>Social cohesion, community structures, cultural artifacts.</td>
</tr>
<tr>
<td><strong>Land instability</strong></td>
<td>Anything located on or at base of steep slopes or cliff tops, roads and infrastructure, buildings on shallow foundations.</td>
<td>Social cohesion, community structures, cultural artifacts.</td>
</tr>
<tr>
<td><strong>Cyclonic winds</strong></td>
<td>Lightweight buildings and roofs. Fences, trees, signs: boats fishing and coastal industries.</td>
<td>Social cohesion, community structures, cultural artifacts.</td>
</tr>
</tbody>
</table>

*Source: UN – DMTP, An Overview of Disaster Management*

Preparedness helps minimize the negative impact of natural disasters to business operations and ultimately to profit.
What are key global trends in disaster preparedness, response, and recovery?

Some of the key global trends are as follows:

- Improvement of professional standards and guidelines
- Greater emphasis on preparedness and mitigation programs as compared to relief and response operations
- Focus on managing risks in advance of disasters
- Shift from corporate donations of cash only to broader contribution including skills and resources
- Integration of disaster preparedness into overall development objectives and programs
- Greater involvement of the private sector and development banks
- Development of NGO emergency units or rapid emergency response teams

How do disasters affect companies?

Disasters not only destroy infrastructure and stability of the communities in which they take place, they also can interrupt business in many ways:

- Loss of capital assets (buildings, plants, equipment)
- Damage to land and/or area where company or suppliers are located
- Disruption of distribution, sales, and other core business endeavors
- Disruption of business for partners along the supply chain
- Harm, both physical and mental, to employees

Companies can mitigate the negative effects of disasters in two ways:

1) They can operate in ways that do not increase risk of disasters.

2) They can engage in preparedness initiatives both within the company and in the community at large.

This two-pronged effort can foster sustainable growth for a company and help it stay competitive. Given the complex and devastating impact a disaster can have on a business, a multi-faceted, inter-departmental and phased approach to disaster preparedness, response, and recovery is crucial.
How can companies get involved in disaster preparedness, response, and recovery?

Disaster management is a multi-disciplinary field and its success cannot be achieved by a single entity or by working in isolation. Both the public and private sector have a role to play at every stage.

Private sector organizations bring unique strengths and capabilities that can contribute significantly to disaster preparedness, including risk management and risk reduction. The private sector can engage in the following ways:

- **Support local development** that helps mitigate risks in disaster prone areas via corporate-initiated or public sector-led programs focusing on, for example, physical infrastructure, poverty alleviation, and other capacity building initiatives.

- **Provide corporate support for community preparedness programs** and for training local governmental and non-governmental organizations where appropriate.

- **Encourage sound economic policies** to foster a more stable environment for community development and business that at the same time helps decrease vulnerability to natural disasters.

- **Provide technical, logistical, and other “core competency” support.** Companies can leverage their existing technological capabilities, distribution networks, and other types of expertise and become integral partners in disaster management as individual entities or in alliance with other companies.

- **Offer technical and other training.** Companies can form strategic alliances or bilateral partnerships with other stakeholders (e.g. government, NGOs, etc) to provide technical training, management and leadership capacity building, and best practices to build sustainable systems for disaster risk reduction.

- **Engage in corporate peer education** by sharing best practices in risk management training, and other core preparedness tactics with other companies.

- **Engage company employees** by leveraging internal skills and resources and forming internal preparedness committees and by encouraging employee volunteerism. For the latter, companies can partner with professional organizations (in either the public or private sector) to train their employees to be disaster relief volunteers.

- **Provide donations.** Companies can offer donations in cash or in kind (e.g. tents, medicines, clothing, food, water, generators, vehicles etc), through establishing appropriate product donation and service sharing channels.
### What are the benefits of strengthening your company’s efforts in disaster preparedness?

Companies can benefit in concrete ways from strengthening efforts in disaster preparedness, response, and recovery. Some benefits include:

- **Preventing Direct Loss:** Natural disasters have the capacity to de-stabilize economies and livelihoods. They spare no one — large corporations, SMEs and individuals all can be affected to various degrees.

- **Protecting Assets and Promoting Efficient Operations:** Companies can benefit if they link their business continuity plans with the overall emergency contingency plans of communities. Community preparedness means safeguarding members of the community who not only may include employees but also may form part of a company’s customer base.

- **Restoring Market and Supply-Chain:** Preparedness helps ensure business can resume normal functions quickly after disasters and provides an opportunity for business to link up with government and other institutions to support recovery.

- **Nurturing a Positive Corporate Culture:** Preparedness demonstrates a companies’ commitment to the community and especially to its employees. Such efforts help retain employees and motivate them to engage with the community as individual volunteers and contributors.

