



MERCY
— RELIEF —

THE HUMANITARIAN AGENDA

- Common Sense is Not always Common -



ABOUT MERCY RELIEF

Mercy Relief is Singapore's own and only humanitarian organisation which personally implements both disaster relief and sustainable development programmes for the distressed, disadvantaged and destitute in Asia.

Mercy Relief (MR) was established as an independent non-governmental humanitarian charity in response to the human tragedies in the region. It aims to promote a civic life of compassion, care and volunteerism amongst Man. Its aid programme originally focused on providing timely and effective assistance to disaster-stricken locations. MR has continuously maintained the delivery of emergency aid within 72 hours from the point of appeal for assistance.

Launched in 2003, there was no other organisations in Singapore whose systems or missions MR could model after. Being a small nation, there was no clear mandate within the local social or welfare sector to focus on helping needy overseas neighbours. Hence, MR had to chart and explore its own path. Every disaster relief mission accomplished proved to be a transformational episode for the young humanitarian outfit.

In 2008, MR embarked on longer-term development projects to uplift the lives of impoverished and disadvantaged communities, focusing on five key sectors – water & sanitation, shelter, healthcare, education and sustainable livelihoods. Six disaster-prone countries were strategically selected – Indonesia, Cambodia, Vietnam, Laos, the Philippines and China – under this sustainable development programme. In 2010, it incorporated risk mitigation features into its reconstruction and development projects.

MR's humanitarian action is guided by the four general principles of engagement - uphold humanity, exercise impartiality, maintain neutrality and respect sovereignty. Through its disaster relief and sustainable development programmes, MR has touched the lives and hearts in 20 countries in Asia.



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PREFACE

The last decade witnessed a marked increase in the occurrence of natural disasters in Asia that resulted in great loss of lives and damage to properties and livelihoods. Asian countries are particularly exposed to a range of hydrological and meteorological hazards, threatened by tropical cyclones, floods, droughts, storm surges, earthquakes, volcanoes and tsunamis.

Most and highly vulnerable to the wrath of Nature are the lesser developed communities. Poverty breeds vulnerability. The poor lack proper infrastructures, often too preoccupied with survival issues, and without risk mitigation mechanisms in place to lessen the impact of potential natural hazards. Risk reduction strategies must take into account capacity building, community development and poverty alleviation – inculcating self-reliance and sustainability, and empowering beneficiaries to transform their environment for a better quality of life.

Humanitarian work is about addressing essential humanitarian needs. Different nations and communities have different histories, laws, systems, customs, cultures and beliefs. Hence, foreign aid must recognise that common sense is not always common, especially in uncommon situations such as major crises.

With mounting natural menaces and challenges, the international humanitarian community must consolidate to enhance its response capacity, both individually and collectively, including grooming of future humanitarians and capitalising on appropriate technologies. A formal alliance of humanitarian practitioners from various sectors is perhaps required.

Despite its tender age, Mercy Relief is privileged to have been amongst the international humanitarian organisations invited to share its experiences and perspectives in international publications, four in as many years.

This publication is to honour the thousands of volunteers, donors and partners who have contributed to the rapid rise of the Organisation and served the humanitarian agenda.”



Mercy Relief owes its gratitude to **SAP Asia** for funding this compilation of Mercy Relief's paths, perspectives and progression. **SAP Asia** has been a true blue supporter of Mercy Relief's regional emergency responses since 2004, helping to cushion the pains of the distressed and disadvantaged, and supporting Mercy Relief's strategic resources expansion, through technical and funding support.

Mitigating Vulnerability for Sustainable Development



Future Perfect, 2012
United Nations Department of
Economic and Social Affairs
(UNDESA)

“Future Perfect is a fully illustrated 300-page book with authors relating their efforts in placing sustainable development at the heart of international, regional, national, municipal and local levels of activity. Their commentaries draw upon experiences around the world reflecting the growing challenges to sustainable societies and the solutions enabling increased investment in sustainability.

By focusing on different levels of society, but particularly the experiences and livelihoods of local communities in vulnerable human habitats, the publication strives to project the benefits of placing sustainability at the heart of human development, livelihoods and poverty eradication.

Future Perfect was launched at the 3rd Preparatory Committee of Rio+20 (Jun 2012) in Rio De Janeiro.

Mitigating vulnerability for sustainable development

Hassan Ahmad, Kyaw Swa Soe, Nursyahida Othman, Mercy Relief, Singapore

Developing nations, which are constantly besieged by natural or man-made crises, commonly struggle to develop beyond their prevailing economic and living standards. The world's largest continent with three-fifths of the world's population, Asia is rich in natural resources including petroleum, forests, fish, water, rice, copper and silver. It accounts for about half of global trade and is expected to develop into a global economic powerhouse. While Asia has seen a significant decline in man-made menaces over the past decade, it faces the increasing occurrence of natural disasters such as floods, droughts, earthquakes, cyclones, storm surges and tsunamis. On average, 100,000 lives are lost each year, with more than 200 million others affected by these hydro-meteorological and geological hazards.

Hazards become disasters in the absence of development and adequate investment in risk reduction. More natural disasters and extreme weather events are anticipated due to climate change and communities must develop effective preventive and response mechanisms, incorporating adaptation to reduce the impacts.

Reducing vulnerability means improving infrastructure, education, food source, security and other factors that contribute to peace and stability for growth. More investment is needed to reduce the gap between rapid economic growth and disaster risk reduction, in order to protect social and economic assets.

The impacts of natural disasters fall disproportionately on developing communities in the region, causing loss of lives and damage to the economy and environment. This affects peace and stability and leads to severe setbacks for social development. Impoverished areas are the most susceptible to catastrophic damage from natural disasters, due to a reduced capacity to prevent damage before and during a disaster and to recover afterwards. Asia remains the most vulnerable continent, with US\$243 billion of economic losses due to natural disasters in 2011 alone. Such massive losses hinder much-needed development in the region, which has the world's largest percentage of people living in poverty.



Image: Mercy Relief

Mercy Relief's response team distributing aid to the victims of the massive Thailand floods in 2011. The country's lack of risk prevention and intervention have affected foreign investors' confidence.

Case study 1: Storm Washi – Mindanao, the Philippines



In December 2011, severe tropical storm Washi struck Mindanao, bringing over 142 millimetres of rainfall within 12 hours and triggering deadly flash floods from three major rivers.

A total of 624,600 people were affected as 1,470 people died, 1,074 were unaccounted for, nearly 2,020 were injured and 430,500 were displaced. An estimated US\$39 million was required for immediate relief activities.

Within 48 hours of the international appeal by the Philippines Government, Mercy Relief (MR) was in Mindanao to help address the critical and essential needs of the affected communities. MR's five-week relief engagement included a food programme, provision of clean drinking water and tarpaulin sets to help displaced families overcome overcrowding issues at evacuation centres and avoid the risk of disease. A psycho-social programme provided books and games to enable children to learn and play while taking their minds off the trauma.

The devastation caused by Washi had varying impacts on neighbouring municipalities. Communities in Cagayan de Oro and Iligan were badly affected, while those in Gingoog experienced minimal damage.

Gingoog's resilience was due to a community-based disaster

preparedness and risk reduction programme that had been implemented by MR in collaboration with the Citizens' Disaster Response Center, a local non-governmental organization, following typhoon Ketsana in 2009. The programme included the formation of community-based disaster preparedness committees (DPCs), educational workshops on disaster preparedness, community-wide drills and natural resource management at 24 landslide and flood-prone communities over seven municipalities and three cities, including Gingoog.

With the instilled culture of preparedness, the village DPC and residents of Gingoog continuously monitored the increasing intensity of Washi, measured rising water levels and rainfall, and rang church bells to warn villagers to evacuate to higher ground. A two-metre high breakwater, built during the CDRPR programme as part of its structural defence, prevented river waters from overflowing into the villages so that only 100 of the 500 households experienced a mere half-metre of flooding.

The resilience of these communities illustrates the effectiveness of investment in adaptive DRR activities, which put them in a better psychological state to manage, overcome and recover from a disaster with minimal physical and psychological trauma.

With critical factors such as rapid urbanization, environmental degradation, population growth and climate change, more communities are occupying densely-populated high-risk areas, heightening their vulnerability to disaster impacts. While governments have placed emphasis on disaster risk reduction in disaster management planning, real investments into longer-term mitigation mechanisms and activities remain insufficient and disproportionate to the scale and intensity of imminent threats. The cost of inaction or lack of investment could be disastrous for human lives and economies, both for Asia and the rest of the world. Failure to establish and ensure peaceful and stable environments not only thwarts development potential, but could also destroy what has been built.

Maintaining peace and stability

Development can be defined as providing improved access to basic human essentials including potable water and proper sanitation, basic housing, healthcare, sufficient livelihood opportunities, and structured education with emphasis on knowledge acquisition and employability.

Achieving peace and stability – the key prerequisites of development – means overcoming or mitigating the vulnerabilities that affect them, and nations that have consciously addressed these issues have gone on to develop and prosper.

A significant example is the island state of Singapore. Despite its limited size and natural resources, including lack of self-sufficiency in food and potable water supply, Singapore has seen rapid development of its people and economy – ascending from a Third World state to a First World nation within three decades of its independence.

Apart from its remarkable natural harbour occupying a prized location at the junction of communications of the Indian and Pacific

Oceans, Singapore's geographic location shelters it from most natural disasters. However, during its earlier years of nation-building, Singapore could not insulate itself from man-made menaces such as ethnic conflicts, high levels of unemployment, lack of sanitation and scarcity of potable water – all of which affect peace, stability and security, and in turn influence growth.

Major policies, strategies, mechanisms and activities were adopted and adapted to mitigate Singapore's vulnerabilities, promote peace and stability and establish foreign investors' confidence for international trade and economic development. The Government also exercises perpetual vigilance on and social discipline of its population, implementing extensive research and careful planning to preserve elements which determine its independence and development. This paired emphasis on vulnerability and excellence is the basis of the country's unique and sustained success.

Conversely, the massive floods in Thailand during 2011 affected its rice harvest by almost 6 million tons. As Thailand is the world's largest rice exporter, such losses not only impacted the country's ability to meet its export contracts, but also put further pressure on global commodity prices. The disaster also rippled through the supply chains of Japanese automobile and electronics makers in Thailand, as parts shortages affected operations across the globe. More than 200,000 workers from these industries in Thailand were affected. Thailand's

Case study 2: Japan earthquake and tsunami – Tohoku, Japan



Japan, the world's most prepared nation against natural disasters, faced a complex humanitarian crisis in March 2011. A 9.0 magnitude earthquake, the most powerful to hit the country, caused widespread destruction and triggered a tsunami of 3.3 metres, which damaged about 400 kilometres of coastline including the Fukushima nuclear power plants, exposing the world to a radiation threat.

A total of 15,845 people died, with 3,375 others missing and hundreds of thousands displaced. Tsunami waves with a run-up height of up to 40.5 metres swept through the regions of north-eastern Japan, inundating 561 square kilometres of land and requiring an estimated US\$300 billion for reconstruction.

MR deployed its first response team within 24 hours of the international appeal by the Japanese Government. Six other relief teams served in the Miyagi and Iwate prefectures in the Tohoku region over four months, addressing survival and wellness needs including food, water, fresh vegetables, establishment of cold storage facilities and a children's nutrition programme. Hundreds of radiation protective suits were provided to help local workers in their search-and-rescue efforts in and around Fukushima.

Risk mitigation initiatives were well planned and implemented by the Japanese authorities, including tsunami warning systems and solid breakwaters along most of the Japanese coastline. Unfortunately, these mechanisms were breached due to the speed and strength of the waves, but the impact could have been much more extensive had there been no structural protective measures in place. Over in Kamaiishi, the locals ignored the tsunami warning and chose not to flee, believing they were protected by a world-record breakwater. The US\$1.8 billion breakwater – which took three decades of research and construction and was 2 kilometres long, 83 metres deep and 7 metres above water – gave way.

The major and costly failure of the Kamaiishi breakwater and the indifference of the Kamaiishi community to the tsunami warning, highlight the need for an immediate, unbiased and exhaustive assessment of Japan's comprehensive structural and non-structural DRR initiatives, including the inadequacies of earlier research and the design, planning and implementation of the risk mitigation measures. Lessons learned from this and associated counter-measures will greatly benefit Japan and other countries with similar geographical conditions and challenges but fewer resources.

