

# Public-Private Partnerships and Disaster Resilience

Report from APEC Workshop on  
Public Private Partnerships  
and Disaster Resilience  
Bangkok 24-29 August, 2010



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Asia-Pacific  
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## Executive summary

Almost 70 percent of fatalities caused by natural disasters occur in the Asia-Pacific region. With the intensity and frequency of disasters in the region expected to increase, disaster resilience is gaining importance as a core conceptual approach to build capacity in economies in the region to respond to and recover from impacts.

Economies come to acknowledge that core values of a society cannot be entirely protected at all times and that disruptions will occur. There is an urgent need to learn to adapt and manage risks in a way that minimizes impact and builds resilience.

The private sector has proven that it can and does play a fundamental role in building the resilience of a society against potential impacts from disasters. It can provide resources, expertise, and essential services. In many economies, critical infrastructure on which a society depends are operated by the private sector.

Public-Private Partnerships (PPPs), therefore, play a fundamental role in building resilience in APEC member economies. They include collaborative partnerships across all levels of government, the non-government sector, business and individuals.

Participants of the APEC Emergency Preparedness Working Group (EPWG) Workshop on Public Private Partnerships and Disaster Resilience, held in Bangkok from 24 to 27 August 2010, recommend the endorsement of common principles for public private partnerships.

These principles are provided in this document. They highlight the need for a whole society approach to enhance an economy's disaster resilience and outline the general objective and scope of collaborative partnerships in the context of disaster resilience. The principles further stress the need to build capacity of small and medium-sized enterprises and companies, local NGOs and local academic groups as they play a key role in building and sustaining local livelihoods in developing economies. They acknowledge the crucial role of women in building and maintaining livelihoods and communities' ability to prepare for, mitigate, respond to and recover from disasters.



# Draft APEC Principles on Public-Private Partnerships and Disaster Resilience

**As of 27 August 2010**

Building on the APEC Strategy for Disaster Risk Reduction and Emergency Preparedness and Response in the Asia Pacific Region 2009-2015 and the EPWG's library of best practice principles including:

- large-scale disaster recovery,
- damage and loss assessment techniques, and
- integration of disaster risk reduction into school curriculums;

Participants of the EPWG Workshop on Public-Private Partnerships and Disaster Resilience recognised the importance of public-private sector\* collaboration to building business and community resilience to disasters and helping communities and economies during the recovery phase.

Participants recommend that the EPWG consider the recommendations from the 2010 PPP and Disaster Resilience Workshop which are set out as draft principles 1-14 on pages six and seven.

\* Definition: For the purposes of this work, the term Private Sector was considered by the participants to include all participants in the disaster management process that are additional to government involvement.

## Draft Principles

- 1 A whole society approach is needed to enhance an economy's disaster resilience. This approach should be based on collaborative partnerships across all levels of government, the non-government sector, business including SMEs, civil society organizations and communities. As such, establishment of partnerships should be encouraged with the private sector in all phases of disaster management.
- 2 Strategic approaches and mechanisms for working with the private sector and setting-up frameworks for public-private partnerships should be developed and strengthened. The private sector should be engaged in collaborative initiatives to build disaster resilience at local and national level. The aim is to enhance both the capability of the public and the private sector to respond to and recover from disasters. Regular information sharing, emergency planning, and practical exercises are crucial in building resilience.
- 3 Partnerships should be based on shared responsibilities and clearly assigned roles and tasks that engage the private sector not merely as a source of funding but use core competencies and expertise and engage the private sector as partners in long-term efforts to build community resilience.
- 4 Platforms for regular dialogue and sharing of best practices and lessons learned should be enhanced to further raise awareness of the potential of public-private partnerships and help establish responsible and good practice. Existing programs should be identified, leveraged, and built upon to avoid duplication and ensure cost-effectiveness.
- 5 Public-private partnerships aiming to build disaster resilience in an economy should be understood as learning journeys where mistakes are allowed to be rectified and learnt from. Public-private partnerships should be open to new and innovative ways of working together and allow for some flexibility to adapt the partnership as it evolves.
- 6 Economies should maximise the opportunities that arise from partnerships that develop during a disaster and look to build and strengthen longer term collaborative engagement with these partners.
- 7 Further collaboration should take place which allows the private sector to better understand and develop capacities in disaster risk reduction. A process for assessing the effectiveness of partnerships should be developed and both parties understand and agree on the mechanisms.
- 8 The integration of small and medium-sized enterprises and companies, local NGO and local academic groups should be encouraged as they play a key role in building local livelihoods and thus contribute to disaster resilience of local communities. These companies and organisations should be supported in efforts to build disaster resilience.
- 9 The consideration of the crucial role of women in local communities and the local economy should be encouraged further. Women play a fundamental role in building and maintaining livelihoods and community ability to prepare for, mitigate, respond to and recover from disasters.

- 10 Building local capacity and community education is a key element in building disaster resilience. Public and private sector stakeholders need to play an active role in such efforts. The role of NGOs and volunteers, and the extent to which business and community contribute to building resilience and response, needs to be recognised and integrated into PPPs.
- 11 Partnerships should be fully funded and staffed. Rather than rely on good will or personality-based leadership, long term success is developed through consistent and adequate funding, dedicated staff and the resources needed to build and grow the partnership.
- 12 Partnerships may contain similar characteristics, but they should allow for flexibility in their approach to better incorporate regional opportunities, risks, political situations and other unique features. This tailored approach will enable partnerships to focus resources and funding where it can make the most impact.
- 13 Governments should explore ways to create incentives to leverage public-private partnerships in disaster resilience with the private sector who are engaged in partnership as part of their Corporate Social Responsibility programmes.
- 14 Governments should work with the private sector to ensure the resilience and continuity of supply chains and essential services in the context of potential disasters.



# Summary of Proceedings from the APEC Emergency Preparedness Working Group Workshop on Public-Private Partnerships and Disaster Resilience

The APEC workshop on Public-Private Partnership and Disaster Resilience was held in Bangkok, Thailand from 24-27 August 2010 with funding from APEC and AusAID and co-hosted by Thailand and Australia.

Representatives from Australia, Chile, China, Indonesia, Japan, Malaysia, Papua New Guinea, Peru, Philippines, Russia, Chinese Taipei, Thailand, the United States and Vietnam attended the workshop.

Representatives from the Asian Disaster Preparedness Center, Coca-Cola (Thailand) Limited, Corporate Network for Disaster Response, DP-DHL, Forbes Calamity Prevention Pte Ltd, Japan International Cooperation Agency, Mercy Malaysia, Pacific Disaster Center, Thai Red Cross, Thai Motorcycle Enterprise Association, The General Insurance Association, the World Bank and the United Nations International Strategy for Disaster Reduction also participated.

The workshop was part of the APEC Emergency Preparedness Working Group's efforts to contribute to capacity building in the region to mitigate, prepare for and respond appropriately to emergencies and natural hazards, including by building businesses' resilience and fostering public-private partnerships to protect businesses, trade and economic growth from disruption. The main objective of the workshop was to improve knowledge on, and opportunities for, public-private partnerships for disaster resilience.

At the conclusion of the workshop, the delegates agreed on a set of recommended principles on public-private partnerships and disaster resilience.



## SESSION ONE

### Opening

**Mr. Auncha Mokkhavesa, Director General, Department of Disaster Prevention and Mitigation (DDPM) Thailand** extended his warmest welcome to the participants of the workshop and noted Thailand's great pleasure and privilege in co-hosting the workshop.

He outlined the role and responsibility of DDPM and how it was established, as well as the formulation of the National Disaster Prevention and Mitigation Act in 2007.

With reference to the recent floods in China and Pakistan, he expressed his condolences and emphasized the importance in engaging all sectors in reducing disaster risks.

He was delighted that APEC has become active in engaging the private sector on this topic and welcomed the opportunity that the workshop provided in identifying practical ways in which private sector efforts in disaster resilience could be maximized.

**Mr. Neil Head, Director of Community Awareness and Education, Australian Emergency Management Institute**, provided introductory remarks on behalf of the Australian delegation. He reminded the participants that the role of the Task Force on Emergency Preparedness had been 'upgraded' to a working group, with a stronger mandate that focuses specifically on building business resilience and fostering public-private partnerships (PPPs) to protect business, trade and economic growth from disruption.

He noted that Australia's position in the midst of the region and the multiple and frequent hazards that it experiences, such as droughts, floods and tropical cyclones, provided it with a good reason to seek to be a strong partner in the region on the topic of emergency management.

He shared that volunteers are a fundamental part of the emergency management structure in Australia and that these volunteers are supported by national arrangements comprising of a comprehensive all-agencies, all-hazards, prepared community and disaster resilience approach, with strong relationships between all government levels and vital links to the business and non-government sectors.

He explained that one in 20 people in Australia are emergency management volunteers who receive training and practice their skills in their own time. During disasters, they seek exemption from their employers to assist in the emergency response activity. This highlights the support from the private sector during disasters in Australia.

## Workshop Overview

**Mr. Adthaporn Singhawichai, Director of Research and International Cooperation Bureau, Department of Disaster Prevention and Mitigation, Ministry of Interior, Thailand,** reiterated the workshop aims to demonstrate best practice in the Asia Pacific region between public and private sector in emergency preparedness and management efforts. He anticipated that an increased awareness amongst the workshop participants of the private sector's role in the many phases of disaster risk management would lead to greater engagement and an increased enabling environment. He hoped that as a result of this, national disaster management offices in the APEC region would encourage the development of PPPs to reduce disaster risks.

### *Disaster Risk Reduction Matters to Business: Public Private Partnership for Disaster Risk Reduction in Asia and the Pacific*

**Mr. Jerry Velasquez, Senior Regional Coordinator, UN-ISDR** Bangkok office, outlined that the business case for investment in disaster risk reduction (DRR) included the strengthening of local relationships, reinforced the business brand, reputation and values, supported staff development and provided further direct business opportunities for development. Likewise, it should be recognized that the private sector is a powerful social and economic driver at the local, national and international level and that in the review of capital flows, national and multinational companies provide economic value to national GDPs in the order of billions of dollars that exceeds external development assistance. It is thus also necessary to ensure that these investments reduce and do not create extra risks.

Mr. Velasquez highlighted the results of the review on the status of PPPs for DRR that was undertaken in 2009. The findings revealed that there were a large number of unilateral relief activities being undertaken, led by the information, communications and technology sector. However, more work remains to be done to outline more clearly additional roles that the private sector could play. He cited good examples from China, India, Japan, Malaysia and Sri Lanka of partnerships and legislation, and reported that there has been much progress in the region in establishing frameworks for multi-stakeholder cooperation on DRR including the private sector. He noted, however, that despite the commitment, intent and the development of a positive enabling legal and policy environment, these frameworks have yet to be applied and translated into action. Recognizing that this is a step by step process, he identified the UN agencies, NGOs, non-profit organizations and corporate networks as amongst the main focal points for business engagement.

Having discussed some of the challenges in fostering good PPPs for DRR, he recommended that:

- the private sector's understanding of the DRR concept be improved,
- the awareness of the importance of PPPs for DRR be raised,
- the business case for involvement in DRR be demonstrated and businesses assisted in understanding its potential role in DRR,
- public sector understanding of PPPs is improved so that they can establish a realistic expectation of potential business contributions,
- private sector views and expertise be channelled into DRR processes, and
- institutional homes and formal engagement processes for private sector engagement be established,

such as the one in India.

He noted that all sectors needed to broaden their views on the potential contributions from the private sector. The private sector as drivers for city development was an example that he cited. This is particularly so because economic growth in cities leads to rapid urbanization and has been shown to increase disaster risks and potential damage and losses in middle developed countries. Thus, businesses should be engaged in ensuring the careful development and expansion of cities.

He noted that the Third Asian Ministerial Conference on DRR held in Kuala Lumpur in December 2008 resulted in the Kuala Lumpur Declaration on Disaster Risk Reduction which was endorsed by the Ministers. It called for the preparation of a Regional Action Plan to engage the private sector and the Kuala Lumpur Initiative on Public-Private Partnership for Disaster Risk Reduction. He reported that guidelines had been developed. A compilation of good practices "Private Sector Activities in DRR" and "The Development of a PPP Framework and Action Plan for DRR in Asia" had been completed and that the Malaysian government has identified key participants to implement the plan. These are amongst a few of a plethora of initiatives being undertaken.

He outlined UNISDR's strategy to engage with the private sector, their plans to establish a cross-industry UNISDR Private Sector Advisory Group and listed upcoming opportunities for private sector to engage in global DRR forums. This included the upcoming Fourth Asian Ministerial Conference on DRR in October 2010 to be held in Korea and the Global Platform for DRR taking place in May 2011. The former focuses on the linkages between DRR and climate change adaptation and could be an area through which private sector could contribute in terms of the funding and technology that is needed to assist adaptation to climate change.

