

“Strategizing humanitarian logistics: the challenge of collective action”

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SECTION 4. Practitioner's corner

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Strategizing humanitarian logistics: the challenge of collective action

Abstract

The management of logistical operations was for many years the weak link in the relief chain. In a situation of humanitarian crisis, raising funds was the matter the utmost urgency, which included resorting to the power of show business. Knowing whether the collected funds would be efficiently spent, particularly in the distribution of help, was not really a priority. Since then, things have changed, as the part now played by logisticians within NGOs shows. Unfortunately, research on humanitarian logistics often tends to favor a technical approach in matters of operational management. Although this outlook remains interesting for improving the use of scarce logistical resources, it must be associated with more organizational approaches looking for the best way of coordinating humanitarian supply chains. Using the case study of Pisco earthquake in Peru (August 2007), the article chooses this angle of examination in reference to the concept of collective strategy.

Keywords: collective strategy, humanitarian logistics, relief chain, supply chain.

JEL Classification: L31, M10, M21.

Introduction

December 26, 2004, a little after midnight an uncommonly violent underwater earthquake, with a magnitude over 9.0 on the Richter scale took place off Sumatra. This earthquake produced a tsunami that is remembered all over the world. It affected Indonesia, the southern coasts of India and Sri Lanka, the South of Thailand and the tourist island of Phuket. The human loss toll was catastrophic. Without any certainty even today, the count is of more than 310.000 fatalities. The coast of Sumatra was swept by lethal 30-feet high waves. On the other side of the Indian Ocean, Somalia and the Seychelles were also affected by 12-feet high waves eight hours after the tsunami reached Sumatra. The news often remind us that our planet Earth undergoes regular upheavals that do not spare civilian populations who in a few minutes lose the fruits of a life of labor, or worse, life itself. Helping the survivors becomes an absolute priority and requires the implementation of highly complex logistical operations.

Humanitarian logistics in emergency relief is the managing humanitarian emergency relief supplies from source to the beneficiaries efficiently and effectively. The main task of a logistics system is to deliver the appropriate supplies, in good condition, in the quantities required, and at the places and time they are needed. Although mostly concerned with the movement of goods and equipment, relief logistics also encompasses the relocation of disaster-affected people, transfer of casualties, and the movement of relief workers. This article wishes to examine the issue of humanitarian logistics within the strategic model of Astley and Fombrun (1983) stressing the necessary coordination between actors. Following a long period of disinterest, the subject is now being studied by the academic community, and there

has been a growing realization of the indispensability of coordinated response to emergencies.

Humanitarian organizations have acquired an exemplary know-how with their numerous past experiences, but a number of stakeholders pose a problem of coordination, considering that the different actors, often widely different in nature, size and specialization, are also compartmentalized in their operating modes (Chandès and Paché, 2006). This coordination is a direct condition for successful aid. In order to improve the monitoring of humanitarian aid, actors will have to learn how to co-elaborate and co-manage relief chains. In other words, an efficient collective strategy will be able to improve the performance of humanitarian supply chains, while a lack of it has dramatic consequences for the stricken populations. From this point of view, our purpose is: (1) to better define the logistical coordination difficulties throughout the complexity of humanitarian operations; and (2) to suggest paths for thought on the means to improve logistical coordination. A case study, conducted on the Pisco earthquake in Peru (August 2007), complements the conceptual analysis and stresses the major stakes.

1. An organizational perspective

For the last fifteen years, and with significant acceleration recently, humanitarian logistics has aroused the interest of researchers in SCM (Kovacs and Spens, 2007, 2009; Tovia, 2007; Jahre and Heigh, 2008; Aslanzadeh et al., 2009; Pujawan et al., 2009; Tomasini and Van Wassenhove, 2009). Some of them consider that SCM is a novel field of application of methods and management tools developed within business organizations. Of course, it is undeniable that emergencies generated by natural or man-made disasters are unique: lives are at stake, the issue is not to bring a quality logistical service to consumers at the lowest cost. The ephemeral dimension of

humanitarian aid, the central feature of the most rigorous previous preparation of teams made up of individuals with complementary skills. It is, therefore, not surprising that the academic literature on SCM now analyzes the theme in an increasing number of papers and special issues of journals. The main challenge is building an efficient relief support network, with a systemic placement of communication, personnel and facilities to achieve the objectives of humanitarian intervention (Cotton, 2007).

Among the diversity of works dedicated to humanitarian logistics, we should note the place occupied by research focusing on transportation optimization issues, perhaps to the detriment of a wider reflection on the monitoring of all relief chains. These works tend to modelize the use of transport resources in disaster relief, by referring, for example, to models imported from the military context (Pettit and Beresford, 2005; Weeks, 2007; Goldsman, 2009). Although transport management remains a major concern in the literature on humanitarian logistics, it must be admitted that it is no longer the only one. Wishing to keep themselves at a distance from approaches in operational research, some researchers have raised the question of an improved management of the relief chain with an efficient pre-positioning of logistical resources which will be useful, should a natural or man-made disaster occur.