Lack of risk prevention and intervention caused several major Japanese companies, Thailand's largest foreign investors, to consider diversifying investments inside Thailand and to other countries. Foreign investors' confidence waned, which will affect local economy and livelihood opportunities.

Risk reduction and adaptation

Natural disasters are no longer seen as extreme events created solely by forces of nature, but as manifestations of unresolved development problems. In any vulnerability analysis there are no straightforward solutions. Multidimensional approaches and innovative institutional arrangements are required to reduce the risks of future harm or loss and threats to planned development. Hazard assessment must include economic, physical, social and political risks.

Despite rapid economic growth and structural transformation in Asia, poverty remains high and the poor are the most vulnerable to natural disasters. In order to ensure cost-effective, well-paced continuous development, developing nations must create a peaceful, safe and secure environment conducive to uninterrupted growth. This is especially so for disaster-prone nations, as the threat and extent of disasters are difficult to anticipate. The process of managing disaster risk effectively begins with risk identification and hazard mapping, which comprise an understanding of the vulnerabilities to determine potential impacts and devastation. Vulnerabilities that threaten growth and development must be adapted and mitigated, if not eliminated.

There is widespread emphasis on post-disaster relief and support for economic recovery such as livelihood regeneration, as governments curb risk mitigation initiatives and divert funds towards reconstruction and recovery efforts, which require extensive resources and time. Given the increasing occurrences of natural disasters, it is imperative that national strategists and humanitarian implementers put in place critical processes and capacity-building strategies, driven by disaster preparedness and risk reduction (DPRR) and adaptation initiatives to prepare vulnerable communities for future calamities.

DPRR can be defined as the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

DPRR propagates a set of activities to minimize vulnerabilities and disaster risks in society, and to avoid and limit the adverse impact of hazards within the broad context of sustainable development. It is imperative that community-based DPRR (CBDPRR) interventions build resilience among vulnerable and disadvantaged communities in a sustainable manner that integrates participation across different demographics within targeted societies.

Case Study 3: Mount Merapi eruptions – Central Java, Indonesia

Mount Merapi, Indonesia's most active volcano, started erupting in October 2010 with continuous eruptions thereafter.

The eruptions took 388 lives and displaced more than 300,000 people as thick ashes, boulders and rivers of hot mud destroyed farmlands as far as 20 kilometres from the volcano, causing US\$781 million in financial losses.

MR was on site within 48 hours of the first eruption, supporting the evacuation of tens of thousands of villagers, setting up a central kitchen to feed the survivors and providing respiratory care equipment at local medical centres. The ensuing rehabilitation and reconstruction efforts included a comprehensive disaster risk mitigation programme focusing on structural and non-structural components, and developmental projects including the rehabilitation of community water systems and provision of further respiratory care equipment for three health centres where medical personnel were trained on first response and respiratory care management. Merapi tends to erupt every four to five years, hence two large multipurpose halls were constructed at schools in the Dukun and Muntian sub-districts, for conversion into relief evacuation centres in future emergencies. An early warning system was established and educational workshops and disaster preparedness drills were held to prepare communities for future eruptions.

MR partnered with the local government and community to introduce adaptive DPRR activities through a full-scale disaster preparedness exercise for the Magelang district, involving an emergency response specialist agency, Singapore Civil Defence Force.

Although there was an existing framework for disaster management within the villages near Mount Merapi, it was found to be insufficient during the response as allocated evacuation centres did not have adequate water and sanitation facilities, and the scale of eruption was more severe than anticipated.

MR's integrated DPRR programme included activities with longer-term



development goals and the strengthening of core public institutions during peace time. It emphasized the need to customize DPRR based on geographical, cultural and awareness aspects with alternative contingencies and complex emergency crisis management planning and the sharing of experience and expertise by specialized international organizations. DPRR adaptation in both structural and non-structural components is critical to effective emergency responses, including cultivating community resilience. Its effects await discovery at the next eruption of Merapi.

Development of a nation and DPRR initiatives must run simultaneously. But what mechanisms should be put in place? Which sectors require priority focus? And how much should be invested in these initiatives? All of these call for an integrated approach incorporating adaptation and effective advocacy plans with extensive research and careful planning for effective cooperation and communication within communities, to address prevailing and unique sets of challenges and constraints. This must be accompanied by master prevention plans and robust crisis management systems.

Focus on communities

Effective DPRR requires an integrated stakeholders' approach where strategies and policies are appropriately adapted at all levels. There must be greater and immediate focus – in terms of attention and resources – on communities where prevailing and unique challenges and the threat of disasters are imminent.

Adaptation of DPRR must be in consultation with local communities, enabling them to share their experiences, concerns and knowledge of the local terrain, culture and history with planners and policymakers. Local governments should invest more in vulnerability assessments based on geographical, cultural and awareness levels as part of capacity-building initiatives. For central governments, adaptive DPRR activities should be set as development criteria to allocate funds to local governments for area development. Development agencies should incorporate adaptive DPRR activities in their development and capacity-building programmes, and disaster relief agencies should include longer-term development and risk reduction goals in relief and reconstruction programmes.

There is also a need for critical supply chain management of acute disaster relief items, including optimized stockpiling of survival essen-

tials. Coupling community-based DPRR and development projects will aid the sustainability of disaster-resilient communities as economic development is directly linked to structural resilience measures, and investment in non-structural DPRR measures would be beneficial. International donors should share their expertise and provide funding for appropriate DPRR adaptation activities through development projects, setting them as a priority.

Forward-looking measures

Budgeting for DPRR is generally less popular as the benefits are less visible and only seem useful to the local population upon realization of the anticipated risks. On the contrary, the willingness and ability to implement forward-looking measures by local governments and communities to prevent, and secure their area from, menaces to peace, stability and security may lead to increased confidence from domestic and foreign investors. This in turn would lead to resources being injected into local economies. Sustainable development hinges on proper planning and real resources.

As climate change creates more uncertainty in weather prediction, there needs to be a change of mindset from government agencies, decision makers and the public. Nature is a powerful force and there are limits to engineering solutions. Hence, community resilience is crucial. More focus and effort must be channelled to strengthen public awareness and a culture of preparedness. Communities must not only try to overcome the power of nature, but also learn to cope with it.

Risk Reduction and Adaptation: Good Concepts with Great Challenges



Risk Returns, 2011
United Nations International Strategy
for Disaster Reduction (UNISDR)

“Risk Returns is a fully illustrated 250-page publication by the United Nations International Strategy for Disaster Reduction (UNISDR), about the increasing significance of sustainable risk reduction strategies as an integral part of social and human development processes. Over one hundred authors related their efforts in making sustainable disaster risk reduction strategies an essential element in human development programmes at international, regional, national and local levels of activity. The commentaries are drawn from experiences around the world reflecting the increasing threat of natural disasters in present and future societies and the need for sustained investment in effective risk reduction strategies to minimise their impact.”

Risk reduction and adaptation: good concepts with great challenges

Hassan Ahmad and Siti Sayudi, Mercy Relief, Singapore

Humans are the definite perpetrators of climate change and have in due course also suffered its backlash. Climate change exacerbates poverty, as erratic weather induces environmental disasters such as drought, flooding and soil degradation that lead to displacement and food shortage issues. The impacts of climate change fall disproportionately on developing countries and poor people in all countries – in other words, those who have contributed least to greenhouse gas emissions. This will in turn worsen existing inequities in health status and access to adequate food, clean water and other resources.

Given the escalating occurrences of natural disasters, it is imperative that national strategists and humanitarian implementers put in place critical processes and capacity-building strategies, driven by risk reduction and adaptation initiatives to prepare vulnerable communities for future calamities. As the implementation of appropriate disaster risk reduction (DRR) measures is an important element in disaster management, the lack of them could lead to significant loss and damage to human and materials and could hamper economic wealth of the society, along with disruption to its essential functions and development goals mapped by the Government.

DRR can be defined as the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Integrative humanitarian actions to address both climate change adaptation (CCA) and DRR efforts need to create an enabling environment for improved early warning, information management and community-based disaster preparedness. Ultimately, responding to disaster should be seen a development action, the advocacy potential from the disaster's profile itself offering opportunities to build longer-term agendas. Within the framework of DRR there have already been efforts to integrate development and humanitarian perspectives through key policy commitments like the Hyogo Framework for Action (HFA). What is needed now is a scaling up of investment at the local level in the achievement of both development goals incorporating the outcomes of the HFA.

The Stockholm Plan of Action for Integrating Disaster Risks and Climate Change Impacts in Poverty Reduction (October 2007), with participation from governments, bilateral and multilateral agencies, civil society organizations, experts and researchers, outlines five recommendations for linking these related fields. These are:

1. DRR and CCA cannot be dealt with in isolation
2. Risks due to disasters and climate change must be known and measured
3. Disaster and climate change risk analysis must be integrated into national planning processes, including the poverty reduction strategy process, in each country
4. DRR and CCA are not sectors but need to be factors in all sectors
5. Capacity building is required at local, national, regional, and global levels.

Adaptation to climatic variability consists of initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects. As opposed to mitigation, climate change adaptation (CCA) strategies outline practical actions recommended to prepare for and respond to the potential impacts of climate change. Adaptation can adopt a variety of forms such as better education, training and awareness of climate change and more technical measures which include, inter alia, better coastal protection through enhanced marine engineering, and use of non-seasonal seeds for prolonged harvest. Adaptation strategies may be implemented in an autonomous or planned manner and differ in their scope to promote anticipatory or reactive response and public or private participation.

Working in a region where 70 per cent of all natural disasters occur, it is an obvious choice for Singapore-based humanitarian relief and development organisation Mercy Relief to focus its operational mandate on alleviating the sufferings of disadvantaged and distressed in Asia. As an implementing outfit, Mercy Relief focuses directly on the work and has steered away from working within closed-door adaptation strategies that have seemingly provided lacklustre and less-than-realistic solutions to the challenges faced by rural communities. Mercy Relief's work is centred on serving the very people who suffer the negative brunt of climate change and addressing their immediate subjective wants rather than gradual objective needs, indicating the organization's intent to tackle risk reduction at community level.

With the implementation of risk management processes through its disaster recovery and sustainable developmental programmes, Mercy Relief has discovered the importance of putting forward a



Image: Mercy Relief

Process socialization: Mercy Relief's staff visited communities in China to garner their support prior to the implementation of the development project

community-based DRR initiative to influence vulnerable communities to adapt to such changes. In locations where Mercy Relief has successfully implemented a DRR programme stemming from its post-disaster reconstruction and rehabilitation efforts after major recent disasters in the Asian region, such amalgamation of risk reduction and adaptation strategies could help vulnerable communities reap benefits from the burdensome environment they have been accustomed to. By identifying appropriate technologies that can be adapted for application in varying conditions and be used sustainably to stimulate development of vulnerable and rural communities, process socialization for adaptation of risk reduction strategies in community-based environment would be well received by communities themselves.

As DRR propagates a set of activities carried out to minimize vulnerabilities and disaster risks in a society, and avoid (prevention) or limit (mitigation and preparedness) the adverse impact of hazards within the broad context of sustainable development, it is imperative that community-based disaster risk reduction (CBDRR) interventions build resilience in a sustainable manner that integrates participation across different demographics within targeted societies. In line with the humanitarian sector's perspectives, Mercy Relief's CBDRR efforts have been implemented with the objectives of effectively empowering communities and enhancing their capacities to deal with disasters by establishing management and governance systems to identify risks and find solutions through participatory exercises to create a conducive environment. This is implemented with the recognition that for comprehensive risk reduction programmes to be effective, targeted communities need to understand simple and practical actions required to protect lives and properties from natural hazard induced disasters.

Culture and disaster risk reduction

Culture has the power of increasing or reducing vulnerability of communities towards disasters and may become either a factor

for the survival of the communities from disasters or a barrier for effective DRR activities. In situations where cultural factors influence behaviour of people when facing a hazard (Oliver-Smith, 1996), researchers and field workers have observed that people not only consider the danger they could encounter during a hazardous situation, but give priority to factors like social values, religious beliefs, traditions, and attachment to a location. Consequently, the lack of consideration of cultural aspects of the affected community can hamper effective DRR strategies, increasing vulnerability rather than reducing it. In the formulation of DRR strategies, implementers should explore measures that are compatible with the cultural habits of targeted communities. To integrate culture and DRR, positive aspects of cultural activities can be highlighted, along with the provision of appropriate scientific knowledge to increase community resilience against natural disasters.