Knowledge transfer, part of ISDR's strategy, was to encourage business leadership and promote the exchange of good and bad practice, whilst the Hyogo Framework for Action would act as a tool for businesses to assess the impact of the DRR activities, to measure progress in playing a wider role, especially for the next Global Assessment Report on DRR.

He also noted the ratification of the ASEAN Agreement on Disaster Management and Emergency Response in December 2009, the first legally binding sub-regional arrangement, demonstrating the extent to which the governments in the region were collaborating on the topic of emergency response. He remarked that the private sector was already strongly involved and supporting the ASEAN DRR day. He also cited improved trilateral cooperation between China, Korea and Japan and welcomed the initiative of APEC to assist in the engagement of the private sector on this issue.

He concluded that it would be of value to examine and document the process and experiences from China, India and Japan on how they successfully established PPPs on DRR.

### *Public Private Partnership and Disaster Resilience*

**Leena Wokeck, Director CSR Asia Center at AIT** provided an overview of the draft discussion paper on PPPs and disaster resilience, noting that the 13 principles that were drafted are derived from a number of case studies in the paper. She welcomed comments on the discussion paper and noted the draft principles would be discussed during the workshop. The discussion paper has been designed to assist in the development of a common understanding among the APEC Member economies on PPP and disaster resilience and that the preliminary list of APEC principles were a starting point for the development of a common approach on the topic and to provide guidance for a comprehensive and collaborative all-

hazards approach for the region. She reported that most of the case studies in the report were mainly from the US and Australia and that more examples of successful case studies from Asia would be presented during Session Two of the workshop.

She provided an overview of CSR Asia. CSR Asia provides thought leadership, research, training and consultancy on business solutions to sustainability challenges and seeks to advance sustainable and responsible business practices with and for business in the Asia Pacific Region. She outlined a key difference between corporate philanthropy and corporate responsibility: the latter focuses on how businesses make their money as opposed to how they spend it. CSR Asia works with many of the leading businesses in the region, as well as on the development of partnerships between INGOs and UN agencies and the private sector in recognition of business contributions to global development challenges and the markets and technologies that can be tapped into in resolving them.

She explained the concept of PPPs, the motivations for governments and businesses to develop these relationships, outlined the terms disaster, business, crucial infrastructure and community resilience, noting the business case, challenges and starting points for PPPs for each of these. Case studies on business and critical infrastructure resilience were provided and areas through which businesses could be engaged in building resilience described.

She concluded by highlighting that disruptions to businesses by natural and man-made hazards could lead to major economic losses and impact on the long-term growth of national economies, thus safeguarding companies from business disruption is a public interest. Similarly, community disaster resilience is also in the interest of business. She urged that private sector expertise and capacities should be mobilized to contribute to ongoing initiatives to build disaster risks. She underlined that achieving resilience in an economy requires a comprehensive, all-hazards, cross-sector, integrated approach that is based on horizontal and vertical cooperation and coordination amongst key public, private, non-profit stakeholders and individuals.

### *Opportunities and challenges in building public private partnership for disaster resilience*

**Dr. Iwan Gunawan, Senior Disaster Management Adviser, World Bank Office, Jakarta** noted that the Issue of resilience is important for the APEC region as the region represents a large amount of growth. He reported the corporate contributions to the 2004 Indian Ocean Tsunami, the 2005 Pakistan Earthquake, 2005 Hurricane Katrina and 2010 Haiti Earthquake in monetary terms and linked this to the amount of media reporting for these disasters. This demonstrates the significance of these contributions, not taking into account other in-kind contributions that were made. He noted that the efforts to date were mainly focused on response, and not on risk reduction and resilience building, whilst emphasizing that opportunities for these do exist.

In Indonesia, telecommunication companies provide their expertise in post-disaster situations. Companies comprise a part of the national risk reduction platform and have been enquiring how they can contribute to building resilience.

He outlined the similarities and differences in the public and private approaches and motivations to disaster risk management. He encouraged the exploration of PPPs where the approaches were aligned. He explained that resilience is a meeting point of empowerment, sustainable development and risk/crisis management, and thus it is a development objective and not disaster risk management objective. He also noted that employment builds resilience to shocks and that savings is a component of resilience, as

this provides extra disposable income.

He suggested that the draft principles should urge national and sub-national governments to lead in developing national resilience goals, that regional and national risk profiles be created to provide a baseline to build common resilience, that critical regional economic infrastructure such as regional production bases, supply chain links and nodes and key environmental assets be identified as core cluster to target resilience building.

### ***Public Private Partnership in Mekong Sub-region: Corporate Sector and Disaster Management***

**Dr. Bhichit Rattakul, Executive Director, Asian Disaster Preparedness Center (ADPC)** listed some challenges in PPPs for disaster preparedness which included businesses not being aware of hazard risks, that they currently have little commitment to reducing disaster risks and that there were a plethora of workshops on the topic, however, more needs to be seen about action on the ground.

He noted that in order to reduce disaster risks, a long-term sustainable commitment is needed that is integrated into corporate long-term planning and supports the implementation of national risk reduction policy. An enabling environment is also needed to allow a space for businesses to be engaged in building disaster resilience. Currently, governments were not sure about how private sector should be involved in national risk reduction efforts, thus there was a need for other DRR contributors to work with the private sector in helping to define their role. The current private sector involvement in response activities needs to be expanded into preparedness and recovery processes. One way in which this could be done is through their corporate responsibility programmes.

He gave an example of the work being undertaken by ADPC in the Lower Mekong delta where they facilitated a dialogue between national and local government and the private sector through the chamber of commerce in Vietnam on flood mitigation activities. The businesses were involved in the needs assessment of the local community and the local government designed a bill to outline the role of the private sector, including initiatives to provide public recognition of this role.

He recommended that similar workshops be conducted at the sub-national level to identify locally relevant roles of private sector engagement, as well as networking meetings to allow businesses to share lessons learnt. He reiterated the need to ensure that the private sector participants are recognized for their contributions through media and governments and through their corporate responsibility programmes integrate risk reduction into their annual plans. He also urged the establishment of local level/provincial level funding between local governments and private sector to help communities and supplement the local government budget for disaster risk reduction.

One role of insurance companies for example could be to provide risk transfer mechanisms especially in earthquake prone areas. They could also collaborate with construction companies to ensure that buildings are earthquake resilient, and assist in calculating potential damage and loss estimations before the onset of a disaster, as well as the costs of proposed structural mitigation measures.

### ***Public-Private Partnership and Disaster Resilience***

**Lt General Dr. Amnat Barlee, Director of Relief and Community Health Bureau, Thai Red Cross Society** described how each of the provincial and district bureau of the Thai Red Cross mobilizes funds from the private sector. At the national level, they have been working with Tesco Lotus, the Coca-Cola

Foundation, Siam City Bank and the Raksthai Foundation. He noted that in order for PPPs to succeed, there needs to be open and sincere dialogue between the different partners and that needs must be clearly identified in order to ensure that appropriate assistance is provided. Leadership through vision formulation and decision making is also required, as is the identification of entry points and focal persons and long term commitment. Ultimately the sustainable development and sustainable businesses shared the same goals, focusing on the protection of assets, the provision of services, supporting livelihoods and the maintenance of the natural resource base. He explained that the private sector needed to work together in their contributions to building disaster risks.

### ***Leadership, Vision, and Convening Coalitions: Enabling the Power of Public-Private Partnerships***

**Mr. Nathan Sage, Southeast Asia Programme Advisor, Pacific Disaster Center** explained that disaster risks were “wicked” problems that are complex, highly connected and inter-dependent. However, the challenges posed by disaster risks could be resolved through the power of partnership and its ability to deliver a transformational outcome or public service. This provides opportunities for leadership, a quality that can be learned and that could be used to inspire innovative solutions. A systems based approach to leadership involved both inward and outward trust and openness which draws from and leads from the past, forward and outward with partners. He also explained the difference between transactional (top-down) and transformational leadership and noted that the different value systems could be normalized. In addition, the approach focuses on ensuring the need and providing the plan, as well as convening coalitions to share know how on how to apply hard and soft power.

### ***Community Resilience to Natural Hazards: A Public Private Partnership Perspective***

**Dr. Liang-Chun Chen, Director, National Science and Technology Centre for Disaster Reduction** outlined that during the 2010 Typhoon Morakot in Chinese Taipei there was:

- competition and poor coordination amongst the private sector in responding to the disaster,
- weak communication between the private sector and the government agencies and the NGO community,
- a duplication of relief efforts in some of the communities,
- limited access to hazard specific knowledge and real-time information, and
- the provision of resources targeted mainly for the post-disaster relief and response.

This provided the basis for the inclusion of local and sub-national private sector in the national institutional risk reduction arrangements.

### ***Public-private partnership and disaster resilience in Indonesia***

**Pak Tabrani, BNPB** spoke about experiences from the private sector involvement in the relief and response activities following the 2004 Indian Ocean Tsunami in Aceh. The role of the private sector has been identified within the 2007 disaster management bill for Indonesia and enhancing the role of the private sector was a priority action that had been identified under the 2010-2014 National Action Plan for DRR, particularly with regards to post-disaster reconstruction. The National Platform for DRR provided the enabling environment through which this could be undertaken. He noted that good disaster governance included the involvement of the private sector and as inspection of the 2007 Bill does not specify a

particular government agency mandated to ensure the resilience of the nation, this places the responsibility on all those involved, including the private sector. He shared that the new pilot Rapid Emergency Response Stand-by Force comprises of resources through various government agencies including the private sector. He concluded by acknowledging that PPPs were important in the effort to reduce vulnerability and enhance resilience in every phase of the disaster cycle and that they need to be mainstreamed into national and local development planning.

### ***Emercom Mission and Objectives in the Development of Public-Private Partnership for Safety***

**Dr. Sergei Molchanov, Deputy Head, Scientific Department** noted that as the current total payments of insurance companies in Russia exceeds less than 5% of total damages, insurance mechanisms should be examined further as means through which the state could transfer the burden of liability of disasters from the state and its taxpayers to the market. Premium payments could then be used as a resource to fund activities within the disaster cycle. It is also the case in Russia that the professional rescue units are not able to provide full safety services in accordance to needs. Thus, there is a need to invite the participation of other organizations, such as the all-Russian public organisation “Russian Union of Rescuers”, which would augment the services provided by the state. By entering into PPP, the role of the State would then focus on providing legal support, licenses to undertake potentially dangerous activities, certification of organizations and specialists and ensure conditions for effective competition between insurance and consulting companies and safety service providers. Other contributors would be involved in monitoring that safety requirements were being fulfilled. Russia is currently drafting a new federal law to regulate the participation of private businesses in ensuring the safety of the public. Safety audits were also being imposed by the State to ensure that private enterprises had insured their liability. This would significantly reduce the participation of government institutions in the process of ensuring safety, allowing it to focus on other important areas of public policy. Object oriented PPP overlaps with functioning orientation of rescue systems resulting in a culture of safety, such as the all-Russian comprehensive system of alarming and alerting the population in crowded sites and the Emergency Warning System and Russian State System of Disaster Management. He shared that Emercom plays a lead role in developing PPP in the field of DRR, providing services to ensure the safety of population and territories, state supervision and the development of a legal basis for rescue activities. In conclusion, he noted that PPPs are a means to combat emerging risks, however regulatory support for their development is needed.

**Pedro Diaz, Human Resource Management Officer, National Civil Defense Institute, Peru**, reported that one of the main lessons Peru learned following the Pisco Earthquake was the lack of integration between public and private sector during the pre- and post-disaster situation. Due to this lack of awareness of the technical capability of the private sector and lack of appreciation that critical infrastructure was owned by companies, and as the city had not been developed sustainably, Peru suffered high financial losses which also affected the fishing sector. Despite the efforts by the private sector to assist in the post-disaster response activities, it became apparent that these contributions would have been more effective if they had been linked to national efforts.

Since then, the mandate of the task force for emergency preparedness has been revised to include the establishment of strategic partnership with the private sector. The National Institute of Civil Defence is now led by the National Society of Industries, based on an initiative by the main unions in Peru. They are currently supplementing the efforts of the government on disaster response and prevention. This

includes undertaking a survey and inventory of privately owned equipment that can be appropriated during a disaster, developing sector specific (e.g. mining) plans, conducting disaster mitigation and preparedness training and creating a directory of the main business focal points. In Peru, the private sector has agreed to be part of a working group within the National Platform for DRR.