Rather than waiting passively for a situation of crisis to occur somewhere in the world to launch humanitarian operations, it is better to show proactivity by mobilizing supplies or other material and non-material resources in anticipation, including by using well-known SCM techniques, such as the decoupling point (Oloruntoba and Gray, 2006). The more rigorous the anticipation is, the easier it will be to mobilize the different humanitarian supply chain members quickly and to better and quickly organize their resources and competences. It is not surprising that Kovacs and Tatham (2009), in their recent article, investigating the ways of improving relief chain responsiveness, stress the pre-positioning of items in regional hubs, and also the necessary interoperability between the various humanitarian aid actors. The authors go as far as stating that the key competence in humanitarian logistics will first rely on the management of interfaces between humanitarian stakeholders.

It would be tempting to think that each natural or man-made disaster is unique, and, therefore, calls for a customized response from which no general lesson will be learned for future events. Of course, the tsunami that devastated south-eastern Asia in December 2004 had nothing in common, in its characteristics and effects, with the earthquake in Haiti in January 2010, and even less with the humanitarian tragedy in Dârfûr. Beyond the objective differences between

these situations, it is essential to determine their similarities so as to accelerate the mobilization of resources and actors. In a highly uncertain world, where the shortest possible timing will probably save thousands of victims, the issue is not only a matter of money, but also and above all a matter of human life. Saving lives will not be possible without developing a knowledge management approach, in other words "learning from previous disasters by capturing, codifying and transferring knowledge about logistics operations" (Van Wassenhove, 2006, p. 482).

There is a high risk that, trying to learn from all natural and man-made disasters, then trying to draw universal rules of action from them, humanitarian supply chains will become fossilized by making do by automatically (and unsuitably) reproducing the same logistical patterns for all crises. The lack of contextualization is stressed by a logistician from Médecins Sans Frontières, who protests against an excessive standardization of supply chain procedures (Maïola, 2007). Citing the example of the Kashmir earthquake in October 2005, she points out the malfunctions that Médecins Sans Frontières Belgium experienced due to their poor knowledge of cold climates and areas. Only standard equipment, particularly clothes, was available, but this was completely unsuited to the situation. Orders had to be urgently programmed, thus, lengthening delivery with dramatic effects for the stricken populations. The author concludes that the operational environment of humanitarian aid is constantly changing and makes it impossible to achieve a complete standardization of supply chain procedures.

This position seems extreme, as it would also be extreme in the context of conventional supply chains. The most suitable approach is in fact to know how to standardize those procedures whose constant characteristics have been identified in each natural or man-made disaster, while maintaining complete freedom to adapt some elements of the relief chain depending on the geographical context, the infrastructure quality, the geopolitical situation, the extent of the stricken populations, etc. In other words, an optimal *decoupling point* between standardization and adaptation should be defined to postpone the distribution of supplies and other resources as late as possible by taking into account the specific features of the humanitarian aid that needs to be deployed at a given time. As we already noted, this approach has held the attention of numerous researchers, who consider it essential to achieve an agile humanitarian supply chain (Oloruntoba and Gray, 2006; Schulz, 2009; Taylor and Pettit, 2009). The five recommendations taken from Weeks's (2007) experience in humanitarian aid confirm that the first essential is to identify universal rules of action at different organizational and informational levels, which does not exclude an adaptation to local realities later on (see Table 1).

Table 1. Five recommendations for improving humanitarian aid (Adapted from Weeks [2007])

Create a central collection point for information	The large volume of information, coupled with marginal communications channels, requires a collection point for filtering and dissemination of information
Use an organizational structure with a common cognitive map	Ephemeral organizations should be familiar in structure to improve efficiency and sense-making
Cover all the bases	The general staff structure provides a starting point for organizations to use/to consider the requisite skills required in a disaster situation
Eliminate barriers to action	Normal approval processes may need to be bypassed in order to ensure effectiveness, but not necessarily efficiency, in a disaster environment
Establish an effective priority system	Everything has a tendency to be categorized as a top priority in an emergency; leaders must be hands-on to ensure the proper priorities are maintained

2. A collective strategy perspective

The review of the literature dedicated to humanitarian logistics highlights an important point: action in the field is essentially collective. Action will be all the more efficient if the quality of mutual adjustments between stakeholders reaches a high level, otherwise malfunctions in terms of availability of supplies and other resources may have dramatic impacts on stricken populations (Zeballos, 2008). In a context of natural or man-made disaster, as well as in any conventional eco-system, each organization is forced to adapt quickly to a more or less unstable environment, in function of its resources and capacities. The environment dictates what is operationally feasible or not: of course, in disasters or emergency environment, humanitarian logistics systems must be effectively coordinated to help people, as a group of experts has concluded in August 2001 (see Exhibit 1).

