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Coordination of the Humanitarian Response to Earthquakes: an Evolving Challenge

Geophysical hazards and humanitarian crises

Although, at the moment this paper is being written, figures about casualties are still preliminary, it looks like the recent earthquake in Haiti may have been one of the most deadly seismological events ever recorded. The history of the relationship between man and the deadly geophysical forces of nature has been carefully documented for thousands of years. Together with records of death and devastation, beginning with the reports of Plinius the Elder following the destruction of Pompeii and Herculaneum in 79 AD, historians have also recorded mankind's efforts to mitigate the effects of such catastrophes.

Whilst, in the case of volcanic eruptions and tsunamis, the great advances made during the last century in developing reliable mechanisms of early

detection and early warning have significantly contributed to reducing the human impact of these events, earthquakes remain intrinsically unpredictable.

Apart from building houses that can withstand their impact (a well, known, simple and straightforward technology which, dramatically, is very little employed around the world), all we seem to be able to do for earthquakes is to mount gigantic relief operations after they have struck and killed thousands (see the table).

A peculiar type of humanitarian response

Modern humanitarianism was born on the European battlefields of the second half of the nineteenth century. Ever since then, although massive international aid has been provided to the victims of a wide range of

Country	Date	No Killed
China P Rep, Earthquake	27/07/1976	242000
China P Rep, Earthquake	22/05/1927	200000
China P Rep, Earthquake	16/12/1920	180000
Indonesia, Tsunami	26/12/2004	165708
Japan, Earthquake	01/09/1923	143000
Soviet Union, Earthquake	05/10/1948	110000
China P Rep, Earthquake	12/05/2008	87476
Italy, Earthquake	28/12/1908	75000
Pakistan, Earthquake	08/10/2005	73338
China P Rep, Earthquake	26/12/1932	70000

N. 177 - JANUARY 2010

Abstract

Established mechanisms that have worked reasonably well for the coordination of the international humanitarian assistance to conflict situations seem to fail in the heated response to large-scale earthquakes.

This paper discusses how some technical specificities of such emergency interventions interact with the exponential growth in the number and diversity of the actors and with a confused international legal framework to make the coordination of earthquake response a huge and evolving challenge.

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natural disasters, the concept of humanitarian assistance has been more closely associated with interventions in support of civilian populations in situations of conflict. In particular, owing to the changing nature of wars, during the last three decades humanitarian interventions have become synonymous with assistance to large-scale population displacements – refugees and internally displaced people. In such situations, excess mortality is almost exclusively a concern for children and is due to the association between a poor nutritional status and a poor health status. In what has become known as the “traditional” humanitarian paradigm, aid agencies intervene on the chain of determinants of health and nutritional status, with the aim to reduce avoidable deaths.

Experience from many large-scale operations shows that mortality rates can be dramatically reduced by humanitarian aid, to the point of being brought back to their pre-crisis levels in a relatively short time. On the other hand, during the last decade the exponential rise in frequency and intensity of weather-related disasters, and the world population’s escalating vulnerability to all types of natural hazards, have given rise to a “new” humanitarian paradigm. Sudden-onset natural disasters see very large number of deaths occurring across all sectors of the population and in a very short period of time.

Aid agencies cannot do anything, for example, to prevent tens of thousands of people from dying as a consequence of an earthquake. In such situations, the overall scope of humanitarian action is therefore smaller: assistance is essentially about “stabilising” the

situation, with the aim to prevent a comparably much smaller number of avoidable deaths, and to alleviate the suffering of the survivors. Unlike a refugee camp operation, where everything has to be built from scratch, the provision of essential services to the affected population has much more to do with rehabilitating existing mechanisms and infrastructure which were damaged from the disaster. In these situations, the nutritional status of the population is hardly ever a concern and trauma surgery, rather than epidemic diseases, is the main health problem. Furthermore, the immediate aftermath of an earthquake calls for a specialized kind of assistance which is not a feature of any other humanitarian crisis: urban search and rescue (USAR).

Research shows that about 90% of the survivors of an earthquake are pulled alive from the debris from family and neighbours, digging in the rubble with their bare hands, within a few hours from the shock. It soon comes a point, though, when the challenges posed by the rescues exceed the capacity of the local population. This is the time for the so-called “technical rescues”, for which specialized expertise and equipment are needed.