- **Leveraging CSR:** Many private sector companies give back to society through CSR initiatives. Responsible corporate practices are in line with a pro-active approach to disaster preparedness and subsequently to involvement in response and recovery. The process provides an opportunity to enhance corporate reputation and demonstrate leadership in the industry.

- **Supporting Sustainability:** Saving lives, mitigating risks, and building resilience are all sound strategies for long-term sustainable development which ultimately can provide livelihood safety nets and stable income generation for communities at risk.

- **Connecting with Communities:** Disaster preparedness can provide a platform for the private sector to be better connected to the communities they serve. It is an opportunity for private companies to build strong partnerships with other stakeholders, including government, humanitarian agencies and community groups.
How do disaster preparedness, response, and recovery fit into CSR?

The intersection between CSR and disaster preparedness, response, and recovery exists on two fronts:

- **Company Operations**: A company that operates responsibly does not increase risks and vulnerabilities of communities where it does business. Rather, through a clear understanding of the risks at hand, the company’s strategies, operations, and preparedness plans seek to reduce and mitigate the risks of disasters.

- **Company Engagement**: Responsible corporate behavior also involves stakeholder engagement and leveraging core competencies for the benefit of society. Companies have an opportunity to engage with government, NGO, and other corporate partners in efforts to create more effective approaches to disaster preparedness, response, and recovery.
Corporate involvement and opportunities for public-private partnership
Through disaster preparedness, government, NGOs, and companies have an opportunity to contribute to development efforts and help reduce the negative effects of natural disasters.

What is the government’s role in disaster preparedness, response, and recovery?

In countries throughout the world, governments play a key role in disaster response and relief. In China, the government is the main agent in disaster preparedness, response, and relief. The Ministry of Civil Affairs and its provincial/county and city level Departments of Civil Affairs are responsible in the disaster relief phase to allocate resources including manpower and materials for immediate rescue and relief.

According to national emergency plans, the national or local government will organize emergency headquarters that include various government departments to coordinate disaster response. For example, for the May 12 earthquake in Southwest China, the central government established the National Quake Relief Headquarters on the day of the disaster. The headquarters originally consisted of eight working groups, focusing on rescue, seismic monitoring, medical treatment, resettlement, infrastructure, restoration of agricultural and industrial production, public security, and communication. Following the threat of flooding, a water resources group was later added. These working groups are temporary, and supersede other government agencies. In addition to the national general headquarters, local headquarters were set up at the provincial and lower levels. During disaster reconstruction and recovery, the leading role will be handed over from the emergency headquarters to line ministries or departments.

For disaster preparedness and recovery, according to China’s National Plan for Comprehensive Disaster Reduction during the “Eleventh Five-Year Plan” (adopted by the State Council on August 5, 2007), local governments and relevant departments (such as construction, education, communication and finance) have important roles in ensuring the safety and security of both people and property and promoting all-round, well-balanced and sustainable socio-economic development.
What is the role of the private sector in disaster preparedness, response, and recovery?

Historically, the private sector has been involved in disaster response and recovery throughout the world. These largely humanitarian and philanthropic efforts have occurred in the form of aid both in cash and kind. However, as the field of disaster preparedness (including risk management and reduction) has developed, it has come to involve more players, such as the private sector.

The private sector has both the capability and the opportunity to play an active role in disaster preparedness, both internally through corporate practices as well as externally as key players within the community.

In China, both the domestic and foreign business communities are increasingly engaged in philanthropic efforts to promote CSR programs. The Chinese Enterprise Confederation has a CSR unit called the Global Compact Office, and it actively encourages its members to incorporate CSR concepts into their business operations. AmCham China’s CSR Committee facilitated more than US$700,000 (RMB4.9 million) in donations for social initiatives in China from 2004-2007, while AmCham Shanghai’s CSR Committee helped facilitate US$240,000 (RMB16.8 million) in donations in 2007 alone. While donations traditionally focused on health and education, members of AmCham have increasingly directed CSR funds and in-kind contributions to disaster relief.

In disaster preparedness, companies have a responsibility and opportunity to:

- Manage operations to minimize levels of risk within the business including establishing safety standards and business continuity plans
- Manage operations to minimize levels of risk in communities in which they do business
- Establish partnerships with public sector and non-profit entities to support preparedness, response, and recovery efforts
- Sponsor research initiatives in the area of disaster risk management and disaster risk reduction
- Establish intra-industry partnerships to better coordinate efforts that leverage core competencies, including technical and/or resource support
- Establish inter-industry partnership to create more comprehensive approaches involving various strengths
What is the role of non-governmental organizations?

In countries all over the world, NGOs play an important role in disaster preparedness, response, and recovery. In preparedness, they are involved in capacity building efforts to better equip vulnerable communities. In the event of a disaster, they deploy relief efforts such as providing medical aid, food, shelter, and clothing. NGOs also play important roles in recovery, helping communities rebuild infrastructure and replenish other damaged resources.

