

Disaster-response management: going the last mile

Thailand and Indonesia



An Economist Intelligence Unit briefing paper
Sponsored by DHL Asia-Pacific



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Preface

Disaster-response management: going the last mile is a new briefing paper by the Economist Intelligence Unit, and sponsored by DHL Asia-Pacific.

The findings and views expressed in this report are those of the Economist Intelligence Unit alone.

The cover photograph is by Dimas Ardian/Getty Images News



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Executive summary

The tsunami that struck on December 26th 2004 wreaked havoc of immense proportions: at least 200,000 people were killed in 13 countries, and the devastation of homes and property has been estimated by the UN to take up to five years to reconstruct and will cost US\$9bn. Dealing with such a disaster was a tremendous logistical task, as material, money and services poured in to rescue and relieve those in distress.

Disaster-response management: going the last mile is an Economist Intelligence Unit briefing paper sponsored by DHL Asia-Pacific. It looks at relief operations for tsunami-affected areas in Thailand and Indonesia, the lessons learnt, and how governments, aid agencies and companies can use these lessons to improve last-mile logistics management in disaster response in the long term.

The briefing paper is based on a series of interviews conducted over June and July 2005 with disaster-response experts, government officials, relief agencies and companies involved in the aid work in Thailand and Indonesia. The main points of the paper include:

- **Disaster-response logistics.** Humanitarian supply-chain management is more difficult than its commercial counterpart because it requires a greater amount of logistics in a shorter amount of time. Moreover, infrastructure often has been destroyed, hindering communications and transportation. The demand for relief supplies is huge and immediate, usually beyond the scope of aid agencies' stockpiles. The threat of death and disease adds a sense of urgency.
- **Gaining access.** There are political and practical dimensions to this aspect of last-mile disaster response. The national government has the sovereign responsibility to co-ordinate relief operations in its territory. Aid agencies and companies should seek permission to assist from the designated authority, and co-operate fully with them. Sometimes international pressure can be brought to bear on reluctant authorities, but volunteers, relief agencies and companies should look for leadership from the UN. Once entry has been made, it is critical to involve the local authorities and people in relief activities. This also helps to determine local capacities and constraints, and is essential to the success both of immediate aid and longer-term reconstruction work. Keeping airports open is critical to the supply of emergency relief. As a rule in a large emergency, goods should never be flown directly to the affected area, especially by parties not involved in the management and/or co-ordination of relief efforts. According to the UN Joint Logistics Centre (UNJLC), the first problem always is dealing with unsolicited items.
- **Types of donations.** Disaster-response experts say one of the best ways to ease the confusion and congestion created by unwanted supplies is for aid agencies and governments to insist on cash instead of material from donors. This has the additional advantage of avoiding the stress of customs clearance. Buying locally wherever possible is another way to ensure stocks of only necessary supplies. It also helps to feed money into an economy devastated by a disaster.
- **Corporate involvement in relief work.** Companies with their supply-chain management expertise seem a natural fit to



work with non-profit agencies in disaster response. The growing importance of corporate social responsibility has resulted in more companies forging partnerships with relief agencies. However, companies providing relief should clarify at the start that all assistance will be free, and that they are in a disaster area for humanitarian reasons alone. This is because relief agencies and governments expect companies to charge for their services and may be suspicious of corporate motives in giving aid. Some agencies also may feel threatened by the presence of companies in disaster-relief work, which they see as their domain.

- **What logistics providers can do.** They can be a part of airport emergency teams, such as those run by the World Economic Forum's Disaster Resource Network (DRN). In the year before the tsunami, the DRN had led a group of

transportation and logistics firms in Dubai to establish a team of air cargo professionals for emergency deployment where necessary. During the tsunami relief efforts, these corporate volunteers worked in Sri Lanka and Indonesia to co-ordinate aid distribution at the main airports. They unloaded aircraft, sorted and stored supplies, and assisted in the onward transportation of those supplies to humanitarian agencies.

Logistics providers can also co-operate with aid agencies on a long-term, forward-planning basis. For example, TNT is working with the UN World Food Programme to upgrade the latter's logistics links, and DHL is partnering with the International Federation of the Red Cross and Red Crescent Societies to research and develop logistics support to cover disaster relief and preparedness, among other projects.



Introduction

Like most natural disasters, this one too came with little warning. The unprecedented ferocity of the tidal waves that slammed into Thailand, Indonesia, Sri Lanka, India and nine other countries in December 2004 left more than 200,000 dead and damaged millions of dollars worth of property. So devastating was the tsunami, and so unprepared were the countries it flooded, that in many cases it took a few days or more for supplies to reach the affected areas.

The tsunami brought out the best in people—many rushed to donate material, money and services to rescue and relieve those in distress. More than good intentions were needed, however, to deal with a disaster of such proportions.

This paper aims to examine in brief the enormous logistical task of “last-mile” disaster response in Thailand and Indonesia.

In military parlance, “logistics” refers to a plan or operation that deals with the procurement, distribution, maintenance and replacement of materiel and personnel. The good logistics that

underpins a major military operation is equally applicable to a disaster-response effort, which uses commercial supply-chain management for humanitarian aid. The words “last mile” refer to the receiving stage of the relief supplies and it is there that the most logistical hurdles occur. As the phrase suggests, last-mile disaster-logistics management looks at the operational details of the final links in the relief supply chain. A successful relief response is often run with military precision and discipline.