Proper engagement with culture is, therefore, vital if implementers are to use culture as part of effective DRR activities and vice versa. Accordingly, CBDRR activities are considered a better way of integrating cultural aspects for effective DRR activities (Mercer, 2009). CBDRR activities that promote participant empowerment and allow for transfer of ideas from community to authorities will garner more support and gain due acknowledgement. Ultimately, CBDRR activities need to provide opportunities for affected communities to contribute towards the development of DRR strategies and measures, increasing commitment and sense of belonging to for the disaster management activities that they are involved in. The implementation of CBDRR programmes needs to consider influential factors:



Image: Mercy Relief

Provision of necessary medical equipment and supplies at the village clinic used by evacuees during an eruption near Mt Merapi

culture, threat of climate change and practicality of efforts in the advent of complex humanitarian situations.

Cultural belief: Mount Merapi eruptions, Central Java

Despite their destructive prowess, Indonesia's volcanoes have played an important role in feeding the soil – and have deep cultural influence. Agricultural productivity is a direct result of volcanoes like Merapi. The short-term destruction of eruptions like the one now occurring is more than outweighed by the long-term benefits of the nutrients that ash falls bring to soils.

Due to their attachment to mythical beliefs, villagers living on the slopes of Mount Merapi continued to trust the power of their cultural leader, Mbah Marijan, the Gatekeeper of Merapi, who believes that it is his duty to stay even when an eruption is imminent. Despite the Government's order for a full-scale evacuation, villagers will not move until the Gatekeeper does. The fate of 500,000 residents of Yogyakarta, a city 20 miles (32km) to the south, rests on Marijan's thin shoulders. It is his responsibility to perform the rituals designed to appease an ogre believed to inhabit Merapi's summit.

Marijan's behaviour might seem suicidal anywhere else, but not in Indonesia, an archipelago of 17,500 islands that straddles the western reaches of the hyperactive Ring of Fire. It is a zone of geophysical violence, a juncture of colliding tectonic plates that loops more than 25,000 miles (40,200km) around the Pacific. Geography has dealt Indonesia a wild card; nowhere else do so many live so close to so many (129 by one count) active volcanoes. On Java alone, 120 million people live in the shadow of more than 30 volcanoes, a proximity that has proved fatal to more than 140,000 in the past 500 years.

Given Mount Merapi's characteristics, spewing or erupting once every four or five years, local authorities have been trying to relocate those communities between three and ten kilometres from the volcanic mountain. Based on Mercy Relief's experience with the communities from its post-2010 eruptions relief and recovery efforts in Central Java, while Merapi may have ceased erupting, the impact on the communi-



Image: Mercy Relief

As part of the DRR training programme, in the Philippines, participants were guided to prepare presentation materials to highlight disaster risk factors present in their community and ways to counter them

ties residing on its slopes remains, and the people remain vulnerable to the onset of disaster. As well as reconstruction efforts to provide new communal water distribution systems (which were damaged during the eruptions), a comprehensive disaster risk mitigation (DRM) programme has been implemented for the communities. The DRM programme includes the provision of respiratory care equipment for three health clinics where medical personnel will be trained in first response and respiratory care management. Two multi-purpose halls and improved sanitation facilities at two schools in the Dukun and Muntilan sub-districts were also constructed, for conversion into relief evacuation centres in the event of an emergency. Along with the establishment of an early warning system, educational workshops were held to prepare communities for future eruptions. In this instance, it is hoped that if communities go against the government's disaster mitigation strategies and evacuation efforts by strictly sticking to their traditional cultural beliefs, loss of lives could be avoided as communities themselves are equipped with disaster response facilities and knowledge on preparedness. In short, CBDRR initiatives were embraced by the people as they could still maintain, to some extent, their cultural beliefs.

Ancestral knowledge: earthquake and tsunami, Simeulue Island

The tsunamis on 26 December 2004 and 28 March 2005 killed only seven people on Simeulue Island in Indonesia's Aceh province. Simeulue was close to the epicentre of the 2004 earthquake, but loss of life was surprisingly low, mostly due to the impact of the earthquake rather than the tsunami, because the people are familiar with the twin disasters in the seismically active region. At Langi, on the north end of Simeulue, which is 40km south of the



Image: Mercy Relief

False sense of security? A house deposited at the concrete breakwater by the retreating tide at Otsuchi, Iwate Prefecture

December earthquake's epicentre, maximum wave heights exceeded ten metres less than ten minutes after the shaking ceased. In the more populous south, wave heights averaged three metres and caused significant structural damage, destroying entire villages. Oral histories recounted a massive tsunami in 1907 and advised villagers to run to the hills after 'significant' shaking lasting one minute and when the sea waters recede drastically. Simelue survivors recounted the historical knowledge and the necessary action to be taken. Simelue's ancient folklore and knowledge provided an extraordinarily powerful mitigation tool that saved countless lives where even a high-tech warning system with a 15 minute response time would have been of much lesser help.

Processed socialization and alternative source of survival, China

Villagers living below the poverty line in rural areas of Shanxi and Sichuan provinces have succumbed to exploiting nature to offset the severe lack of resources and poor crop output. With numerous incidents of landslides due to rapid deforestation after trees have been largely sacrificed for energy use, development projects have been implemented with due consideration to the communities' socio-economic needs. To address this situation, Mercy Relief programmes look to pragmatic solutions to provide villagers with alternative sources of energy. Anaerobic biogas digesters have been installed to generate biogas for cooking and lighting. This helped cut down expenditure on coal, as well as minimizing use of firewood – which helps protect the environment and improve health. At the same time, ecological sanitation was introduced to the villagers, that is, proper toilets were built in homes, with the excrement collected treated by the biogas digesters. This paves the way for effective and hygienic management of domestic waste, and the residue from biogas extraction also provides the villagers with natural fertilizer for their crops. Besides the economic benefits of saving on fuel by using biogas for cooking, it is a more environmentally-friendly and healthier alternative to using coal or wood. The savings generated present the villagers with livelihood investment possibilities.

Community-based DRR, Philippines

In a country where between ten and twenty typhoons mercilessly slash its land every year, the lives of large communities across the Philippines are made worse by chronic poverty, a lack of economic diversification and environmental degradation. When Typhoon Morakot hit Zambales province in August 2010, those living in the municipalities of Botolan and Palauig were crippled as they saw river channels being damaged by the lahar build-up around it, submerging their villages. Although the Philippine Government had spent more than US\$19.6 million to build a series of dikes to prevent further lahar damage, there had been little efforts to maintain them. To prevent more casualties from future typhoons and rains, the people in Botolan had been asked to move to the highlands. However, being mostly fishermen, they have no means of livelihood on the slopes of Mount Pinatubo, increasingly barren from the slash-and-burn hunting methods of the indigenous Aeta people. Thus, the village community needs either a means of sustaining its livelihood (fishing) or diversification into other sources of income that could increase its resilience in the face of disasters.

To tackle this, Mercy Relief started a few livelihood projects aimed at increasing the resilience of the coastal communities to damage by seasonal monsoons and as well as increasingly-common disasters such as typhoons and accompanying flooding and tidal surges. To ensure that developmental efforts are followed through during disaster times, Mercy Relief, with its local partner, Citizens' Disaster Response Center (CDRC) came together to launch a community-based DRR programme in 24 landslide and flood-prone communities in the provinces of Negros Oriental, Negros Occidental, Iloilo, Sarangani and Misamis



One of the many vessels left stranded on the solid coastal defence in Ishinomaki, Miyagi Prefecture

Oriental. The project hopes to build the capacity of selected communities through awareness-raising and training of participants. Through the formation of Disaster Preparedness Committees (DPCs), community leaders have been identified to build community resources for long-term mitigation and risk reduction. Through training and formation of the DPCs appointed by the villagers, Mercy Relief and CDRC ensure developmental initiatives remain sustainable and community-driven.

Practicality of DRR in complex or large-scale humanitarian crises

While most DRR strategies have been developed for implementation in rural and poverty-stricken areas during peacetime, measures have to be effective in the advent of complex humanitarian situations. Most traditional DRR strategies are based on the perspective that if disaster risk measures have been taken into account when planning development projects, those projects are less likely to be undermined by the impact of a hazard, and that if programme implementers adopt a developmental approach to emergency relief, then the capacity of that community will be built up.

However, this is of little relevance when countries and communities have been crippled by disasters. For instance, after Sri Lanka and Pakistan were swept with prolonged flash floods just months after the countries had been resuscitated following an armed conflict, their governments and aid agencies were economically unable to combat another disaster.

DRR has increasingly been seen as a growing area of policy and programmatic investment for NGOs, including a greater focus on partnerships and community engagement, and an increased awareness on the part of development colleagues of the need for risk reduction work in development programming. There is, however, a general recognition that resources for DRR are still insufficient.

Although most countries have shown progress in terms of preparedness and response in recent times, this has not matched up to the increasing frequency and force of natural hazards.

For example, Japan, the world's most prepared nation against natural disasters, recently faced an extremely complex humanitar-

ian crisis — an earthquake that triggered a monstrous tsunami which made landing on 500 kilometres of coastline in less than an hour, and damaged nearby nuclear power plants, exposing the world to a radiation threat.

Mercy Relief response teams, which have been working in the two worst-affected prefectures of Miyagi and Iwate since the third day of the tsunami, found that risk mitigation initiatives were well implemented by the Japanese authorities, including a tsunami warning system and solid breakwaters. Unfortunately, these DRR mechanisms were breached and tens of thousands of lives were lost due to the speed and strength of the waves, with hundreds of thousands others displaced.

Despite Japan's trusted records of impeccable disaster risk reduction and management policies and systems, such adversities affect even the most prepared government and communities. The unprecedented scale of disasters simply overwhelms seemingly faultless risk reduction, mitigation and prevention measures. In less serious conditions, proposed DRR measures and subsequent response may be short-term and time bound, and will not engage with the deeper, underlying causes (political, economic or cultural) of disaster, thus making DRR strategies as a whole ineffective at critical points. Compared to their more learned urban and economically well-off counterparts, rural and disadvantaged societies have not been informed adequately, or worse misinformed, about the evolution of DRR within their societies, indicating a heightened need to formulate strategies that are relative and comprehensively adapted to different target communities with varied socio-economic capacities and resource capabilities.

Helping People Take Control Of Their Destiny



Tomorrow Today, 2010
United Nations Educational,
Scientific and Cultural Organisation
(UNESCO)

“As lead Agency of the UN Decade of Education for Sustainable Development (DESD), UNESCO produced a landmark publication on the increasing significance of sustainable human development, and the importance of education in achieving sustainable development throughout the world. This innovative endeavour is a striking example of sharing respective resources to make the world a better place through increased investment in education for sustainable development.

By focusing on different levels of society, but particularly the experiences and livelihoods of local communities in vulnerable human habitats, it seeks to project the benefits of experience in improving the interface between educators and civil society leaders whose decision making is increasingly affected by the challenge of sustainable development.

Tomorrow Today is a fully illustrated 350-page book, launched at the UN General Assembly in New York (Nov 2010), where UNESCO had arranged a special event to promote the continuing work of DESD.

Helping people take control of their destiny

Hassan Ahmad and Siti Sayadi, Mercy Relief, Singapore

Education policymakers and implementers often promise that education will bring about a better future for those who embrace it. Yet in a Sumatran province, more than 100,000 university graduates are unemployed. What are the effects on these unemployed graduates who have invested time, money and hope in pursuit of that better future?

Education initiatives provide a level of expectancy aimed at capacity-building and sustainability, empowering beneficiaries to transform their environment for a better quality of life. They also provide rural communities with the psychological tools to understand, appreciate and acknowledge other peripheral developmental requirements to change the conditions of their lives. Therefore given that education is both the means and the deliverable to attain sustainable development, it is imperative that humanitarian implementers understand the primary needs and outlook of rural and disaster-affected communities in assessing their ability to appreciate and apply education to their lives.

