### **Quick Response Report #105**

## TOWARDS A THEORY OF COORDINATION: UMBRELLA ORGANIZATION AND DISASTER RELIEF IN THE 1997-98 PERUVIAN EL NINO

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#### INTRODUCTION

An assessment of the literature on the response phase of disasters reveals several interesting and significant trends. First, research consistently indicates that a low degree of coordination is a pressing problem facing those who provide relief at both the domestic and international levels. Although many scholars have endeavored to understand this issue,

there is much about coordination which remains to be explored. Second, studies suggest that private and voluntary humanitarian agencies have become increasingly involved in, and more important participants of relief operations. One need look no further than the histories of the Red Cross, the Salvation Army, CARE, Médecins Sans Frontières, Oxfam, Church World Services, and other charitable groups for confirmation. Finally, scholarship has failed to adequately address how non-governmental organizations interact prior to, during, and after disaster. For instance, an insufficient amount of academic attention has been given to the collective humanitarian arrangements known as "umbrella organizations" and the implications that these increasingly prevalent collaborative structures may have on disaster relief operations.4

With these preliminary remarks in mind, there can be much justification for questioning how relief operations can be more effectively and efficiently coordinated in spite of the abundant and ever-increasing number of organizations and agencies that participate in humanitarian activity. The purpose of this Natural Hazards Center Quick Response Project is to address this inquiry by putting forth a theory of the requisites for coordination, and then investigating how successfully Interaction (an international umbrella organization based in the United States) meets those requirements in the case of the 1997-98 Peruvian El Niño disasters. In attempting to achieve this goal, the following paper will: discuss the factors that are necessary for there to be coordination among non-governmental organizations (NGOs); mention the methodology used to complete this study; indicate Peru's need for relief during the 1997-98 El Niño disasters; explore the operational benefits of an umbrella organization and assess the humanitarian operations of a few of its members in the aforementioned catastrophes; and finally, emphasize the implications that this research might have for domestic responses and future scholarly endeavors.

The arguments to be advanced in this exercise are fourfold. First, the coordination of relief is possible only to the extent that there is contact, communication, and cooperation among humanitarian actors. Second, umbrella organizations such as Interaction may furnish some, but not all, of these requisites. Third, and consequently, non-governmental organizations may reconsider the merit of joint operations at the domestic level. Finally, agencies that respond to disasters must also contemplate, among other things, how coordination can be facilitated with modern communications technology or by working closely with the affected government. Nevertheless, the preliminary nature of this theory and the reliance upon a single case to deduce the value of umbrella organizations underscore the need for more research to be conducted on the collaborative efforts of non-governmental organizations in disaster relief.

#### A THEORY OF COORDINATION

It can be asserted that the coordination of relief - or the harmonization of humanitarian activity - can only take place with inter-agency contact, communication, and cooperation. In other words, coordination among a number of actors will be increasingly likely in disaster relief operations when there has been or is:

- 1. some sort of pre-disaster links or ties among agencies to help generate familiarity with one another and develop norms that stress collaboration.
- 2. network or means within which information regarding a disaster situation can be easily shared and quickly transmitted to others.
- 3. a willingness based on incentives to work together with others to meet the needs of relief recipients.

In contrast, the degree of coordination among non-governmental humanitarian organizations will be significantly lower when the above three requisites are not met. For instance, and for the most obvious of reasons, it is doubtful that coordination will take place among organizations if they are unaware of each other and if a professional association has not been established among them before a calamity strikes. Likewise, if organizations do not generate standards of conduct or agreements to operate in unison with others, there will be a lower chance for coordination. What is more, coordination between groups will be substantially impaired if there are no forums or communicative instruments available to convey information or discuss policy options. Also, coordination will become much more difficult, if not prevented altogether, provided that organizations do not overcome the disincentives to cooperate (i.e. competition for publicity and funding), or if agency managers do not fully comprehend how the operations of another may complement their own and/or benefit the disaster victims whom they are trying to serve.