The tsunami caught governments, aid agencies and companies unawares, and showed how unprepared they were for its magnitude. *Disaster-response management: going the last mile* asks: What are the lessons learnt from the emergency? How can governments, aid agencies and companies use these lessons to improve last-mile logistics management in disaster response in the long term? How can the fundamentals of commercial supply-chain operations be fine-tuned to suit the scale and severity of relief work?



Gaining access

In commercial supply-chain management, goods are moved regularly through a series of distribution centres to desired destinations. There are stock lists, schedules and standard procedures. In a disaster situation, most of these key elements are missing in humanitarian supply-chain management. Infrastructure is often damaged, hindering communications and transportation. The demand for relief supplies is huge, unpredictable and immediate, usually beyond the scope of aid agencies' stockpiles. With the threat of death and disease adding a sense of urgency, the proper management of the logistics of a disaster-response supply chain becomes particularly necessary.

A successful relief response is often run with military precision and discipline. Good logistics management underpins any major military operation and any commercial undertaking. It should support any disaster-response effort, especially in the "last mile" or receiving stage because it is there that the most breakdowns and blockages occur. As the phrase suggests, last-mile disaster-logistics management looks at the operational details of the final sections of the relief supply chain.

Fundamental to the relief effort in the last mile is gaining access to the affected area. This issue has two sides: political and practical. On a political level, it raises the question of whether the national government will permit international aid and personnel to visit the disaster areas, and who will have the final responsibility for relief work. On a practical level, it asks how the disaster zones can be reached, if transport and telecommunications infrastructure has been damaged.

Political side to access

With almost universal agreement, all sources contacted for this paper said that the host government must step forward and take ultimate charge of disaster-response operations in their jurisdictions. "Authority and organisation is always the prerogative and responsibility of the sovereign governments. The UN humanitarian agencies (World Food Programme, Unicef, UN High Commissioner for Refugees and others) are there to assist them in this task when requested. In complex emergencies where no clear authorities are present, this is different," notes Adrian van der Knaap, chief of the UN Joint Logistics Centre (UNJLC). "This was, however, not the case in the tsunami. There were no distribution plans in Indonesia prior to the disaster. Relief agencies, especially the UN agencies, were close partners and advisers to the local authorities and central government institutions on all matters concerning the execution of relief programmes and were directly involved."

Peter Walker, director of the Feinstein International Famine Center at Tufts University in the US, agrees that "all agencies and companies looking to assist should first seek to co-operate with the designated authority". Unfortunately in mega-disasters such as the tsunami, many government people and systems designed to respond are also the victims of the disaster and are partially paralysed, notes Mr Walker, who used to be a director of disaster and refugee policy at the International Federation of Red Cross and Red Crescent Societies. In such a situation, the UN is often called upon, through its Office for the Co-ordination of Humanitarian Assistance (OCHA). Volunteers, relief agencies and companies should



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look to OCHA for leadership, he says, as this would help to reduce much of the duplication and confusion that arises in last-mile logistics.

There also is an important role in major relief operations for the national Red Cross or Red Crescent societies of the affected countries, supported by the International Federation. But

‘Authority and organisation is always the prerogative and responsibility of the sovereign governments.’

—Adrian van der Knaap, chief of the UN Joint Logistics Centre

the UN has a marked advantage in that it has both the organisational ability and the international reach to marshal together supplies and aid from different sources globally. This co-ordinating role is one that a national government or a relief agency usually cannot play as effectively.

An official in Indonesia with a major US telecommunications company finds it conceivable that an independent body, devoid of standard government politics and ministerial control but represented by key government entities, non-government organisations (NGOs) and responding private-sector companies, could form the nucleus for a co-ordinating body. But he adds that such a single authority, at least in the case of Indonesia, “must be mandated and championed by the President's Office”.

Indeed, the magnitude of tsunami relief work in Aceh was amplified by politics. The Indonesian province was under civil emergency rule and virtually off-limits to outsiders. To reach the affected areas, relief agencies and international military personnel needed approval from the

Indonesian government. Getting that approval provided a crucial lesson in disaster response—bring international pressure to bear on governments to open up sensitive areas to relief work.

But once that entry has been made, it is critical to involve the local authorities and people in the relief activities. This will help in the understanding of local capacities, constraints and the operating environment, which are all essential to the success of emergency relief and longer-term recovery and reconstruction, says a paper released in Indonesia on May 16th 2005 by the United States Agency for International Development, better known as USAID. An independent agency that provides humanitarian assistance globally in support of US foreign-policy goals, USAID points out that working through local partners is vital even when aid comes from international agencies or other countries.

Practical side to access

Compared with Thailand, Indonesia saw a far greater level of devastation, with access roads blocked and entire villages washed out by the tidal waves. In an interview on January 9th 2005 with the *Suara Merdeka* newspaper, Mar'ie Muhammad, the secretary-general of the Indonesian Red Cross, said that more than 60% of the Acehese people found themselves homeless after the tsunami. Supplies to victims were “hopped” by air from Jakarta or other staging areas to Medan before movement was possible to Aceh and, ultimately, Banda Aceh and the final disaster sites.

Keeping airports open is crucial to disaster-response logistics. “This has the single biggest effect on moving supplies,” notes Neil Henderson, director of Asia-Pacific Network Planning with DHL in Singapore. Relief supplies are flown in from global donors, stored and disseminated further from airports, either by helicopter or land



vehicles. In the tsunami aid efforts in Sri Lanka, for example, Colombo airport was the focal point of the relief and recovery response. For several weeks after the disaster, airport workers were brought in from Dubai to help the emergency operations. Logistics companies, including DHL, chipped in to assist the humanitarian supply chain in Colombo.