### ***Public-Private Partnership on Disaster Management: Philippine Government Experience***

**Josefina T Timoteo, Chief Operation Division, Office of Civil Defense, Department of National Defense, National Disaster Coordinating Council (NDCC)**, conveyed that there has long been an enabling environment for private sector engagement in DRR in the Philippines through the adoption of the 1978 Presidential Decree 1566 and the 2010 Republic (Philippine Disaster Risk Reduction and Management) Act 10121. In Section 5 of the latter, it specifically states that “A representative from the private sector shall be one of the members of the National Disaster Risk Reduction and Management Council”. The value of PPPs are also reflected in three national frameworks, namely the 2005 NDCC Four Point Plan of Action on Disaster Preparedness, the 2009 revisions of the national KALASAG disaster risk management (DRM) awards to enable the private sector to be publicly recognized for their DRM contributions and the 2010 Philippines Strategic National Action Plan on DRR. This has resulted in the number of private sector representatives at the National Disaster Risk Reduction and Management Council rising from 18 to 43 members, four KALASAG awards conferred to private organizations since 1998 and 18 MoU being signed with the private sector.

The engagement with the private sector in DRR stretches as far back as 1966 with the organization of the Associate of Carriers and Equipment Leasers Inc. which provide free use of its member’s equipment during disaster relief operations. Business continuity professionals also provide voluntary and training services as part of the Civil Defense Action Group Inc. A private Sector Disaster Management Network has also been established as part of the corporate responsibility programmes of a consortium of private sector organizations. The PPP DRR initiatives centre on the sharing of information and resources, contingency planning and undertaking joint exercises and training of personnel/volunteer groups.

More recently, private sector engagement in disaster preparedness and recovery is being enabled through the 2009 establishment of the Philippines Disaster Recovery Foundation. This has resulted in a partnership between three telecommunications providers and the PAGASA to expand a network of rain gauges by locating them at cell sites which each have back up power and communication systems.

She concluded that to date, private sector involvement in DRM has focused largely on relief and recovery initiatives and there was a need to extend the scope of their engagement to include DRR activities, that their DRM contributions also serve their business interests, and the government should play a role in promoting innovative engagement of the private sector in DRM and recognizing the resulting initiatives.

**Ryan MacFarlan, US State Department of State Bureau of East Asian and Pacific Affairs, Office of Economic Policy**, outlined the USA-Japan suggestion to host a Senior Disaster Management Officials Forum in September 2011 on PPP and DRR. The target audience for the forum is emergency management officials and members of the APEC Business Advisory Council and the intention is to ensure that it is held alongside the Senior Officials (Trade Ministers) Meeting. In addition to the Forum allowing for the sharing of information and standards for business continuity, it would also act as a means to inform the development of a voluntary ISO standard for PPP in DRR to promote Business Continuity Planning (BCP), which the USA

and Japan are proposing. He noted that there is currently a variety of methodology to assess disaster risks and that it was necessary to provide the private sector with tools to reduce disruption to business and trade. Thus, there was a need to develop suite of practical tools that included indicators for success of BCP, thus highlighting their value. Certifications would then be issued based on an evaluation of business disaster preparedness. This would address the new mandate of the APEC Emergency Preparedness Working Group and leverages on APEC's strengths.

### *Public-private partnership and disaster resilience in New Zealand*

**On behalf of New Zealand, Mr. Neil Head** shared with the participants a brief report of a few public-private initiatives for building disaster resilience in the context of New Zealand's comprehensive and integrated risk management framework. The roles and responsibility of central government agencies, local authorities, emergency services and lifeline utilities (critical infrastructure) are clearly stipulated in the legislation and all of these entities are expected to routinely incorporate business continuity arrangements into their business planning and risk management processes, and to regularly monitor and report on their progress as appropriate. All other infrastructure providers and businesses were also expected to play a role in achieving the vision of a resilient New Zealand. This notion of individual responsibility matched with rights has facilitated the development of PPPs on DRM.

Critical infrastructure providers in New Zealand comprising of transport, energy, telecommunications, water and wastewater services have been assigned the duty of continuation of these services. In order to facilitate their implementation, Regional Engineering Lifeline Groups have been established to provide a platform for these utility operators to work with other stakeholders to identify and address interdependencies and the vulnerabilities to regional-scale emergencies. A multi-stakeholder National Engineering Lifeline Committee comprising of private companies, non-profit and non-government organizations, a state-owned enterprise and several government agencies was also established in 1999 to promote infrastructure resilience. These committees focus on addressing the interdependence of network infrastructure and identifying areas of common vulnerability that require collaboration to achieve effective risk reduction and preparedness to ensure that relevant information, new ideas and lessons are exchanged between the national utility organisations, and across public/ private organisations.

The regional engineering lifeline groups are supported by, and work closely with, regional emergency management and they provide an overarching layer of hazard risk awareness and activity over and above the risk management undertaken by the individual organisations. Regional lifelines projects have resulted in a number of improvements to infrastructure resilience, including enhancing the resilience across different lifeline sectors by strengthening road bridges that carry services additional to road traffic, such as water, power, gas, and telecommunications. Progress has also been made by individual lifeline sectors to address specific resilience issues across companies and with government agencies. For example, the Telecommunications Emergency Planning Forum was established in late 2008 and consists of major telecommunications operators in New Zealand, the regulating agency (the Ministry of Economic Development) and the Ministry of Civil Defence & Emergency Management. It promotes continuity of telecommunications services by developing and maintaining an agreed and well-functioning capability for emergency response, and coordinating responses to government requests for information and support on emergency management.





## SESSION TWO

### *Public-Private Partnership: DHL and Disaster Management*

**Mr. Matthew Hemy, Head, Asia Pacific Disaster Response Team, DP DHL** reported that the 2003 Bam Earthquake in Iran was a turning point for DHL when they witnessed how a flood of relief goods could shut down an airport's logistics if not professionally and effectively handled. This led to the signing of the 2005 Memorandum of Agreement with the UNDP and the UNOCHA which also focuses on disaster preparedness in addition to relief. DHL has since expanded its involvement by setting up its own global network comprising of three Disaster Response teams, with the first of these in the Asia Pacific. In the event of a major natural disaster, teams comprising of specially trained DHL employees will help manage crucial logistics operations in airports close to the affected area. This focuses mainly on addressing issues related to airport logistics management capability and is a crisis response mechanism in partnership with UNOCHA, whilst the Get Airports Ready for Disaster (GARD) programme is a preparedness initiative which focuses on the development of a crisis and contingency plan and the transfer of knowledge in support of airport operations in partnership with UNDP. Countries in which DHL are working with include Indonesia, the NDCC in the Philippines, the Ministry of Aviation and Transport in Sri Lanka, the Chinese Earthquake Authorities and the Pakistan National Disaster Management Authority.

The lessons that DHL has learned are that collaboration with the government and military is crucial, an outline of the private organizations capability and service which it wishes to provide is clearly communicated, and the ground rules and the contact network are established early. Other learning experiences include the engagement with an established partner, the provision of a needed capability and clearly define missions, the use of core competencies, professionalism, commitment, the establishment of operating protocols, the provision of added value and the passing on of expertise.

### *Public-Private Partnership and Disaster Resilience*

**Mr. Archawat Charoenslip, Public Affairs and Communication, Coca-Cola Thailand (Limited)** described Coca-Cola's Global Water Stewardship efforts in Thailand (Raknam), including the provision of bottled drinking water to disaster affected communities. In this regard, it is working with the Thai Red Cross. This came about through the realization, following the 2004 Indian Ocean Tsunami, that it was more effective to ensure the timely provision of relief services through the formalization of an arrangement with a relief partner prior to the onset of a disaster. He stressed the importance of defining common objectives that are aligned with partner capabilities. The awareness of the annual natural hazard calendars allows the manufacturing plants to plan their production schedule to take this into

account and prepare for the possible shift from the production of soft drinks to water. First aid training which was initially only provided for delivery staff has been expanded to include other staff as well as broadened to suppliers, customers and university students, through partnership with the Thai Red Cross. Disaster management plans for the branch offices and the bottling plants have also been developed.

### *General Insurance Association: Collaboration and Mitigation of Disaster*

**Mr. Vichai Santimahakullert, General Insurance Association (Thailand)** explained that the association is comprised of 70 Thai insurance companies that provide employee volunteers to manage a one million Baht fund which is used mainly to resource the Associations philanthropic relief activities. He noted that of the 20 million households in Thailand, only 15% are insured. The Association works closely with the independent Office of Insurance Commission which has established provincial branch offices in Thailand, to encourage communities to take up insurance.

The Association was initially motivated to increase their public relations by helping disaster victims to recover. However through the building of trust with the public, they have managed to increase risk awareness amongst the community and they are currently promoting micro-insurance by providing extensions options to their economy fire dwelling house insurance for small groups to include earthquakes and flooding.

Other initiatives undertaken include the Mitsui Sumitomo Insurance Thailand branch support of the 2008 & 2009 Safety Helmet project, collaboration with the Don't Drink and Drive Foundation and the development of posters on how to reduce the impacts of storm surge.

### *VCD by Thai Motorcycle Enterprise Association*

A VCD by the Thai Motorcycle Enterprise Association was screened to show their efforts in encouraging road safety in collaboration with the Department of Disaster Prevention and Mitigation and the Department of Land Transport. These include the establishment of information centres, traffic education, helmets for kids, suppression of motorcycle theft and an anti drink and drive campaign conducted with the police and motorcycle safety check-ups.

### *PPP case studies in Malaysia*

**Ms. Takako Izumi, General Manager for Operations/Advisor to ADRRN, described Mercy Malaysia's** cooperation and collaboration with companies in Malaysia. This included the engagement of a graphics company to prepare visual materials to aid learning on disaster preparedness and mitigation as part of a Ministry of Education, National Security Council school preparedness programme; support from government-linked companies to expand the aforementioned programme; the organization of a business continuity conference with Pricewaterhouse Coopers; the collection of change by Malaysian Airlines (MAS) from its passengers; the provision of volunteering opportunities for MAS employees and complimentary flights for emergency response; the provision of training and volunteer opportunities for Petronas and UMV employees. She noted that most of its cooperation has stemmed from business interest in supporting emergency response activities. These initiatives provide the basis for further engagement of the private sector in DRM initiatives and she stressed the importance of moving beyond a project focused collaboration to long-term strategic partnerships that leverage on the expertise, resources, capacities and mutually beneficial objectives of the organizations. She concluded by saying that the starting point for this is to build understanding and knowledge of DRM amongst the private sector.

## *Corporate Network for Disaster Response (CNDR): A case on PPP in Building Disaster Resilience*

### **Ms. Hilda Tabar-Cleofe, Executive Director, Corporate Network for Disaster Response (CNDR)**

explained that the CNDR was established after the 1990 Luzon Earthquake which occurred during a USAID meeting, where participants were trapped in the collapsed buildings. Companies with helicopters, drills and mobile phones lent these to the rescue teams. They recognised that they had resources that were not available to the government and that there was a need for a formal coordinating mechanism amongst the companies and government agencies that were responding to a disaster. Thus the aim of CNDR is to build the capabilities of the business sector and Filipino communities to effectively prepare for and deal with disasters. CNDR focuses on mobilizing resources for disaster-stricken communities that are most affected and least served. It has evolved into an institution that renders services and that comprises other DRM initiatives such as developing contingency plans, conducting evacuation drills for communities and initiating community-focused mangrove reforestation projects in collaboration with multiple partners including the private sector.

CDNR also organizes quarterly forums for the private sector on BCP, safer cities, DRR and climate change.

She also said that it was necessary to continue advocating for efficient response systems, to ensure that the DRR activities are in-line with the companies' strategic business and CSR goals and objectives and that there is a continuing need to engage private sector in DRM initiatives. She pointed out that PPP initiatives are sustainable if communities and local government units are directly involved during the project design and that companies involved in the community needs assessments can appreciate the risks faced by the communities. She concluded by saying that it was necessary to document and disseminate best practice on PPP.

### ***Prakob Petcharuttana, President NPC-Safety and Environmental Service Company Limited***

**Prakob Petcharuttana, President NPC-Safety and Environmental Service Company Limited** spoke of his company providing emergency response services for the Map Tha Put Industrial Estate, the biggest industrial estate in Thailand, a 500,000 million Baht investment. This service serves as a good example of emergency response in an industrial estate where joint exercises are organized with the government and standard operating procedures have been developed to ensure a smooth transition from the company to the government emergency service providers during an emergency. In addition, his company also provides and coordinates evacuation services through the appropriation of company owned vehicles. He noted that public-private sector collaboration on DRM in Thailand is voluntary and not formalized.