Humanitarian logistics systems must be improved

Over 50 logistics experts from international organizations, which make up a roll call of those most frequently in the forefront in disaster response came together in August 2001 for the first time at the World Health Organization (WHO) in Geneva to discuss logistics management systems for humanitarian assistance in disaster situations. Chief among their conclusions are that logistics systems must be better coordinated and clearly transparent if humanitarian supplies are to bring the most effective help to people in crisis: "There is an urgent need for better coordination of humanitarian supply logistics in disasters such as earthquakes and hurricanes. To do this, a common approach to exchange logistical information and an internationally standardized classification of supplies is vital", said the participants. The workshop, a joint initiative of the World Health Organization, the Pan American Health Organization (PAHO), World Food Program (WFP) and the Office for the Coordination of Humanitarian Affairs (OCHA), was held to improve coordination between the agencies, governmental

and non-governmental organizations (NGOs) and donors with respect to the logistics of international relief assistance in disaster situations. The participants agreed to use the experience and philosophy of SUMA, a system developed by PAHO and the Foundation for the Development of a Supply Management System (FUNDESUMA), as the base for development of this common platform. SUMA software has been used successfully in the last ten years mainly in the Americas, during and after large disasters such as Hurricane Mitch in 1998 and the El Salvador earthquakes in January 2001. Frequently, countries that experience a disaster are flooded with tons of supplies, putting a great burden on already stretched relief staff who then must categorize and dispose of the material. Systems like SUMA use simple software on laptop computers to track and sort incoming donations and their destinations, allowing disaster managers to see what they have and send it where it is needed. According to Dr Alessandro Loretto, of WHO Headquarters Emergency and Humanitarian Action department, a key objective of the meeting is to put crucial "substance into coordination for emergencies". "By providing people with a common logistic system, you decrease the difference between the beneficiaries – both national authorities and local communities and authorities – and the providers, and offer empowerment which is the only true form of capacity building", Dr Loretto said.

Source: <http://www.who.int/>. Access date: October 27, 2009.

If one adopts this perspective, a strategic action should be able to match the capacities enjoyed by the organization with the capacities required by the environment (Altay et al., 2009). In other words, NGOs need to make a strategic decision to be *tactically flexible*. In many cases, we have to admit that organizations are unable to play a proactive part when confronted with the environment, often for lack of financial and managerial resources, and even a lack of recognition by the different stakeholders. In the humanitarian world, Schulz writes (2009, p. 3), "logistics was long considered a back office function – a

support service for the programs and front line activities. The consequence was often a lack of adequate funding for investments in infrastructure and strategic disaster preparedness. Moreover, logisticians were often not involved in the early decision process, or included in the assessment teams on-site”.

The need for organizational capacities and the lack of resources to address the difficulties met with by the organizations, for example, to stabilize their procurement, reduce competition or respond to a business opportunity, are at the origin of the formulation of collective strategies in Astley and Fombrun's (1983) sense. For these authors, the turbulence and complexity of the environment strengthen this absolute requirement of collective action, and find an obvious echo in a humanitarian context. In general, the environment of organizations increases in complexity because its elements are strongly interconnected and interdependent, and because they act in an individual and contradictory manner. To protect themselves from external threats and perpetuate their existence by achieving a high degree of performance, organizations must develop a collective construction of their environment, a kind of *negotiated environment* (Cyert and March, 1963). Therein, collective strategies appear to be an efficient means of managing necessary interdependences between organizations; they have the power of limiting the turbulences of the environment by making the actions of the members of a community coherent (Bresser and Harl, 1986; Bresser, 1988).

In their seminal contribution, Astley and Fombrun (1983) present collective strategies as voluntarist strategies as far as they tend to prove that the most dynamic organizations are capable of collectively controlling their destiny. Collective strategies, based on the sharing of resources, also have an economic purpose as they help limiting the impact of the turbulences of the environment generated by the many independent – and sometimes contradictory – actions of each organization. This is a crucial issue in humanitarian action where, as we already mentioned, the lack of coordination between NGOs, or between NGOs and the private sector, can lead to a less than fully efficient management of supply chains operations. Astley and Fombrun (1983) identified four collective strategies, by making a double distinction depending on the possible types of partnership: firstly, (1) *commensalistic* partnerships (between competitive organizations within a horizontal relation) and (2) *symbiotic* partnerships (between complementary organizations within a vertical relation); secondly, (3) *direct* partnerships linking organizations by agreements defining benefits for each partner, and (4) *indirect*, formal or informal partnerships that do not specify the economic benefits for partners.