Having presented the above theory of coordination, one may question to what extent umbrella organizations such as Interaction satisfy these requisites with their NGO members. Before seeking an answer to this inquiry, it will be necessary to specify the methodology to be utilized in this study, and illustrate the need for relief in the 1997-98 El Niño disasters in Peru.

#### METHODOLOGY FOR THIS STUDY

The methodology for this Quick Response Research Project has three components. First, personal interviews, phone conversations, and e-mail correspondence were undertaken with natural scientists, social scientists/policy analysts, governmental and international governmental officials, NGO staff, and disaster victims to comprehend the causes and effects of El Niño, as well as the resulting relief needs. Excerpts from local newspapers were also drawn upon when necessary.

Second, Interaction's home web page was examined to gain a basic understand of this umbrella organization, while paying particular attention to its goals and membership. Phone conversations and e-mail correspondence also took place with some of Interaction's employees to clarify the organization's purpose within the humanitarian arena. In addition, a publication by Interaction, Member Profiles, 1997-1998, was reviewed in order to become aware of those agencies which participate in said organization and make contacts for subsequent interviews in the field.

Finally, if it was determined that a member of Interaction was providing relief to the victims of the 1997-98 Peruvian El Niño disasters, then a few of its leaders, workers or volunteers were asked a series of questions about the nature of the umbrella organization and the coordination that took place in their humanitarian operations. Such inquiries included:

- 1. Are you aware that your NGO is a member of Interaction? What is the purpose of this umbrella organization? How do you feel about your union with other members of Interaction and the organization's norms concerning post-disaster response?
- 2. Do you communicate with the members of Interaction concerning your relief operations? If so, by what means (i.e. meetings, modern technology and equipment) do you presently use to discuss policy options and implementation procedures with other members of Interaction? How important is technology for communication among disaster relief organizations and why? Is there anything that could be done to improve communication among the members of Interaction?
- 3. Does Interaction provide incentives to cooperate with other members of the organization? Are there any drawbacks to cooperating with the other organizations of Interaction? Can you provide specific examples?
- 4. Are you currently coordinating your relief operations with other members of Interaction? If so, with whom are you working, what are you doing jointly, and where? If not, why have you decided to work alone? What is your overall opinion about the coordination of relief within Interaction?

To reiterate, the intent of these questions was to probe the importance of contact, communication, and cooperation among non-governmental actors prior to and during their relief activities, and also to assess the degree of coordination by members of Interaction in the Peruvian El Niño disasters.

### THE PERUVIAN EL NINO DISASTERS AND THE NEED FOR NGO RELIEF

Given the name El Niño (the "Child" in Spanish) by Peruvian fishermen due to its typical appearance during the season when the birth of Christ is celebrated, the Pacific Oscillation Phenomenon is a shift in the circulation pattern in the Pacific Ocean that periodically (usually every 3-4 years) results in the presence of a massive body of warm water just off the coast of Peru. In addition to this heating of the ocean's surface which may extend over thousands of miles, El Niño brings with it various atmospheric disturbances. For example, in Peru El Niño is often accompanied with low

pressure and an influx of moist air moving east along the equator which results in severe precipitation, that is particularly prevalent when southeastern winds are weak or non-existent. El Niño may also increase average air temperatures in Peru by 4-6 Degree Celsius. 6

Although this natural phenomena has a great impact upon weather patterns worldwide, Peru is typically numbered among those severely affected. This is especially the case with 1997-98 El Niño as it is commonly regarded to be one of the most powerful climatic events up to this point in Peru's history. According to several scientists who participated in a January conference in Lima on the Pacific Oscillation Phenomenon, the 1997-98 El Niño differs from previous ones in two dramatic ways. First, the temperature of the sea has surpassed what has been recorded previously. Second, the temperature of the sea has increased faster in 1997-98 than in preceding years. These two trends are largely responsible for the several disaster agents that have made their presence strongly felt in Peru since the latter part of 1997. 10 These include:

- 1. flooding and mud slides (mainly but not exclusively in the North).
- 2. coastal sea surges resulting from strong ocean currents, warm surface temperatures, and fierce winds.
- 3. drought resulting from excessive heat (common to the South).