The global logistics provider, with its local partner in Jakarta, later worked with the Indonesian military and the government to transport supplies in Medan and Banda Aceh. The government stressed that it had sufficient military manpower, and DHL provided only technical advice on the actual movement of material at the two locations. The company, through its Jakarta office, managed to secure more than 100 pallets and a forklift for the military to use, and provided advice on how to shift and store stock more efficiently.

Even so, bottlenecks arose. It is unlikely that

any airport in the world could have handled the surge of relief flights required by the tsunami; certainly the small airports at Medan and Banda Aceh were both overwhelmed. Neither airport has a real apron area for aircraft to park and unload goods, and this restricted the number of incoming flights. Moreover, the military aircraft hangars doubling as cargo warehouses were quickly full.

According to Mr van der Knaap, both hubs were congested during the first phase of the emergency mainly because all sorts of unsolicited shipments arrived from all over the world, blocking the passage of most-needed supplies. The UNJLC therefore advised the local authorities to impose a strict slot regime in Banda Aceh and Medan, and to direct all flights with goods that were unasked for and without a consignee with the capability to unload cargo and transport commodities, to Subang airbase in Malaysia where the WFP and

USAID lessons: local participation in disaster response

- **Local participation and ownership is critical.**

Survivors, community leaders and other local officials need to be part of the planning and implementation process from the outset. In the early days of the emergency response, much of the international relief effort did not involve Acehnese civil society organisations or local authorities.

Understanding local capacities, constraints and operating environments is critical to the success of emergency relief and longer-term recovery and reconstruction.

- **Recovery should begin concurrently with emergency relief.** USAID was able to take advantage of funds from the Office of US Foreign Disaster Assistance (OFDA) to support 40 small grants to promote the broad participation of Acehnese society in the rebuilding process, as well as to facilitate community recovery. These were

mostly for cash-for-work activities, which employed almost 25,000 people and put more than US\$2m in desperately needed cash into the local economy. (OFDA is the office within USAID responsible for providing non-food humanitarian assistance in response to international crises and disasters.)

- **Local partners are critical to success.** In places where access and security are problematic, it is even more critical to work through, and strengthen the capacity of, local partners. Even when funds are channelled through international partners, the latter should be required to co-operate with one or more local non-government organisations or civil society organisations.

Adapted from USAID/Indonesia's Tsunami response in Indonesia: Lessons learnt



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UNJLC had established a hub with ample parking and warehouse space. “From there we shuttled commodities in short-haul planes to Banda Aceh and Medan. Through that system we were able to prioritise cargo and stagger arrival at airports.

Keeping airports open is crucial to disaster-response logistics.

There was no ‘paperwork’ delay,” says Mr van der Knaap. “Unfortunately many companies and organisations pushed their cargo to Banda Aceh and Medan, thereby blocking essential supplies and congesting the airports (and later ports as well).”

By contrast, Thailand could handle last-mile response better as Phuket International Airport sat virtually undamaged in the middle of the

tsunami disaster zone. The airport is capable of handling everything up to wide-body aircraft, although it lacks the facilities for long-term parking and full logistics support. Since it caters primarily to tourists, the airport has been designed to move visitors in and out quickly.

The viability of Phuket airport was providential, because in the immediate aftermath of the tsunami, coastal roads were closed in many areas. This was particularly true when trying to navigate the way to Khao Lak, the hardest-hit area in Phang-nga province, or to Krabi, up to ten hours by road from Phuket. Using boats was possible and would have shortened travel time, but the fear of another tidal wave dictated other means of transportation. In relative short order, Thai police and military helicopters, deployed from neighbouring provinces or available locally, were on the scene. They were instrumental in moving medical personnel and providing immediate relief to the region.



Getting the right type of donations

Sorting out donations on arrival is no mean task, and is an important facet of last-mile disaster-logistics management. The final links of a relief supply chain face a problem that businesses and the military do not: dealing with unwanted and inappropriate supplies, such as warm clothing in a tropical climate, computers in locations where electricity connections have collapsed, or medicine that is past its expiry date. Weeding out superfluous and unsuitable supplies not only delays disaster response but also diverts valuable personnel from the more critical task at hand.

Cash or kind?

Disaster-response experts say the best way to avoid the confusion of unwanted supplies is for aid agencies and governments to convey—even insist—to individuals and corporate donors that they proffer cash instead of material. This has several advantages. For a start, it could ease congestion at various checkpoints in the host country as fewer supplies would come in. According to an officer with an international firm experienced in emergency response, Indonesian customs officials were hamstrung by improperly documented relief cargo. Stationing disaster-recovery facilitators or customs-clearance advisers at the ports would have expedited such shipments. Moreover, operators of airport terminals, whether big or small, are usually ill equipped to cope with disaster logistics of such magnitude. The arrival of differently labelled aid from different donors also can be overwhelming. Applying a colour coding system can help to categorise and identify supplies, but reducing the amount of material donations is better.

Companies sending aid supplies invariably do

not offer the costs for either transportation or customs clearance. In many instances, agencies have felt obliged to accept high-profile donations of goods in kind, only to end up spending more overall on transporting them than they would have if they had bought locally. “Many agencies have written policies of what they will and will not accept as goods in kind,” explains Mr Walker. “My sense is that agencies need to be stricter in applying these rules and companies need to be better informed about the downside of their good intentions in offering goods in kind.”