Mercy Relief adopts an innovative, socially inclusive perspective on education for sustainable development, with a thematic emphasis on capacity-building at the community level, whilst complement-

ing each country's own educational investments and national policies.

Education programmes foster a learning culture in communities, empowering them to make their own choices and decisions for their developmental needs during peacetime and in the aftermath of calamity. As a relief and development organization, Mercy Relief sees education as the catalyst that helps communities to become the uplifting force behind their own destiny. Therefore education programmes are implemented with expansionary and pre-emptive strategies for longer-term development, including disaster risk mitigation philosophies.

Immediate versus longer-term needs

Having served disaster-stricken, impoverished and disadvantaged communities in 19 countries over the last seven years, Mercy Relief have seen that in these communities, immediate, subjective, simple personal needs prevail over longer-term or less urgent communal needs.



Image: Mercy Relief

Sumatra, Indonesia — Unemployed graduates, who have invested their time and money, now bored and frustrated — a potential recipe for social problems.



Image: Mercy Relief

Zamboanga, Philippines — Mangrove planting for coastal rehabilitation and protection leads to enhanced livelihood output for fishermen and coastal communities. Parents can now afford to send their children to school.

Sustainability of livelihood opportunities is paramount to any household. Water is crucial to immediate survival and sustainable development in disadvantaged communities. A development project that provides potable water and water for farming is virtually certain of winning over targeted communities. Macro issues such as education, the threat and spread of avian flu and HIV, or environmental degradation, are least proximate to these communities in terms of consciousness.

Mercy Relief's approach to education

With the understanding that longer-term objective comprehensive needs must begin to prevail over immediate, subjective personal requirements in disadvantaged communities' pursuit of development, Mercy Relief has formulated its development programme approach to integrate the five focused areas of water and sanitation, shelter, livelihood, healthcare and education. Education provides the mental challenges, knowledge and skills required by communities to enable them to help themselves out of poverty.

An improved environment in the Philippines

The poverty-stricken province of Zambales in the Philippines lacks economic diversification due to environmental degradation triggered by improper management of natural resources, natural disasters due to climate change, and the limitations of rural development funds. The situation is exacerbated by the scarcity of clean and potable water, coupled with the high costs of medical treatment, which prevent many parents from budgeting for their children's education.

These problems motivated Mercy Relief to engage in a project in the coastal district of Palauig, aimed at triggering a new culture of knowledge-seeking for community development. Public forums were set up to encourage the villagers to explore possi-

ble environmental and livelihood-building activities that could enhance the community's living conditions holistically.

Starting with the planting of mangrove seedlings on five hectares of shoreline, this effort aimed to establish natural nurseries for fish to spawn, in turn allowing villagers to increase their catch. In addition, a mangrove nursery was introduced to support the mangrove-planting project and in tandem provide additional income to the community as the seedlings were also sold to government agencies and other NGOs to start mangrove re-plantation at other coastal sites. Two water systems were constructed, managed by local communities, to provide a steady supply of potable water to at least 466 households with 3,262 beneficiaries at Luan and Poblacion. Herbal farming projects were implemented to provide 786 households with alternative remedies to treat basic medical conditions instead of seeking expensive modern treatment in town. With increased income and savings, parents can now set aside a budget for their children's education.

Changed approach, changed impact in Indonesia

Studies conducted by Indonesia's Ministry of National Education showed that most teachers and principals were under-qualified in terms of their teaching techniques, school management and operational effectiveness. These in turn affected the quality and attitude of students graduating from the schools, and there was a high student drop-out rate. This trend persisted despite efforts by the provincial education board to invest funds in rehabilitating and improving school infrastructures



Image: Mercy Relief

Riau Islands, Indonesia — Principals and teachers attend workshops that help them plan and design new methods of delivery and activities to keep education exciting and appealing. Interactive learning and presentations are features of the new model.



Image: Mercy Relief

Ho Chi Minh City, Viet Nam — Students go through an unconventional system of language learning which culminates in presentations on foreign cultures, confidently conducted in English, for their foreign benefactors and friends.



Image: Mercy Relief

Sichuan, China – Biogas digesters address the sanitation and health issues in Ziyang County. Within six months, more than 224 families experienced the health, economic and environmental benefits of the project.

and providing compensation benefits to encourage teachers to teach in remote areas.

Since 2008, Mercy Relief has run a Principals and Teachers Quality Improvement Programme and an Education Quality Improvement Programme (EQUIP) in Indonesia's Riau Islands Province (KEPRI) and South Sumatra Province, in partnership with the Sampoerna Foundation, to increase the capacity of teachers and principals through professional development in leadership and pedagogical skills. A year-long capacity-building programme was put in place to expose the teachers and principals to better practices and the latest trends in teaching, classroom management, leadership skills, curriculum development and Information and Communication Technology (ICT).

The new, intensive exposure resulted in an enhanced confidence level among the teachers, enabling them to provide a creative learning environment for the students, who in turn now enjoy school and appreciate education.

Viet Nam: language that adds gloss

Pressures of globalization have driven Viet Nam to become one of the most economically promising ASEAN countries. Despite growing demand for mastery of the English language in the region, English is still hardly used in conversation at all levels, partly due to the lack of qualified English teachers and the fact that those available have had no formal training to teach English as a second language.

To meet this demand, Mercy Relief launched the English for Everyone (EFE) programme in Ho Chi Minh City. Partnering the WIBI School of Higher Learning, five English language teachers from the University of Finance and Marketing (UFM) were selected and trained in a method of teaching English appropriate to the level of the local capacity. The programme encouraged interactive learning and habitual use of English in everyday communication

to enhance students' confidence in using the language. Participating teachers from the national schools were also trained and they acquired an improved method of teaching English.

After seven months of lessons, 50 teachers and over 4,000 students from 14 elementary schools could speak and write basic English confidently. They have showcased their newly-acquired skills by sharing what they have learned at inter-cultural leadership presentations.

Health education and renewable energy in China

People in many rural areas in China struggle to meet basic needs. Fei'e Village of Jian Yang County in Sichuan was chosen for a Mercy Relief eco-sanitation development project that has led to greatly improved living conditions. Previously, the pig-rearing villagers lived with poor sanitation and a high risk of epidemics due to the improper disposal of human and pig excrement in open pits. In addition, villagers suffered poor health due to the use of coal and wood for cooking in unventilated kitchens.

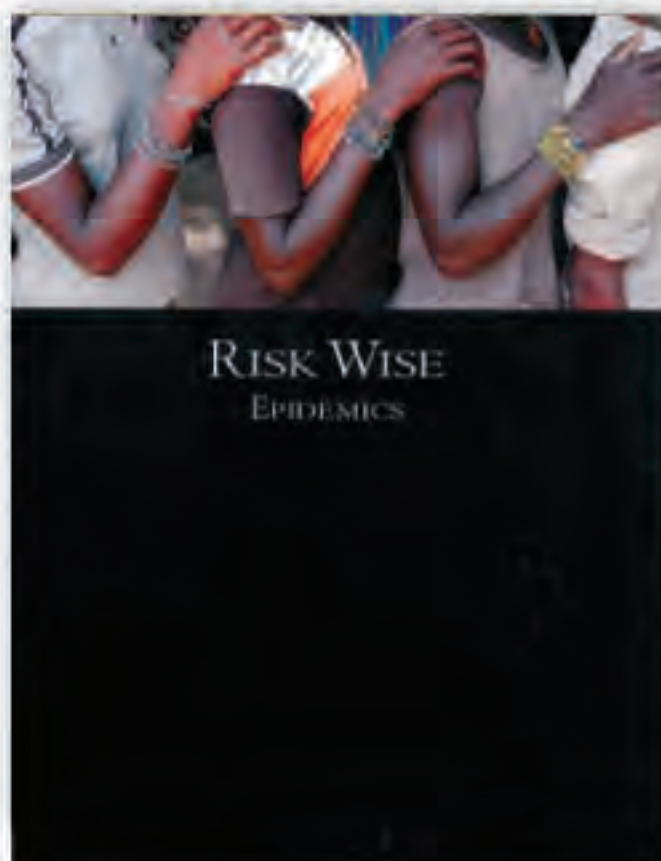
Through the installation of underground anaerobic biogas digesters serving 224 of the poorest households in the village, inhabited largely by the elderly, an efficient waste management system was developed. The excrement, collected via a new piping system from the pig pens and rebuilt toilets, is stored in the digesters and used to harvest enough biogas to fuel biogas cookers and lamps provided for the villagers to serve their household cooking and lighting needs. The residue excrement from the digesters is also used to fertilise crops.

In addition to enjoying better sanitation, the villagers now spend less on buying electricity from the national grid, and are encouraged to abstain from the environmentally unfriendly practices of tree-cutting for firewood and using chemical fertilisers for farming. This holistic project has educated the entire community about public healthcare, renewable energy and waste, environmental protection and safer agricultural produce.

Creating or enabling access to better education is often one of the most effective, albeit challenging, ways to combat chronic poverty and stimulate community development. Improving educational infrastructures, building better and more effective educational resources, enabling disadvantaged children to return to school or continue education, and enhancing teachers' skills and knowledge are possible areas for intervention identified by Mercy Relief to address the education sector's needs, both in times of peace and following disasters.

It is, however, important to note that impoverished or remote communities may lack longer-term planning capability due to their constant preoccupation with survival. Hence, the culture of learning cannot be imposed on them overnight. It is imperative that in engaging these communities, any education programme should include other developmental efforts to address their basic survival needs.

Thwarting the Secondary Enemy



Risk Wise Epidemics, 2009
World Health Organisation
(WHO)

“Risk Wise Epidemics brings together voices from all sectors of civil society, urging all nations to take the necessary measures to prepare for present and future infectious health threats. Infectious diseases do not respect geographical boundaries – they can devastate families, communities and entire countries, and if unchecked, they can take on global proportions.

Prevention and preparedness for epidemic diseases is a fact of life that must be acknowledged by every country. Every organisation, whether public or private, must work together to enable the coordinated response that is needed to rapidly identify and contain public health emergencies, reduce panic and minimise disruption to trade, travel and communities. Risk Wise Epidemics represents the cumulative work of a wide spectrum of organisations and corporations with a collective desire to prevent, prepare for and mitigate future pandemic events.

Published in 2009 to coincide with the 62nd WHO World Health Assembly, Risk Wise Epidemics can be used as a companion guide for civil administrators who are serious about improving the world’s defences against infectious diseases.”

Thwarting the secondary enemy

Hassan Ahmad and Siti Sayadi, Mercy Relief, Singapore

The occurrence of natural disasters has risen distinctly over the last two decades. Hydrometeorological hazards such as floods and windstorms have contributed largely to the increase of rapid-onset natural hazards. The United Nations (UN) Under-Secretary General for Humanitarian Affairs characterized the high incidence of this type of disaster as a 'mega disaster' linked to climatic change.¹ Less predictable geological hazards such as earthquakes, volcanic eruptions and tsunamis have also seen an increase due to rapid urbanization, environmental degradation and weak governance. Such hazards are likely to have an even greater human cost.

The under-management of social issues like improper water use and sanitation, hygiene practices and limited healthcare awareness, mostly

due to lack of funds, has led to a lack of knowledge and understanding of health issues such as diseases in both disaster-stricken and poverty-stricken areas.

Measures towards the prevention, mitigation and eradication of infectious diseases require a holistic approach in the following areas.

Risk of epidemics in disaster areas

In their manuscript *Epidemics after Natural Disasters*, Watson, Gayer and Connolly highlighted the issue of displacement as a primary concern that would lead to disease transmission.² They mentioned that "the risk for communicable disease transmission after disasters is associated primarily with the size and characteristics of



Evacuated survivors from Banda Aceh return home from non-affected towns like Medan because of unfamiliar conditions at the new locations. Such migration activities posed high risks of transmission of diseases

the population displaced, specifically the proximity of safe water and functioning latrines; the nutritional status of the displaced population; the level of immunity to vaccine-preventable diseases such as measles; and access to healthcare services." Mercy Relief's (MR) experiences in the aftermath of recent major disasters such as the tsunami in Aceh; the earthquake in Pakistan; and the war in Afghanistan support their assertion.