The effects of these agents and subsequent disaster response have had a plethora of economic, developmental and political repercussions. In the agricultural realm, there has been a drop in output due to the flooding of 114,445 hectares of cultivable land,11 the appearance of diverse fungi resulting from intense heat,12 and drought.13 With regards to fishing, some commercial sectors have been temporarily eliminated due to the higher ocean temperatures.14 The government estimates that, between November 1997 and January 1998, there has been a 6% reduction in seafood caught.15 Tourism, transportation, petroleum, mining and other areas of the economy have also been adversely affected by El Niño.16 As a result of these problems, the Gross Domestic Product in some of Peru's departments has declined significantly during the disasters17 while inflation has increased slightly throughout the country.18 In addition, thousands of miles of roads and bridges have been destroyed,19 and scores of schools have been reduced to rubble or severely damaged.20 Total costs for prevention and reconstruction are estimated at \$861 million,21 which will undoubtedly set back Peru's ambitions for national progress. Moreover, the centralized, politicized and inadequate response by the Fujimori government has also resulted in further tension with those of the opposition.22 This adds fuel to the fire in a country where the government is still combating hostile guerrilla activity.

In spite of the above observations, it is probable that the most dramatic impacts of El Niño have been social. According to the United Nations Office for the Coordination of Humanitarian Affairs, the disasters have, as of May 1, 1998, resulted in:

- the death of some 340 people
- the disappearance of 178 others
- a total of 730 reported injuries
- at least 300,000 people affected 23

Regarding the latter statistic, the most pressing problems confronting victims pertain to their housing, health, and ability to obtain food and water. To illustrate, it is believed that at least 40,549 homes have been destroyed,24 and thousands of Peruvians continue to dwell in damaged or inadequate make-shift housing without electricity.25 Sewage systems have also been damaged which has led to an outbreak of cholera and an rise in the report of other intestinal diseases.26 El Niño's higher temperatures and the inability of people to maintain their hygiene have resulted in an increase in the cases of conjunctivitis.27 The presence of standing water in flooded areas has increased the number of insects leading to numerous cases of malaria.28 And, the dried mud and sewage has clouded the air in some areas with dust which has led to an outbreak of respiratory infections.29 What is more, the destruction of the infrastructure has severely disrupted the distribution of food that has been harvested.30 As a case in point, tons of potatoes rotted on trucks near Tarma as they waited for washed-out roads and bridges to be repaired.31 Even where food has been available, it has become more expensive due to the overall scarcity.32 Also, looting in one city caused some store owners to close down, which has complicated the matter further.33 Finally, potable water is lacking in many regions.34 To obtain a small portion of this vital liquid, some disaster victims have had to wait in long lines 35 or pay for what was originally intended to be apportioned without cost.36

Although the government of Peru has provided some temporary shelter, clothing, medicines, food, and potable water to thousands of disaster victims, the relief has been inadequate. In the flooded city of Ica, for example, aid did not arrive at all of the locations that required it and was insufficient where it did. 37 The government was also criticized for not providing assistance to the victims of a mud slide in Chosica as well as in other areas stricken by various disasters. 38 The needs have in fact been so great that an international appeal has been necessary, although reluctant in coming. 39 Among those responding to the disasters were the United Nations, the International Federation of Red Cross and Red Crescent Societies, and several governments including Canada, China, Japan, the United States, and others from Europe and Latin America. A host of non-governmental organizations have been providing assistance to the disaster victims as well. It is now to the coordination among those NGOs within Interaction that this paper will now turn.