Adds Mr van der Knaap: “Unsolicited donations of goods often do more harm than good. They clog up the supply chain, making logistics extremely complex and expensive, and goods are often not of the right quality and specification. Cash is better.”

Using cash seems a simple solution, but it comes with a warning. Unscrupulous people can pretend to collect money for disaster victims only to pocket it themselves. In the January interview, Mr Muhammad complained that some people in Indonesia falsely claimed to be linked to the “Support for Aceh” fund, but used the money for their own purposes. He advised that donations should be made to known legal institutions or through the mass media.

‘Companies need to be better informed about the downside of their good intentions in offering goods in kind.’

—Peter Walker, director of the Feinstein International Famine Center at Tufts University in the US.



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Although the rule of thumb for agencies is to insist that donations be in cash, when material is accepted it should suit the need of the emergency. In Thailand's tsunami relief efforts, for example, although the government requested that money not be sent, it did set down clear requirements, such as water, desalination machines, tents, body bags and, a few days later, refrigeration cars to transport thousands of decaying bodies to cold storage rooms for later identification, according to Dr Chumsak Pruksapong, a police major-general and director-general of the Central Institute of Forensic Science within Thailand's Ministry of Justice. The assignment was given to PTT, the country's petroleum giant, which soon arranged for 80 such cars to be sent to the area.

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In the first few hours after the tidal waves struck, however, there had been little systematic processing and assessment of relief needs. It was only later in the day that the Thai government and corporations began to respond. Unilever used its distribution channels to gauge local needs and move goods quickly. The Anglo-Dutch company's salesforce was on the disaster scene almost immediately and was able to call for special shipments of foodstuffs (instant noodles) and

personal-care items. These were sent by road via Unilever's local transportation provider.

The Bangkok-based branch of Colgate-Palmolive of the US (see box) also organised relief supplies in co-operation with the King's Charities, which are under the patronage of the Thai royal family. Other companies also quickly offered aid, much of it garnered through the combined efforts of several chambers of commerce, which used their member lists to secure supplies. Clothing, blankets, money and over-the-counter medicine were collected, among other things. Aid flooded in from across the world from private, corporate and government donors.

In Indonesia, the country's air force was moving badly needed food, water and medicine to Medan and Banda Aceh provinces within 24 hours. However, according to an official from a Western telecommunications firm, things got bogged down at the last stop. No one seemed to be in charge of the logistics movement, and while food and medicine were obviously the first priorities, it seemed that no decisions were being made on secondary priorities such as communications and fuel by local or central government authorities. With communications virtually destroyed, it was impossible to advise what type of aid was needed, how much and where. Most vehicles in the area were either lost or damaged, and fuel was hard to come by.

Responsibilities became clearer in Medan when OCHA helped to set up a board of aircraft owners, NGOs and government donor representatives. Chaired by the Indonesian government, the board co-ordinated with the UNJLC on the goods needed and their priority. According to a Jakarta-based USAID official who was actively involved in the relief work in Indonesia, this system worked well,



Colgate-Palmolive helps out in Thailand

Colgate-Palmolive in Thailand is aligned with several charitable projects under the patronage of the Thai royal family. When the tsunami hit Phuket and other coastal regions, the US consumer-goods company worked with the King's Charities to organise relief efforts for the victims. This came in the form of money and supplies (including its own products such as soap, toothpaste and tooth-brushes), which were funnelled through established channels and moved quickly to the affected region by their transportation contractor or through the Thai Red Cross.

Colgate-Palmolive also harnessed a team of volunteers—senior executives from its Bangkok and New York offices—who visited the disaster area and offered support to an orphanage-school programme that includes the building of a brand new library.

Months after the disaster, Colgate-Palmolive continues to assist the tsunami victims through various reconstruction projects, including the rebuilding of a library at the King's School in Phangnga province and a free dental check-up campaign, which will extend beyond the disaster zone.

with firm lines of authority drawn up—for example, the local government's Civil Aviation Authority dealt with commercial flights bringing in supplies.

Stockpiling

In planning for the future, the USAID official said that stockpiling of such items in the region, possibly at Utapao Air Base in Thailand, would be of great assistance. It is not known whether this suggestion has been formally proposed to the Thai government.

Utapao played a unique and central role in the resupply operation for the affected areas. According to a Bangkok-based US embassy official, the Thai government authorised unprecedented access and use of Utapao to support the disaster relief. US military personnel were allowed visa-free access to the facility, which was used as a staging

area for resupply to all affected areas in the Indian Ocean.

According to USAID, US military personnel delivered almost 4.3m kg of relief supplies to the affected countries, much of this staged from Utapao Air Base. This type of co-operative spirit between governments helped to eliminate unnecessary bureaucracy and allowed for swift, smooth and unencumbered response to local decision-makers.

But the USAID official criticises the decision to source needed supplies, such as tents, blankets and high-protein biscuits, from existing aid stockpiles in the Middle East and Europe. He believes that local purchase of such goods would have been timelier.

Mr Walker agrees: "In these days of rapid on-demand supply, stockpiling makes little sense for most items. Relief agencies often have agreements with supply companies to allow them to rapidly purchase goods like tents, plastic sheeting and water piping. Local purchase is always the preferred option. It is usually quicker, cheaper and helps to bolster the local economy which has just taken a great hit in the disaster."