### **The morning of Session Two was concluded by an introduction and summary of the Draft APEC Principles on PPPs and Disaster Resilience**

#### **Subsequently participants left for a half day field visit to:**

- Ayutthaya Provincial Office and DDPM regional/provincial officers
- Flood Prevention Project Site at World Heritage site – Wat Chaiwatthanaram
- Bangchak Petroleum Public Company Limited Central Region Business Office and Bang Pa-in Oil Distribution Centre

### **The Governor's speech on Current Disaster Management in Phra Nakhon Si Ayutthaya Province:**

Phra Nakhon Si Ayutthaya covers an area of 2,556 square kilometres. It is located in the flat river plain of the Chao Phraya river basin. The Chao Phraya, Pa Sak, Lop Buri and Noi rivers, coupled with several hundreds of irrigation canals and natural water resources, make this province a major rice bowl of the country. Apart from the agricultural sector, Phra Nakhon Si Ayutthaya is home to a rapidly growing industrial sector with six industrial estates, including 1,772 registered industrial factories, three oil depots and six gas loading stations. It is the site of several main and secondary roads that connect 46 provinces in central, northern and north-eastern Thailand and are the main routes to transport chemical and hazardous materials to Ayutthaya and other destinations. As the former capital city, the province is also the location of magnificent historical sites, among others, Ayutthaya historical park, a UNESCO World Heritage Site, with approximately 1,500 tourists visiting daily.

Due to its geographical location, terrain and human activity, Phra Nakhon Si Ayutthaya has become more vulnerable to both natural and man-made disasters than ever before. These include road traffic accidents, marine accidents, transport accidents, floods, storms, drought, plant epidemics, chemical and hazardous material incidents, social unrest etc.

The provincial government has laid down a number of pro-active operating procedures and countermeasures to minimize impacts on lives and properties and a five-year Disaster Prevention and Mitigation Plan has been put in place taking a three stage approach with detailed planning for pre-, during- and post disaster stage measures. The plan will be revised and improved annually. Communities are encouraged to formulate community disaster prevention and mitigation plans and carry out disaster risk reduction activities in vulnerable communities, historical sites and other significant locations by, for instance, installing either permanent, mobile, or temporary flood prevention systems, roadside ramp posts, traffic lights and improving road black spots to reduce road traffic accidents. Community-based public education campaigns, in schools and through local media, raise awareness among the general public and deliver information to help them understand risks

associated with potential disasters. Simulated exercises are organized at all levels as well as in the work place. Last year, the provincial authority concerned conducted three provincial level and 21 district level simulated exercises.

A database for an organized collection of disaster data has been set up and can be accessed through the provincial government website and the website of Ayutthaya disaster Prevention and Mitigation Provincial Office. Emergency Operations Centers as well as Disaster Relief Centers are set up at all levels. A working group has been set up to follow up the progress in drafting the Disaster Prevention and Mitigation Plan. Each working group is composed of representatives from all government agencies concerned and headed by vice governors and deputy governors. A Provincial Steering Committee oversees the implementation of disaster prevention and mitigation activities. Government officials, civil defence volunteers, and other volunteers regularly receive training.

The preparedness of equipment, tools, and vehicles necessary for disaster relief operations is ensured and disaster resource sharing among four zones of local administration is promoted. The availability of the financial resources required for provincial disaster management is ensured through various sources such as government agencies, local administrative organizations, calamity emergency funds, the private sector, charitable organizations, and donations.

A comprehensive reaction plan in the event of a disaster is in place. Under the Disaster Prevention and Mitigation Act B. E. 2550 (2007), Section 23, the local administration is obliged to carry out primary disaster prevention and mitigation operations through local integrated efforts. In the event of a disaster of a scale that exceeds local capacities, assistance plans are in place at the district, provincial or national levels.

In the aftermath of a disaster, procedures have been set up to conduct initial damage and needs assessments and prepare lists of affected people and damaged property. In addition to this, plans are in place to provide relief assistance and to improve and restore physical and mental health of affected people to normality, as soon as possible, and to rehabilitate and repair damaged basic infrastructure and public utilities.

## SESSION THREE

### Conclusion and recommendation

**Director Bridger McGaw, Director, Private Sector Office of the U.S. Department of Homeland Securities** (by video link) described the U.S. engagement with the private sector, including the loaned executive programme, the organization of National Preparedness Month and Cyber Security Awareness Month. The challenges in PPPs include defining the principles that shape PPPs, engaging in planning exercises to explore operational working modalities to develop response plans, developing incentives for good disaster preparedness practices, the management of donations to ensure the timely delivery of relevant aid, exploring the modalities of information on a daily basis and the provision of situational analysis to responders in the aftermath of a disaster.

**Jeanie Moore, Sr. Advisor, Private Sector Division, Office of External Affairs, Federal Emergency Management Agency (FEMA)** (by video link) explained that the FEMA Private Sector Office of External Affairs was established in October 2007 to act as a focal point for NGOs, businesses, academia, voluntary organisations and faith based organizations to share information and develop innovative and synergistic processes for coordination and collaboration. The philosophy underpinning the office is to ensure that needs are met, that capabilities are maximised and that there is a conduit for collaboration, as the private sector provides the bulk of daily services in the community. She concluded with the core attributes of PPPs, existing models in the U.S and the provision of effective tools through the FEMA website.

The discussions that followed the presentation highlighted the need to raise awareness of businesses on what constitutes disaster risk reduction and also raise awareness of the role that the private sector can play. Companies are experts in the risk to their own line of business, however they need to be cognizant that large scale investments by companies in disaster risk reduction leads to ripple effects in the community, e.g. through their supply chain. Continuity managers in companies need to work together with local government to raise awareness of their investments in risk management, to reduce overlaps, redundancy and ensure effective use of public funds. Risk management experiences of large companies need to be shared with small and medium enterprises and companies who invest in disaster risk management activities should do it strategically so that they can play a key role in the national DRM initiatives.

It was noted that there are a lot of training opportunities for emergency managers that the private sector can provide. In addition, there is a need for governments to collaborate with the private sector to bring critical infrastructure back into operation, as this will aid the rapid return to a state in which they can resume their operations.

#### *Overview: Emerging issues for Public Private Partnerships and Disaster Resilience in Asia Pacific*

**Mr. Nathaniel L. Forbes, President, Asia Council International Association of Emergency Managers (IAEM)** pointed out that there are insufficient opportunities for the private sector to interact with and discuss disaster management issues with the public sector.

Not enough of the private sector is involved in discussions and not enough opportunities are provided for the private sector to interact with the public sector on disaster management. He outlined the basic needs in a post-disaster situation and identified resources and services that could be provided by the government agencies, the private sector and NGOs. He explained the different approach to incident

management and the different priorities of government agencies and the private sector in the aftermath of a disaster. In doing so, he suggested that the main role of the government should not only be to legislate, but to provide an enabling environment and support framework through which the other contributors can respond. He listed climate change, the collapse of ocean systems, peak oil and water scarcity as emerging issues and suggested that tax deductions should be provided to individuals for risk management activities that they have invested in or donated to and that the deduction amount should be based on a business resilience index. He purported that there were a lack of incentives for people to be prepared for disasters and thus suggested that economies should compete to secure aid for the DRR activities based on the development and submission of innovative DRR plans. The deliberate provocation of sensitivity between economies by showing them how they compare would result in the creation of competition incentives. He declared that the disaster management authorities did not meet frequently enough and noted that there could be an increase in business representatives contributing to the APEC Emergency Preparedness Working Group meetings. He concluded that the private sector should also be involved in preparedness, not only during and after a disaster.

# Appendix – Discussion Paper prepared for the APEC Emergency Preparedness Working Group Workshop on Public-Private Partnerships and Disaster Resilience

Drafted by CSR Asia - [www.csr-asia.com](http://www.csr-asia.com)

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## Introduction

This discussion paper contributes to the APEC Emergency Preparedness Working Group (EPWG) workshop on 'Public-Private Partnerships (PPPs) and Disaster Resilience', to be held in Bangkok, Thailand, 24-27 August 2010. The workshop is co-organised by the Australian Government and Government of Thailand, with the aim to increase collaboration and demonstrate global best practice between public and private sectors in emergency preparedness and management efforts. The workshop will provide governments, emergency management authorities, regionally focused businesses and a selection of peak private sector groups in the region with working models and new networks that will foster partnerships in anticipation and ahead of future disasters. The overall aim is to strengthen business and community resilience to disasters, and mitigate disruptions to business and trade in the APEC region when disasters occur.

The purpose of this paper is to initiate a discussion among representatives of the APEC economies participating at the workshop on the role of PPPs in building disaster resilience and a common approach for APEC member economies to further encourage and strengthen such partnerships. For this reason, the paper highlights best practice examples within the APEC region and proposes a draft set of APEC Principles for consideration by APEC's Emergency Preparedness Working Group (EPWG).

The paper does not discuss the concept of disaster resilience in general or what will be required to further strengthen the resilience of economies, communities or infrastructures. It touches on these issues in discussing the need to engage the private sector in resilience efforts and focuses on the potential of collaborative public-private endeavours in building resilience of businesses, communities and economies.

### 1. Disaster resilience

In a globalizing world our modern economies find their security environments shaped by a dynamic mix of continuing and emerging challenges and opportunities. Technological innovation has brought about a range of new threats and climate change will inevitably add to the frequency and intensity of freak weather events. Organised crime, natural disasters and pandemics make it impossible to identify and address all factors that put economies, their communities and organisations at risk.

Based on the acknowledgement that core values of a society cannot be entirely protected at all times and that disruptions are inevitable, resilience is gaining importance as a core conceptual approach. Economies come to accept that they cannot prevent every risk from being realized, but rather must learn to adapt and manage risks in a way that minimizes impact. A number of economies have therefore shifted from a protection focus to a resilience focus. For example, in Australia, a review of the Australian Government's Critical Infrastructure Protection Program undertaken in 2007 found that the term 'critical infrastructure protection' did not adequately reflect the program's all hazards approach, instead implying a protective security focus. Hence the review recommended a shift to resilience to more accurately reflect the program's work and objectives.<sup>1</sup>

The United Nations International Strategy for Disaster Reduction (UN/ISDR) defines resilience as:

*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, including through the preservation and restoration of its essential basic structures and functions. Resilience means the ability to “resile from” or “spring back from” a shock. (UN/ISDR 2009, UN/ISDR Terminology on Disaster Risk Reduction)*

At the centre of this definition is the ability or capacity of physical or human systems to respond to and recover from the impacts of extreme events and to minimize disruptions to structures and functions. In contrast, the concept of disaster risk reduction (DRR)<sup>2</sup> is, simply put, about identifying and addressing disaster risks and looking at how to reduce, transfer or accept risks of a disaster happening. Disaster resilience addresses the question of what happens when a disruption occurs. It can be understood as the process of preparing and responding to the eventual actualization of the multiple and increasingly diverse risks. This means that in order to build and maintain resilience one has to work on all phases of disaster preparedness, mitigation, response, and recovery.

With regard to community resilience UN/ISDR further states that:

*The resilience of a community in respect to potential hazard events is determined by the degree to which the community has the necessary resources and is capable of organizing itself both prior to and during times of need. (UN/ISDR 2009, UN/ISDR Terminology on Disaster Risk Reduction)*

Community resilience, therefore, is about the continued ability of a community to function during and following a disaster. According to the International Federation of Red Cross (IFRC) “local capacity is key to saving lives” and for local communities to prepare for catastrophes, they can make use of local knowledge, education programmes, low cost mitigation measures and preparedness plans. IFRC states that “the more organised a community is, the more resilient it is when disaster strikes.”<sup>3</sup>

Businesses are vital actors in the societies in which they operate. They act as employers, producers of goods and services, operators of critical infrastructure, consumers of public and other private sector services, taxpayers, and many more. In every community, companies both small and large, are key to community development. Disruption in business activity can lead to major economic losses and can significantly impact the long-term growth of national economies. Safeguarding companies from business disruptions is therefore a public interest. Similarly, community disaster resilience is in the interest of the private sector as a business needs a functioning community (within which) to operate.

According to Stewart et al. “community resilience is influenced by the relationships government

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2 The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events. (UN/ISDR Terminology on Disaster Risk Reduction 2009)

3 Warhurst, A. (2006)

(public) agencies develop with private sector partners and the resilience of relevant supply chains and critical infrastructures/key resources which exist in their communities.”<sup>4</sup>

Critical infrastructures such as transportation, communications, and power infrastructures are particularly vulnerable to shocks and disturbances as they are highly interconnected and interdependent. Hence, one failure can have a domino effect and lead to failures throughout the chain affecting various sectors and locations. In this regard, critical infrastructure resilience is about a system’s ability to not only withstand damage or disruption but to be able to be readily and cost-effectively restored after an impact.<sup>5</sup>

From the above it becomes apparent that achieving resilience in an economy requires a comprehensive, all-hazards, cross-sector, integrated approach that is based on horizontal and vertical cooperation and coordination of key public, private, and non-profit stakeholders as well as individuals.