Victims who are unconscious or too weak to make themselves heard are located through the use of trained dogs or sophisticated listening and visual devices, and specialized tools and heavy machinery are employed to cut through the debris and extricate the survivors. These functions are, to a very large extent, performed by international USAR teams who represent the “first wave” of the international response to an earthquake.

Urban Search and Rescue: a tsunami within the earthquake

The search and rescue phase is a momentous event, one which in itself poses a formidable challenge to coordination. The “window of opportunity” for USAR assistance is limited to a few days, as no survivors were ever found later than 8 days after the earthquake. According to their own technical guidelines, teams as large as 100 people with up to a 100 tons of equipment must be airborne within 8 hours of notification, travel for thousands of kilometres, arrive in the country within 24 hours from the earthquake and immediately be dispatched to the area of operation. In the first 36 hours after the Izmit earthquake (Turkey, 2001), for instance, as many as 97 international USAR teams with a total of over 2,700 rescuers landed at Istanbul airport.

People, their animals and the equipment they carry must be helped through customs – in itself often a formidable feat -, then transport and interpretation must be arranged locally before the teams are dispatched to the affected area in a strictly coordinated way (i.e. assigning different teams to different geographical zones so to avoid gaps and duplications).

Such crucial coordination functions are typically performed by UNDAC (United Nations Disaster Assessment and Coordination) teams. These are groups of specialists managed by the UN Office for the Coordination of Humanitarian Affairs. They strive to arrive in the country *before* the arrival of the first USAR teams and immediately establish a reception centre at the airport and an on-site operations coordination centre in the affected area, from which the

initial phase of the response is managed. The hectic search and rescue operations unfold then 24 hours a day for five or six days, until a collective decision is taken to wind down as no more survivors are found. After a further few days of rest, the teams leave the country: within two weeks of the earthquake, the only traces left by this huge, extraordinarily complex and challenging – from the coordination point of view - wave of international assistance are the people who have been saved from a certain death.

The relief operation moves then on to the “stabilization” phase mentioned above. Meanwhile, a large number of humanitarian actors have arrived in the country and the UNDAC teams gradually hand over coordination functions to the in-country UN teams or the local authorities as appropriate.

An increasing number of increasingly diverse actors

As evident from this sketchy description of the first two weeks of the international response to a major earthquake, coordination is not only crucial, but also extremely difficult.

The extraordinary time constraints, the often very harsh and confusing operating conditions, the number and diversity of the stakeholders and the inevitable weakness of the local mechanisms in the early phases of response constitute a bedrock of “necessary evils” – unavoidable factors that make the work of those in charge of coordination particularly challenging.

Other factors are at play, however, that add to the load of difficulties and may be largely responsible for some of the

coordination failures experienced in the recent past.

Part of these factors can be considered as “unnecessary evils” – avoidable liabilities that coordinators and disaster managers would happily do without. Others are the product of the general evolution of the international emergency response environment, and are therefore probably also unavoidable. Whether “necessary” or “unnecessary”, these complicating factors all have to do with the multiplication of the actors involved in earthquake response.

Established, “professional” actors in the humanitarian environment are plenty to begin with. Already in 1994, for instance, in the midst of a most dramatic conflict situation such as the siege of Sarajevo, up to 304 humanitarian organizations were reported to be working at the same time. Five years later, in post-conflict East Timor, over *one thousand* agencies were contemporarily present in Dili. Natural disasters, however, and particularly earthquakes, have a special way of catching the public’s imagination and triggering a strong desire to help. This, in turn, results in the affected country being flooded with a range of “new” actors that include the unskilled and useless at the top end, disaster tourists in the middle and those who, despite good intentions, border criminality at the bottom.

It has then happened that, in-between flights carrying professional search and rescue teams following a major earthquake some years ago, a jumbo jet from a European country landed at the airport and regurgitated some 300 coal miners, with their helmets and fatigues, who jollily proclaimed: “We are here to help”. No food, no water, no communications, no equipment, no training, no in-

ternational experience, not the faintest idea of how “to help”. And, already some twenty years before, following the Spitak earthquake in Armenia, one individual had *driven* a huge crane *all the way from Finland*, arriving in the area more than six weeks after the disaster.

More recently, the earthquake in Bam and, especially, the south-Asia tsunami presented us with a collection of examples of bad practices which in certain cases bordered with criminality. This was the case, for instance, of the “instant” NGO that showed up in Bam, picked up a group of what they summarily identified as unaccompanied children, brought them to a European country for “two weeks holiday” and then flew them back to Iran.