Internationally and more recently in China, while the government is the primary agent in disaster management, NGOs have become active in a few key areas such as public health, education, poverty alleviation and environmental initiatives, which can be important resources for both mid and long-term disaster recovery programs.

NGOs often work in partnership, both with government and companies. For companies, NGOs can serve as key collaborators in CSR programs and can help companies deploy technical resources and donations to disaster affected areas. Local and community-based NGOs can use their knowledge of local communities’ capacities and resources in assessing and implementing activities, participating in coordination meetings, and also in assisting the affected population to rebuild their homes.
What are key components of disaster preparedness for a company?

While this manual touches on components of disaster response and relief, the main focus is on disaster preparedness, which ultimately is the best mechanism to ensure that response and relief efforts are most effective.

Key to preparedness is risk assessment, planning, training, and testing

Planning Process


Risk Assessment

Before developing a disaster preparedness plan, it is important to do a hazard risk assessment to ensure that there is a clear understanding of the overall environment and circumstances for which the plan will be made.

Risk assessment can be understood as a five-stage process\(^9\):

- Establish the context of the risks
- Identify potential risks
- Analyze the risks by assessing the likelihood and impact of an event
- Set priorities for addressing the risks (which can include a decision to not address some risks)
- Treat the risks (identify, plan and implement activities)

All risks cannot be eliminated but they can be minimized to varying degrees. Technical measures, traditional practices, and public experience can be used to reduce severity of the disasters.

Assessing risks is a crucial step before developing a disaster management plan.

Planning

Contingency plans must be developed and/or previously existing plans updated in light of experience gained in the disaster. Contingency planning is most effective when it is a participatory process that includes all the actors who will be required to work together in the event of an emergency. It is a forward planning process, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place to respond to an emergency situation.\(^10\)

Developing a plan is key to ensuring that efforts in preparedness, response, and relief have taken the business, the community, and other entities’ key issues into account.
A comprehensive disaster preparedness strategy would therefore include the following elements:

<table>
<thead>
<tr>
<th>Hazard, risk, and vulnerability assessment</th>
<th>Some key questions to help conduct an assessment:</th>
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<tbody>
<tr>
<td></td>
<td>• What are the main natural hazards that could affect my business?</td>
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<tr>
<td></td>
<td>• What is the likelihood of each of these occurring? (May differ per location)</td>
</tr>
<tr>
<td></td>
<td>• What are the risks associated with each of these? (May differ per location)</td>
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<tr>
<td></td>
<td>Based on the above:</td>
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<tr>
<td></td>
<td>• Where and how is our company most vulnerable (e.g. specific location, structural vs. human vulnerabilities, etc.)?</td>
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<tr>
<td></td>
<td>• What are our company’s priorities in terms of preparing for natural hazards?</td>
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<table>
<thead>
<tr>
<th>Response mechanisms and strategies to create a plan</th>
<th>In developing a plan, a company should:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>• Identify organizational resources</td>
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<td>• Determine roles and responsibilities by location</td>
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<td>• Determine roles and responsibilities by business function, for example:</td>
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<td></td>
<td>&gt; Strategy</td>
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<td></td>
<td>&gt; Operations</td>
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<td></td>
<td>&gt; Finance</td>
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<td>&gt; Human Resources</td>
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<td></td>
<td>&gt; Communications</td>
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<td></td>
<td>• Develop policies and procedures on the following:</td>
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<td></td>
<td>&gt; Information gathering systems and/or outlets (early warning, needs assessment, post-disaster recovery)</td>
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<td></td>
<td>&gt; Information assessment processes</td>
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<td></td>
<td>&gt; Establishment of assessment teams (including plans for training them)</td>
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<td></td>
<td>&gt; Evacuation procedures (including how to disseminate these procedures to employees)</td>
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<td></td>
<td>&gt; Search and rescue teams (including plans for training them)</td>
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<td>&gt; Inventory of services and products that can be mobilized in event of a disaster</td>
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<td></td>
<td>&gt; Agreement with government agency or NGO to facilitate distribution of services or products</td>
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<td>&gt; Measures for activating distribution systems</td>
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<td>&gt; Measures for activating special installations, such as emergency or mobile hospital facilities</td>
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<td>&gt; Preparations for emergency reception centers and shelters</td>
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<tr>
<th>Coordination plans involving public and private sector partners</th>
<th>To ensure that response and recovery efforts are most efficient, companies can work to coordinate their plans by establishing partnerships with</th>
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<tbody>
<tr>
<td></td>
<td>• Government entities (national and local)</td>
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<td></td>
<td>• NGOs and relevant multi-lateral organizations</td>
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<tr>
<td></td>
<td>• Other companies within their industrial sector in order to leverage industry strengths and facilitate response efforts</td>
</tr>
<tr>
<td></td>
<td>• Other companies outside of their industry to develop comprehensive preparedness, response, and recovery plans that utilize strengths and core competencies across sectors</td>
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</table>
Training and Testing