## Box 1: Development of a National Disaster Resilience Strategy in Australia

Given the expected increased regularity and severity of natural disasters arising from extreme weather events, on 7 December 2009, the Council of Australia Governments (COAG) agreed to adopt a whole-of-nation resilience-based approach to disaster management which recognizes that a national, coordinated and cooperative effort is required to enhance Australia’s capacity to withstand and recover from emergencies and disasters. This agreement recognizes that disaster resilience is a shared responsibility for individuals, households, businesses and communities, as well as for governments.

Noting that the effective protection of critical infrastructure is reliant on a strong, collaborative partnership between governments and critical infrastructure owners and operators, COAG also agreed to establish a National Critical Infrastructure Resilience Committee, both as a national co-ordination mechanism for critical infrastructure resilience, as well as to enhance and replace existing co-ordination mechanisms.

COAG also agreed to establish a new National Emergency Management Committee (NEMC), providing a clear mandate to drive and coordinate national policies and capability development in relation to emergency management. This mandate includes the ability to influence and facilitate decisions beyond the remit of the traditional emergency management portfolio. The first task of the NEMC is to bring together the representative views of all governments, business, the non-government sector and the community into a comprehensive National Disaster Resilience Strategy.

Source: Council of Australian Governments (2009)

## Box 2: Safeguard Iowa Partnership (SIP)

Many U.S. states and local jurisdictions are actively entering into PPPs to improve their capabilities in emergency management. Some states have an Emergency Support Function (ESF) for business and industry, some include the private sector in exercises, and some communities have created online registries of business resources that are available to public sector responders.

An example of a successful state partnership is the Safeguard Iowa Partnership (SIP), a voluntary coalition of the state's business and government leaders that facilitates the unified management of capabilities during an incident. SIP partners (from the private as well as public sector) work to reduce the impact of emergencies on their communities by donating resources and expertise and offering support services. In addition, annual partnership fees provide financial support.

Among the initiatives undertaken to help share private sector resources to improve preparedness in Iowa is a secure Web-based catalogue that identifies the volunteer and for-hire emergency assets of private sector partners. The business resource registry organizes these assets according to location, availability, and quantity so that they can be procured relatively easily during emergencies.

Source: U.S. Department of Homeland Security/Security/Federal Emergency Management Agency (n.d.)

### 1.1. Resilience of local communities

Community disaster resilience can be strengthened through careful natural resources management and sustainable livelihoods. This stresses the importance of the role of women, the informal sector and local business in building resilience of local communities.

- Gender perspective: Women have a crucial role in all stages of disaster management as they are among the most vulnerable groups in disaster affected populations but also because they are the pivotal managers of natural and environmental resources and key frontline implementers of development. UN/ISDR stresses that “women's responsibilities in households, communities, and as stewards of natural resources, position them well to develop strategies for adapting to changing environmental realities”. Hence it is crucial to integrate their knowledge and experience in order to take into consideration the interest of the whole community and build real community-based resilience. Though the crucial role of women is increasingly being acknowledged, their involvement in disaster management and in particular in decision making has been low and their concerns have not adequately been integrated into the implementation of disaster management. There is a need to better involve the concerns and knowledge of the more vulnerable community groups such as women, children and the elderly who represent a substantial part of the population.<sup>6</sup>

- The informal sector: Handmer and Choong argue that local economic activity is key to disaster resilience in much of the world – “without the flows of money generated by such activity, the ability to continue living, let alone recover, is limited.” They see unofficial or informal activities as an important factor for the local economy and local livelihoods as it keeps money in local hands.<sup>7</sup>
- Small- and medium-sized enterprises (SMEs) and local companies: A UN report found that most Agencies, Funds and Programmes have entered partnerships with large, multinational companies based in industrialized countries and that the potential of SMEs and local companies has not been realised yet. Recognising that local partnerships can better respond to development needs and be more sustainable the UN is now aiming to engage more with SMEs and local companies. The UN report stressed that such partnerships often follow different rules than those with multinationals and approaches must be adapted accordingly. SMEs are often more interested in skills and technology transfer than reputation gains and they are also typically more dependent on short-term benefits and need to see more immediate results when entering into a partnership.<sup>8</sup>

## 1.2. Business resilience

The list of natural and manmade disasters with which businesses have had to contend early in the 21st century is long. Business disruptions resulting from these included among others: loss of assets and productivity, loss of revenue, customer complaints and delayed product availability. In many cases disruptions have rippled across supply chains, shaken entire industries and taken their toll on employee, customer and partner relations. As businesses form the backbone of a nation’s economy and play a crucial role as employers and taxpayers, business resilience is important to every economy. For example, the volcanic eruption in Iceland in April this year did not only cause the biggest airline disruption but also affected many other types of business both directly and indirectly. Disruptions rippled across supply chains and took their toll on employee, customer and partner relations with thousands of people not being able to get to the right places. In particular, import/export businesses, tourism, the pharmaceutical industry and any other business relying on perishable goods being delivered via air transport had been adversely impacted.

While most larger enterprises will have risk management systems in place, most of these systems do not make adequate provisions for high-impact low-probability events that are difficult or impossible to foresee leaving them unprepared when a major event affects their operations. Large-scale events such as pandemics, natural disasters and terrorism may pose the least common class of risk compared to data-<sup>9</sup> or business-driven risks<sup>10</sup> but they are potentially the

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7 Handmer and Choong, 2006

8 United Nations General Assembly, Report of the Secretary General, A/64/150

9 Data-driven risks deal specifically with digital information hosted, created and delivered by IT applications and services and the various threats facing that information.

10 Some classes of business-driven risk come about when one company acquires or merges with another; in the process of combining their assets and staff, the efficiency and consistency of service delivery can become challenged. Other business-driven risks include a failure to comply with government regulations, poor oversight and governance of resources, including IT assets and poor business process optimization.

most disruptive and expensive ones.<sup>11</sup> Against this background, putting in place and regularly up-dating and exercising a well-thought out and flexible business continuity management framework is key in building business resilience. The Business Continuity Institute (BCI) advocates a Business Continuity Management (BCM) framework that, very simply put, looks at the business impacts of process disruptions or asset damages as opposed to focussing on the probability of business risks and threats and how to avoid, transfer or accept those<sup>12</sup> (which would be the focus of the more popular enterprise risk management systems).

While business continuity management can be a complex issue depending on the particular industry, size and scope of a business putting a plan in motion will improve the likelihood that a company will survive and recover.<sup>13</sup> While larger companies may be better able to recover from major business disruptions, the impact of disasters or other major disruptive events can put small and medium-sized enterprises (SMEs) out of business. SMEs form important parts of other businesses' supply chain, as such their downfall can jeopardise entire industry sectors and impact local economy.

Business continuity is a management discipline that identifies potential threats to an organization and the impacts to business operations that those threats, if realized, might cause. It provides a framework for building organizational resilience with the capability for an effective response that safeguards the interests of an organization's key stakeholders, reputation, and value-creating activities.<sup>14</sup>

Standards play an important role in introducing management systems and practices in a greater number of businesses as they usually establish prescriptive, moderately easy to understand and consistent set of principles and process steps. There is no international standard for BCM. The more acknowledged ones include BS 25999 (UK), NFPA1600 (US and Canada) HB221 (Australia), APS 232 (Australia) and FSA (UK). BS 25999, for example, establishes the process, principles and terminology of BCM. The purpose of this standard is to provide a basis for understanding, developing and implementing business continuity within an organisation and to provide confidence in the organisation's dealings with customers and other organisations. It also enables the organisation to measure its BCM capability in a consistent and recognised manner. The standard deals with broad goals and is therefore non prescriptive so as to make it applicable to small and large business and local or global organisations.<sup>15</sup>

Clearly, complying with a BCM standard does not infer any immunity from problems, but it allows benchmarking and certification and indicates a sophisticated level of risk management, which in response will provide market assurance that the organization is well prepared to meet a range of events that may threaten its sustainability and existence.<sup>16</sup>

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11 IBM website

12 Business Continuity Institute (2009)

13 U.S. Department of Homeland Security/Security/Federal Emergency Management Agency (2004) and website of Ready Business

14 Business Continuity Institute and The Chartered Institute of Purchasing & Supply (2010)

15 <http://www.bs25999.com/>

16 <http://www.bs25999.com/>

The U.S. Department of Homeland Security (DHS) has recognised the crucial role that standards can play and introduced a voluntary program of accreditation and certification of private entities to three standards adopted by the DHS (see Box 4).

### Box 3: Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep)

PS-Prep is a voluntary program of accreditation and certification of private entities using standards adopted by the U.S. Department of Homeland Security that promote private sector preparedness, including disaster management, emergency management and business continuity programs. The purpose of the program is to enhance nationwide resilience in an all-hazards environment by encouraging private sector preparedness.

It provides a mechanism by which a private sector entity may be certified by an accredited third party stating that the entity conforms to one or more preparedness standards adopted by DHS. To date, DHS has adopted the following three standards all of which comprehensively deal with preparedness and can be applied to the majority of private sector entities:

- ASIS International SPC.1-2009 Organizational Resilience: Security Preparedness, and Continuity Management System. Available at no cost.
- British Standards Institution 25999 Business Continuity Management: Part 1 (2006) and Part 2 (2007). The British Standards Institution is making both parts available for a reduced fee of \$19.99 each.
- National Fire Protection Association 1600:2007 Standard on Disaster / Emergency Management and Business Continuity Program. Available at no cost.

DHS has selected an accreditation body, the ANSI-ASQ National Accreditation Board (ANAB), to develop and oversee the certification process, manage the accreditation and appoint qualified third parties to carry out the certification in accordance with the accepted procedures of the program. Private sector organizations, including businesses and critical infrastructure and key resources (CIKR) entities, may apply for certification to the applicable requirements of preparedness standard(s) adopted by DHS. Certification, in the context of this program, is confirmation that an accredited third party certification organization has validated a private sector entity's preparedness to a standard. Once an organization is certified, there will be a periodic reassessment and audit process so the certification organization can continue to have confidence in the organization's conformity to emergency preparedness and business continuity management system. DHS will maintain and make public a listing of any private sector entity certified as being in compliance with PS-Prep, if that private sector entity consents to such listing.

Source: FEMA factsheet of the Voluntary Private Sector Preparedness Accreditation and Certification Program

## Box 4: Getting business prepared and engaged

In the United States there is a large number of initiatives aiming to get business prepared to disasters and to engage them in collaborative approaches for building disaster resilience. Two of these initiatives are introduced below.

### **Ready Business**

Ready Business is a web-based information platform for businesses particularly targeting small- to mid-sized businesses. It outlines common sense measures business owners and managers can take to start getting ready and provides practical steps and easy-to-use templates. These recommendations reflect the Emergency Preparedness and Business Continuity Standard (NFPA 1600) developed by the National Fire Protection Association and endorsed by the American National Standards Institute and the Department of Homeland Security. It also provides useful links to resources providing more detailed business continuity and disaster preparedness information.

Source: Ready Business website

### **ChicagoFirst**

This non-profit association was set up by fourteen major Chicago area financial institutions to address homeland security, business continuity, and emergency management issues that require a coordinated approach among institutions and with all levels of government. The motto of the association “a crisis is no time to exchange business cards” encapsulates its approach to resilience, security and overall preparedness”.

Firms from the broader private sector constitute the membership of this association and members collaborate with strategic public and private partners on disaster preparedness and business continuity issues. The goals of the association include developing information sharing protocols with local and state emergency response agencies to ensure that members receive access to trusted, real-time information and working with the City of Chicago on evacuation planning.

A major aim is to develop a credentialing programme which will allow critical infrastructure operations personnel inside a secured disaster site perimeter and into their places of business as soon as possible after an event.