MR's modus operandi for acute emergency relief is to assess and evaluate firsthand the situation and basic needs for survival of the victims such as food, water and shelter in the affected areas. A team of medical personnel is usually included in the reconnaissance party to assess the medical and healthcare needs of the survivors, and at the same time provide support to local healthcare units in managing casualties. The objective of the subsequent medical relief missions is to attend to trauma cases – directly treating the patients or referring them to a more advanced institution.

Experiences and lessons drawn from various MR humanitarian relief missions have repeatedly brought to attention the compounded medical and social problems that could have been prevented if a proactive approach had been implemented to address the issues, both pre- and post-disaster.

Case Study 1: Indian Ocean tsunami – Aceh, Indonesia, 2004

Tens of thousands of homes in Aceh were destroyed by the monstrous waves of the tsunami. The heavily crippled local government had to

grapple with unprecedented displacement issues and burgeoning concern over the health conditions of the affected population. With hospitals and health institutions badly damaged or affected by the impact of the waves, major aid agencies faced the uphill tasks of obtaining relevant pre-disaster health data to determine the immunization status of the affected population.

MR deployed 17 medical teams to Meulaboh and Banda Aceh in the two months after the disaster. The local authorities there requested that MR send its medical teams to an isolated community of thousands of internally displaced persons (IDPs) at Secata camp in Muta-I, about 45 minutes away from the main town Banda Aceh.

While treating trauma cases directly resulting from the disaster, as well as diarrhoea due to contaminated food sources, a multitude of alarming discoveries surfaced in and around the overcrowded camps. Numerous pools of stagnant water left by the waves, coupled with the hot and dry weather, became convenient breeding grounds for mosquitoes and rodents. Mosquito nets distributed to the IDPs earlier were hardly effective when it came to overcoming the risk of vector-borne diseases. Fortunately, MR chanced upon a Korean non-governmental organization (NGO), which focuses



Survivors welcoming food packs distributed during the emergency phase to address their most basic survival needs

Image: Mercy Relief



Aid agencies deploy liaison officers to allay anxieties by facilitating communications between evacuated patients and relatives on the ground

on fogging and spraying stagnant water to prevent mosquito breeding.

Another major issue was the improper use of clean water. Despite the availability of water purification units, the threat of water-borne diseases remained real. Upstream contamination of interconnected water sources was detected and the community in Secata continued their daily routine of using the spring water for bathing, washing and even consumption. Together with Oxfam, which was providing adequate water containers designated for different household purposes, MR conducted workshops to create awareness on proper and hygienic water use. To control the looming sanitation problems at the camps, Oxfam also set up cubicle toilets to prevent faecal contamination from the overflow of latrines. In Calang, east of Mata-I, a rapid health assessment conducted two weeks after the disaster found that all survivors continued to drink from unprotected wells, and at that time, 85 per cent reported having diarrhoea.

Given the crowded living conditions, there was also an apparent need for measles vaccination. While a higher immunization coverage level was needed to prevent any outbreak, MR could only effectively conduct opportunistic vaccination for children who came voluntarily to the medical centre where the teams operated. Secata's remoteness posed logistical problems in maintaining the cold chain to transport vaccines, creating further setbacks to the medical personnel whose mobility was already limited by the lack of transportation that hindered them from reaching more victims and conducting a

mass-scale outreach programme. The World Health Organization (WHO) reported that clusters and sporadic cases of measles, including 37 reported cases in North Aceh district, were common despite mass vaccination campaigns conducted elsewhere by other agencies.

During MR's two-month operation at Mata-I it was also observed that many of the IDPs had low immunity levels, as they were only eating plain rice. MR therefore initiated a food distribution programme to boost their nutrition intake.

Case Study II: South Asian Earthquake – Muzaffarabad, Pakistan, 2005

Mountainous terrains, limited accessibility and severe climate posed early challenges to MR's initial team, which went to Abbottabad and subsequently settled at the UN base camp in Muzaffarabad. In an effort to extend medical aid there, MR partnered with Pakistan's largest medical NGO, the Pakistan Islamic Medical Association (PIMA). Complementing each other's strengths, the collaboration involved working together in the organization and set-up of a field hospital at Neelum Valley. Operations at the field hospital were stretched to capacity as the medical personnel had to attend to inpatients and outpatients, many of whom



Image: America Today/Mercy Relief

The field hospital in Muzaffarabad was overcrowded with patients and visitors, which meant medical personnel had to be vigilant in identifying and isolating communicable disease cases to prevent any spread within the ward.

suffered injuries from impact and experienced some degree of post-traumatic stress disorder. There was also an influx of diarrhoea cases suffered by the IDPs from nearby camps. Before adequate water and sanitation facilities were provided at the IDP camps, an outbreak involving more than 750 cases of acute watery diarrhoea occurred in the unplanned, poorly equipped camp of 1,800 persons.

Despite the modest infrastructure MR operated in, the field hospital was well set up with an ambulatory consultation area, an operation theatre and a fully stocked pharmacy. A systematic registration and triage system was kept to record patients' data. It ended up becoming the referral hospital for WHO and the Pakistani Army, bringing in patients who had been evacuated from the surrounding mountain villages. In many of these referral cases, doctors were greeted with cultural revelations on the affected community's traditional injury management practices. In her report, *The Lure of Pakistan: A Humanitarian Relief Experience in Muzaffarabad*, Mercy Relief's team leader Dr Fatimah Lateef documented the ingenious way these patients coped with their injuries.³ The Kashmiris typically "covered their wounds with turmeric powder, a spice believed to have anti-septic properties. Some also used locks of their own cut hairs to pad their fractured limbs, before bandaging with scarves or towels." For such occurrences where difficulties of immediate access to health facilities and delayed presentation of acute injuries occurred, the risk of wound infection and tetanus cannot be overly emphasized.

It was repeatedly documented in WHO's *Weekly Morbidity and Mortality Report* during the emergency period that illnesses and deaths from tetanus had occurred due to contaminated wounds, partly due to the low vaccination coverage among the affected population.⁴ As supplies of vaccines were limited due to logistical constraints during the time of MR's operations there, MR only managed to administer the first of three doses needed for the treatment of tetanus. Undertreatment of tetanus had contributed to the controversies surrounding the efficacy of vaccination efforts during the acute emergency period. Fortunately, PIMA diligently continued administering the remaining doses to the patients. The medical personnel also had to shoulder the task of educating affected communities on the functions and benefits of vaccination.

In the management of severely injured patients, medical personnel struggled with decisions to evacuate or isolate infected victims as this effort risked further trauma to the victims and their dependents. In cases where mothers were infected with tetanus and needed to be quarantined, it proved to be a problematic arrangement for the patients and their children, who required their mothers' continual presence and attention.



Image: Toy Mita Hany / Mercy Relief

In Afghanistan Mercy Relief's medical personnel mass-wash children with antiseptic soaps as part of its personal hygiene programme

Medical personnel were also faced with a space dilemma. The need to quarantine patients with infectious diseases at the field hospital required additional space in an already congested setting, which may otherwise have been used to cater for additional beds for patients with other conditions.

Case Study III: Armed Conflict — Afghanistan, 2002

MR worked alongside several other foreign NGOs at a medical centre in Spin Boldak, South Afghanistan. The main objective was to treat patients for common ailments and wounds. However, relief agencies seeking to extend medical aid in Afghanistan also had to combat tuberculosis (TB), which was already an endemic disease that pervaded in the war-torn country before the peak of its devastation.

There were many challenges in controlling the spread of TB and its subsequent treatment, which takes around six to nine months. If treatment falls short of the standard protocol, there is a risk of developing resistant strains of the bacteria. Thus, there is the continued risk of TB becoming a potential pandemic caused by bacteria. Apart from the mandatory three-weeks quarantine period imposed on the patient, there is the problem of providing the complete course of three drugs needed to treat the disease. If treatment is not done properly, patients may develop resistance and without proper X-ray facilities, the doctors can only clinically diagnose patients. Given the

lack of resources, the doctors faced the dilemma of whether or not to treat the patients. Patients need to be educated extensively on the recovery process. While they may feel better after two weeks, they still need to be on medication for an extended period of three to four months under direct observation. Treatment of TB is a tedious process; therefore prevention of an outbreak would save valuable resources.

Working with the local government health office, MR embarked on a health education programme by first targeting children, primarily infants — the most vulnerable group to infectious diseases. Medical researchers have typically acknowledged the hypothesis that infants who are not breastfed are more vulnerable to infection and diarrhoea. In order to build up the infants' immunity levels, MR executed the programme with a conscientious aim to create a conducive and sustainable environment that encourages frequent breastfeeding for children.

Driven by the misconception that milk powder has superior nutritional value to breast milk, Afghani mothers became persistent in asking for milk powder. This had a reverse effect on relief agencies' efforts to

increase milk powder supplies for emergency situations to avoid malnutrition in affected children. To dispel the misconception, health talks were conducted to educate the mothers on the benefits of breast milk. The programme was expanded to promote appropriate child feeding and caring practices, including diversifying diets and improving hygiene, as even with adequate nutrition, poor hygiene could still aggravate the spread of diarrhoeal diseases. In response to this MR conducted a bathing exercise to educate parents on the need to keep their children safe from diseases.

Lessons learned

There is a need to establish cooperative networks with partner agencies and local authorities — No single agency can be fully self-sufficient in its operations and work independently from other NGOs. NGOs must be open to collaborations with more experienced or bigger partners to tap into their resources, network and expertise to supplement their deficiencies. For example, in order to provide efficient and effective medical aid, relief agencies must be well equipped in other resource areas like logistics, manpower and telecommunication amenities. These resources facilitate proper planning and coordination in the midst of operational chaos. The goodwill established with trusted networks during peacetime will pave the way for successful cooperation when disasters occur.

There is a need for a holistic approach — Basic needs for survival required and expected by the affected communities are interconnected. Effective aid cannot be extended in a piecemeal manner.

Local cultural sensitivities need to be understood — In making recommendations for the prevention or management of diseases, relief workers need to be sensitive to customary practices and social beliefs that may create psychological barriers to the local community's acceptance of proposed treatments. Within a relief team, able and knowledgeable leaders should be appointed in the field to take charge of operations and be accountable for decisions.

Operations in ground situations need to be adaptable — Relief workers must be adoptable and adaptable to ground situations. Medical aid workers cannot expect to duplicate the same working conditions that exist in an urban peacetime setting or impose their own standard practices on their local partners and co-workers.

MR believes that healthcare is but one of the five key components for effective and sustainable development in disaster-stricken and impoverished rural communities, the other four being shelter; water and sanitation; education; and livelihood opportunities. The five components are intimately connected, hence the need to address them in a holistic fashion. Immediate and tangible benefits appeal more to these communities.

Immediate subjective wants versus gradual objective needs

Having worked in 19 countries over the last six years in disaster-stricken and impoverished rural areas, the common thread that runs through these communities is that the targeted communities' chief motivation stems out of immediate subjective simple personal wants, which prevail over gradual objective comprehensive communal needs.

Livelihood opportunities and their sustainability are paramount to any household. Water is quintessential to the immediate survival and sustainable development to these affected and disadvantaged communities. A development project, which provides immediate and sustainable sources of food and income — for example potable water and water for farming — is virtually certain of winning over the wills and minds of the targeted communities.

Macro issues such as the threat and spread of avian flu and HIV, or environmental degradation, are least proximate to these communities in terms of consciousness and conscience.

Parallel to developed communities, people become interested in insurance only after they have reached a certain level of comfortable income and lifestyle. This psychological block is motivated by the limited social bandwidth and the anxiety of immediate personal survival. Such phenomena accurately explain the rural or affected communities' disinterest towards immunization. For disaster-stricken communities in rural areas, given the trauma and devastation around them, the survivors will not be motivated to adopt any revolutionary health procedures that would not compensate them for the loss of their families and properties.

In addition, culture and religion are known to influence the ways people define health, express pain, select treatment options and deal with grief. These characteristics of the affected communities represent yet another challenge to the international aid community. Relief workers cannot underestimate the influence such beliefs bring in shaping rural communities' understanding of medical treatment and the myths created surrounding the spread of modern medical theories.

Conclusion

Poverty increases vulnerability and, as such, immunization programmes should be implemented in impoverished and developing communities during peacetime. However, it must also be taken into consideration that efforts to eradicate an epidemic after a major disaster require extensive resources, thus causing significant financial strain on the affected country. To avoid this, a holistic preventive strategy to combat diseases needs to be implemented proactively before an epidemic occurs. In addition, the need for education to encourage practice cannot be overemphasized and this needs to be done during peacetime.