Buying some items locally is not always possible, as stocks may not be sufficient or easily transportable.



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Buying some items locally is not always possible, as stocks may not be sufficient or easily transportable, especially in an emergency of the tsunami's magnitude. This is particularly the case for things like tarpaulin and tents. Several disaster-response officials mentioned that providing second-hand clothing was a waste of time and resources, and supplies were left piled up in warehouses months after the event.



Distributing supplies and collecting people

Some problems unfortunately crop up even during times of distress and danger. In Thailand, incidents were reported of aid deliveries being halted by local village chiefs who acted almost like village bullies. They sifted through the supplies and took what they wanted before allowing them through. Relief workers were intimidated to the point that they immediately complied with the local officials' demands. In Indonesia, too, theft was a significant problem, although control did improve with time.

There were also some complaints that relief supplies were sent to Singapore or Hong Kong, but this seemed to be more a matter of overload than inefficiency. According to an officer with an international firm experienced in responding to emergencies, the sheer volume of supplies created the need for a detour. Backing up the logistics chain, the main culprit seemed to be inappropriate donations, particularly clothing. In Phang-nga province in January, a Unilever official saw piles of clothing on the side of the road, all abandoned because they were not suited for the tropical environment.

Indonesian authorities used a two-tier system to deal with the transportation of the homeless, the wounded and the dead. Within the Ministry of Social Welfare, the overall agency, Bakornas, is responsible for disaster management. At the local level, a unit called Sakorlak acted as the response element of the system. A military officer was put in charge of the tsunami response and positioned in the vice-president's office. Such mixing of civilian and military authority led to conflicting and unclear lines of authority and did not work as well as planned. However, the Indonesian government

is aware of these limitations and is trying to improve the system.

In Thailand, according to Dr Chumsak, once the initial shock of the tsunami had passed, the Ministry of Health's "referral system" kicked into gear. Representatives from Bangkok Hospital and Bumrungrad Hospital were deployed to Phuket to collect injured patients, many of them foreigners. The Thai Air Force was engaged to conduct mercy flights to move the more seriously injured to Bangkok, thus relieving some of the burden on the badly stretched local medical staff and facilities.

According to Dr Chumsak, existing charitable organisations, most notably Por Tek Teung, and other NGOs moved right in to collect the dead. The overwhelming number of corpses, especially in the Khao Lak area, was beyond anything that these organisations had ever seen. Three temples were converted into temporary morgues. As foreign forensics teams—32 in all—joined the process, the Australians took the lead in complying with the Disaster Victim Identification (DVI) programme, in which 17 points of identification were listed for each corpse.

Dr Chumsak says that the DVI process was not followed initially because the Thai medical authorities were unfamiliar with it and were overwhelmed by the details. To best proceed with forensic examination and identification of the bodies, the Australians suggested setting up a central "morgue" at Phuket's airport. The Ministry of the Interior, which reportedly believed that such a mass movement of bodies would only add to the confusion, rejected this idea. It is interesting to note that only one of the 32 teams bothered to contact the Ministry of Justice for permission to provide forensics support.



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Such inadequate communication between national and international efforts perhaps contributed to a serious misperception that grew from the Thai authorities' decision to separate Caucasian from non-Caucasian victims. Dr Chumsak explains that the differentiation was meant to assist in identification, but to certain Asian countries it appeared that Western victims were receiving more favourable treatment.

The lessons learnt: better communication would have helped co-ordination of forensics support for victim identification; racial sensitivities are acute even in times of disaster.



Private-sector involvement

It would seem natural for companies to use their supply-chain management expertise to work with non-profit agencies in disaster response. As corporate social responsibility grows in importance, companies are forming more partnerships with aid agencies. One such initiative is the World Economic Forum's Disaster Resource Network (DRN), a Swiss non-profit, private organisation that serves as a point of contact for companies that want to support disaster management efforts in developing countries.

What logistics providers can do

Join airport emergency teams. During the tsunami, airport emergency teams under DRN worked in Sri Lanka and Indonesia to co-ordinate aid distribution at the main airports. Corporate volunteers included logistics providers such as DHL, Aramex, Dnata and TNT Logistics, which directed the unloading of aircraft, sorting and temporary storage of supplies, and the onward transport of those supplies to humanitarian agencies.

In the year prior to the tsunami, the DRN had led a group of transportation and logistics firms to establish a team of air cargo volunteer professionals for emergency deployment. The team was deployed in Colombo on December 28th 2004 at the request of the UNJLC. A second team was deployed a few days later to ease congestion at the Banda Aceh airport.

Co-operate with aid agencies. Another example of private sector and aid agency co-operation came six months later. Mercy Corps distributed 500 free radios to humanitarian aid workers and survivors in remote locations around Banda Aceh, to help them to access broadcast updates about public health concerns, reconstruction activities

and aid programmes in the area. The radios, donated by Freeplay Foundation, another aid agency, were warehoused in Johannesburg, South Africa, and were transported for free by Beijing-based China Ocean Shipping Company, popularly known as COSCO. To be successful, the operation, co-ordinated by DRN, required the co-operation of executives in different organisations and companies on three different continents.

For its part, TNT has forged a partnership with the UN World Food Programme (WFP) for the fast delivery of aid around the world, and to upgrade WFP's infrastructure in terms of storage locations and better logistics links, so that the organisation can better respond to food and support needs. In July last year, DHL and the International Federation of the Red Cross and Red Crescent Societies signed an agreement under which the company would conduct research and develop logistics support to cover disaster relief and preparedness, among other projects.