Source: ChicagoFirst website

## 1.3. Business engagement in community resilience

Companies new to business continuity often focus their efforts solely within the boundaries of their organization. As their business continuity arrangements mature, these boundaries expand to include supply chain vulnerabilities. Many conventional business continuity frameworks stop here.<sup>17</sup>

There is now increased expectation for business to play a larger role in disaster response and recovery. For example, after the earthquake in Sichuan province, China, in May 2008, Chinese bloggers made lists of corporate contributions to earthquake victims. Similarly, an “International Stingy List” of corporations accused of failing to contribute to earthquake victims was prepared in an attempt to boycott these companies.<sup>18</sup>

Against this background, leading companies are now adding a further dimension on BCM and start playing their part in building community resilience. This clearly makes business sense as no business exists in a vacuum. Its employees, suppliers and customers may all come from the local area and the availability of all critical infrastructures is dependent on the local ‘last mile’. Hence, if the community is impacted, the business is also impacted. Good business continuity planning therefore needs to take into account dependencies in the local community and, for self preservation rather than for altruistic reasons, needs to become involved in helping enhance the resilience of the local community.<sup>19</sup>

The Corporate Network for Disaster Response (CNDP), based in the Philippines, finds that the private sector is still geared largely toward emergency response as this type of intervention produces more tangible benefits to corporations. It sees, however, an opportunity for more strategic private sector engagement through

- linking DRR and resilience efforts to climate change which features more prominently on corporate agendas, and
- in promoting business contingency planning in particular for companies who have not dealt with disasters before. As their own continuity plans mature and their understanding of DRR grows they come to understand linkages between business and community disaster preparedness.

Companies, of all sizes, are ideally placed to begin preventative action. One of the most important ways business can help is by reducing vulnerability among at-risk populations within their sphere of influence. In doing so, businesses should not simply revert to philanthropy to make contributions in the aftermath of a disaster. A company seeking to demonstrate responsible business will rather act proactively and establish measures to protect employees, operations and communities in disaster prone areas.<sup>20</sup>

Companies, especially those with an office presence in disaster affected areas, find themselves drawn into disaster relief and recovery, both as a response to their clients and their employees. Some of these companies have gone so far to permanently include disaster relief as a core area within their community investment or CSR programmes as they clearly see that making a positive contribution on the ground can help in building trust and reputation from the local community and in attracting and retaining staff.<sup>21</sup> While some companies still largely fall back to philanthropy making in-kind or monetary contributions other companies engage more strategically by bringing in core competencies, skills, technology, products and services, and personnel. Annex 1 includes a number of case studies of companies that have build strategic partnerships in order to help build community resilience towards disaster impacts. A majority of these companies are involved in building disaster response

18 Frost, S. (2008) and Wong, A. (2008)

19 Honour, d. (n.d. b)

20 Warhurst, A. (2006)

21 Wong, M. (2009)

preparedness by providing company assets, employees and expertise for more coordinated and timely response and relief activities such as Coca-Cola and the Thai Red Cross Society in Thailand or Mercy Malaysia and its corporate partners in Malaysia. Only a few companies get engaged in broader disaster mitigation activities looking at community development or natural resource management such as, for example, Smart Communications in the Philippines who supported a mangrove reforestation project in the typhoon and flood prone “Barangay Cagsao” community.

Investment in the social and economic development of a community is a crucial, yet less explored area of building community disaster resilience. As stated earlier, community resilience largely builds upon a community’s ability to organize itself to minimize effects of disasters and to recover quickly by restoring socio-economic vitality. Poverty increases vulnerability as it constrains access to crucial assets and services and restricts an entire community’s possible course of action. In poor rural communities this means, for example, that livelihoods depending on agriculture and other natural resources are vulnerable to even slight variations in weather and seasonality. In an urban setting poor communities are often left with no choice but to settle informally on hazard prone lands such as along the banks of rivers. Hence, poverty reduction efforts such as job and livelihood creation can help reduce disaster risks and contribute to resilience. Companies can contribute to community resilience by the very act of doing business thus providing jobs and creating livelihoods or by investing in areas such as education, health and the environment. They can ensure that the poor are able to get access to crucial products and services by providing low cost options. For example, Allianz SE has partnered with NGOs Care International and Planet Finance to establish market demand, research customer needs, train microfinance institutions and roll-out microinsurance schemes in order to ensure the poor do not fall into the poverty trap as a result of a disaster. Allianz has teamed up with GTZ and UNDP in Indonesia and included features such as compliance with Islamic law and co-insurance for spouses to make the products more flexible and accessible for customers. Initiatives involve educating a community on the concept of microinsurance, with a focus on the principle of community lending and shared risk.<sup>22</sup>

International Alert found that when emergencies hit, the default response is often driven by an international alliance of aid donors, UN agencies, international NGOs and some private-sector companies. It sees a lack of skills and resources

### **Working with customers to ensure supply of crucial services**

Ensuring supply of crucial services is in the very interest of utility companies and some have found innovative ways of working with customers on disaster preparedness. For example, Sydney Water assists households in being prepared for essential service disruptions caused by natural disasters or water supply asset failures by providing substantial cash rebates to customers who buy and install water tanks to catch rainwater from their roof. This water can be used for various purposes including flushing toilets, washing clothes, for basic hygiene after boiling, cleaning purposes and watering plants.

To date more than 20,000 rebates have been paid to Sydney residents, providing them with a contingency source of water in times of supply disruption as well as with an effective measure to conserve water.

Source: Personal communications with David Parson, Manager, Critical Infrastructure Resilience, Sydney Water

required as a major reason for inadequate action from national and local actors.<sup>23</sup> Local and national actors, however, would be powerful advocates as they have profound knowledge of the social, environmental, cultural and political issues in the affected communities. Hence, building national and local capacity is vital to ensuring disaster resilience. For example, DP DHL works together with local authorities to build capacity of local airports.

## 1.4. Resilience of critical infrastructure

Critical infrastructures (CI) are those infrastructures whose disruption or destruction would result in a serious impact on social and economic well-being and national security.<sup>24</sup> It is important to note that CI do not only include assets but also networks or supply chains that support the delivery of essential services. For example, the supply of food is dependent on a complex network of producers, processors, manufacturers, distributors and retailers and the infrastructure supporting them. Therefore, the U.S. Homeland Security Act speaks of critical infrastructure and key resources (CI/KR), the latter of which are to be understood as “publicly or privately controlled resources essential to the minimal operations of the economy and government.”<sup>25</sup>

According to the U.S. DHS, ensuring the resiliency of CI/KR is essential to the Nation’s security, public health and safety, economic vitality, and way of life. Any CI/KR disruptions can significantly disrupt the functioning of government and business alike and produce cascading effects far beyond the targeted sector and physical location of the incident.<sup>26</sup>

CI extends across various sectors of an economy, including local government authorities, banking and finance, utilities (transport, power, gas and water), communications, built environment and facilities, manufacturing, mining and process industries, as well as national health and defence organizations. CI disruptions can have a range of implications for business, the community and government, which may result in injury, anxiety, social and economic impacts. The example of France’s 2003 heat wave shows how initially technical problems with public infrastructure can lead to a serious health crisis: power shortages due to the unusually large electricity demands seriously resulted in numerous casualties in northern France as especially the most vulnerable part of the population was unable to cope with the high temperatures.<sup>27</sup>

Most businesses will have enterprise risk management systems and/or business continuity plans in place, which allow them to manage risk to be within their respective risk appetite by deciding on whether to transfer or avoid an identified risk. Such an approach is not appropriate for critical infrastructures (CI). Due to their significant importance for economies CI operators/owners also need to be able to address hazards and risks that are unforeseen or unexpected and they need to ensure the continuity of essential services to the community in the face of all hazards. However, protecting CI from all hazards – no matter what the cause and risk of realisation– is unrealistic. Hence, rather than focusing on the causes and risks, the focus should be on anticipating the consequences of

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23 International Alert, 2009

24 Zeichner Risk Analytics (2007)

25 Website of the U.S. Department of Homeland Security

26 U.S. Department of Homeland Security/Security/Federal Emergency Management Agency (n.d.)

27 Brunner, E. and Giroux, J. (2009)

CI breakdowns and damages.<sup>28</sup>

A fundamental characteristic of modern CI is that they consist of complex, highly connected and highly interdependent systems.<sup>29</sup> This is particularly evident in the utility sector – a reliable continuity of the supply of cooling water is critical for electricity generation in nuclear plants, while on the other hand, electricity is crucial for water supply and treatment facilities. The high interdependency makes CI particularly vulnerable as a disruption in one system will affect operations of other interconnected systems. It poses a challenge to building CI resilience towards disasters and other hazards.

Given that most CI are owned by the private sector or operated on a commercial basis, a main component in enhancing resilience of CI is forging partnerships between the public and private sector. Governments need to be engaging and encouraging dialogue with CI operators.<sup>30</sup>

Further, CI resilience incorporates the actual infrastructure and the owner/operator capabilities needed to create a positive trajectory of functioning and adaptation after a disturbance has occurred.<sup>31</sup> Stewart et al. (2009) argue that

*“owners/operators should have intricate knowledge of their assets position(s) within complex, interdependent infrastructure systems and possess an understanding of risks (all-hazards), vulnerabilities, and potential consequences. As such, government programs intended for hazard mitigation planning and critical infrastructure protection (CIP) require collaborative engagement with private sector operators in order to be effective in accomplishing their intended goals.”* (Stewart et al., 2009)

From the above it becomes apparent that multidirectional information flow is needed in order to provide CI owners/operators with a comprehensive picture of threats or hazards to CI and to enable more effective emergency planning from the government. Information sharing would also enable a cross-sectoral analysis of dependencies assisting CI owners/operators and the government to understand system-wide risks that are beyond the purview of individual organisations or sectors. This would enable potential risk sharing and knowledge transfer to cope with certain incidents and ultimately enhance CI resilience.

A major challenge for private-public collaboration in this regard lies in balancing the need to protect information about CI sites for security reasons and the need to share such information with local agencies to build disaster preparedness. In case of the UK summer 2007 floods experience showed that actual risks to CI sites was much higher than communicated risks and that protection of CI sites was poor.<sup>32</sup> Against this background, governments may want to consider issuing clear guidance on expected level of engagement of CI owners/operators in disaster planning, exercising and response and consider the case for strengthening disclosure requirements. Regardless of legal requirements, robust relationships need to be established that provide a confidential platform for sharing and protecting sensitive information regarding threats, vulnerabilities, countermeasures,

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28 Brunner, E. and Giroux, J. (2009)

29 Stapelberg, R.F. (n.d.)

30 Brunner, E. and Giroux, J. (2009)

31 Stewart et al. (2009)

32 Pitt, M. (2008)

and best practices.

Countries already sharing information about CI include France, where local city mayors, responsible for public safety in their communes, have access to potentially sensitive information on CI in order to develop suitable local emergency plans in which utility operators are also involved. The French government has recently passed a law on the security of CI, which includes a business continuity plan requirement. Set up in response to the recent influenza outbreak, the law applies more generally to the wider context of increased threats such as terrorism or flooding. The law requires individual operators to draft classified Operator Security Plans which are known only by the operator and the government. Each plan is individual and is drawn up based on individual circumstances and the needs of the operator, but may include elements such as improving defences and setting out evacuation arrangements.<sup>33</sup>

### Box 5: Australia Trusted Information Sharing Network (TISN) for Critical Infrastructure Resilience

The Australian government understands that a business-government partnership is required to help build confidence and reliability in the continued provision of critical infrastructure (CI) services that support Australia's national security, economic prosperity, and social and community wellbeing, from all hazards. The TISN, established in 2003, forms the basis of a strong private sector and government partnership approach to protecting CI in Australia. TISN members include owners and operators of critical infrastructure, Australian, State and Territory government agency representatives, and peak national bodies.

The TISN was established in order to raise the awareness of risks to CI, share information and techniques required to assess and mitigate risks, and build resilience capacity within organisations. Through sector specific and cross-sectoral activity it allows industry, government and also competitors to share information and to collaborate on common issues. Solutions to domestic security problems can be developed in a trusted environment which is sanctioned by business regulators.

Further, it enables business to bring issues to government that are seen as impediments to achieving CIR. Seven TISN Sector Groups are overseen by the Critical Infrastructure Advisory Council which reports to the Attorney-General. In this manner it gives CI owners and operators a way of communicating with the Australian Government at a high level.

Recognising that each TISN Sector Group has its own culture, people and approach, the Australian Government is taking a more tailored approach to each Sector Group.

Source: Website of the TISN

## Box 6: The U.S. National Infrastructure Protection Plan (NIPP)

With the NIPP, which was launched in 2006 and tackles both security threats and other manmade and natural disasters, it was sought to provide a unifying structure for the integration of a wide range of efforts for the enhanced protection and resiliency of the nation's critical infrastructure and key resources (CI/KR) into a single national program.

The NIPP sets out national priorities, goals and requirements for effective distribution of funding and resources to help ensure that the US government, economy and public services continue in the event of a terrorist attack or other disaster. It supports the prioritization of protection and resiliency initiatives and investments across sectors to ensure that government and private sector resources are applied where they offer the most benefit for mitigating risk by lessening vulnerabilities, deterring threats, and minimizing the consequences of terrorist attacks and other manmade and natural disasters.