The emergence of a “strategic center” (or “hub”) is a requisite for the development of a collective strategic vision, shared by the whole community, whether private firms and/or organizations are involved in the management of a humanitarian supply chain. While preserving the decisional autonomy required for the development of each organization, the strategic center plays a significant part in the spreading of this strategic vision, the purpose of which is to supply guidelines for defining operational action plans. According to Livet and Thévenot (1994: 139), collective action appears only when it is possible to note “a certain order [...] in the actions of several persons”. The coordination of collective actions refers to the coherence, or rather the cohesion, which it is indispensable to achieve to avoid the spreading of entropic effects. One of the missions of a strategic center is to ensure this cohesion; this is where the center must have a powerful mission of coordination. There is nothing new here, as such findings are identical in the academic literature studying network organizations and their associated SCM (Paché and Paraponaris, 2006).

The legitimacy of a strategic center can be based on its own performance, its expertise in a given field, its ability to spread a collective vision and promote its application with the other partners in a clear language, corresponding to each party's interests. The action of a strategic center is temporary by nature. Mechanisms of coordination between stakeholders are first developed, and then tested. Each actor learns how to manage cooperation, relations between partners and their dynamic evolution (Ingham, 1994). Thus, when the relation reaches a certain degree of maturity, the leadership of the strategic center tends to weaken. This reasoning can apply to the case of humanitarian logistics, in any type of crisis. The urgent nature of acting to save lives mechanically leads stakeholders to follow a collective strategy to improve emergency response, a requisite condition for an efficient use of scarce resources. A case study presents an original experience stressing the major issues and opening interesting opportunities for extension.

3. Application to the Pisco earthquake (Peru)

To conduct the case study, we chose the participant observation method and resorted to the perspective selected by Bogdan and Taylor (1975): research is characterized by an extended period of social interactions between the researcher and the studied individuals in their environment. One of the authors of the article has been a member of a government agency in Peru since March 2007, and this agency is involved in the management of humanitarian logistics operations. Taking advantage of his status of internal participant observer, this author was able to get involved in the day-to-day operation of the government-

tal agency, and also to take part in various processes of decision making. A significant amount of primary information was collected and recorded in intermediate activity reports of a confidential nature. This active part helped obtaining a privileged position of analyst during the natural disaster in Peru, to obtain a direct measurement of some logistical malfunctions and then to issue recommendations to avoid their re-occurrence.

3.1. Lessons from a hard experience. The Pisco earthquake (Peru) of August 2007, of a 7.9 magnitude on the Richter scale, killed more than 500 people and directly impacted more than 655.000 persons whose basic needs for water, food, shelter, clothes, etc., had to be quickly satisfied (see Figure 1 and Table 2). Humanitarian aid was distributed to victims

by various civil defense committees at regional, provincial and municipal levels, but mainly, in view of the amplitude of the disaster, by the *Instituto Nacional de Defensa Civil* (INDECI). This agency played the part of coordinator (or “strategic center”) for the whole national civil defense system. In the Pisco crisis situation, the INDECI and various committees were overtaken by events and particularly by the needs for assistance in the three impacted regions. In spite of the relatively low number of fatalities, in comparison with other natural or made-man disasters throughout the world, the response capacity at national level proved manifestly inadequate; in fact, international cooperation was necessary to bring aid to the stricken populations.

