Voices & ideas

Chosica: Prevention Bears Fruit

The landslides (known locally as huaycos) that fell on settlements along Peru's central highway on February 15, 2009 were nothing new, yet we are now able to extract some preliminary lessons from this extremely frequent problem.

Huaycos occur almost every year between December and April. They are caused primarily by the mountainous terrain along a swath of land that rises from under 1,000 to over 3,000 meters above sea level in only a few kilometers. Usually, rainfall in this area is relatively moderate. However, every 10 to 15 years certain atmospheric conditions occur that bring clouds over the mountains from the jungle, resulting in torrential rains in the upper reaches of streams that flow past villages located along their banks. These rains fall on enormous masses of fragmenting rock that are very unstable, causing them to slide down the hillsides into the riverbeds and hit populated areas.

The landslides people remember the most coincide with the El Niño phenomenon —in 1925, 1983, 1987 and 1998— but this year's landslides occurred in the absence of El Niño. In 1925, the Rimac River reached its historic high flow due to mudflows (500 m3/sec), flooding large areas of what is modern-day Metropolitan Lima. In 1983, landslides destroyed hundreds of homes along the central highway, and buried several villages and Las Quiscas recreational area in Santa Eulalia. In 1987, seven huge landslides in Chosica coinciding with El Niño buried 500 houses and left 200 people missing. The streets of Chosica and the central highway were filled with mud and rocks, some the size of a normal bedroom. Recently, we were able to visit El Pedregal, the hardest hit area, where the local people have rebuilt their homes on top of the ones that were buried, which in some cases are now being used as basements.

In all these disasters, people talked about the lack of prevention. Finally, after what happened in 1987, a radical change took place. Now we have evidence of how flood prevention measures taken in the last decade have limited the destructive effects of these avalanches of mud and rock. First, even though the flow of the Rimac River on that Sunday on February 15 (97 m3/sec) was greater than on March 3, 1994 (92 m3/sec) — which flooded the port of Callao, destroying 427 houses, and affecting industrial facilities and close to 10,000 people—, losses were comparatively low. This can be explained by the flood protection works built along the river since 1989 and the maintenance of the riverbed near Callao. Second, this time the mudflows in the Chosica streams (Quirio and Pedregal) carried smaller-sized rocks at a lower velocity than in 1987 because of the water flow regulation dikes built by the municipality, the Center for Disaster Prevention and Research (PREDES) and the Ministry of Transportation between 1990 and 1999. Today, we lament the disappearance of three people and the damage to some 50 homes from huaycos of similar proportions to those in 1987, but in this case a disaster that could have been similar or greater to that one was prevented.

But prevention works were not the only thing that brought security to the towns in Chosica over the past decade. Community leaders also reacted before the rains came and called the mass media to demand such works. In addition, communities were involved both through local work days and in developing the agreements about measures to be taken. The electric power company refused to install household service unless a home was located in a safe area. The media informed about the takeover of lands along riverbeds for homebuilding, and unscrupulous real estate developers were sued by the Peruvian National Civil Defense Institute (INDECI). In addition, active citizens' oversight led to uncovering corruption in some of the river defense projects.

All of the above led Chosica to be recognized as an example of how a community can prevent disasters, and its experience was shared by the United Nations at the 1994 World Conference on Natural Disaster Reduction, held in Yokohama.

Today, the situation is becoming particularly hazardous again because there is evidence that the dikes have come to the end of their useful life and complementary projects have not been completely built. This makes us think that when new huaycos occur, we might end up bemoaning increasingly greater destruction. Furthermore, the gullies in the slopes next to settlements have not been treated for many years and new houses have been built in these areas. Finally, reservoirs and channels above the villages are not sufficiently protected.

Community organization around civil defense has grown weaker and the different agencies and official institutions involved do not seem to have the capacity to respond. Calling on local residents to establish early warning systems and evacuation routes and areas is all fine. However, these measures would be much more effective if the people and the bodies involved prepared ahead of time and were able to include risk reduction in the plans and budgets of the different public and private institutions. The great challenge now is to respond to an emergency, recognizing that the prevention measures of the past have run their course and that we need to develop new policies and strategies to reduce risk.