Training and testing are key aspects of disaster preparedness, and there are several mechanisms that can be deployed in different situations and contexts.\textsuperscript{11}

- **Table top exercises**
  - Interactive discussions of possible disaster scenarios to devise response plans
- **Drills**
  - Limited mobilization of resources (e.g. personnel, equipment, etc.) used to simulate and test response plans, often focused on one component of the plan (e.g. building evacuation)
- **Full-scale exercises**
  - Comprehensive simulations that test multiple components of a plan

It is crucial to train employees for disaster management in line with the role they would play should a disaster occur.\textsuperscript{12}

- **Employees**
  - All employees should be able to react to disaster warnings
  - All employees should understand the emergency plan
  - All employees should know how to obtain information and guidance during an emergency from both internal and external sources
- **Management**
  - Management plays a crucial role in disaster response and may need to lead employees, engage with the media and/or other stakeholders, and make decisions about response efforts
- **Emergency response staff**
  - Employees with specific responsibilities in disaster response should receive special training.

Conducting trainings and testing is key to ensuring that a plan will be successful should a disaster occur.

Effective monitoring of training and testing helps to identify gaps.

Attributes of successful corporate disaster management

While companies’ plans and approaches may vary, companies that adhered to the following practices have experienced successful results in disaster preparedness, response, and relief:

- Employ pre-disaster planning and have protocols in place to facilitate involvement
- Blend cash and product donations and use core competencies in outreach efforts
- Rely on local expertise
- Establish and build on relationships with trusted NGO and other public sector partners
- Demand accountability and transparency\textsuperscript{13}
The following section highlights how public-private partnerships have played a positive role in disaster preparedness, response, and recovery both internationally and in China. There are no limits to how the private sector can contribute to disaster management. Here Caterpillar, Grainger, IBM, JPMorgan, Partnership in Quality Medical Donations, and UPS demonstrate how companies can leverage core competencies in disaster efforts.
Caterpillar’s preparedness initiatives allow it to act quickly to safeguard its employees and provide assistance when disasters occur. Caterpillar, China dealers, as well as the Caterpillar Foundation have thus far initiated two response efforts in 2008: the snowstorms in Southern China and the earthquake in Southwestern China.

**Snowstorm**

In February, the worst winter storms hit China in more than 50 years, and the severe weather resulted in at least 100 deaths and thousands more injuries and illnesses.

An initiative in preparedness, the Caterpillar travel safety program allowed security management to closely monitor and triangulate risk exposures in terms of facilities and individual travelers. Proactive travel safety advice and updates were communicated to all employees in snow-affected areas. The company’s local emergency response teams were placed on standby to respond at the facility level.

Caterpillar’s local businesses were advised to conduct a supply chain and critical supplier risk assessment to determine how the storms may impact its business partners. As part of the Caterpillar crisis management process, escalation to the Regional Incident Management level was considered but deemed unnecessary, as business impacts did not reach the enterprise level. Employees in Shandong, Suzhou and Xuzhou were voluntarily released from work three days prior to the holidays as a risk reduction measure.

By taking a proactive approach to managing risk and by placing people’s safety first, Caterpillar China operations were able to mitigate health and safety risks for employees and minimize business interruption.

The Caterpillar Foundation also contributed USD$150,000 to the Red Cross to assist in snowstorm relief efforts. In addition, Caterpillar dealer Lei Shing Hong provided machinery free of charge to help clear major roads and highways in the eastern region of China, an area hardest hit by the snowstorms.

**Earthquake**

Following the earthquake in China on May 12, Caterpillar, together with Caterpillar China dealers, engaged in rescue efforts and started planning for the reconstruction of the affected area.

The Caterpillar Chengdu District Office and ECI Metro Investment Co., Ltd, the Caterpillar and Shandong Engineering Machinery (a Caterpillar Company) dealer covering southwestern China, assembled more than RMB 20 million ($2.8 million) worth of...
Caterpillar equipment and a team of skilled operators for rescue operations. Following the disaster, a fleet of 22 Caterpillar machines, 16 sets of work tools and 5 generator sets were alongside the Sichuan Armed Police Rescue Center, one of the leading government agencies in charge of local rescue efforts. Caterpillar machines worked to help clear roads in the following areas: Dujiangyan, Deyang Honghai County, and the roads to Wolong, and the Longchi tunnel.