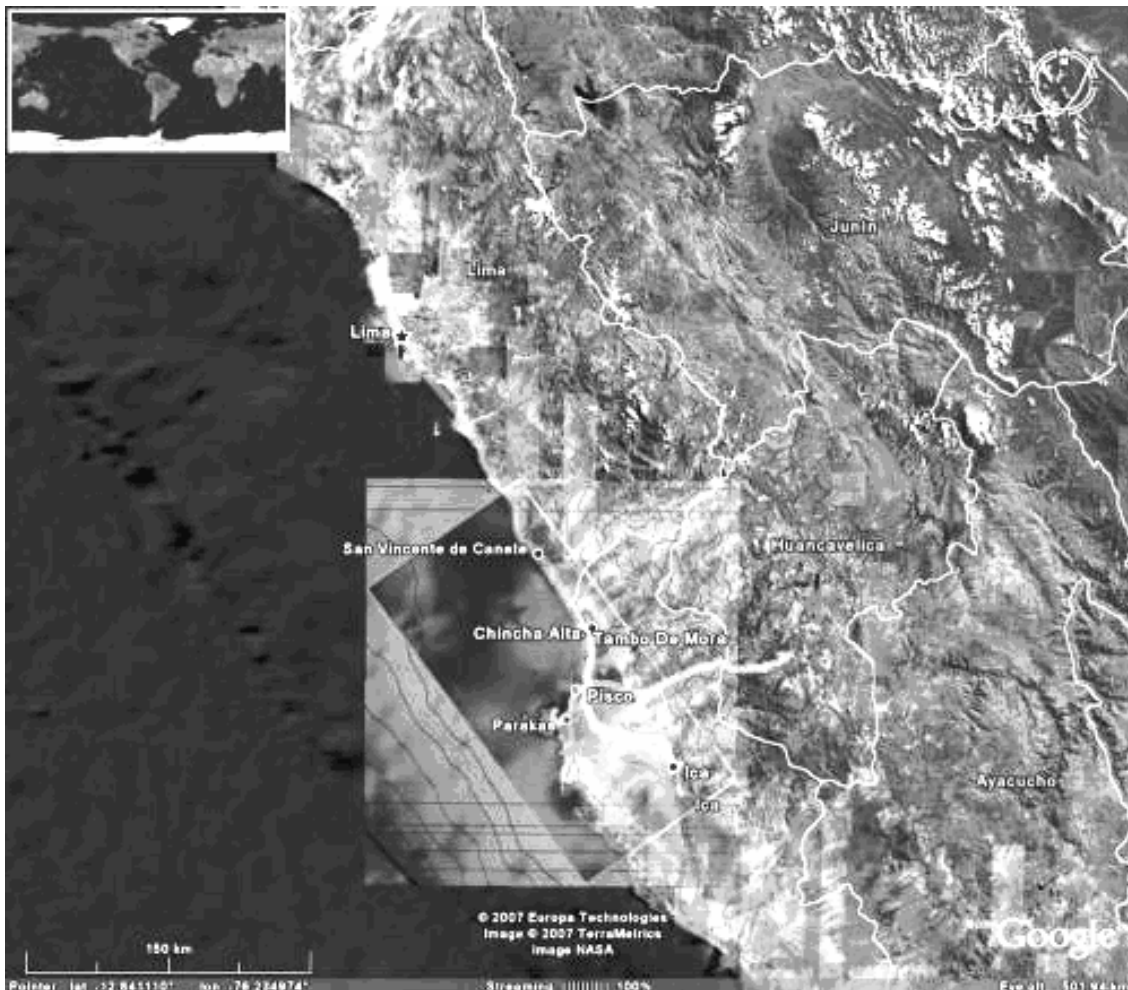


Fig. 1. Overview of affected area

Source: A report of the National Science Foundation-Sponsored Geotechnical Earthquake Engineering Reconnaissance [GEER] Team.

Table 2. Damage assessment (According to the estimates from INDECI, September 21, 2007)

	<i>Cañete</i>	<i>Chincha</i>	<i>Pisco</i>	<i>Ica</i>	<i>Other locations</i>	<i>Total</i>
Deaths	7	99	338	73	2	519
Injured	172	516	100	957	99	1.844
Homes destroyed	7.339	29.867	11.707	31.133	4.823	84.869
Health facilities destroyed	--	4	1	4	5	14
Health facilities damaged	2	10	--	--	100	112

Although community mobilization, both at national and international level, was remarkable in the hours and days that followed the earthquake, it must be admitted that on the site of operations, logistics management was chaotic to say the least (see Exhibit 2). The receipt and transport of humanitarian donations were performed in complete improvisation, and caused repetitive bottlenecks in the air force bases and the ports of Callao and Pisco; in September 2009, it is difficult to quantify the exact volume of lost or damaged products, following extended exposure to the humidity of the winter climate. Then, humanitarian aid was distributed haphazardly, the source of costly duplication in some areas whereas other, more isolated regions, received only partial support. Worse, in the confusion following the earthquake, a distribution of goods inappropriate to the people's needs, or even unfit for consumption (rotten food, drugs past their expiry date, etc.) was noted. To understand the major reasons for the operational and logistical failures linked with the Pisco earthquake, several objective factors must be taken into account:

- ◆ Firstly, as in all natural or man-made disasters, the particular characteristics of the earthquake, the unexpected nature and the amplitude of the event, the diversity and quantity of things needed by victims required the immediate mobilization and action of numerous stakeholders.
- ◆ Secondly, it appeared obvious that the various civil defense agencies were poorly prepared: inadequate level of products in warehouses, lack of logistical support resources and equipment (lifting equipment in ports and airports, poor availability of transport means, etc.), few human resources to assess, receive, control, store and distribute humanitarian aid, no integrated logistics information system capable of ensuring the tracking and tracing of products along the relief chain.
- ◆ Finally, the poor operation of the national civil defense system made it difficult for the INDECI to mobilize and coordinate the different agencies and their material and human resources. The result was a "spontaneous" and autonomous structuration of the humanitarian supply chain, with very poor efficiency in the end and the multiplication of individual and anarchic actions by participants in the field.

A chaotic situation: an interview of Luis Encinas from Médecins Sans Frontières.

MSF's Luis Encinas has coordinated the emergency intervention launched to provide care to the people affected by the Pisco earthquake. He shares his first impressions:

Can you describe the first thing you witnessed when you arrived in the affected zone?