Essentially, any aid agency that wishes to embark on the formulation of a pandemic contingency plan must be able to appreciate the concerns, outlook and culture of the targeted communities. Only then can the communities be won over effectively.

A general increase in the number of large-scale natural disasters requires an international response — hence the need for an effective network of NGOs (of diverse capabilities) for better coordination, maximizing on each other's strengths and avoiding duplication of efforts. This would allow for greater efficiency in the allocation of resources and better services to the targeted communities. Regional capacities to respond to disasters should be developed and relevant institutional relationships strengthened. This would include existing regional organizations, the UN regional offices, and the national disaster management agencies and health agencies of countries prone to natural disasters.

Peacetime Strategies for Disaster Risk Mitigation



Risk Wise, 2008
International Disaster and Risk
Conference (IDRC)

“A fully illustrated, 200-page book, Risk Wise offers perspectives, case studies and analysis on disaster risk reduction and mitigation in light of the increasing threat of natural disasters. It brings together the knowledge and experiences of public and private organisations working towards disaster preparedness and mitigation at local, national and international levels.

The book received full support from over 60 public institutions including four separate UN Agencies (UNISDR, UNESCO, UNEP and UNOSAT), and was granted the status of partner publication to IDRC 2008.

It was published in August 2008 for launch at the International Disaster and Risk Conference (IDRC Davos 2008).”

Peacetime Strategies for Disaster Risk Mitigation

Hassan Ahmad, Alicia Wong and S R Shievet, Mercy Relief, Singapore

Natural disasters are inevitable, and they often occur with little or no notice and require an immediate and effective response in order to prevent further damage or loss of life. Cyclones, earthquakes, tsunamis and typhoons are all forces of nature. Environment abuse has led to the increase of natural disasters. The process of environmental degradation and damage can only be delayed. With the decline in global climate due to environmental and human factors, disaster and risk mitigation has taken on an unprecedented importance.

Environmentally focused solutions have limitations and require total global cooperation. There must be resources, education and training before they can be put into place. More importantly, the community and the affected peoples must be able to see the relevance of the proposed solutions. Why should fishermen plant mangroves that will stop them from accessing the sea for the daily

catch that would feed their families? International experts are brought in with scientific and technical knowledge that has little relevance and connection to the local community. Very often, the proposed solutions are too narrowly focused on the single problem at hand and do not take into consideration the challenges faced by the affected peoples in their daily lives; or offer any alternatives when an environmental solution takes away the only means of livelihood the community has.

In the introduction chapter of the *World Disasters Report 2005*, Markku Nislaala, the Secretary-General of the International Federation of Red Cross and Red Crescent Societies (IFRC) said:

"Three things need to happen. First, we must understand what enables people to cope with, recover from and adapt to the risks they face. Second, we must build



Meulaboh: History helps – Personnel from Mercy Relief (MR) and the Tentara Nasional Indonesia (TNI) delivering supplies to Meulaboh in a Singapore Armed Forces' (SAF) Chinook just days after the Tsunami. From left: Iwan Subrata (MR's Medanese partner), Hassan Ahmad (MR's Chief Executive) and Dr Iskandar Idris, (MR's medical volunteer) with other volunteers in the background

Image: Ernest Goh

our responses on the community's own priorities, knowledge and resources. Third, we must scale up community responses by creating new coalitions with governments and advocating changes in policy and practice at all levels.

"If we focus only on needs and vulnerabilities, we remain locked in the logic of repetitive responses that fail to nurture the capacities for resilience contained deep within every community. We have talked about building capacity and resilience for decades. It is now time to turn rhetoric into reality: to dispel the myth of the helpless victim and the infallible humanitarian, and to put disaster-affected people and their abilities at the centre of our work."

What happens before and after a disaster is all related to disaster risk reduction. The main concern is human life and human suffering. It is time to bring the humanitarian players together; to build an alliance for effective action locally, nationally, regionally and internationally.

Objective and aims

Mercy Relief's experiences in Myanmar, Sichuan and Aceh illustrate the importance of alliances and how the interoperability of different systems and institutional interactions are important elements in disaster risk reduction strategy.

Case study: Cyclone Nargis — Myanmar, May 2008

Although there were clear signals that there was inadequate capability to manage the disaster alone, the Myanmar authorities were hesitant to welcome foreign assistance. It was a situation where the international humanitarian community, including foreign military assets, had to wait by the sidelines and helplessly watch as the vulnerable survivors try to find food and help in the deteriorating ground

conditions. Demands and pressure by the international community brought little positive shift. While aid-offering countries and bodies observed the Oslo Guidelines that humanitarian assistance must be provided with full respect for the sovereignty of the affected states (paragraph 21), the Myanmar authorities lacked confidence that the assistance offered would be purely humanitarian. As the clock ticked, the devastated Ayeyawaddy delta community turned desperate. Timeliness of aid is key to any acute crisis in order to prevent further damage or loss of lives.

Prior to Cyclone Nargis, Mercy Relief had minimal and short-term engagements in Myanmar implementing piecemeal development projects. Had there been a sustained commitment and cooperation previously, Mercy Relief would have had the necessary ground network and trust and confidence of the local authorities, to have been allowed continued and early entry to provide more timely and effective penetration.

When the first groups were eventually allowed in, they were from the immediate neighbours, followed by the Association of Southeast Asian Nations (ASEAN) members, then the other international agencies. However, each country went in with its resources and operated independently of each other. This resulted in serious duplicity of resources leading to wastages, and hence less efficient management of risk.

Whilst Mercy Relief awaited clearance from the Myanmar authorities to move into the badly affected delta areas, it dispatched the first two batches of relief



Myanmar: Caught in the politics of hope – Mercy Relief's volunteer pharmacist K. Thandalethime administering medication during the daily mobile clinic runs in Twanta, Myanmar

Image: Johnathan



Sichuan: Goodwill gets better. Having worked closely during the acute phase, the partners launched the reconstruction of two schools in Ziyang. From left: Shi Qian (Ziyang Foundation for Poverty Alleviation); Gerry D'Silva (Hong Leong Group Singapore); Chia Hui Yong and Hassan Ahmad (Mercy Relief); Jiang Shi Lin (Deputy Mayor, Ziyang Prefecture).

supplies to the Ministry of Social Welfare, Relief and Resettlement and UNICEF in Myanmar. At the same time, Mercy Relief sourced for and built a network of partners on the ground, including the Adventist Development and Relief Agency (ADRA) and Singaporean businesspersons based in Myanmar, all of whom possessed reliable communication links with the local authorities and were already supporting the acute relief efforts in the delta region.

Mercy Relief only managed to deploy its personnel out of Yangon two weeks after the disaster, through the agreement made between the Foreign Offices of Singapore and Myanmar. ADRA is an excellent example – its engagements during peacetime, executing development work in the rural areas, gave it almost unlimited access to Ground Zero and even allowed it to act as a conduit for other foreign and local non-governmental organizations (NGOs) going into rural Myanmar. Working with ADRA allowed Mercy Relief's staff, volunteers, resources and equipment access to the delta region. Mercy Relief was able to latch on to these partners to effect disaster relief in the unique situation that Myanmar posed to all relief agencies.

Case study: Wenchuan earthquake – China, May 2008

The Wenchuan earthquake took place nine days after Cyclone Nargis landed on the Ayeyawaddy delta. Although China was geographically further from Singapore than Myanmar, Mercy Relief's response team to Sichuan was at Ground Zero on the fourth day after the quake, a week before its first relief team to Myanmar got out of Yangon. The reason: Mercy Relief had an existing and sound network and goodwill with the local Chinese authorities and NGOs, established through its staff who had implemented development projects in various parts of China. The sustained peacetime engagement and

cooperation allowed Mercy Relief to effect timely assistance, with the assured warmth and confidence of the local authorities and partners.

Case study: Indian Ocean tsunami – Aceh and North Sumatra, December 2004

In the aftermath of the 2004 Indian Ocean tsunami, despite the challenging terrains of Aceh, Mercy Relief was able to secure early access into Meulaboh and Banda Aceh in the first week of the disaster. Medan (North Sumatra) was the main launching pad for international aid into Aceh, with rotary-wing aircrafts forming an air-bridge between Medan and the other parts of Aceh. The substantial history and goodwill shared by Mercy Relief and the North Sumatran Government (in particular the governor himself), through consistent engagements and joint projects on poverty reduction in and around Medan, gave the former priority and easy access to the air assets. As such, Mercy Relief was not only able to provide timely and effective penetration into the remote affected areas in Aceh, but also helped pave the way for many other NGOs to set up their bases in Meulaboh. The timely intervention, together with other foreign NGOs and militaries, helped eliminated the risk of a secondary disaster such as an epidemic.

Lessons learned

Bureaucracy, while necessary, is machinery that moves too slowly and, more often than not, may prove a stum-



Image courtesy of

hling block in emergency response operations. Government-in-government relationships take time to develop. NGOs are generally small and do not have the resources of the governments, international NGOs or intergovernmental organizations. On the other hand, their smallness allows for greater mobility and adaptability, and their personnel are usually made up of specialized generalists. Therefore, the solution for NGOs in a disaster is alliances — alignment and cooperation with like-minded NGOs that share similar goals and vision. Continuous engagement during peacetime can only build goodwill, understanding, cooperation, and lead to easier access and greater efficiency when it comes to risk reduction before and after a disaster strikes.

NGOs generally have a long and intimate history with various communities in the country. They are close to and familiar with the challenges faced on the ground by the communities they serve, as well as the challenges faced by groups working on the ground. They have developed working networks within the community and are familiar with the system of governance in the host country.

Poverty increases vulnerability. Poorer communities are more vulnerable to natural disasters as they do not have the means to prepare themselves against them. Mud houses tend to crumble easily even with lower Richter quakes. The damage to the mud structures, if it does not cause death by impact, may suffocate the victims instead. Peacetime development work not only increases the capacity of the local communities, it also enables the implementing organization to build rapport and goodwill with the local communities, partners and authorities for future cooperation.

The experiences of Mercy Relief and ADRA in the case studies above highlighted the importance of existing good work and will which enabled early and timely response.

Recommendations

In a region where 70 per cent of the natural disasters take place, NGOs play a crucial role. It is even more pertinent that a civilian alliance dedicated to humanitarian assistance working with both government and military is built. Asian NGOs have the ability to open doors and cultivate relations. With the track record of disasters in Asia, developing working relationships in the region during peacetime has to take top priority in any risk reduction strategy. The small steps taken to develop working relationships will have a big impact on goals to minimize the risks pre- and post-disaster.

Based on the experiences in Myanmar, Sichuan and Indonesia, and as part of risk management when a disaster hits, social assets in the form of institutional interactions and alliances are equally if not more important than technological, physical and operational assets and capabilities. When a disaster hits, the people who need assistance and the providers of assistance are all involved. It is crucial that the dialogue and engagement starts before the disasters hit.

Peacetime community capacity building

Peacetime is when trust and confidence can and should be built, to ensure that when a disaster strikes there is greater chance of reducing the suffering and further loss of lives because timely and necessary assistance can be accessed and implemented based on the relationships built. Risk reduction is often seen in physical, technological, structural and environmental terms. Risk reduction strategy must also take into account capacity building, community development and poverty alleviation — all of which is about enabling people to help themselves, to build their own risk reduction methods. An example of an informal community building that worked and saved lives and only came to light after the tsunami is the people of Sumatru, an island off Sumatra.¹

Humanitarian disaster response

The UN has the Office for Coordination of Humanitarian Affairs (OCHA) as its coordinating office for information. Perhaps there is a need for a working office to coordinate operations for coalitions of NGOs responding directly to disasters in Asia. Effective coordination will contribute to more effective and efficient deployment of resources. The ASEAN Regional Forum (ARF) has included humanitarian affairs in its mandate, with regular exercises.

Governments hitherto have underestimated or ignored the possible impact of NGOs in actual delivery of humanitarian aid in natural disasters. The IFRC's Code of Conduct for NGOs in Disaster Relief includes a section on recommendations to intergovernmental organizations.²

Mercy Relief is planning for a possible coalition of NGOs and corporate bodies in Asia, which share resources and network and have regular engagements and exercises. It would involve the heads of respective national disaster preparedness and response agencies. When the alliance of Asian NGOs crystallizes, the issue of civil-military coordination requires address.