To ensure the sustainability of relief efforts, the International Federation of Red Cross and Red Crescent societies made the following recommendations to donors, including logistics companies:

- **Link relief and development programming.** The present organisational structure and funding mechanisms of many donor institutions reflect the view of relief and development as two divorced activities. Donor institutions should seek ways to promote dialogue between their relief and development divisions, and allow a degree of development funding into relief programmes.
- **Measure the quality of relief programmes.** Measuring the quality of developmental relief programmes requires a different set of



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parameters and associated skills from evaluating simple relief delivery. Donor institutions should explore new ways of evaluating and reporting in relation to relief programmes, which reflect the attributes of a developmental approach.

- **Support local structures.** Working through, enhancing and supporting local structures is central to the developmental approach to relief. Donor institutions should recognise and support the legitimacy of funding local structure strengthening as part of disaster preparedness and relief programmes.
- **Support review activities.** Promoting new ways of working requires an enhanced learning process. Donor institutions should support both national and international relief programme reviews with a view towards promoting developmental relief.

Why the scepticism?

Some aid officials are sceptical about corporate involvement in humanitarian aid. The Jakarta-based officer from USAID points out that companies would need to make a corporate commitment to not only fund but also to provide manpower and training in humanitarian disaster-response management, and to support a disaster

virtually anywhere. Given the economic requirements, “stand-by arrangements” in every situation would be difficult to demand from companies. He says a viable alternative perhaps could be a UN body established with funding, manpower and training comparable with the existing skill sets offered by these companies. To enhance disaster response, he recommends the Pan American Health Organisation’s Supply Management System, a two-decades-old programme that countries in the region have all adopted and been trained to use. Such simplicity and wide acceptance allows for easier transition to an emergency supply situation, he concludes.

Companies themselves may have to banish a few misperceptions when providing humanitarian aid. For example, aid agencies and governments often expect commercial organisations to charge for their services. Private-sector relief providers therefore should make it clear at the start that all assistance provided will be free, and that they are in a disaster area for humanitarian reasons alone. Companies may also have to deal with suspicion from some aid agencies of corporate motives in giving aid, perhaps because the agencies feel a little threatened by the presence of companies in disaster-relief work, which they see as their turf.

Unilever steps forward

A tie-up with the Thai Air Force enabled Unilever to move relief supplies quickly to affected areas in Thailand’s Phang-nga province. The air force was also helpful in reconstruction efforts there, taking on the task of building homes, while Unilever piggy-backed on this operation to provide supplies—food and personal-care products from its existing stocks for each home being built. Delivering relief packs to families reported by its on-the-ground sales and support teams, the Anglo-Dutch

company admitted to some difficulties in determining exact numbers. It would plan for, say, 500 families, but find that the constant state of flux among residents could mean there were now 600 families in a specific locale. Unilever recommends constant monitoring of a relief and reconstruction situation to determine what is needed and when. A Unilever officer suggested that the government establish a combined logistics plan to cover air, rail and road deliveries.



After the disaster

To sound the alert on another tsunami, the Thai government set up a National Disaster Warning Centre in May. Under its aegis, a multi-station siren system will be established in the southern provinces facing the Andaman Sea to warn local residents of a coming tsunami. While intended to be broader in its scope, the warning centre merely addresses the threat and suggests places to evacuate. It is unclear whether shelters have been built to accommodate any such evacuation of large numbers of people.

Warning towers. The building of warning towers seemed to hit a snag soon after. The *Thai Rath* newspaper on July 6th 2005 quoted Smith Thammasaroj, chairman of the National Disaster Warning Centre, as saying that construction had been delayed on 59 of the 62 towers because of the government's budget process. He added that three towers in Patong Beach in Phuket province could finish early because they were being built with donations. However, their alarms were not activated during an earthquake on July 5th, apparently because the tremor only recorded 6.8 on the Richter scale, whereas the alarms are programmed to set off for a minimum 7.5 reading, with the centre's approval.

Evacuation centres. The centres seem to be progressing better, perhaps owing to corporate interest. Unilever is helping to rebuild several schools in Thailand's devastated Phang-nga province and is also redeveloping an auditorium that can serve as an emergency shelter.

Wider co-operation. Alongside Thailand's initiative to set up a disaster warning system, the US in May organised an inter-agency meeting in Bangkok to discuss the development of a wider Indian Ocean Tsunami Warning System.

Co-operation and assistance from such organisations as the UN, the US National Oceanic and Atmospheric Administration and the National Weather Service could lead to a multi-nation warning system. The Unilever officer recommends bringing the Japanese into the discussion because of the country's long experience in dealing with tsunamis. The UN Educational, Scientific and Cultural Organisation (UNESCO) is working to bring a warning system to the Indian Ocean.

Role of insurance

In the reconstruction effort, it appears unlikely that new buildings in either Thailand or Indonesia could be tsunami-proof. Building standards in private homes have been virtually ignored in most parts of both countries. For those whose homes were destroyed, there is little relief. The destruction to property affected the poor the most, from fishermen to simple villagers, none of whom is a likely candidate for insurance. So, while hotels and larger establishments may have had insurance, and have been quicker to rebuild, thousands of homes and fishing boats destroyed could only be replaced by donations.