#### THE FINDINGS

This investigation of the international response to the 1997-98 Peruvian El Niño disasters offers mixed findings about Interaction's role in the coordination of relief. On the one hand, this umbrella organization does facilitate contact among its members and also provides several incentives for cooperation. On the other hand, the network for member communication within Interaction is currently underutilized. Consequently, coordination has taken place, but not to the extent that could be possible. This section examines the contact, communication and cooperation within Interaction, and then discusses the coordination among several of its members in the Peruvian El Niño disasters.

First, Interaction undoubtedly facilitates contact among its NGO members, although this is somewhat lacking in the field at a disaster site. At the most basic level, Interaction brings together a diverse group of NGOs, increasing their points of mutual contact which might otherwise be minimal if the organization did not exist. For instance, every member of Interaction is required to designate one of their staff to serve on the Board of Directors which meet together at least once annually to review executive decisions and conduct general business. 40 Employees of each NGO are also encouraged to join task forces and participate in Interaction's other special projects pertaining to activities in the humanitarian field. 41 The great benefit of these points of contact is that it helps members to become aware of others, and learn more about their respective missions and organizational strengths and weaknesses. In addition, the affiliates of this umbrella organization receive complementary copies of Member Profiles, 42 which furnishes pertinent data about each NGO including names, positions, addresses, phone numbers, programs and geographic areas of operation. The publication therefore gives members information that is useful for coordination when disaster strikes. Moreover, the contact among members of Interaction has led to agreement on the norm of collaboration. In March of 1989 the Executive Committee of Interaction urged the umbrella organization to "develop a set of ethical standards covering governance, financial reporting, fund raising and public relations, management practice, human resources, public policy and program services." 43 On November 5, 1992, the entire membership of this umbrella organization unanimously passed several norms regarding conduct which were developed by the PVO Standards Committee. 44 All members belonging to Interaction affirmed in Article 7.2.2 that their "response will be coordinated with other local and international humanitarian organizations in order to ensure prompt action and effective allocation of resources, and to avoid duplication of effort." 45 Thus, Interaction has helped generate a greater consensus on the importance of inter-agency collaboration.

However, these significant strengths are somewhat diluted by the fact that contact is not universal within the organization. While some of the NGOs in Peru were aware of Interaction and its membership, others were not.46 Even within the same agency, knowledge about the umbrella organization could vary dramatically between those at the field and headquarters levels. By way of illustration, one member of Oxfam's staff in the United States had a great deal of knowledge about Interaction while a regional director for the same organization in Peru did not.47 It is evident, therefore, that information about this umbrella organization has not yet been adequately relayed to those who implement policy at the field level.

Second, and in regards to communication, Interaction does provide its members several means to relay information. Nonetheless, the area of communication is probably the most notable weakness of this umbrella organization. As previously mentioned, Interaction's Board of Directors convenes annually to discuss common problems and exchange recommendations for future policy. Also, the publication and distribution of <u>Member Profiles</u> enables Interaction's

affiliates to keep in better touch with each other during disasters. 48 Furthermore, this umbrella organization gives its members free subscriptions of Monday Developments, a bi-weekly publication "by, for, and about NGOs," which updates members on current disaster situations and ongoing relief activities. 49 Thus, a significant amount of information can be - and is - exchanged among the members of Interaction.

But communication among members of this umbrella organization seems to be lacking where it matters most: at the field level. Many of the NGO personnel that were involved with the disasters in Peru stated that they have had little or no communication with the other members of Interaction. 50 The reasons for this sparse sharing of information included unawareness of others, logistic difficulties, or a simple lack of desire. Nevertheless, communication was sometimes manifest among (and always within) the agencies that constitute Interaction. And, when it did, it appears that modern technology such as cell phones, fax machines, and computer e-mail were the preferred instruments because of their ease in access and speed of transmission. 51 To my knowledge, only one group of NGOs actually had a formal meeting in the field to communicate with others. 52