Besides the even more serious consequences on the efficiency and effectiveness of the overall relief effort, it is clear that such plethora of “new” and largely unprofessional actors imposes an additional burden onto coordination.

Dealing with dozens of “we are here to help” teams takes considerably more time and energy that dealing with the professional USAR teams; time spent trying to find a solution on how to dispose of tons of unsolicited donations of medicines is inevitably taken away from more important coordination activities; running after “instant” NGOs trying to put a cap on their malpractices should not be part of the tasks of humanitarian coordination.

The multiplication of actors, however, is far from being only a matter of the unskilled and the unprofessional. On the one hand, it is obvious that states are increasingly contributing military assets in humanitarian emergencies. While the in-

volvement of the military in relief operations is not new (think of the 1948-49 Berlin airlift, for example), military engagement in relief activities has grown since the early 1990s.

Military resources were used in response to the 1991 cyclone in Bangladesh, and after Hurricane Mitch in Central America in 1998. More recently, the US military supported the response to Hurricane Katrina in 2005, the UK military was brought in to help tackle floods in Britain in 2007 and huge numbers of Chinese troops were deployed in the aftermath of the earthquake in Sichuan province in 2008. Following the October 2005 earthquake in Pakistan, domestic and international military actors mounted the largest humanitarian helicopter airlift ever seen.

On the other, regional organizations are also getting increasingly involved in disaster relief. This is the case for military organizations such as NATO, for example in the US Katrina response and the Pakistan relief operation in 2005, and for economic/political organizations such as the Association of South-East Asia Nations. Already technical cooperation was already happening amongst countries in the region since the late 1970's, in 2003 ASEAN formalized cooperation through the establishment of a Committee on Disaster Management and has been since implementing a Regional Programme in Disaster Management.

Similar initiatives are carried out in Central American countries through CEPREDENAC and in the Caribbean through CEDERA. In Europe, the European Union has shown in recent years a growing interest in deploying military and civil defense assets outside the borders of the Union,

and it has even attempted to take up a coordinating role parallel to the United Nations.

Regardless of the raging debate surrounding the military's involvement in relief (critics claim that it is inefficient, inappropriate, inadequate and expensive, contrary to humanitarian principles and driven by political imperatives rather than humanitarian need), it is obvious that the presence of such actors adds an entirely new dimension to the challenges of coordination.

For instance, it is understandable that a military force contributing the vast majority of the logistics means used in a relief operation may not readily accept the leadership of a civilian-run coordination mechanism, and that organizations of more strictly traditional humanitarian observance may not be willing to coordinate their action with militaries.

Finally, states are not only being increasingly present in relief operations through their militaries. They also intervene directly, and not necessarily as a single entity. Firstly, many of the large USAR teams that are deployed internationally are the same that have search and rescue responsibility in their own countries – they are state-run entities and are deployed abroad as part of their government's help to the affected country. Secondly, in a race for internal visibility following a major disaster, many governments are keen to be perceived by the public opinion in their countries as “doing the right thing”.

Whether they are needed and appropriate or not, goods, personnel and light infrastructure (such as field hospitals) are thus hastily dispatched to the affected country. Such bilateral interventions are often accompanied by

the deployment of high-calibre politicians and other public figures (such as, for example, the Minister for Foreign Affairs or the Head of Civil Defense).

These visits in themselves are a major headache for those in charge of coordination, as protocol and security arrangements take a heavy toll on their already stretched time and energy resources. Lastly, in many Western countries international aid is not only a matter of interest for the government. Regions, provinces, local administrations and even individual towns often have their own aid programmes and feel entitled, in the aftermath of a major disaster, to intervene directly. This may, or, in many cases, may not happen in consultation with the national government. As a result, the aid provided by one single country may well trickle through the intervention of a dozen different actors – themselves poorly coordinated – with near-devastating consequences on the overall coordination of the relief effort.

Secret plans and paper tigers: the role of the affected state

Every year during the last two decades, the UN General Assembly has endorsed a Resolution on “Strengthening the coordination of emergency humanitarian assistance”, dealing with the different and evolving challenges faced by the international system for disaster response. The preamble of every single one of these Resolutions reiterated that “the affected State has the primary role in the initiation, organization, coordination and implementation of humanitarian assistance within its territory.”