Caterpillar work tools were also used to assist in rescue efforts and clearing debris from the earthquake. Caterpillar contacted all its four dealers in China to get the most experienced master operators, maintenance people and volunteers – a team totaling more than 100 personnel.

In addition, the Caterpillar Foundation made a cash donation of RMB7 million (US$1 million) to earthquake relief through the American Red Cross. Caterpillar employees, retirees, directors and dealer employees are still in the process of making personal contributions. In addition, the company’s joint venture in Japan, Shin Caterpillar Mitsubishi Ltd., is making a donation of 10 million yen—nearly US$96,000 (RMB670,000)—to the Japanese Red Cross to help provide relief.

Caterpillar will continue to pursue ways to enhance support for the rescue operations and contribute to the reconstruction efforts. The company’s plan for supporting the reconstruction includes:

- Making available applicable work tools and special products that are not widely available in the market. Equipment such as large track-type tractors will be very helpful in reconstruction work;
- Providing training for all contractors on operation and maintenance for the pool of selected machines, regardless of whether they own equipment from Caterpillar or the company’s competitors;
- Leveraging the company’s knowledge on road rebuilding and using associated equipment fleets to help build rural roads in a faster and cheaper way when compared with conventional methods;
- Developing special rental terms for Caterpillar contractors who will be working in the reconstruction projects;
- Supporting re-building of affected schools and roads.
Grainger is the National Founding Sponsor of the American Red Cross “Ready When the Time Comes” (RWTC) Program. Grainger provided seed money to fund the launch of the program in 16 cities across the United States and is helping to promote the program and provide employees to be trained in disaster relief.

RWTC also meets a critical need in U.S. disaster preparedness planning and is a solid example of public-private partnership as it enables the resources and experience of corporate America to fill a vital gap in the training and response system. In addition to sheltering, feeding and other relief activities, many local Red Cross chapters are looking to RWTC corporate partners to assist with technology, staffing, infrastructure and logistical needs that arise when a disaster strikes.

RWTC trains employees and their family members as volunteers to help support local disaster relief efforts. In addition to staffing call centers, assisting with mass care sheltering and feeding operations, and conducting damage assessments, Grainger volunteers may be called upon to help with training of other corporate volunteer groups in disaster relief.

The first of its kind in the United States, this public-private partnership provides corporate employees with volunteer training to actively support those in need when a disaster occurs. RWTC fits a national need for individuals, employers and communities to be prepared proactively, not reactively.

In 2001, Grainger, a leading distributor of facilities maintenance products, was introduced to the RWTC program by the American Red Cross of Greater Chicago. With their highly integrated supply chain and distribution network, Grainger has had a long history of serving customers and communities with needed products to keep their local businesses running in times of disaster. This opportunity to extend the company’s commitment to disaster relief to their employees, retirees and their family members was embraced immediately by senior leadership within Grainger. Shortly thereafter, a corporate volunteer policy was instituted to allow all RWTC volunteers one paid day (8 hours) each year to respond to disasters. Grainger began its involvement with the RWTC program in Chicago in 2001. By the end of 2008, RWTC programs will be operational in 23 cities in the United States. More than 100 companies, including several Fortune 500s, have trained nearly 4,000 volunteers (almost 1,000 of which are Grainger employees).

With one phone call to a local company, the American Red Cross can have a cadre of pre-trained, highly skilled volunteers available to staff shelters, serve meals, answer phones, perform damage assessment, teach preparedness courses, execute warehousing and logistics functions or serve in other capacities as needed by the local Red Cross. RWTC has increased the capacity of local Red Cross chapters to respond by an average of 37%.

RWTC has also opened doors to new corporate relationships for the chapters and strengthened current ones. It has provided Grainger and other corporate partners with leadership and development opportunities for employees, strategic networking opportunities among corporate partners and potential business development leads. All told, the Red Cross has raised more than US$1.8 million (RMB12.6 million) in support of this program since its inception, with US$1 million (RMB7 million) contributed by Grainger and US$800,000 (RMB5.6 million) by other corporate sponsors.
IBM: Technology Helps Sichuan Earthquake Relief Efforts

After the earthquake in Sichuan Province on May 12, IBM immediately set up a Crisis Management Team to maneuver its global resources and support to contribute to the relief efforts in China. IBM leveraged its technology and experiences in large-scale disasters to help China’s relief efforts. In the first eight days after the earthquake, IBM donated technology, equipment, and services worth more than RMB7 million (US$1 million) to several key government departments.

In addition, IBM employees made cash donations and participated in volunteering work. By May 19, 11,593 IBM employees in China contributed donations totaling RMB3.2 million (nearly US$500,000), to the Chinese Red Cross Society, which awarded IBM a “China Humanitarian Medal.” A number of overseas employees were also active in China’s relief efforts and made cash donations.