Third, the NGOs within Interaction are inclined to cooperate with each other as this umbrella organization provides numerous incentives for collaboration while concomitantly minimizing harmful competition. But Interaction may not be able to overcome all of the disincentives that work against collective NGO operations. Concerning the former point, Interaction facilitates cooperation not only because its members have committed to live up to the organization's norms of collaboration, but also because these NGOs recognize the enticements of collective action. Members of Interaction generally agree that joint projects foster both operational efficiency and effectiveness. 53 For instance, working closely with others helps to prevent gaps in relief and avoid duplication of effort. Also, the exchange of information among NGOs increases shared knowledge about the disaster situation, victims' needs, and the procedures for working with the affected government. Moreover, the pooling of resources and co-financing of relief activities increase the likelihood that operations will be successful. Joint action may also help each NGO accomplish its individual mission. A Medical Supplies Coordinator for Direct Relief International asserts that without working through other organizations he would be unable to ship relief goods to Peru. 54 Along with the above benefits, working within Interaction may increase each NGO's access to Congress and the Administration, 55 possibly having a profound impact upon the laws and policies that affect them all.

Interaction also minimizes inter-agency competition which increases the probability for collaboration. For example, this umbrella organization increases the publicity for, and credibility of its members. 56 Contact with the other players that are involved in disaster relief may advance NGO notoriety, while the strict reliance upon a set of operational standards gives donors more assurance that expenses will be minimized and that funds will be accounted for. Although Interaction does not directly fund its members' field operations, it assists its members in the collecting of funds for relief through press releases and 'How to Help Lists.' Therefore, this umbrella organization may reduce to some extent the competition that can be prevalent among agencies in the areas of publicity and funding.

Regardless of its many inducements for collaboration and its minimization of NGO competition, Interaction might not be able to overcome other disincentives that preclude inter-agency cooperation. For instance, there have been some bad experiences with joint projects in the past. One anonymous official of an NGO said that his organization had sent several containers of relief to another for distribution after Hurricane Hugo, but the latter took credit for the aid by removing the former's labels. In addition, the difficulties of undertaking NGO coordination may discourage cooperation. One employee for the American Red Cross stated that, from a logistical standpoint, it is much easier to work with members of the Federation (such as the Peruvian Red Cross) than with those outside the organization. Sa Also, several members of Interaction assert that they prefer to work directly with the affected government or local NGOs in order to more fully understand relief needs and build local capacity. Therefore, obstacles to cooperation within Interaction continue to persist.

Perhaps as a result of the moderate amount of contact, communication and cooperation among members of Interaction, there has been an equal degree of relief coordination within this umbrella organization in the Peruvian El Niño disasters. Of the 13 Interaction members that responded to the situation in Peru, roughly half were coordinating their operations with associates of the umbrella organization. Among those coordinating within Interaction were the Adventist Development and Relief Agency, CARE, the Catholic Medical Mission Board, Catholic Relief Services, Lutheran World Relief, and OXFAM America. In the most formal of these joint operations, the Adventist

Development and Relief Agency, CARE, Catholic Relief Services, and OXFAM America all worked closely together with the Peruvian government to diagnose needs and prepare for possible relief requirements through "priority action plans at the local, district and regional levels in different departments." 60 In another collaborative operation, the Catholic Medical Mission Board sent pharmaceuticals to disaster victims through Catholic Relief Services. 61 Meanwhile, OXFAM America and Lutheran World Relief traded accounting software and operation manuals to increase their ability to coordinate. 62 This helped each organization become more involved in each other's prevention and relief activities before and after the El Niño disasters. 63

In contrast to the above organizations, the American Red Cross, Church World Services, Direct Relief International, Food for the Hungry, Latter Day Saint Charities, United Methodist Committee on Relief, and World Vision Relief and Development did not coordinate their work with other members of Interaction. 64 However, virtually all of these organizations stated that they were coordinating with other international and local NGOs, 65 the Peruvian government, 66 or branches within their own organization. 67 For instance, Direct Relief International coordinated with Caritas (a local NGO) to ship and distribute medical supplies (i.e. first aid products, antibiotics, sutures, medical gloves, etc.) valued at over \$30,000 to disaster victims in Callao. 68 Latter Day Saint Charities sent the government vaccines to combat Malaria in Iquitos as well as several containers of clothing to be distributed nation-wide. 69 This religious organization also sent \$80,000 in cash to help purchase food and other medicines for disaster victims in several areas. 70 The American Red Cross sent over \$60,000 to its Peruvian counterpart in order to obtain food and clothing, and provide other goods and services for victims in relief centers. 71 It appears, therefore, that most of the members of Interaction have coordinated with others in and out of their organization.