From the point of view of the international legal framework, therefore, things are very clear:

there is somebody in charge and that somebody is the government of the affected state. Unfortunately, experience shows that, with a few notable exceptions, reality on the ground can be very different.

Examples such as the Federal Government of India, which provided as much as 96% of the emergency aid received by the victims of the 2001 Gujarat earthquake, or the government of the Islamic Republic of Iran, which put the Iranian Red Crescent Society officially in charge of coordinating aid operations following the 2003 Bam earthquake – a task they performed admirably –, are few and far between. More often, unfortunately, in the immediate aftermath of the disaster the capacity of the national government to provide aid to the victims – let alone the capacity to coordinate the plethora of international actors – appear completely overwhelmed.

In most cases, this is due to lack of preparedness, even for countries which feature a significant risk for natural hazards. For example, in Armenia – the country at higher seismic risk in the world – a governmental plan for earthquake response does exist, but is considered as a state secret. One wonders how the many stakeholders who have to be involved at national level can plan, rehearse and execute their actions in a coordinated fashion when the government is playing so secretively. In another example, Ecuador's legislation establishing the national setup for disaster management is a jungle of recursive, duplicating, often contradictory acts.

New institutions are created after every major disaster, whose authority and area of responsibility clash with other, already existing institutions. All

of them share a ridiculously low budget: the *Defensa Civil*, for instance, recently saw its allocation reduced from an already very low 500,000 US Dollars per year to a laughable 50,000. In yet another example, Nepal has a relatively straightforward legal and institutional framework for disaster management, but one that has been likened to a "paper tiger": everything exists on paper, but in reality capacities on the ground are extremely scarce.

Furthermore, even in countries which do have a proper preparedness plan and where response capacities exist, it is evident that government officials, especially at local level, know very little about the bewildering complexities of the world of international assistance, which is bound to descend upon them shortly after the disaster. The sudden influx of dozens upon dozens of international actors further weakens the command and control capacities of the local administrations.

Ruling by consensus: the near-impossible task of the United Nations

The UN Disaster Assessment and Coordination teams were created exactly to support the coordination capacities of local administrators in an earthquake-affected area. Although they have been employed in many other sudden-onset emergencies, this remains their main area of specialization. So specialized is their intervention, in fact, that they tend to focus almost exclusively on the search and rescue phase. The UNDAC team members are experienced, they rehearse regularly together with all the main players in the USAR world, and usually the coordina-

tion of the hectic search and rescue phase runs as smoothly as the objective difficulties allow.

The real coordination problems tend to emerge at a slightly later stage, and involve the various sector of humanitarian assistance concerned with the "stabilization" we have mentioned earlier.

At this stage, coordination can be a problem when there are 30 or 40 actors active in the health sector, as many in the water and sanitation sector, possibly more in the shelter sector, and so on. Some of these actors are civilian, others are military, some are governmental, others are non-governmental. All work under enormous pressure, partly because of operational challenges, partly because they all compete for visibility in the national and international media. Their willingness to "be coordinated", or at least to take part constructively in the coordination process, varies to a large degree.

When the government is incapable or unwilling to take a strong leadership role, trying to put some order in this phenomenally challenging environment is a task which the international legal framework assigns to the United Nations. In particular, the UN Office for the Coordination of Humanitarian Affairs (OCHA) has the mandate of coordinating not only the assistance provided by the UN system, but all international assistance in case of natural disasters. To understand how this mandate, which appears clear, unequivocal and strong from the relevant General Assembly Resolutions, amounts in fact to a near-impossible task, one has to briefly look at recent history, and in particular to what hap-

pened to OCHA's two predecessor organisations.

Already in the 1970's, the UN Disaster Response Organization (UNDRO) was given the role to be an "executive" coordinator – a body with greater authority that would have the power to tell other partners what to do. This model of coordination, derived directly from the military, was thought to be appropriate for situations in which decisions were to be taken quickly amongst a large number of actors, and already then failed catastrophically.

UNDRO eked out an existence characterised by opposition and resentment on the part of a community of fiercely independent peers. A second incarnation of the same concept was attempted in the early 1990's, after the dissolution of UNDRO, with the UN Department of Humanitarian Affairs, and failed equally miserably.