How interested would the insurance industry be in coming to the aid of those who cannot afford to pay for its products? In any event, says the Unilever representative, the involvement of the insurance industry in disaster must be transparent, with benefits carefully explained to all before the next disaster. Insurance then would be seen as a preventative measure but only to those who could afford it. While some sort of advisory role for the insurance industry should be considered, using affordability as a criterion, in the tsunami the percentage of victims benefiting from insurance would have been minuscule indeed.



Conclusion

Although humanitarian supply-chain management has made strides in recent years, it still has a long road ahead, and must all the while avoid the potholes of politics, inadequate stocks and personnel, and lack of preparedness. Logistics is still considered of secondary importance to fund-raising and relief work in disaster response. Moreover, donations are spent almost entirely on immediate needs, with little left over for research and training between disasters.

Affected governments, particularly of developing countries, are themselves slow in initiating disaster preparedness. After the tsunami, there were calls for the various governments to develop a disaster-response plan to guard against another such tragedy. But an adviser to the Thai senate stated realistically that there was “too much on their plates” for the senators to deal with an expansive disaster-response plan. Perhaps the best summary of the situation in Thailand came from a Thai official in the public health sector. When asked about what proactive measures had been taken by the Thai and other Asian governments to deal with a disaster, he replied bluntly, “Almost none.”

Yet planning and preparedness are critical. The UN needs to be given an overall mandate to

co-ordinate companies, relief agencies, militaries and national governments in order to put a proper relief-response plan in place. Although agencies and armies may be good on the ground to help people, they usually lack expertise in humanitarian supply-chain management, which calls for a great amount of logistics squeezed into a short time. As they are familiar with commercial supply-chain management, companies can leverage their core competencies to develop sustainable solutions to humanitarian supply-chain management, even though this is much harder than commercial logistics.

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Key recommendations

These recommendations are based on the content of our interviews for this briefing paper, suggestions put forward in a paper by the International Federation of Red Cross and Red Crescent Societies, and lessons on disaster response by the University of Wisconsin-Disaster Management Center:

Gaining access

- **First seek to co-operate with the government of the affected country.** It is part of the sovereign responsibility of a state to organise and direct disaster response on its territory. All agencies and companies looking to assist should first seek to co-operate with the designated authority.
- **Look to the UN for leadership.** When the government and its systems are unable to respond swiftly because they are themselves victims of a disaster, volunteers, relief agencies and companies should look for leadership to the UN, through OCHA, to reduce much of the duplication and chaos in last-mile logistics. The UN has both the organisational ability and the international reach to co-ordinate supplies and aid from different sources globally. International pressure should be brought to bear on governments to open up sensitive areas to aid work.
- **Local participation and ownership is critical.** Survivors, community leaders and other local officials need to be part of the planning and implementation process from the outset. In places where access and security are problematic, it is critical to work through, and

strengthen, local partners. This helps in understanding local capacities and constraints, which is vital to the success of emergency relief and longer-term recovery and reconstruction.

- **Keep airports open.** This is crucial to disaster-response logistics. Airports are the focal points for supplies that are flown in from donors. These goods can be warehoused at the airport before being sifted, packaged and disseminated. They can be transported to the affected areas via helicopters or land vehicles.
- **Recovery work** should begin concurrently with emergency relief.

Getting the right type of donations

- **Insist on cash, or appropriate donations.** Relief agencies should insist that donations are in cash, but when material is accepted it should suit the need of the emergency. Valuable resources and time are lost in unloading and sifting through unwanted, inappropriate supplies.
- **Source locally, if possible.** Stockpiling may not be the best solution for quick access to relief supplies. As far as possible, items such as tents, blankets and plastic sheeting should be sourced locally. This is usually quicker and cheaper, and helps to bolster the local economy affected by the disaster. Relief agencies usually have arrangements with supply companies to permit quick purchases of such supplies.



Disaster-response management: going the last mile

Thailand and Indonesia

- Having a customs expert at hand to advise on clearance of incoming relief supplies will help to improve logistics.

Distributing supplies and collecting people

- **Be aware of the threat of intimidation from local officials.** Distress and danger does not stop greed and theft. Local village chiefs can sometimes forcefully commandeer aid supplies for their own use, threatening relief workers in the process. Theft of supplies can also be a significant problem, as was the case in Indonesia before control was improved.
- **Recognise the pitfalls of oversupply.** The sheer volume of relief supplies created a need for a detour to Singapore or Hong Kong during the tsunami relief work. Inappropriate donations, mainly clothing, were the main obstacle in the smooth running of the logistics supply chain. As Mr van der Knaap sees it, donations of commodities are acceptable only when they are from a well-established consignee, with the capacity to handle and distribute supplies (with the consent of the authorities). The bottomline: donations of material by corporations and individuals should be strongly discouraged.
- **Keep lines of authority clear.** Indonesia's mixing of civilian and military authorities to deal with the transportation of the homeless, the wounded and the dead, led to conflicting and unclear lines of authority and did not work as well as planned. However, the authorities recognised the limitations of this approach and later sought to clarify the chain of command.

- **Be alert to racial sensitivities and the need for good communication.** This is essential among the various agencies involved in forensics support for victim identification. Inadequate communication between national and international efforts in Phuket is likely to have given rise to a serious misperception that Western victims were receiving more favourable treatment.