INTERNATIONAL PROGRAMME

Mercy Relief's International Programme focuses on disaster relief, emergency preparedness and risk mitigation for crisis-stricken and disaster-prone communities, and sustainable development initiatives for poor and disadvantaged communities in Asia focusing on water and sanitation, shelter, livelihood, healthcare and education.

Mercy Relief's (MR) humanitarian action is guided by the four principles of engagement to uphold humanity, exercise impartiality, maintain neutrality and respect the sovereignty of the state.

DISASTER RELIEF

Natural disasters are inevitable, and they often occur with little or no notice. Cyclones, earthquakes, tsunamis and typhoons are all forces of nature. Environment abuse has led to the increase of natural disasters.

Disaster relief is one of the 2-pronged objectives of MR. With the right strategy of partnering local and international organisations, it was made possible for MR to deliver aid in timely and effective manner. Timeliness of aid is key to any acute crisis so as to prevent further damage or loss of lives. MR strives to reach Ground Zeroes within 72 hours from the point of appeal for aid by local authorities of the affected locations, focusing primarily on the provision of medical relief and basic survival needs to the survivors.

SUSTAINABLE DEVELOPMENT

In 2008, MR embarked on longer-term and sustainable development projects in Indonesia, China, the Philippines, Vietnam, Laos and Cambodia aimed at uplifting the lives of impoverished and disadvantaged communities, focusing on water and sanitation, shelter, livelihood, healthcare and education.

Poverty breeds vulnerability. Hence, MR's development programme seeks to complement its disaster relief programme, as communities which are better developed and resourced would be able to respond better to crises, including natural disasters. This is the essence of Disaster Risk Mitigation. The emphasis is on capacity building, inculcating self-reliance and sustainability, and empowering beneficiaries to transform their environment for a better quality of life.

DISASTER RELIEF

The decision to respond hinges primarily on appeals for assistance made by the national, provincial or local governments of the affected areas, or on appeals by the United Nations on behalf of the affected country or countries. This is in line with the general philosophy of respecting the sovereignty of the affected state(s).

The key to effective relief is to be at the affected areas personally and early so as to have first-hand observation and assessment of the critical needs on the ground, and match them with appropriate aid.

For post-disaster reconstruction engagements, Mercy Relief seeks to help put the affected communities' derailed lives back on track to normalcy, through the provision of schools, orphanages, medical facilities, public amenities (e.g. bridges) and livelihood opportunities (e.g. fishing vessels), including disaster preparedness and risk mitigation mechanisms for disaster-prone communities.

Since 2008, Mercy Relief (MR) has responded to 8 geological catastrophes; 15 hydro-meteorological calamities and 3 armed conflicts, covering disaster-stricken locations from Indonesia and the Philippines in the southeast of Asia; to Japan and China in the north-east, Sri Lanka and Pakistan in the south and Palestine in the west. More than

SGD 8.84 million were spent on acute relief, rehabilitation efforts and reconstruction projects over at 13 countries.

Hydro-meteorological menaces have posed an increasing challenge for the humanitarian players as they leave trails of devastation across international boundaries with varying terrains and national regulations, systems and cultures. Typhoons Morakot and Ketsana of 2009 slammed across the Philippines, Taiwan, Vietnam and Cambodia, whilst the southeast Asian floods of 2011 surged through Thailand, Cambodia and the Philippines.

The increasing frequency of disasters have also witnessed geological and hydro-meteorological terrors battering almost simultaneously, wreaking wide-scale chaos, destruction and agony across several countries. The terrifying twins of Cyclone Nargis-Wenchuan quake of 2008, and the devastating duo of Typhoon Ketsana-Padang quake of 2009 caused severe strains on the regional and international humanitarian communities.

MR is currently strengthening its relations with the various national disaster management committees of disaster-prone countries – to better understand the individual local response systems and establish close communications channel for better data accessibility. In addition, MR has embarked on the stockpiling of relevant relief supplies such as food, water systems and shelters as part of its relief preparedness.



Great East Japan earthquake and tsunami, 2011



Philippines Storm Washi, 2011



Pakistan Floods, 2010

SUSTAINABLE DEVELOPMENT

Water & Sanitation . Shelter . Livelihood . Healthcare . Education

General development process and motivation of under-developed communities

Livelihood opportunities and their sustainability are paramount to any household. Water is the essence to immediate survival and sustainable development to these affected and disadvantaged communities. As the timeless saying goes, 'Water is life'.

Survival
(Water)

Stability
(Shelter)

Opportunity
(Livelihood)

Security
(Healthcare)

Expectancy
(Education)

Immediate Subjective Wants versus Gradual Objective Needs

Communities' predominant motivation to improve their lives stems out of immediate subjective simple personal wants, which prevail over gradual objective comprehensive communal needs. Livelihood opportunities and their sustainability are paramount to any household. Macro issues such as education, the threat and spread of avian flu and HIV, or environmental degradation, are least proximate to these communities in terms of consciousness and conscience.

Mercy Relief has expended SGD 4.97 million for the implementation of 30 development projects stretched across Indonesia, China, the Philippines, Vietnam, Laos and Cambodia.

Projects range from access to water for life and livelihood; structured sanitation for hygiene and energy; housing for the relocation of cave-dwellers at risk; rehabilitation of coastal landscape and waterways for livelihood opportunities; training of caregivers for Special Needs children to facilitate latter's rehabilitation and future independence; refurbishment and equipping of medical centres for higher level of healthcare, and English training for non-native speaking communities to allow better access to wider range of information. Disaster risk mechanisms are incorporated into the project planning for communities which are disaster prone.



(above) Mangrove planting for coastal rehabilitation and protection leads to enhanced livelihood output for fishermen and coastal communities in Zambales, Philippines.
(left, vertical) Water for life and livelihood, Shanxi, China.

Consolidated Financial Statements

2008 - 2011

BALANCE SHEET

	2008 (S\$'000)	2009 (S\$'000)	2010 (S\$'000)	2011 (S\$'000)
ASSETS				
Land and Buildings	*	*	*	*
Other Tangible Assets	121	89	73	46
Investments	*	*	*	*
Inventories	171	162	264	500
Accounts Receivable	975	1,371	2,147	1,257
Cash & Deposits	551	1,065	1,035	1,577
Others	*	*	*	*
TOTAL ASSETS	1,818	2,687	3,519	3,380
FUNDS				
Unrestricted General Fund	836	1,131	861	1,273
Restricted Fund	675	1,389	2,495	1,796
Endowment Fund	*	*	*	*
TOTAL FUNDS	1,511	2,520	3,356	3,069
LIABILITIES				
Long-term Liabilities	*	*	*	*
Current Liabilities	307	167	163	311
TOTAL LIABILITIES	307	167	163	311
TOTAL FUNDS & LIABILITIES	1,818	2,687	3,519	3,380

INCOME & EXPENSES

	2008 (S\$'000)	2009 (S\$'000)	2010 (S\$'000)	2011 (S\$'000)
INCOME				
Donations in Cash				
- Tax Deductible	233	196	604	836
- Non-tax Deductible	3,953	3,571	3,270	4,060
Donations in Kind	*	*	*	*
Grants	714	1,130	951	881
Investment Income	*	*	*	*
Investment Gains	*	*	*	*
Others - Merchandise sale & Facilitation fees	-	45	36	32
TOTAL INCOME	4,900	4,941	4,861	5,809
EXPENSES				
Direct Fundraising Expenses	45	38	61	7
Direct Charitable Expenses - Local	275	95	38	115
- Overseas	3,918	2,600	2,741	4,705
Staff Salaries & Allowances	769	904	923	1,031
Other Operating Administration Expenses	158	296	261	238
TOTAL EXPENDITURE	5,165	3,933	4,024	6,096
SURPLUS / (DEFICIT)	(265)	1,009	837	(287)

*Not applicable

Thank goodness for Me

DPM Teo lauds humanitarian group for contributions here and abroad

By NG KAI LING

SIZE does not matter for Singapore humanitarian group Mercy Relief. Despite having just 15 full-time staff and operating out of a humble office located at an HDB void deck, it has consistently been among the first non-governmental organisations to render assistance to crisis-stricken areas all over the world.

At a ceremony to mark the 2nd World Humanitarian Day, Deputy Prime Minister and Defence Minister Teo Chee Hean paid tribute to Mercy Relief for being "one of Singapore's success stories", making important contributions both at home and in the region.

World Humanitarian Day was designated by the United Nations General Assembly to recognise the hard work of humanitarian workers, who risk their lives to provide aid to the crisis-stricken.

At the ceremony, religious leaders from five different faiths led some 150 guests in a one-minute prayer for the safety of all aid workers and also in remem-

brance of those who died in the course of their work.

Mercy Relief was launched by then Deputy Prime Minister Lee Hsien Loong in 2003. Started by Muslim group Perdaus in 2001, Mercy Relief went its own way in 2003 so that it could be more inclusive.

SUCCESS STORY

"You are respected for the good work that you carry out, and have also established goodwill, confidence, trust and love between citizens of our Asian neighbours and Singapore."

Deputy Prime Minister and Defence Minister Teo Chee Hean, paying tribute to Mercy Relief at a ceremony to mark the 2nd World Humanitarian Day

At the time, it set for itself a response time of 72 hours from the point of appeal for assistance – a feat which it has achieved consistently since, making it among the first to arrive at disaster zones to render aid.

Last year, Mercy Relief went on about 10 aid missions to places including the Philippines and Taiwan, in the wake of Typhoon Morakot, and Qinghai in China and Padang in Indonesia, after they were hit by earthquakes.

The group's most recent mission was to the flood-hit province of Khyber-Pakhtunkhwa in Pakistan, where a five-man team helped distribute medical supplies, food, tents and five water filtration systems to convert dirty water into drinking water. The group returned last Saturday.



Mercy Relief distributed portable water filtration Khyber-Pakhtunkhwa province. It has consistently

Said Mr Teo, welcoming them back: "You are respected for the good work that you carry out, and have also established goodwill, confidence, trust and love between citizens of our Asian neighbours and Singapore."

At home, Mercy Relief is helping to nurture a new breed of volunteers and aid workers through its collaboration with Singapore Polytechnic to run a course on humanitarian affairs.

ercy Relief



"THERE IS A LOT MORE TO BE DONE. THE DEVASTATION IS VERY WIDESPREAD. WE SAW BODIES OF WATER ALONG THE MOTORWAY AND WE THOUGHT THEY WERE LAKES OR RIVERS, BUT THEY WERE FLOODED VILLAGES."

systems (above), medical supplies, food and tents during its recent mission to Pakistan's flood-hit been among the first NGOs to render aid to crisis-stricken areas of the world. PHOTO: MERCY RELIEF

The Certificate in Humanitarian Affairs is open to first-year students with a grade point average of 3.0 or higher and will be an additional certificate on top of their diploma.

Students can apply for one of the 40 places available in the course, which starts in October.

But before that happens, Mercy Relief will be making another trip to Pakistan in the following two weeks, now that the

Singapore Government has put up another US\$50,000 (S\$67,800) for the flood-stricken country.

Said Mr Jaffar Mydin, who has just returned from there: "There is a lot more to be done. The devastation is very widespread. We saw bodies of water along the motorway and we thought they were lakes or rivers, but they were flooded villages."

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DEVELOPING THE HUMANITARIAN SECTOR IN SINGAPORE



As part of Mercy Relief's efforts to enhance its capacity and grow the humanitarian sector locally, it has included several key areas of focus:

- Research for development of appropriate technological applications for rural and disaster-stricken communities managed by its Strategic Innovation & Partnership (STRIP) unit;
- Recruitment, deployment and management of volunteers under its Mercy Overseas Volunteer Expeditions (MOVE) programme;
- Promotion of volunteerism, care and compassion to the citizens and residents in Singapore under the Cultivating a Grateful & Gracious Society (CGGS) programme, and
- Structured academic training courses for youths and relevant individuals or agents.

Strategic Innovation & Partnership (STRIP) unit

Mercy Relief has set up an in-house innovation unit to initiate and coordinate researches, designs and development of appropriate technologies for humanitarian deployment focusing on shelter, food, water and sanitation. It will partner local tertiary technical institutions and relevant corporations as part of the latter's CSR.