In Pisco, at first it felt like I was witnessing a bombed area. People were wandering about in the streets in a state of confusion, of loss. There was no access to basic services. In the most affected areas, like the towns of Pisco, Chincha and Ica, between 50% and 90% of the buildings have been destroyed. Four hospitals have been reduced to rubble and another four were severely damaged. So far, about 400 aftershocks have been recorded, some of them have reached over 5.5 in the Richter scale.

What are the main difficulties the arrival of humanitarian aid is confronted with?

Access roads have been badly damaged. For example, some parts of the Pan-American Highway have virtually collapsed. Reaching Pisco from Lima took us three times longer than it normally would. Although the chaotic situation is declining, humanitarian aid has not reached peripheral areas yet.

After having participated in other emergencies, what has drawn your attention on this occasion?

From a human perspective, the strong, deeply rooted community spirit amongst the population in the area has amazed me the most. I have seen people older than 70 who spent the night in the open keeping watch in shifts to protect one another. They have nothing. They have lost everything but the capacity for lending a helping hand. In the midst of widespread havoc, the way the affected people spontaneously organize themselves is impressive.

Source: <http://www.msf.org.au>. Access date: October 10, 2009.

In view of the mistakes and malfunctions associated with the logistics management of aid following the Pisco earthquake, what challenges are the INDECI and the civil defense offices of the regional governments now faced with? As shown by the studies mentioned in the first part of the article, depending on the emergency, the challenge is: (1) to be able to temporarily increase operational and logistical capacities; and (2) to guarantee procurement and the last mile distribution of humanitarian relief relevant to the needs of the population. These problems share the characteristics that can be solved only through the application of a collective strategy, to avoid the risk of a multiplication of fatalities in the field.

Efforts must be organized so as to favor cooperation agreements ensuring, within an ephemeral organization, the coordination of a quick, agile, exceptional, temporary, complementary and diversified assistance. As Stephenson (2005, p. 341) unfortunately notes, "the humanitarian landscape is populated by different agents who jealously guard their agency, a foundation

that is both insecure and dynamic, and there is a lack of firmly accepted behavioral norms among the participants concerning how to relate to one another". Furthermore, the fragmented nature and number of disparate actors of humanitarian logistics generate a logistics system volatility and unpredictability (Carroll and Neu, 2009). This is the reason why the *Cooperacion Logistica Solidaria* (CLS) agency was created, to look for a systemic answer to a set of actors who have to learn to work together faced with the urgency resulting from a natural or man-made disaster. A systemic answer is indispensable to react as soon as possible to variations in the environment, by mobilizing adequate human and material resources.

3.2. How to improve collective action? The primary objective of organizations operating in natural or man-made disasters is to bring relief to stricken populations. Unlike conventional supply chains, for humanitarian supply chains, the recipient of aid is not a "customer", since humanitarian services may need to target the supplier/donor (Olorunfoba and Gray, 2006). But the end user is the one who will serve as reference to determine whether the relief chain has achieved a sufficient level of efficiency. The organizations involved in the relief chain have to act efficiently, at the right time and in a coherent way, by assessing priority needs and avoiding the overlapping and waste of mobilized resources. Each organization has a specific field of expertise and action, which, in most cases in an individual and compartmentalized manner, offers a relatively specialized service in relation with its nature and purpose. None of them has the capacity and competences required to deal with all the problems generated by an emergency on its own.

To answer the necessity of a collective action based on the mobilization of complementary potentials, we suggest a virtual coalition structure where all stakeholders acting during the humanitarian and/or development stage will unite to meet the challenge of building a temporary relief chain. This coalition is defined by a short or medium horizon: once the goods or services have been delivered on site, the coalition is put on standby, pending the next operation. The building of a temporary, often complex relief chain requires the implementation of a suitable infrastructure while taking two major constraints into account: (1) the spatio-temporal distance between partners; and (2) the necessary mix between the partners' individual and collective interests.

It will be monitored by a strategic center to allow the humanitarian supply chain members to share documents, communicate action plans and improve mutual coordination. To do so, the virtual organization will have to rely on an information system offering

the possibility of rapidly implementing a platform linking each organization, to end up with an effective cross-organizational information sharing (Maiers et al., 2005). Drawing from Astley and Fombrun (1983), we distinguish two types of collective partnership to avoid reproducing the unfortunate experience in Pisco:

- ◆ *A direct "symbiotic partnership" in a vertical relation.* This results in the constitution of a coalition structure bringing together two types of organizations to ensure the best match between what is on offer and the real needs of stricken populations by delivering supplies and other resources in good condition, in the required quantities, in the places and time where and when required: (1) upstream, suppliers of humanitarian products (manufacturers, donors, international organizations, etc.); and (2) downstream, civil defense actors and NGOs. The design and management of the supply chain are temporary, while achieving the ideal of logistical flexibility.
- ◆ *A direct "commensalistic partnership" in a horizontal relation.* This leads to the constitution of a confederation of private firms and bodies specialized in logistics, which negotiate and temporarily unite to mobilize and coordinate human and material resources to meet the logistical needs created by a large natural or man-made disaster. Collaborations developed by different organizations offering the same range of products and services are derived from a shared initial intent. This intent is to valorize logistical competence so as to collectively meet the victims' needs. A shared initial intent promotes the quick, flexible and transitional union of competences, human resources and capacities of each partner.