IBM’s major efforts included:

• On May 14, IBM donated several high-end enterprise servers, database management software and IT services to the China Charity & Donation Information Center at the Ministry of Civil Affairs. The system serves as a platform for the Ministry to manage data input that enables it to release accurate official statistics on aid resources received.

• On May 15, IBM donated several servers and relevant software to the Beijing Red Cross Blood Center to help the center cope with a surge in people coming to donate blood. The system, which began operating on May 16, increased the productivity and efficiency in managing blood preparation coordination and blood donation.

• On May 19 and 20, IBM proposed the Sahana solution to National Disaster Reduction Center, China Charity and Donation Information Center of the Ministry of Civil Affairs, and Emergency Commanding Center of Chengdu City. Sahana is an open source disaster management software tool developed by IBM and other organizations during the Tsunami. It facilitates the following: assistance to search and manage information for missing persons; coordination and balance for division of labor and cooperation between assistance organizations and volunteers; registration and allocation and tracking for assistance request and implementation; registration and tracking management of camp; cooperative management of relief materials, and decision-making strategy for Geographic Information Decision Support System of disaster situation.

• On May 20, IBM contributed a server to the Information Center of the Seismological Bureau to establish a strong response system for immediate public earthquake alarm.
JPMorgan: Outreach to Disaster Victims

Disaster relief is part of JPMorgan’s Corporate Responsibility program in China. In 2008, the company was involved in two major disaster response efforts: one for the snowstorms in Southern China and a second for the earthquake in Southwestern China.

**Snowstorm**

JPMorgan reached out to help the victims of the severe snowstorms that hit southern China in early 2008. Exemplifying inter-industry collaboration and public-private partnerships, JPMorgan donated 10,000 leather jackets valued at RMB4 million (US$570,000) in conjunction with X-step, a sportswear company in China. The jackets were distributed by one of JPMorgan’s NGO partners, the China Foundation for Poverty Alleviation (CFPA), to victims in Jiangxi.

JPMorgan was able to distribute these much needed goods effectively due to the company’s disaster preparedness system, which allows for the effective mobilization of resources and donations from both the employees and the headquarters. In addition, JPMorgan China has also built strong relations with a number of NGOs including CFPA and the Red Cross Society of China, who could ensure the efficient delivery of JPMorgan’s donation during disasters.

**Earthquake**

In response to the earthquake in Sichuan, JPMorgan’s New York and Beijing offices led a firm-wide program to deliver immediate and longer-term assistance to the areas.

Acting through the CFPA, JPMorgan purchased and organized the delivery of RMB3 million (US$430,000) worth of urgently needed foodstuffs, such as water and instant noodles. This supply will increase sharply as additional funds are made available from employee donations. JPMorgan employee volunteers will intensify their efforts through fundraising and delivery of aid.

At the same time, the JPMorgan Emergency Relief Fund has made an immediate allocation of RMB1.4 million (US$200,000) for the distribution of aid through the Red Cross Society of China, which is already on the ground in the most affected areas. In the U.S., the American Red Cross has set up a branded website on behalf of JPMorgan to assist staff with direct donations.
PepsiCo China: Disaster Relief Initiatives

**Snowstorm**
Seeking to assist citizens who had been affected by the snowstorms in Southern China in January 2008, PepsiCo Investment (China) Limited put forward a two pronged effort leveraging public sector partnerships and its own core competencies and employees. First, PepsiCo partnered with the Red Cross Society of China and donated RMB200,000 (US$29,000) as well as relevant-disaster relief goods. Second, the company mobilized its bottling plants to send donated items and funds to areas most seriously affected in Guangdong and Hunan Provinces. Guangzhou Pepsi worked with the local Department of Civil Affairs to hand out beverages at the Guangzhou railway station.

**Earthquake**
In response to the May 12 earthquake in Southwest China, PepsiCo China provided donations in both cash and goods to affected areas in partnership with local authorities. Within 24 hours of the quake, PepsiCo China contributed RMB1 million (US$140,000) to the Red Cross Society of China, the company’s key partner in disaster management. Within two days and regularly thereafter, PepsiCo China’s HR department issued an Employee Bulletin providing updates on the damage and status of PepsiCo’s employees and facilities and encouraging PepsiCo employees to make monetary donations to this cause. Donations were also solicited from global employees by the PepsiCo Foundation. As of June 6, PepsiCo had committed to donate RMB15 million (US$2.1 million) to Sichuan victims and employees affected by the disaster. Donations by employees globally were also funneled into a relief fund whose dollar amount was matched by PepsiCo Foundation and PepsiCo Asia Pacific. PepsiCo also provided food and drinks to victims in affective areas. Items were transported to Dujiangyan City one day after the quake. By direct communication with the relief response team led by local government, the foods and drinks were distributed to earthquake victims.
Product Quality Medical Donations: Leading the Way in Public-Private Disaster Donations

High quality medical product donations are an important component of the international healthcare system used by humanitarian agencies in their efforts to provide disaster relief, build basic healthcare infrastructures, and combat specific diseases. The collaboration between healthcare firms that donate medical products and the humanitarian agencies that deliver and distribute these products plays a major role in meeting the healthcare needs of vulnerable populations around the world.