#### IMPLICATIONS FOR DOMESTIC RELIEF AND SCHOLARSHIP

The theory of coordination presented in this paper and subsequent investigation of Interaction in the 1997-98 Peruvian El Niño disasters have several important lessons for relief operations in the United States and for future academic endeavors. In the practical realm, it should be recalled that, for coordination to be improved among NGOs, there must be contact, communication and cooperation among them. Contact is needed to generate familiarity of others and develop norms that stress collaboration. A communication network is required to relay information quickly to others about a disaster situation and what one is doing to respond. And, incentives for cooperation are a necessity if NGOs are to be willing to collaborate with others.

If this theory about the requisites for coordination is correct, humanitarian actors may seriously consider the merit of creating and participating in umbrella organizations at the domestic level. For instance, this paper has illustrated that Interaction facilitates pre-disaster contact among its member agencies through meetings and publications, which helps them to become aware of others and generate agreement about the importance of collaboration. Likewise, it was noted that Interaction's meetings and publications facilitate the sharing of information among its members at the headquarters level. In addition, this quick response report indicated that the benefits of collective operations in, and increased publicity and funding through Interaction motivates its member to cooperate and minimizes harmful competition. Therefore, umbrella organizations may be an important tool for the coordination of relief.

However, this is not to say that Interaction has had a positive impact upon coordination in all areas. This paper points out a few of the weaknesses evident in the 1997-98 Peruvian El Niño disasters that must be overcome if subsequent relief operations are to be improved. For instance, practitioners at the implementation level must be more aware of other NGOs if coordination is to take place. Also, meetings must be held by NGOs at the field level to augment discussion about policy options or operational procedures. The establishment of an NGO coordination center at the disaster site could be a valuable mechanism to ensure that these two suggestions are put into practice.

Similarly, this study underscores the fact that modern communications technology (i.e. computers, cell phones, fax machines) plays an increasingly important role in the coordination of relief. An Assistant Director of Programming for the Catholic Medical Mission Board put it best when she declared that technology is "crucial for any expedient communication." 12 It should be understood, however, that there may be problems associated with these new methods of sharing information. Some officials stated that the age of their computers or type of software prohibited

communication with others.73 NGOs might therefore consider purchasing newer computers, or upgrading and sharing their programs. Others also stated that some forms of communication may not work in specific circumstances. For instance, location may make cell phones inoperable while downed power and phone lines may make fax machines and e-mail systems useless.74 It appears, therefore, that NGOs must try to develop "redundancy" in their networks in order to ensure communication at all times. In addition, some employees of humanitarian organizations affirm that modern technology has created a new challenge for emergency managers: information overload. Besides striving to acquire accurate data about a disaster situation, relief workers must increasingly focus on how to manage, interpret, and apply it.75 Consequently, NGOs also need to find new ways to process and use the information that they receive through modern communications technology.

A further implication for NGO relief operations in the United States concerns finding ways to highlight the positive aspects of inter-agency cooperation, while also overshadowing past negative past experiences and reducing competition for funding or publicity. The former can be done by educating NGOs on how one's strength may complement the mission of another, or by specifying the advantages that coordination has on meeting relief recipients' needs. Umbrella organizations may accomplish the latter by rewarding their NGO members with monetary support or public recognition for outstanding collaborative efforts.