To increase visibility along the relief chain, the CLS will have to exchange ever expanding information to anticipate, adapt and assess (donation monitoring, stock levels, status of mobilized capacities and resources, etc.). The implementation of a *computer aided logistical decision tool* would reinforce the CLS intermediation, as well as the coherent coordination of the whole relief chain; this is to be associated with a knowledge management framework to identify information needs, and provide decision-makers with useful relief recommendations based on past experience (Zhang et al., 2002). Nevertheless, the creation of sharing mechanisms is only part of the problem. Arguably, the real difficulty is persuading the actors to actually share the information – especially in light of the "knowledge is power" arguments.

We see that the management of humanitarian logistics operations cannot be reduced to the optimization of a variety of means. In fact, the first thing is to reflect on

the way each actor's actions must articulate in compliance with a clearly formulated collective strategy. Of course, technological, cultural and organizational differences between actors need to be considered carefully as collective action might be inhibited by difference in capabilities and resources (Dantiki, 2005; Kovacs and Spens, 2009). The strategy must be in place long before any emergency, to avoid improvisation and its dramatic effects on stricken populations. The most burning issue remains the potential mobilization of resources, and consequently of logistical coordination investments, which could occasionally – or never – be called for in some of the world's areas.

Conclusion

It has been clear for many years that humanitarian action has no price for the “*grandes consciences*” of western countries. How is it possible indeed to refuse laying out a few millions of dollars when the life of hundreds of thousands of individuals is at stake? Unfortunately, in a world of scarce resources, although humanitarian action has no price, it obviously has a cost, and an improved management of this cost has an influence on the ability to send relief to a varying number of operation sites. Among possible savings, the best logistical coordination plays a significant part, for example in trying to avoid useless equipment or food redundancies in one place when a

few miles further, both are sorely lacking. Because of the funding system for NGOs that supplies funding *after* the event, they are in competition, and each would be happy to cooperate on their own terms. Efforts are being made by NGOs, UN Agencies and governments to a lesser extent the donor community, but these efforts are fragmented (Whiting and Ayala-Öström, 2009).

Strategizing humanitarian logistics needs a strong collective action, and the UN Cluster model is a good illustration of this type of collective action, in particular the Logistics Cluster acting as “strategic center”. Even the introduction within the UN family of the relatively benign cluster system is meeting considerable resistance from NGOs who remain adamant that they must retain the freedom of individual action in order to meet their specific mandate and expend their donors' money appropriately. To sum up, the time has come for a less idealistic vision of humanitarian aid, by integrating management approaches to improve its impact. This article aims at suggesting openings in this sense by integrating the model of collective strategies developed by Astley and Fombrun (1983). It is obviously only a start requiring further work in the field of humanitarian logistics and more widely in SCM.

References

1. Altay, N., Prasad, S., Sounderpandian, J. (2009), Strategic planning for disaster relief logistics: lessons from supply chain management. *International Journal of Services Sciences*. Vol. 2, No. 2, pp. 142-161.
2. Aslanzadeh, M., Ardestani Rostami, E., and Kardar, L. (2009), Logistics management and SCM in disasters. In Zanjirani Farahani, R., Asgari, N. and Davarzani, H. (Eds.), *Supply chain and logistics in national, international and governmental environment: concepts and models*. Heidelberg: Physica Verlag, pp. 221-252.
3. Astley, W., Fombrun, C. (1983), Collective strategy: social ecology of organizational environments. *Academy of Management Review*. Vol. 8, No. 4, pp. 576-587.
4. Bogdan, R., Taylor, S. (1975), *Introduction to qualitative research methods: a phenomenological approach to the social sciences*. New York, NY: John Wiley & Sons.
5. Bresser, R. (1988), Matching collective and competitive strategies. *Strategic Management Journal*. Vol. 9, No. 4, pp. 375-385.
6. Bresser, R., Harl, J. (1986), Collective strategy: vice or virtue? *Academy of Management Review*. Vol. 11, No. 2, pp. 408-427.
7. Carroll, A., Neu, J. (2009), Volatility, unpredictability and asymmetry: an organising framework for humanitarian logistics operations? *Management Research News*. Vol. 32, No. 11, pp. 1024-1037.
8. Chandès, J., Paché, G. (2006), La coordination des chaînes logistiques multi-acteurs dans un contexte humanitaire: quels cadres conceptuels pour améliorer l'action? *Logistique & Management*. Vol. 14, No. 1, pp. 39-48.
9. Cotton, J. (2007), *Logistics in support of disaster relief*. Bloomington, IN: AuthorHouse.
10. Cyert, R., March, J. (1963), *A behavioral theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.
11. Dantiki, S. (2005), Organizing for peace: collective action problems and humanitarian intervention. *Journal of Military and Strategic Studies*. Vol. 7, No. 3, pp. 1-21.
12. Goldsman, D. (2009), *Humanitarian logistics and supply chains: case studies and research issues*. Boca Raton, FL: CRC Press.
13. Ingham, M. (1994), L'apprentissage organisationnel dans les coopérations. *Revue Française de Gestion*. No. 97, pp. 105-121.
14. Jahre, M., Heigh, I. (2008), Does the current constraints in funding promote failure in humanitarian supply chains? *Supply Chain Forum: An International Journal*. Vol. 9, No. 2, pp. 44-54.
15. Kovacs, G., Spens, K. (2007), Humanitarian logistics in disaster relief operations. *International Journal of Physical Distribution & Logistics Management*. Vol. 37, No. 2, pp. 99-114.