Theme: ***Common Sense is Not always Common***

FOOD



Mercy Ready Meals (MRMs)

Mercy Ready Meals (MRMs) was thought out in the aftermath of the Wenchuan earthquake in 2008. Working together with Mercy Relief's (MR) corporate partner, Golden Season, the first MRM developed was rice porridge with sweet potatoes.

The high fluid content of the porridge serves to rehydrate the victims, with the starch meant to fill the hunger and provide energy. Sweet potato was included for its high nutrition - the number one nutrition of all vegetables with rich content of dietary fibre and naturally occurring sugar, complex carbohydrates and protein.



Subsequently, red and green bean soups were included in the range of MRMs as they contain high protein and fibre. Each MRM pack weighs 250gm and is easily consumed and digestible, which make them suitable for infants, the elderly and injured, without any re-heating requirement. The MRMs have a shelf life of three years.

More than 940,000 packs of MRMs have been dispatched and distributed to disaster-affected locations in China, Japan, Thailand, Cambodia, Pakistan and the Philippines.





WATER

PedalPure™

Portable & Robust Ultra-Filtration Treatment System

In many disasters, contaminated water remains a critical issue. The portable ultra-filtration PedalPure system would allow more victims access to clean and safe water for consumption and survival.

Mercy Relief Chief Executive, Hassan Ahmad, said, "The pedal-powered filters do not require electricity to pump, and as such are very appropriate for use in disaster-stricken and remote areas where power supply is affected or scarce."

The 700-litre-per-hour system was designed by Mercy Relief (MR), in partnership with the Singapore Polytechnic (SP). Each unit is able to fill 466 bottles (1.5litre capacity) with water per hour. Equipped with wheels and brakes, the system is easily transportable across challenging terrains.

Pedaling activates the piston pump, which begins passing water through a dual-flow fibre membrane system. This process is known as ultra filtration which removes particles larger than 0.01 microns, including most bacteria.

When the membranes are dirty, a pressure gauge will show an increase in pressure, indicating that the system requires cleaning. The membranes can be easily cleaned through a backwash. During backwashing, clean water flows in a reverse direction through the membranes to remove the sediments and micro-organisms stuck on the membrane surface. Thereafter, the membranes will be ready to produce more water.



Specifications

Product water capacity:
700 litres per hr
Dry weight: 40kg
Overall dimensions:
1.1m (L) x 1.1m (W)
x 1.25m (H)
Performance:
Removal of sediments,
bacteria, colour



Household Rain Harvester (HRH)

The Household Rain Harvester (HRH) is a joint design between MR and SP.

The HRH is a simple device comprising a collapsible plastic container (akin to an inverted umbrella) to collect rainwater. It is joined at the base by a valve with an attached ceramic filter to separate sediments and bacteria from the water. Its simplicity and affordability makes it suitable for rural application and emergency response.

As a tropical region, Southeast Asian countries are blessed with abundant rain. While excessive rain causes floods, destruction to properties and contaminates clean sources of water, the HRH seeks to convert that burden to blessings by allowing affected households to collect and filter rainwater for safe consumption and ensure their survival.

SHELTER

Rapid Deployment Shelters (RDS)

The Rapid Deployment Shelter (RDS) was jointly designed and developed by MR, SP and Golden Season.

The RDS can be erected quickly in less than two hours by 3 men and can function as a medical clinic, storage facility, administrative area or living accommodation. Heat-treated aluminum is used for the structure to minimize weight for easier and more affordable transporting. Its adjustable legs can adapt to uneven terrains while the raised floor reduces the risk of flooding. Louvers and composite wall panels are used to ventilate and insulate the structure.

The first two units will be deployed in 2nd half of 2012 in earthquake-prone Padang, West Sumatra, Indonesia.



A three dimensional perspective of the RDS



A prototype of the RDS

Mercy Overseas Volunteer Expeditions (MOVE) programme



Mercy Relief has established the Mercy Overseas Volunteer Expeditions (MOVE) Programme in 2010 to provide an operative platform for individuals and groups to exercise the spirit of active global citizenry. MOVE volunteers (MOVERs) shall serve disadvantaged and poor communities at Mercy Relief's (MR) development project locations overseas such that they can personally and meaningfully experience and appreciate the plight of the less fortunate, and in tandem, learn the mechanics and philosophies of humanitarian work. This would also allow MR to identify and nurture future humanitarians.

Theme: *It's Good to Feel Bad*



*(left) Students from Singapore Polytechnic serving at MR's development project location in Shanxi, China.
(right) Employees of Neptune Orient Lines provided colourful container kindergartens in Meulaboh, Aceh.*

In 2011, a more structured pre-expedition training course and post-expedition activities were incorporated into MOVE to acquaint, equip and reinforce the mechanics and philosophies of effective volunteerism and humanitarianism. This would also allow MR to identify and nurture future humanitarians. MOVERs will learn and deliver the 'software' and 'heartware' elements of humanitarian work which will complement and supplement the 'hardware' components which MR had already provided to the needy communities.



Management trainees of Singapore Tourism Board in Indonesia



Students from Raffles Institution in Vietnam



Members of Singapore Soka Association in China



MOVE comprises two primary platforms for volunteer deployments – Mercy Expeditions (**MX**) and Mercy Youth (**MY**).

MY is catered for young adults and students between the ages of 15 to 35 years, and **MX** is opened to working adults and general volunteers. Social and corporate institutions may send their employees to undergo this programme to help develop their sense of global relevance, responsibility and professional lives.

The slogan '**It's Good to Feel Bad**' seeks to encourage **MOVERs** to consciously avoid the '**hero**' mentality after their volunteering services overseas. It is constantly drummed that whilst the **MOVERs** live in safe, secured and successful Singapore, hundreds of millions of their Asian neighbours are struggling to merely survive, hence the need for them to do even more for the less fortunate.

Returning **MOVERs** will automatically be integrated into the **MOVE Alumni**, a platform to allow them to further immerse themselves in active volunteerism, both locally and regionally. **MOVERs** shall promote an active volunteering spirit, civic life of compassion and care amongst the Singaporean society.



(left) Students from Temasek Polytechnic planting mangroves as part of a coastal protection and disaster risk mitigation effort in the Philippines

(above) Nursing students from the Institute of Technical Education (East) conducting health checks for villagers in Indonesia

Cultivating a Grateful & Gracious Society (CGGS) programme

Locally, MR initiated the Cultivating a Grateful & Gracious Society (CGGS) programme, launched by ESM Goh Chok Tong in 2011. This structured Asian-centric Programme seeks to promote the Singapore Spirit of compassion, care and volunteerism, targeting local education institutions, grassroots bodies, native Singaporeans and new citizens – focusing on essential values for character and social developments with the emphasis on:

Global Citizenry

The Singapore Spirit

A Nation Resilient

Servant Leadership

based on MR's first-hand experiences, observations and lessons learnt from disaster relief and sustainable development engagements with regional communities. CGGS is brought to schools through customised assembly talks and guided exhibitions for different age-groups to sow the seeds of compassion and consideration for others. Thereafter, students are provided with actual platforms and opportunities to contribute towards the good of others around them, and in tandem, better themselves as useful citizens, locally and globally. Students would then undergo interactive reflection sessions to ponder with a purpose – on the experiences they have harvested.

Theme: *If We could Care for Strangers, then Caring wouldn't be Strange.*

Cultivating a Grateful & Gracious Society (CGGS) programme

GLOBAL CITIZENRY – *Beyond Country, Culture & Creed*



The global community of the 21st century is highly inter-connected where technology has facilitated travels, trade and communications. Whilst Singapore is an independent country with a sound economy, no country can exist without being inter-dependent. The necessity to interact across boundaries, be it for commercial, political or social, warrants conscious education to enhance goodwill and trust, or avoid conflicts. Asia holds the majority of the world's population,

with the majority of the world's poorest located here. Whilst Singapore is relatively sheltered from natural calamities, the increasing occurrences of major disasters in Asia has caused serious apprehensions of food and water shortages. Can Singaporeans afford to be passive bystanders to the sufferings of their regional neighbours? And if Singaporeans choose to help, would local forms of assistance or solutions be appropriate for foreign communities with varying cultures, systems and structures? Would something common in Singapore be common at other places? *Is common sense always common?*

THE SINGAPORE SPIRIT – *Share the Treasures of the Heart*

Singapore is a naturally gifted dot – geographically well-positioned for commerce and is safe from many calamities. Such blessings become valuable only if they are shared by Singaporeans who *pay-it-forward* to fulfill their humanitarian duty. Singaporeans are envied by their neighbours for their economic success, but are they loved by their neighbours for their compassion and graciousness? Despite its economic prowess, Singaporeans rank lowly on gracious deeds. How far away are Singaporeans from that cultivated plane? Is the stench of the rat-race crushingly foul for the scent of graciousness to ever be the air that Singaporeans breathe?



A NATION RESILIENT – *Reflecting Beyond, Strengthening Within*



With the escalating menaces of natural disasters and man-made terrorism in the region, Singapore must maintain a conscientious effort to build her nation's resilience. Resiliency is the ability to adapt well to crises, the composure to persevere and bounce back from them. Peacetime is when systems and values must be established and inculcated into the society respectively. Over the decades, Japan has notably helped Singapore to develop her technology and economy. Singapore should now turn towards Japan to learn and build its nation's resiliency. What makes a nation resilient? Is there a natural gene? Is it a concept, culture or character?

SERVANT LEADERSHIP – *He who Serves Others, serves Himself Last*

It is important that every generation be moulded in the best of moulds, where individuals may emerge with the qualities and virtues fitting to lead their communities – social, corporate, political etc. Leaders are respected and appreciated, more so in the social sector, when they serve their communities' causes with their hearts, hands, honour and humility. True leaders are those who place the needs and welfare of others before theirs. Where leaders strive merely for success, the only other consequence is failure, but where one chases excellence, success may follow. Servant leaders must wear their hearts on their rolled-up sleeves. When challenges seem insurmountable, leaders must be able to motivate their followers to keep faith and continue striving for their aims. But does fate always favour the faithful?



Training

Mercy Relief has developed an academic course and is partnering the Singapore Polytechnic to run the first Diploma Plus Certificate in Humanitarian Affairs as an elective in Singapore, to acquaint keen students to, and equip them with, the principles and philosophies of the humanitarian sector. It is currently developing a practical certificate for working adults targeting personnel from relevant bodies inter alia the Singapore Civil Defence Force (SCDF), Ministry of Health (MOH), Singapore Armed Forces (SAF), Ministry of Foreign Affairs (MFA), other NGOs and corporations whose CSR focus are humanitarian.

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Poly course for relief workers

SINGAPORE Polytechnic (SP) and non-governmental organisation Mercy Relief are teaming up to train more humanitarian aid workers.

The Diploma-Plus Certificate Programme in Humanitarian Affairs was launched at the polytechnic on Thursday for a pioneer batch of 51 students.

The course is the first of its kind in Singapore and possibly the world, said Mercy Relief chief executive Hassan Ahmad.

He will be delivering the first few lectures in the course, and added that the humanitarian sector has been facing an acute shortage of trained personnel for the last three years.

"The sudden increase in the

number of natural disasters in the region in the past decade has made the need for trained workers more crucial," he said.

A Diploma-Plus course is an additional certification for students already enrolled in the polytechnic. This course will be conducted over three semesters, with a total of 150 class hours.

Course instructors will include the polytechnic's lecturers and Mercy Relief staff.

SP senior director of architecture, design and environment cluster Lim Cher Yam said that more than 200 students had applied for the 50 places in the programme.

During the course, students will study the mechanics and dy-

namics of humanitarian aid, including how to manage the operations of a humanitarian effort and cultural considerations.

In March, students will go on an overseas trip to experience relief and development work first-hand. They will be tasked with designing solutions to on-site problems on the spot, said Mr Hassan.

Ms Lossini Jeyapandiyen, 19, said she left the first lecture with a better idea of how humanitarian aid works.

"When we watch or read the news, we usually see the end product of humanitarian aid, not the process," she said.

"I had no idea how many obstacles you have to clear just to get aid to a place."

Soft copies available on Mercy Relief's Website.
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