A final practical recommendation for disaster response in the United States concerns the involvement of the government in relief operations. An unexpected finding of this Quick Response Project which deserves mentioning was that essentially all NGOs asserted that they were working closely with local public officials and emergency managers. 76 Stated differently, each member of Interaction was coordinating its humanitarian activities with the affected government. Political leaders and bureaucratic elites in the United States must therefore recognize the major role that they have in coordination, and may consequently desire to encourage, facilitate, and participate in the creation of umbrella organizations with NGOs.

Finally, this paper invites theoretical refinement of the requisites for coordination and further empirical investigations into umbrella organizations. In the conceptual realm, my theory of coordination definitely necessitates further elaboration on, and clarification of the interrelationship of NGO contact, communication and cooperation in relief operations. Also, the notion of "umbrella organization" may open up new avenues for scholarship as it provides an alternative to previous theoretical models (i.e. the "centralized command and control system" and "emergent human resource system"). In other words, "umbrella organization systems" require further academic attention as they have a unique blend of centralization and decentralization in decision making, and as they provide an interesting mix of structures prepared for, and adaptable in relief operations. With regard to empiricism, further studies will be essential for determining the merit and drawbacks of umbrella organizations, and their effect on the coordination of relief among non-governmental organizations.

#### **CONCLUSION**

The need for this Quick Response Project on the coordination of relief within Interaction is owing to three important facts in the literature on disaster response. Coordination has continually been regarded as problematic. NGOs are now more important participants in relief operations than in the past. And, little is known about the impact that umbrella organizations may have on the harmonization of humanitarian relief. It is hoped that the theory of coordination presented in this paper and subsequent investigation into Interaction's role in the relief operations during the Peruvian El Niño disasters will contribute to the important field of disaster studies. Likewise, it is desired that the lessons of this study will be of benefit to emergency managers who respond to calamities here in the United States.

#### **NOTES**

1 See Dennis S. Mileti, <u>Disaster Relief and Rehabilitation in the United States: A Research Assessment</u> (Boulder: Institute of Behavioral Science, University of Colorado 1975); Erik Auf DerHeide, <u>Disaster Response: Principles of</u>