Product Quality Medical Donations (PQMD) formed ten years ago in response to a growing awareness of poor donation practices. PQMD is the only international non-profit membership association for pharmaceutical companies, medical device manufacturers and non-governmental organizations which share a commitment to responsible and effective medical donations. PQMD strives to maintain a balance between public and private sector participants and has grown in the last decade to its current state of 26 NGO and corporate members. PQMD’s initiatives aim to promote quality donation practices, foster education programs and learning conferences, stimulate professional development, conduct and support research, and facilitate networking and collaboration.

In the face of disasters, companies are under tremendous pressure to respond. They generally do not have reliable information to base their decisions on and receive multiple requests risking the possibility of sending more than is needed to meet the need. In response to these issues, PQMD formed the Emergency Committee. The Committee streamlines communication of in-country assessments and requests for products and/or cash. Within 24 to 48 hours after an event, a call takes place among committee members to discuss the current status of the emergency and coordinate outreach. Following the call, a report goes out to committee members detailing the state of the disaster, the projected response (i.e. donations, cash, etc.) and the NGO partner of each company.

The public-private partnerships and intra-industry coordination fostered by PQMD promote more effective responses to medical and healthcare needs around the world.
UPS: Leveraging the Skill-sets of UPS Logisticians

UPS has responded to disaster relief efforts through financial and in-kind shipping support for many years. UPS and other logistics and transport companies recently began to collaborate to leverage their specialized logistics knowledge to help save lives through the Logistics Emergency Team initiative.

Under the auspices of the World Economic Forum, UPS and other transportation companies are offering logistics expertise, human resources, and in-kind services to help the humanitarian community when disaster strikes. The approach is responsive: to come when invited in response to an obvious need. The approach is also collaborative: to work with the humanitarian community to complement its capabilities and build on its existing expertise. And the approach is personal: to engage employees at every level in efforts to contribute.

Humanitarian organizations face damaged transportation infrastructure and potentially overwhelmed customs authorities at a time when huge volumes of relief goods come flooding in and have to reach affected areas.

Logistics Emergency Teams (LETs) are deployed in sudden-onset, large-scale, natural disaster scenarios for a period of three to six weeks. While this is a small part of the disaster response effort overall, the LETs help bridge the resource gap in those critical first weeks where the impact can be greatest.

Once the funding appeal process is underway, and the humanitarian community gears up to a more sustainable operation, the LETs then transition out. Where needed and available, the LET’s participants will also offer local logistics assets like offices, warehouses, transportation assets, and above all – people who know how to solve logistics problems.

UPS and other logistics companies piloted the LETs concept in August 2007. UPS Supply Chain Solutions Manager Mike Thomas went to Indonesia for one month to assist the World Food Programme (WFP) – helping to do a logistics assessment for potential East Timor operations and implementing new warehouse safety programs. UPS and other LETs participants also provide pro bono warehousing space for the new Humanitarian Resource Depots in Panama and Ghana, allowing emergency supplies to be stock-piled closer to affected regions and reducing the amount of time it takes to get relief goods to those that need them.

In May 2008, Thomas once again joined logistics experts from Agility Logistics and TNT with LETs – this time to provide relief to victims in Myanmar devastated by Cyclone Nargis. UPS currently is identifying additional UPS experts in Asia, Europe and in the Americas that want to make a difference, and who are willing to respond when needed to provide much-needed logistics support.

Working together with the World Economic Forum, and the humanitarian community, UPS and other logistics and transportation companies can profoundly enhance the effectiveness and efficiency of emergency response. Although everyone benefits from increased cooperation, the ultimate beneficiaries are those critically affected by disasters worldwide.
Glossary

**Capacity**: Availability of resources of individuals, households and communities to cope with a threat or resist the impact of a hazard.

**Complex Emergencies**: Emergencies arising from complex interacting economic, geo-political and (often) natural events.

**Development**: The cumulative and lasting increase, tied to social changes, in the quantity and quality of a community's goods, services and resources, with the purpose of maintaining and improving the security and quality of human life without compromising future generation.

**Disaster**: An occurrence causing widespread destruction and distress.

**Disaster Management**: A systematic process which encompasses all aspects of planning for disasters and responding to them. The management of the whole spectrum from prevention to mitigation, through preparedness and response, to reconstruction and rehabilitation.