Private-sector involvement / What logistics providers can do

- **Establish early on that all assistance is given free.** Aid agencies and governments often expect commercial organisations to charge for their services. Companies therefore should make it crystal clear that all assistance provided will be free, and that they are in a disaster area for a humanitarian job and nothing more. Companies may also have to understand that agencies might feel a little threatened by their presence in disaster-relief work, which the agencies see as their domain.
- **Get in early, with the right papers.** Companies providing humanitarian services should move into the disaster area early, have their commercial credentials ready, and use their network of contacts to access people in authority to obtain permission to swing promptly into action.
- **Think long-term.** To be truly effective, companies need to plan ahead and build relations with senior government officials, so that when assistance is required national authorities already trust the companies' commercial credentials, and they can move swiftly into immediate relief work.



- **Determine resources required and delivery operations.** The community-relations divisions of companies, along with relief agencies, need to determine the emergency resources needed, identify the potential sources of relief supplies, and decide the best place for delivery. Supply-chain management software can be used to estimate the extent of damage to life and property. Donors can then pinpoint the nearest airport and the nearest warehouse space.
- **Maintain updated database of suppliers.** Since supply-chain management software can be used in disaster situations, companies must regularly update their databases of suppliers of such disaster-relief items as tents, bottled water and plastic sheeting. However, it is important not to focus solely on physical and infrastructure losses, but also to understand the local ability to use these resources in a way that promotes self-reliance.
- **Ensure corporate commitment to disaster response.** Corporate commitment to providing effective disaster response is best determined by long-term initiatives. This can include setting up a community-relations division in the company that works actively with non-profit agencies to offer expertise and supplies on demand, or to conduct research and give logistics support.
- **Volunteer for airport emergency teams.** Logistics providers can volunteer for airport emergency teams, such as those set up by the World Economic Forum's Disaster Resource Network. Emergency teams worked in Sri Lanka and Indonesia to co-ordinate aid distribution at the main airports. They directed the unloading of aircraft, sorting and temporary storage of supplies, and the onward transport of those supplies to humanitarian agencies.
- **Forge partnerships with aid agencies.** Logistics companies can also forge partnerships with aid agencies. For example, TNT has tied up with the WFP to upgrade the agency's infrastructure in terms of storage locations and logistics links, so that the organisation can respond better to food and support needs. DHL has teamed up with the International Federation of the Red Cross and Red Crescent Societies to research and develop logistics support to cover disaster relief and preparedness, among other projects.



Appendix

Guidelines for relief agencies

These recommendations were originally made by a private voluntary relief agency based on an evaluation of its performance in a major relief operation.

- Attempt to define the financial parameters for a programme as soon as possible, and in any case not later than the time that needs have been assessed. This facilitates rational and cost-effective programme planning.
- Ensure that aid recipients are involved in continuing evaluation of the relief effort. Recipient participation in evaluation can often provide opportunities and the stimulus for better community organisation. A relief agency should take steps to facilitate a more ready exchange of ideas, information and experience between the aid organisations, which commonly assist in disaster situations abroad.
- Take steps to ensure that all field staff is adequately oriented in the basic principles of disaster preparedness and emergency programme planning.
- Support representatives, particularly those in disaster-response situations, with legal and organisational credentials that enable them to establish local bank accounts and conduct business on behalf of their agency. Local legal advice should be obtained regarding business principles in the particular country.
- Prior to a disaster, establish a definite plan that systematically develops working relationships with local ecumenical agencies, church groups and government contacts in disaster-prone countries. Information regarding these contacts should be compiled and retained both at

the field level and at headquarters with periodic updates.

- When planning a disaster-response relief effort, consider channelling funds through individual, grassroots and local groups as well as large counterpart church groups. In other words, in a situation where a large counterpart does not exist, consider channelling funds directly to projects and through local national intermediaries.
- To facilitate a relief effort, carefully consider the possibility of immediate establishment of an independent relief agency office. This is recommended even when a strong local counterpart organisation already exists. The independence would facilitate objective assessment and better quality of assistance to the counterpart organisation.
- The views of a variety of both grassroots local leaders and ordinary intended beneficiaries should be carefully incorporated in the relief agency planning process used for a disaster response, particularly in the area of actual distribution and use of resources. When community development objectives are included in a project, the implementation plan should include indicators to show whether and how success is being achieved.
- Pay careful attention to the recruitment and management of volunteers used in a disaster response. Before embarking on the project, orient volunteers to the history of the country, its culture, important religious beliefs, the disaster and previous activities of the relief agency. Volunteers should be used

only in situations that do not hinder the relief programme effectiveness and when available members of the local community cannot carry out the tasks they perform.

- Ensure that evaluations of past relief operations are made available at the earliest stage to agency officials concerned in the planning and implementation of the disaster-response strategy. If it has no pre-disaster in-country activity, the likelihood of an agency's mounting a successful post-disaster operation is greatly reduced. Local survivors, the military and the national government generally best handle immediate relief operations.
- False assumptions abound, one of the most common being the assumed need to bring in vast quantities of food, and another to mount massive inoculation programmes against cholera et al. These have been shown to be highly expensive and largely unnecessary.
- Relief officials are vulnerable to accepting unreal views of local problems. Local politicians and officials, to promote their own vested interests, will project all their problems as being induced by the disaster. However, it will gradually emerge that most post-disaster problems were in existence prior to the disaster.

Adapted from a disaster-response lesson from the University of Wisconsin-Disaster Management Center. The extract was itself adapted from *Self-Evaluation of the Church World Service Response to the Earthquake, 4 February 1976, Guatemala, Central America, March 14-16, 1978.*