- <u>Preparation and Coordination</u> (St. Louis: C.V. Mosby Company 1989); Douglas Patton, "International Disasters: Issues in the Management and Preparation of Relief Workers" <u>Disaster Management</u> 4 (1992); Lord Judd of Portsea, "Disaster Relief or Relief Disaster? A Challenge to the International Community" <u>Disasters</u> 16 (1992).
- 2 See David A. McEntire, "Reflecting on the Weaknesses of the International Community During the IDNDR: Some Implications for Research and its Application" <u>Disaster Prevention and Management</u> 6 (1997).
- 3 See Randolph C. Kent, <u>Anatomy of Disaster Relief</u> (New York: Pinter Publishers 1987); and John Borton, "Recent Trends in the International Relief System" <u>Disasters</u> 17 (1994).
- 4 Meeting Needs: NGO Coordination in Practice (London: Earthscan Publications 1995) is, to my knowledge, the only collection of research that covers aspects of this important issue. Edited by Jon Bennett, this book examines from an empirical standpoint the coordination of relief by umbrella organizations (in particular those associated with the International Council of Voluntary Agencies). However, Meeting Needs invites further investigation of umbrella organizations as it lacks a theoretical base and deals exclusively with the coordination of humanitarian aid in complex emergencies. Also, the findings of Bennett's volume warrant corroboration as it was published in association with the ICVA.
- 5 Personal interview, Gilberto Romero, employee PREDES (Peru's Center for Disaster Research and Prevention), 4 February 1998, Lima.
- 6 "Un Niño Rudo, Devastador," El Sol, 8 de Febrero de 1998, Edición Especial, B1.
- 7 Jennifer Brill, "Peru Bears the Brunt of El Niño," <u>Disaster Relief</u>, 17 April 1998, Electronic Edition 1-2; Antonio Sanchez, "El Niño Arremete en Todo el País," <u>El Sol</u>, 10 de Febrero de 1998, 1.
- 8 Personal interview, Mateo Casaverde, meteorologist and advisor headquarters of INDECI (National Civil Defense Institute), 2 February 1998, Lima; Personal interview, Ena Jaimes Espinoza, meteorologist SENAMHI (National Meteorological and Hydrological Service), 4 February 1998, Lima. See also, Sonia Muñoz, "El Niño Conmueuve al Mundo," El Sol, 8 de Febrero de 1998, Edición Especial, B1.
- 9 Personal correspondence, Lone Wind, Programme Officer United Nations Development Programme, 30 January 1998, Lima.
- 10 A state of emergency has been declared in over half of Peru's departments. See "Gobierno Declaró en Emergencia 16 Departamentos del País," <u>El Comercio</u>, 20 de Febrero de 1998, 1-2.
- 11 Hugo Vallejos Muñoz, "Se Han Perdido 114 Mil 445 Hectáreas de Tierras Cultivadas," <u>El Comercio</u>, 29 de Marzo de 1998, Edición Electrónica 1.
- 12 "Plagas y Enfermedades Afectan 39,917 hectáreas en la Sierra, <u>El Comercio</u>, 3 de Abril de 1998, Edición Electrónica 1.
- 13 "Senamhi Sostiene que Hay Déficit de Lluvias en Puno," <u>El Comercio</u>, 26 de Febrero de 1998, Edición Electrónica 1.
- 14 "Crisis Agobia a Saladores de Pescado en Chimbote," <u>El Comercio</u>, 3 de Abril de 1998, Edición Electrónica 1; "El Niño' Perjudicó la Pesca Industrial pero no la Artesanal," <u>El Comercio</u>, 27 de Febrero de 1998, Edición Electrónica 1.
- 15 Personal correspondence, Martin Blum, Program Official LWR, 22 June 1998.
- 16"Turismo Interno Está Mostrando una Baja Considerable Admitió Ministro Caillaux," <u>El Comercio</u>, 24 de Febrero de 1998, Edición Electrónica 1; "Demanda de Pasajeros y Envío de Encomiendas se Reduce Hasta 80%," <u>El Comercio</u>, 28 de Febrero de 1998, Edición Electrónica 1-2; "El Niño Afectó Producción de Todos los Lotes en Talara," <u>El Comercio</u>, 6 de Marzo de 1998, Edición Electrónica 1; "Suspenden Labores en Minas de Lunar de Oro," <u>El Comercio</u>,

- 16 de Marzo de 1998, 1; "Comercio en Ica se Restablece Lentamente," <u>El Comercio</u>, 11 de Marzo de 1998, Edición Electrónica 1.
- 17 "PBI de Piura Tendrá Caída Drástica Asegura su Cámara de Comercio," <u>El Comercio</u>, 2 de Marzo de 1998, Edición Electrónica 1; "Gobierno Reduce Crecimiento del PBI para 1998 a 4%," <u>El Comercio</u>, 27 de Febrero de 1998, Edición Electrónica 1-2.
- 18 "Inflación de Febrero que Llegó a 1.3 Superó los Cálculos del Gobierno," <u>El Comercio</u>, 1 de Marzo de 1998, Edición Electrónica 1; "Fenómeno del Niño Afectó Levemente Precios de Alimentos en Enero," <u>Expreso</u>, 3 de Febrero de 1998, Economia 9.
- 19 "El Niño ha Deteriorado 1,500 kmts. De Carreteras Asfaltadas en el País," <u>El Comercio</u>, 23 de Mayo de 1998, Edición Electrónica 1; Personal correspondence, Martin Blum, Program Official LWR, 22 June 1998.
- 20 "'El Niño' ha Dañado 597 Escuelas en Todo el País," El Comercio, 3 de Marzo de 1998, Edición Electrónica 1.
- 21 "Costos por 'El Niño' Serán de 861 millones de dólares," <u>El Comercio</u>, 26 de Marzo de 1998, Edición Electrónica 1.
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