OCHA was then created in 1998, on entirely different premises. Already in 1991, UN GA Resolution 46/182, known as the "humanitarian resolution", had acknowledged a fundamental truth: there is no legal or moral basis to say that, within the humanitarian community, one member has more authority than the others. Size, or mandate, may have been assumed in the past to be a viable basis to justify an "executive" coordinator role for a certain organization, but this has never worked. Based on this realization, OCHA was given the task to coordinate *by facilitation* (the coordinator is not there to issue instructions, but to create the conditions that allow coordination to emerge among peers), and *by consensus* (decisions are taken by consensus, and are not binding on those who participate in the process).

Although this may seem to be a limited, "tamed" and somewhat frustrating approach to coordination (in the sense that it works as long and as much as participating organisations are willing to coordinate their actions), it must be borne in mind that, from the standpoint of the United Nations, *there are simply no alternatives* to this model.

In fact, by following this approach OCHA was not only tolerated, but could actually develop into a major, fundamental partner: nobody could think of today's humanitarian world without OCHA and the many services it provides. And, it must be recognised that the facilitation approach to coordination works rather well in humanitarian crises linked to conflict. Such crises tend to be of a protracted nature, and the response tends to involve only "traditional", experienced humanitarian partners who have grown accustomed to playing the coordination game according to these rules.

However, the extraordinary, peculiar features of the humanitarian response to earthquakes (some of which we have outlined in this paper) may make the consensus-based coordination the UN is mandated for simply a "mission impossible" task.

The future: between a worsening *status quo*, self-regulation and military rule

The author of the paper has been personally involved in the organisation of the lessons learned exercises that have followed each major international earthquake relief operation during the last eight years, including a regional event fol-

lowing the south-Asia tsunami. With hindsight, the overall picture emerging from these moments of reflection by the international aid community is not particularly comforting. Certain lessons appear in fact as *lessons not learned*, certain operational mistakes seem to be made over and over again and certain attitudes and behaviours seem to fly directly into the face of age old recommendations.

A pessimist would therefore be authorised to look at the future with a sense of gloom: a worsening *status quo* in which the chronic problems weighing onto the international response to earthquakes seem to linger, take on new dimensions and possibly grow even bigger. And still, it must be recognised that signs of progress do indeed exist. For instance, the self-regulation efforts carried out for nearly two decades by the search and rescue community through their international body INSARAG (International Search and Rescue Advisory Group) have led to considerable advances.

The adoption of the ISARAG Guidelines, for instance, is a major step forward. This is a set of principles and operational guidelines which have contributed greatly to raising the bar of this particular humanitarian trade, levelling the practices of the professional teams to a higher standard and helping weed out the amateur, the unprofessional and the potentially harmful.

Similar efforts at self-regulation have been pursued, with varying degrees of success, by the entire humanitarian community through, for instance, the ambitious SPHERE Project. This is a comprehensive set of humanitarian minimum standards and indicators developed jointly

by some 450 organisations, which is now at its third revision and has effectively become *the* technical reference for aid operations. From these and other initiatives, it would therefore appear that some progress has been achieved on the *how* of humanitarian coordination.

Deciding on the *who*, *what*, *where* and *when* in the heated response to an earthquake remains for the time being a rather confused, frustrating process. Resting on somewhat shaky foundations (the “consensus-only” mandate for the United Nations and the weak capacities of the national authorities), the process is open to be taken over by the most recent arrivals on the humanitarian scene.

The response to the south-Asia Tsunami, to the Pakistan earthquake and, very notably, to the recent Haiti disaster may point to an increasing role by the military, not only in the provision of massive logistic support and in the direct provision of emergency aid, but also in directing and coordinating the overall international effort. This has already attracted fierce criticism and heated reactions on the part of a variety of actors.

One is left to wonder if such criticism will be quenched by the sheer weight of the military and the determination of their political masters, that same combined might that has imposed the concept of Integrated Missions (combining political, military and humanitarian action under a unified command) onto humanitarian crises such as Afghanistan, Sierra Leone and Liberia. Integrated Missions were initially met with the same scepticism and outright fury, but they came to stay.

Beyond policy and doctrine debates, however, the most important thing is that international aid remains accountable to the victims. Coordination must be aimed to maximise the efficiency and effectiveness of aid, as measured by its impact on the affected population. No sector of the population or sector of assistance should be left uncovered by assistance, and no two sectors should receive the same assistance by different partners. This, and this alone, will be the yardstick any future coordination arrangement will be judged by.

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