The NIPP provides the framework for the unprecedented cooperation that is needed to develop, implement, and maintain a coordinated national effort to bring together government at all levels, the private sector, nongovernmental organizations, and international partners. In doing so, it depends on its 18 supporting sector-specific plans (SSPs) for full implementation of this framework within and across CI/KR sectors. SSPs are developed by the Federal Sector-Specific Agencies (SSAs) in close collaboration with sector partners. Together, the NIPP and SSPs provide the mechanisms for: identifying critical assets, systems, and networks, and their associated functions; understanding threats to CI/KR; identifying and assessing vulnerabilities and consequences; prioritizing protection initiatives and investments; and enhancing information-sharing mechanisms and protection and resiliency within and across CI/KR sectors.

The effective implementation of the NIPP is predicated on active participation by government and private sector partners in meaningful, multidirectional information sharing. To be effective, the NIPP is sought to be implemented using organizational structures and partnerships committed to sharing and protecting the information needed to achieve the NIPP goal. NIPP implementation relies on CI/KR information provided voluntarily by owners and operators. Much of this is sensitive business or security information that could cause serious damage to private firms, the economy, public safety, or security through unauthorized disclosure or access. The Federal Government has a statutory responsibility to safeguard CI/KR protection-related information. DHS and other Federal agencies use a number of programs and procedures, such as the Protected Critical Infrastructure Information (PCII) Program, to ensure that security-related information is properly safeguarded.

This risk-informed approach also includes mechanisms to involve private sector partners in the planning process and supports collaboration among CI/KR partners to establish priorities, define requirements, share information, and maximize risk reduction.

The Private Sector Node (including CI/KR owners and operators, SCCs, ISACs, and trade associations) provides incident information, as well as reports of suspicious activity that may indicate actual or potential criminal intent or terrorist activity. DHS, in return, provides all-hazards warning products, recommended protective measures, and alert notification to a variety of industry coordination and information-sharing mechanisms, as well as directly to affected CI/KR owners and operators.

Source: U.S. Department of Homeland Security/Security/Federal Emergency Management Agency (n.d.)

## 2. Establishing successful public-private partnerships

Business has proven that it can and does play a fundamental role in building community resilience towards disasters. It provides resources, expertise, many essential services, and operates critical infrastructure on which a community depends.

In recent years we have seen an increasingly manifest interest of the public and the private sector in each other and their declared willingness to cooperate more and better. The current model of private-sector engagement in disaster management is largely focused on response and recovery and generally involves private sector actors contributing their products, skills, and expertise to response operations on a pro-bono basis. The challenge is to build upon the success to date in pro-bono collaborations and develop deeper engagement with the private sector involving companies as investors and partners in long-term efforts to build community resilience.

Public-private collaboration has traditionally been viewed as a partnership or as contractual interaction between government agencies and private sector companies. In many economies public-private partnerships (PPPs) are widely adopted in the areas of urban development, transportation, water/wastewater, utilities, schools, and financial management and are typically defined as:

*a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility. (NCPPP, 2008).*

Clearly business can provide superior logistics capabilities, technical expertise and key skills and services which the government should be tapping into to build overall disaster resilience while reducing the burden on public finance. But PPPs based on contractual agreements as described above face some major challenges.

The time sensitive nature of decision-making in the aftermath of a disaster appears to bring public and private sectors together in informal settings on an ad-hoc basis as opposed to planned interaction. As post-disaster response and recovery activities are often the entry points for private sector engagement, experiences made during this time will shape their attitude towards cooperating with

the public sector in other projects and their willingness to build long-term relationships. The public sector needs to build upon collaborative action with companies in the aftermath of disasters and emergencies and pave the way for long-term strategic private sector involvement in building disaster resilience.

Contractual agreements are also counterproductive when it comes to developing innovative strategies and building long-term relationships of mutual trust. Stewart et al. argue that in the case of PPPs, relational contracts could augment the public's sectors need for risk sharing, accountability and transparency by establishing trust, mutual interest and a willingness to do what is required in a given situation (for example there is often no time to renegotiate service terms of a contract).<sup>34</sup>

In engaging with business, the public sector needs to be open to new and innovative ways of working and both parties need to provide the time for the partnership to evolve and mature. It certainly needs time for both parties to learn how to understand each other, build trust and to ensure that different working cultures can meet to serve the ultimate goal of the partnership. A good example in this regard is Coca-Cola's "loaned-executive" assignment in 2005 under which Coca-Cola's Public Affairs Manager for Asia was seconded to the UNDP Regional Centre in Bangkok for one year. The aim was to build and manage new partnership activities for longer-term tsunami reconstruction efforts. This unusual secondment was a new experience on both sides and indicates Coca-Cola's and UNDP's openness to a more creative and innovative approach to PPPs. It has allowed both parties to learn from each other and to deepen their collaboration.<sup>35</sup>

It has to be acknowledged that business needs to be able to communicate results of partnerships to their various stakeholders and justify investments made. This requires them to measure and communicate results of partnerships. Stakeholders increasingly ask business to report on impacts of their community investments or CSR programs rather than inputs (i.e. what difference was made on the ground?).

Some private sector firms have responded to disasters as part of a government contract, while others responded because they have vested interests in the impact area through physical assets, suppliers, customers, and/or corporate values of social responsibility. Motives for private sector engagement are diverse and hence a diversity of interaction based on less formal relationships is needed that allow flexibility and enables involved parties to adapt relationships to effectively address issues as they arise.

However, to ensure that partnerships are build on joint action in which complementary resources are being tapped and different interests are being balanced while the parties involved retain full independence, there need to be clearer rules to the game. A basic framework such as the

"Such partnerships leverage on our core competencies and expertise in supply chain and logistics management, global presence and network, and experience in disaster management since 2003's Bam earthquake in Iran. We see this as an opportunity to utilize our expertise to make a positive difference to local communities in which we serve and operate."

**Matt Hemy, Head of the Asia Pacific Disaster Response Team, DP DHL, on DP DHL's partnership projects with UNOCHA and UNDP**

34 Stewart et al. (2009)

35 Hawkins, S., n.d.

“Guidelines on Cooperation between the United Nations and the Business Sector” contribute to ensuring responsible and good practice. The UN guidelines, intended to serve as a common framework for all organizations of the UN, outline, among other things, principles for partner selection and engagement, roles and responsibilities, and types and modalities of partnerships.

Similarly documentation and dissemination of best practice examples contribute to sharing lessons learned and establishing good practices. The U.S. Federal Emergency Management Agency’s Best Practices Portfolio, for example, provides a valuable collection of hazard mitigation stories, ideas, activities/projects and funding sources that help actors new to this field or those looking for helpful case studies. A search engine allows looking for case studies by location, activity, hazard or project type (pure private or public sector initiative or PPP).<sup>36</sup>

## Box 7: DP DHL on lessons learned and best practices

To provide disaster relief worldwide, Deutsche Post DHL cooperates with the UN Office for the Coordination of Humanitarian Affairs (OCHA) and the United Nations Development Programme (UNDP). Below lists DP DHL’s key lessons learned and best practices in developing close and trusting relationships these two partners. (See Annex 1 for details on DP DHL’s partnerships)

### **Lessons Learnt – private sector involvement in disaster response and preparedness**

- It is important to work with a respected partner and to ensure there is clarity on the scope of engagements
- It is helpful to focus on a specific element of disaster response or preparedness where the group’s expertise can be leveraged
- Clear communication to other actors in the field that the engagement is a pro bono initiative. This is important in being accepted by humanitarian actors.
- It is also important to openly share the motivation for Corporate Responsibility/Disaster Management activities and to engage with the humanitarian world.
- It is important to prepare one’s teams for relations with humanitarian and governmental actors on the scene. Generally, professionalism (trained people, good equipment) and standardization are key as they ensure successful operations. It would be extremely harmful for a private actor to collaborate with untrained people, as there is a possibility of something going awry.

### **Best practices in developing long-term partnerships with UN**

- Select partners whose strategic focus areas are a good fit, because this leads to a win-win situation
- Leverage core competencies and key assets of the company. DHL uses its logistics knowledge/expertise and leverages its experienced employees all over the world
- To develop a sustainable partnership, the parties need to secure the support and recognition of senior management from both parties
- In implementing the partnership, it is essential to use project management know-how and resources to successfully start the cooperation. A special emphasis has to be focused on establishing processes, planning and communication
- A key factor is to find a UN partner with a mandate in the area that the company would like to be involved in. In DHL's case, UNOCHA has a mandate to coordinate in and have access to disaster situations
- Trust between partners and a common long-term vision of the partnership and the intended outcomes of the collaboration are of critical importance

Source: Matt Hemy, Head of the Asia Pacific Disaster Response Team, DP DHL

## Annex 1: Case studies of private sector engagement

### *Corporate Network for Disaster Response (CNDR)*

CNDR was set-up in the Philippines with the aim to provide a formal coordinating mechanism for private sector response and relief contributions after major natural disasters. Since its establishment the programme of the network has evolved to cover the whole range of disaster management work including disaster risk reduction (DRR) and preparedness. CNDR now also engages its private sector members in building community resilience towards disasters and builds capacity within the private sector for business response and resilience.

The “Strengthening Assets and Capacities of Communities and Local Governments for Resilience to Disasters” (ACCORD) project is funded by the European Commission’s Humanitarian Aid Department (ECHO) through the Fifth Disaster Preparedness Programme (DIPECHO) Action Plan for Southeast Asia, and CARE Netherlands. The aim of the project is to build disaster response capacities of targeted communities. This involves strengthening the institutional capacity of local government units (LGUs) to engage in Community-based Disaster Risk Management (CBDRM) activities and institutionalizing DRR through local legislative plans and agenda.

The first two phases of the project have been implemented and negotiations for the third phase are on-going. The second phase (ACCORD-2), a 15-month project that was completed in January 2010, was implemented by CNDR, the Agri-Aqua Development Coalition-Mindanao (AADC) and Care Netherland. The project area included five highly disaster prone municipalities located in the nation’s poorest provinces. Build on lessons learned from the first project phase (ACCORD-1) a major focus of this project was to strengthen PPPs in order to mainstream and institutionalize DRR programs.

Experience made during ACCORD-1 highlighted the need for better coordination and collaboration between DRR groups and the private sector in mitigating disaster impacts on communities. Therefore, a Public-Private Partnership (PPP) component was integrated into ACCORD-2 in consistency with the project’s support of the Delhi Declaration on DRR and the Hyogo Framework for Action.<sup>37</sup> This is also aligned with CNDR’s thrust of engaging its member companies to support community based disaster risk management projects. An example of corporate involvement in this project is Smart Communications, a CNDR-member corporation who supported a mangrove reforestation project in the typhoon and flood prone “Barangay Cagsao” community in an effort to contribute to natural resource management and disaster mitigation. Soil erosion at riverbanks and shorelines was identified to be a key risk factor in the community. The company provided necessary funds and employee volunteers participated in the planting together with communities. Based on the success of the first planting initiative Smart is committed to support another mangrove reforestation project in the same community. Smart Communications considers this initiative as a win-win situation contributing both to community disaster mitigation efforts as well as to meeting the company’s tree planting target under its corporate social responsibility (CSR) program.

### *MERCY Malaysia*

MERCY Malaysia is a non-profit organisation based in Malaysia which focuses on providing

medical relief, sustainable health related development and risk reduction activities for vulnerable communities in both crisis and non-crisis situations.

The organisation's School Preparedness Programme aims to promote a culture of disaster preparedness among school children and to increase capacity of schools and students to respond to disasters. Called the "School Watching Workshop", the programme includes

- a "Community-Based Hazard Mapping" tool to help school communities to identify hazards and risks in and around the schools and then devising solutions to make it a safer place, and
- Training of Trainers workshops

In 2009 MERCY Malaysia was approached the PINTAR<sup>38</sup> Foundation, an independent not for profit organization working in partnership with companies, partner NGOs, individuals and Government entities to foster academic excellence particularly among rural school children. The Foundation is a collaborative social responsibility initiative by the Government-Linked Companies (GLCs)<sup>39</sup> in Malaysia. As part of the partnership between the foundation and MERCY Malaysia the organisation's School Preparedness Program was extended to include 30 schools adopted by the Foundation. GLCs volunteers were trained by MERCY Malaysia and have now joined the organisation's pool of workshop facilitators and trainers.

MERCY Malaysia's programmes provide volunteering opportunities for employees of partnering companies. Companies find that such opportunities contribute to them being seen as attractive employers. In many cases, the organisation found companies getting initially involved in disaster response and relief projects making pro-bono donations and contributing financial aid. As a company's understanding of disaster management grows and its engagement matures, so does its interest in strategic long-term partnerships.