**Hazard**: A potential threat to humans and their welfare. Hazards can be natural (such as earthquakes, typhoons, floods and droughts) or induced by human processes (such as industrial accidents). Hazards can potentially trigger disasters. Some people use the term ‘environmental hazards’.

**Mitigation**: Any action taken to minimize the extent or impact of a disaster or potential disaster. Mitigation can take place before, during or after a disaster, but the term is most often used to refer to actions against potential disasters. Mitigation measures are both physical or structural (such as flood defenses or strengthening buildings) and non-structural (such as training in disaster management, regulating land use and public education).

**Preparedness**: Specific measures taken before disasters strike, usually to forecast or warn against them, take precautions when they threaten and arrange for the appropriate response (such as organizing evacuation and stockpiling food supplies). Preparedness falls within the broader field of mitigation.

**Prevention**: Activities to ensure that the adverse impact of hazards and related disasters is avoided. As this is unrealistic in most cases, the term is not widely used nowadays.

**Recovery**: The coordinated process of supporting disaster-affected communities in reconstruction of physical infrastructure and restoration of emotional, social, economic and physical well-being.

**Response**: Actions taken in anticipation of, during, and immediately after a disaster to ensure that its effects are minimized, and that people affected are given immediate relief and support.

**Risk**: The likelihood of a specific hazard occurring and its probable consequences for people and property.

**Risk Management**: The systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risk.

**Vulnerability**: The extent to which a person, group, services, socio-economic structure or environment is likely to be affected by the impact of a hazard (related to their capacity to anticipate it, cope with it, resist it and recover from its impact).
References


8 Ibid.


12 Ibid, pp. 2-4.

Acknowledgements

The following publications served as references for creating this manual:


**Australian and New Zealand Risk Management Standard (AS/NZS 4360:1999).**


SEEDS India. “Corporate Social Responsibility and Disaster Reduction: An Indian Overview” (2002).


Notes
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Notes
The Asia Foundation is a non-profit, non-governmental organization committed to the development of a peaceful, prosperous, just, and open Asia-Pacific region. The Foundation supports programs in Asia that help improve governance, law, and civil society; women’s empowerment; economic reform and development; and international relations. Drawing on more than 50 years of experience in Asia, the Foundation collaborates with private and public partners to support leadership and institutional development, exchanges, and policy research.

With a network of 17 offices throughout Asia, an office in Washington, D.C., and its headquarters in San Francisco, the Foundation addresses these issues on both a country and regional level. In 2007, the Foundation provided more than US$68 million in program support and distributed 974,000 books and educational materials valued at US$33 million throughout Asia.

The Asia Foundation’s China program supports legal development, governance reform, environmental protection, women’s empowerment, and constructive U.S.-China relations.

The Asia Foundation is not an endowed organization, and depends solely on monetary contributions from donors to accomplish its work.
Background of project

The Public-Private Partnerships for Disaster Management Program is a joint initiative between The Asia Foundation, the Department of Disaster and Social Relief of the Ministry of Civil Affairs (MOCA), the International Department of the Chinese Enterprise Confederation (CEC), and the American Chambers of Commerce (AmCham).

Supported by the Office of U.S. Foreign Disaster Assistance of the United States Agency for International Development (USAID), the two-year project’s goal is to enhance private sector participation in, and contributions to, community-level disaster preparedness, risk reduction, and relief initiatives. The project encourages multi-sectoral approaches to disaster risk management aimed at promoting greater collaboration among government agencies, private enterprises, and local charities and relief organizations.

The project encompasses several initiatives:

- **Disaster Management Workshops for Private Sector**: Workshops for businesses in Beijing, Shanghai, Qingdao and Ningbo to raise awareness of natural hazards, potential disaster impacts, and approaches to disaster management and risk reduction. These workshops also identify disaster management CSR opportunities for businesses.

- **Disaster Preparedness Manual**: Designed for use primarily by the private sector, the manual is being distributed widely to AmCham and CEC members, as well as to local charity and relief organizations.

- **Disaster Management Webpage** (www.pppdisaster.org): A bilingual webpage with links to MOCA, AmCham, CEC, and other related websites has been developed to promote information sharing, education and awareness on disaster preparedness and relief initiatives.

In addition, the project is supporting activities in communities in two coastal cities, Qingdao and Ningbo, both of which are frequently affected by natural disasters and have vibrant and growing business communities with the potential to participate in disaster preparedness, response, and recovery. The project conducts Private Sector Workshops in each city, as noted above, and also carries out the following activities:

- Disaster Management Training for local charities and community groups
- Community-based Public Awareness Campaigns in conjunction with business leaders, key government agencies, and community groups.
- Community-based Vulnerability Reduction Projects that assist communities to identify resources to implement projects prioritized in local mitigation plans.