16. Kovacs, G., Spens, K. (2009), Identifying challenges in humanitarian logistics. *International Journal of Physical Distribution & Logistics Management*. Vol. 39, No. 6, pp. 506-528.
17. Kovacs, G., Tatham, P. (2009), Responding to disruptions in the supply network—From dormant to action. *Journal of Business Logistics*. Vol. 30, No. 2, pp. 215-229.
18. Livet, P., Thévenot, L. (1994), Les catégories de l'action collective. In Orléan, A. (Ed.), *Analyse économique des conventions*. Paris: Presses Universitaires de France, pp. 139-167.
19. Maiers, C., Reynolds, M., Haselkorn, M. (2005), Challenges to effective information and communication systems in humanitarian relief organizations. *Proceedings of the 2005 IEEE International Professional Communication Conference*. Limerick, pp. 82-91.
20. Maïola, A.-L. (2007), Médecins Sans Frontières et la gestion des catastrophes naturelles: standardisation et limites de la logistique en situation d'urgence. *Mondes en Développement*. No. 137, pp. 81-88.
21. Oloruntoba, R., Gray, R. (2006), Humanitarian aid: an agile supply chain? *Supply Chain Management: An International Journal*. Vol. 11, No. 2, pp. 115-120.
22. Paché, G., Paraponaris, C. (2006), *L'entreprise en réseau: approches inter et intra-organisationnelles*. Editions de l'ADREG. URL: <http://asso.nordnet.fr/adreg>. Access date: September 28, 2009.
23. Pettit, S., Beresford, A. (2005), Emergency relief logistics: an evaluation of military, non-military and composite response models. *International Journal of Logistics: Research & Applications*. Vol. 8, No. 4, pp. 313-331.
24. Pujawan, I., Kurniati, N., Wessiani, N. (2009), Supply chain management for disaster relief operations: principles and case studies. *International Journal of Logistics Systems and Management*. Vol. 5, No. 6, pp. 679-692.
25. Schulz, S. (2009), *Disaster relief logistics: benefits of and impediments to cooperation between humanitarian organizations*. Berne: Haupt Verlag.
26. Stephenson Jr., M. (2005), Making humanitarian relief networks more effective: operational coordination, trust and sense making. *Disasters*. Vol. 29, No. 4, pp. 337-350.
27. Taylor, D., Pettit, S. (2009), A consideration of the relevance of lean supply chain concepts for humanitarian aid provision. *International Journal of Services Technology and Management*. Vol. 12, No. 4, pp. 430-444.
28. Tomasini, R., Van Wassenhove, L. (2009). *Humanitarian logistics*. New York, NY: Palgrave Macmillan.
29. Tovia, F. (2007), An emergency logistics response system for natural disasters. *International Journal of Logistics: Research & Applications*. Vol. 10, No. 3, pp. 173-186.
30. Van Wassenhove, L. (2006). Humanitarian aid logistics: supply chain management in high gear. *Journal of the Operational Research Society*. Vol. 57, No. 5, pp. 475-489.
31. Weeks, M. (2007), Organizing for disaster: lessons from the military. *Business Horizons*. Vol. 50, No. 6, pp. 479-489.
32. Whiting, M., Ayala-Öström, B. (2009). Advocacy to promote logistics in humanitarian aid. *Management Research News*. Vol. 32, No. 11, pp. 1081-1089.
33. Zeballos, J.-L. (2008), La ayuda humanitaria internacional en casos de desastres. *Revista Peruana de Medicina Experimental y Salud Publica*. Vol. 25, No. 2, pp. 230-232.
34. Zhang, D., Zhou, L., Nunamaker Jr, J. (2002), A knowledge management framework for the support of decision making in humanitarian assistance/disaster relief. *Knowledge and Information Systems*. Vol. 4, No. 3, pp. 370-385.