MERCY Malaysia has found that there is an increasing interest by businesses to better understand disaster management and how they can make a sustainable contribution going beyond immediate disaster relief donations. In November 2009, for example, the organisation together with Pricewaterhouse Coopers jointly organized a one-day Business Continuity Conference entitled "Tomorrow Happened Yesterday". Attended by 40 participants from various business sectors based in Kuala Lumpur, the conference provided participants with an overview of disaster preparedness, disaster and emergency response and crisis management within the framework of business continuity.

### **DP DHL**

Deutsche Post DHL (DP DHL) brings in its global presence in over 220 countries and territories, comprehensive logistics network and experience in disaster management to contribute to disaster response and disaster preparedness. It does so by providing logistics support after natural disasters and preparing airports to handle the surge of incoming relief goods.

DP DHL's key partnerships in this regard include a partnership with UNOCHA to prevent logistic bottlenecks at airports (DHL's Disaster Response Teams) and a partnership with UNDP to facilitate disaster response capability development at airports (GARD).

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38 Promoting Intelligence, Nurturing Talent and Advocating Responsibility (PINTAR)

39 Companies controlled by the Government of Malaysia

## **DP DHL's Disaster Response Teams (DRT)**

These teams are provided free of charge in cooperation with the UN Office for the Coordination of Humanitarian Affairs (UNOCHA). If disaster strikes, DP DHL's specially trained logistics experts bring in their core competencies (i.e. airport operations, cargo handling, flight operations, warehousing and distribution) to support logistics of incoming relief goods to prevent bottlenecks and delays at the affected airport.

There are three teams worldwide with about 200 DHL volunteers: DRT Americas based in Panama, DRT Middle East/Africa based in Dubai, and DRT Asia Pacific based in Singapore. The teams, ready to be deployed within 48 to 72 hours, form a network covering nearly all regions in the world that are affected by natural disasters on a regular basis.

DP DHL's DRTs have been deployed in many operations, including operations after the Indian Ocean Tsunami in December 2004; in Myanmar after Cyclone Nargis hit in May 2008; and in Haiti after the 7.0 magnitude earthquake hit in January 2010.

DHL was involved in the DRT operation in Myanmar after Cyclone Nargis hit in May 2008, which affected 2.4 million people in the Irrawaddy Delta region of Myanmar, leaving the international humanitarian response facing significant challenges.

Within hours of the catastrophic flooding of coastal areas of the Indian Ocean in 2004, Deutsche Post DHL began organizing the logistics and transportation of humanitarian aid by leveraging its worldwide network. On the Thai island of Phuket, DHL vehicles shuttled tourists to safety and in India, they helped to transport federal police forces to the disaster area. The Airport Emergency Team – the predecessor of today's DRTs – was mobilized and sent to Colombo Airport in Sri Lanka.

The disaster management experience during and after the tsunami in Asia demonstrated the need for countries/governments to be well-prepared to deal with disasters. There was an evident shift in the mindset and approaches of governments dealing with disaster response and management, afterwards. This entailed being more prepared on the ground for natural disasters, in a region which was in the Pacific Ring of Fire and was visited regular by earthquakes, typhoons and floods.

The DHL DRT Asia Pacific was able to assist, coordinating 17 humanitarian organizations and UN agencies, and preparing 2,200 tonnes of aid for the relief agencies to transport to affected communities.

## **Get Airports Ready for Disaster (GARD)**

Together with the United Nations Development Program (UNDP), DP DHL prepares airports to handle the surge of incoming relief goods as part of its program "Get Airports Ready for Disaster" (GARD). The program, which was launched in August 2009, was developed in response to the challenges faced by officials at local airports in storing and distributing huge volumes of food, water, medicine, and tents provided by the international community after natural disasters. It also includes preparing officials to develop contingency plans to accommodate potential disaster relief operations. The program aims to coordinate incoming emergency supplies more effectively by bringing in DP DHL's experience and expertise in the field of airport logistics management.

One of GARD's key elements is the Train-the-trainer-concept, where DP DHL employees train local government employees and airport personnel how to be prepared for the onslaught of aid and

emergency response which is delivered, after disasters strike. Based on what DHL has experienced, many airports do not have standing plans to cope with disaster relief operations. Therefore a major focus of the training program is to build capacity of airports to develop overall relief contingency plans. The training program is based on thorough on-site assessments which provide a base line level of knowledge of an airport's capability to handle disaster relief operations. It provides airports with GARD standards and operations procedures and templates to further roll-out the training across the country.

The aim is for countries to take ownership of their disaster management plans, once DP DHL has imparted skills and knowledge. DP DHL believes that a country's capability for coordinated and effective disaster response and relief is enhanced if disaster contingency plans were in place at all airports. Two pilot projects have been successfully completed in Indonesia. They will provide the launch pad for similar projects in high risk areas in Asia and Latin America in future.

### **Lessons learned and best practices**

DP DHL's partnership with UNOCHA started in 2005 when the company offered its core logistics expertise to become involved in disaster response. Before the partnership, DP DHL had already deployed so-called Airport Emergency Teams (AET) on its own initiative. DP DHL's partnership with UNOCHA is based on a Memorandum of Understanding (MoU) which clearly states the scope of activities, and the activation process for the DRTs. The partnership was designed for the scope of the current DRT activities from the beginning.

DP DHL sees success in the field as a result of fostering the partnership links in times of non-deployments, like taking part in joint training exercises. An annual conference with DP DHL colleagues and UNOCHA representatives has been established, which provides the opportunity to enhance the partnership, review past deployments, and agree on future collaborations.

GARD was developed from a previous partnership between DP DHL and UNDP where the company contributed to UNDP's program on "Safer Communities through Disaster Risk Reduction in Development" (SC-DRRD) in Indonesia in 2006. Experiences made in this partnership and DP DHL's DRT deployments led both parties to develop a GARD pilot project in Indonesia which is now ready to be rolled out to other countries.

Owing to DP DHL's long-standing experience and proven capability in disaster response and relief, the company has been able to establish strong relationships with national authorities and governments. The company observed that establishing MoUs with individual countries is a logical step, to ensure that national governments had a clear understanding of the capability DP DHL could provide, prior to a disaster. It allows for a more coordinated and timely activation of DRTs and thus more effective disaster response and relief operations.<sup>40</sup>

### **Coca-Cola**

Since 2007, the Coca-Cola Foundation Thailand<sup>41</sup> is partnering with the Thai Red Cross Society to provide clean bottled water and emergency support to communities in the aftermath of disasters.

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40 For more info on DP DHL's Disaster Management initiatives, read:  
[http://www.dp-dhl.com/content/dpdhl/en/responsibility-online\\_report\\_2010/society/GoHelp\\_disaster\\_management.html](http://www.dp-dhl.com/content/dpdhl/en/responsibility-online_report_2010/society/GoHelp_disaster_management.html)

41 Established in 2003 by Coca-Cola (Thailand) Ltd, ThaiNamthip Ltd and Haad Thip PCL

The nationwide collaboration focuses on disaster preparedness and immediate disaster relief by leveraging the Coca-Cola system's extensive transportation and distribution network of thousands of trucks, 80 warehouses, and thousands of employee volunteers who are specially trained by Red Cross staff to serve as decentralized "rapid response" units. As part of this project around 1,700 Coca-Cola system employees across the country are receiving intensive training every year on first aid and disaster-relief basics from the Relief and Community Health Bureau of the Thai Red Cross Society with the aim to be prepared for a decentralized rapid-response deployment in emergencies. The Coca-Cola system's nationwide distribution system is also being used to deliver effective and timely support to disaster relief efforts including the provision of clean bottled water, tents, and other equipment for relief efforts.

The collaboration has benefitted more than 80,000 households with over 900,000 bottles of "Namthip" bottled water distributed to disaster-hit communities across Thailand.

According to TCCC the project is part of the company's enduring commitment to Thai communities and builds on the long history of both financial and in-kind support from the Coca-Cola system in Thailand and globally on disaster relief. TCCC seeks to formalise this partnership for the future in order to make the company's response more effective and meaningful. TCCC considers the partnership to leverage the core competencies of the Coca-Cola system e.g. its nationwide distribution system (trucks, warehouses); its employee volunteers and its products (especially its 'Namthip' bottled water) to support the Thai Red Cross Society in providing effective and timely support to disaster relief efforts nationwide.

### *Telstra*

Telstra is a leading Australian telecommunications and information services company. As such the company is bringing in its technology and expertise to build community resilience through a number of initiatives and involvements.

Telstra's Disaster Relief Assistance, for example, includes communications technicians restoring services in disaster affected areas and relief packages offered to customers. Volunteer and First Response Leave is available to Telstra's employees to enable them to provide critical services for the protection of life and property.

In 2009 Telstra was engaged through a selective tender process to develop a national emergency alert system with \$15.6 million funding from the Australian Government and under the lead of the Victorian Government through the Office of Emergency Services. It is a national system available to all states and territories, excluding Western Australia which is using its own system.

Already before the tender process government authorities already worked with the private sector to better understand potential barriers to the envisioned system (e.g. legislative barriers related to mass calling) and telecommunication capabilities.

Using Telstra technology, Emergency Alert provides customers with essential information about extreme weather events and emergencies sending warning alerts by recorded voice to landlines and text messages to mobile phones, based on an owner's billing address. Emergency Alert can deliver up to 1,000 voice messages a minute to landlines and 300 text messages a second to mobile telephones. It can be used 24 hours a day, 7 days a week and can quickly reach a large

number of people in a targeted manner. The system is 'carrier agnostic', which in simple terms means that messages go to customers from all telecommunications carriers.<sup>42</sup>

Following a successful month of testing and an extensive public trial, the system commenced operation in December 2009. It can deliver up to 1,000 voice messages a minute to landlines and 500 text messages a second to mobile telephones. The national cooperation which led to the successful development of this system now allows for consistency and interoperability across Australia's states' borders.<sup>43</sup>

Currently, the feasibility of enabling State and Territory Governments to send targeted messages to mobile phones based on their actual physical location, regardless of the billing address for the mobile phone, is being explored. This will have particular benefit for people visiting an area that is under threat, such as holidaymakers or those in transit.<sup>44</sup>

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42 Telstra corporate website on disaster relief

43 Attorney General for Australia (2009)

44 Telstra corporate website on disaster relief

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## Contacts

For further information please contact:

### **APEC Secretariat**

#### **Director (Program)**

Emergency Preparedness Working Group  
35 Heng Mui Keng Terrace  
Singapore 119616  
[www.apec.org](http://www.apec.org)

### **Thailand**

#### **Adthaporn Singhawichai**

Director, Research and International  
Cooperation Bureau  
Department of Disaster Prevention and  
Mitigation (DDPM)  
3/12 U-thong Nok Road,  
Dusit District, Bangkok 10300, Thailand  
Phone (66) 2637 3655  
Fax (66) 2243 5279  
Email: [foreign\\_dpm@yahoo.com](mailto:foreign_dpm@yahoo.com)

### **Australia**

#### **Raelene Thompson**

Executive Director, Australian Emergency  
Management Institute (AEMI)

#### **Neil Head**

Director, Community Awareness & Education,  
Australian Emergency Management Institute  
(AEMI)  
Attorney-General's Department  
601 Mt Macedon Road  
Mt Macedon, Victoria, Australia  
Phone (613) 5421 5288  
Email: [neil.head@ag.gov.au](mailto:neil.head@ag.gov.au) or  
[aemi@ag.gov.au](mailto:aemi@ag.gov.au)  
[www.ema.gov.au](http://www.ema.gov.au)





**Susan Manniche**

Administration Officer  
Australian Emergency Management Institute  
(AEMI)  
Attorney-General's Department  
601 Mt Macedon Road  
Mt Macedon, Victoria, Australia  
Phone (613) 5421 5264  
Email: [susan.manniche@ag.gov.au](mailto:susan.manniche@ag.gov.au)  
[www.ema.gov.au](http://www.ema.gov.au)



**Australian Government**  
**Attorney-General's Department**

**Australian Emergency  
Management Institute**

**Discussion Paper Consultants**

**CSR Asia –**  
**Helen Roeth (CSR Asia– Hong Kong) &**  
**Leena Wokeck (CSR Asia– Bangkok)**  
Office A, 15/F,  
Wing Cheong Commercial Building  
19-25 Jervis Street  
Sheung Wan, Hong Kong  
Phone: (852) 3579 8079  
Email: [hroeth@csr-asia.com](mailto:hroeth@csr-asia.com)  
Email: [lwoeck@csr-asia.com](mailto:lwoeck@csr-asia.com)  
[www.csr-asia.com](http://www.csr-asia.com)

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