CRISIS OR MITIGATION?:
The role of relationships between institutions and communities in disaster recovery assistance

Photo: Choluteca Honduras /Zack Clark/Wikipedia Commons

Introduction

In this brief article, I would like to review the anthropological complications of disaster recovery policy and practice as they were confronted by institutional actors and affected populations in the reconstruction of two resettlement communities in Southern Honduras after Hurricane Mitch. What I mean by anthropological complications in these cases is the way recovery policy and practices can articulate assumptions about the nature of people, society, and communities that are either not relevant or enhance social inequities in the contexts where they are applied. This is an issue that has been thoroughly investigated in the fields of urban planning and development (Caldeira and Holston 2005, Escobar 1995, Ong 2006)

but that remains to be fully explored in disaster studies (Maskrey 1995). For the reader, this may seem like an uninteresting point of departure. One may easily say: "Of course NGOs and government agencies are aware of the necessity of making culturally sensitive policy decisions," but, what I would like to demonstrate in this article is that, while this is easily recognized in theory, the cultural implications of disaster recovery policy are much more difficult to recognize in practice.

Second, one may say that there is more to the application of policy than such a focus could lead one to believe. Whether disaster recovery policy is culturally sensitive or not, it is never a totalizing force. As a number of anthropological studies of disaster

have demonstrated (Fortun 2001, Oliver-Smith 1986), people are always resourceful agents who navigate the social and material circumstances that emerge in post-disaster settings, making new meanings and creating new relationships to take on the tasks at hand. Indeed, the cases I will review will demonstrate that this is the case. Even in the most dire of circumstances, disaster-affected populations strive to cope with institutional rigidity and the unintelligibility of aid distributed in arrangements that do not match local patterns of resource use, sociality, and symbolic value. Still, the reviewed cases will also demonstrate that there can be variable outcomes to disaster recovery efforts, that institutional policies can cause unnecessary hardship on populations who are already at the brink of emotional, social, and logistical collapse, and that there are occasions when institutional resources can be used in alternative manners that help meet the objective of mitigation in a more efficacious manner.

The case study: Choluteca, Honduras

Limón de la Cerca and Marcelino Champagnat are two resettlement communities constructed 7 miles east of the Honduran city of Choluteca after Hurricane Mitch. These communities, I would like to argue, displayed dramatically different reconstruction outcomes three years after the storm, one featuring conditions of social crisis and one making important strides toward mitigation. I would also like to argue that in the case of the community in crisis (Limón de la Cerca) these conditions were the result of the articulation of three variables, which included: 1) the position of disaster-affected families in the broader social topography of Choluteca – Limón residents were categorized as clase obrera, "working class" – 2) the rigid mobilization of expert knowledge on the part of housing reconstruction program managers and local government officials that limited the capacity of residents and program managers to transform reconstruction aid into arrangements that were culturally relevant and environmentally adapted, and 3) the epistemological limitations of major international donors who could have provided oversight of reconstruction projects, but were incapable of doing so due to the constraints of their knowledge-making systems. In the case of Marcelino Champagnat, in contrast, housing construction program managers established different relationships with the community leaders, relationships in which expert knowledge was mobilized as a non-negotiable part of reconstructing affected communities.

The differences between the two communities included:

1) The proliferation of adolescent streetgangs called maras in Limón, while, in Marcelino, these gangs remained subordinated to a tightly-knit group of community leaders.
2) The construction of 900 homes whose dimensions and aesthetics were not readily recognizable by residents as houses (residents routinely referred to the houses as matchbox houses) and whose structural properties were not suited to the local environment in Limón, while 330 more spacious and culturally-relevant houses were constructed in Marcelino Champagnat.
3) In Limón, land distribution patterns on the part of the municipality deprived the site of a significant element of its leadership and fractured important social networks that were an important means of securing childcare assistance, protection from robbery and violence, and of creating the sentiment of "hallarse" (to find oneself at ease). Hallarse was the criterion used by residents to determine the collective success of reconstruction programs.
4) The incompletion of infrastructural projects in Limón, such as electrification, while similar projects had been successfully completed in Marcelino less than two years after the storm.

The information presented below was collected during a 13-month ethnographic study from June of 2000 to July of 2001. What was interesting to me as an ethnographer was how, in the course of ethnographic interviews, NGO project managers and consultants routinely explained the differences between the two communities in terms of essentialized properties of community residents.

Limon residents were referred to as an urban, marginal, and dependent population, incapable of self-governance, while Marcelino Champagnat was represented as a community composed predominantly of a rural population, with a history of community organization. The completion of 160 household surveys and 40 ethnographic interviews, however, revealed a different story. Residents from both communities originated from the same 9 neighborhoods that lined the Choluteca River and had, in the immediate aftermath of the storm, attempted to act as a single community. Moreover, my ethnographic research revealed that

Photo: Choluteca Honduras /Zack Clark/Wikipedia Commons

the different conditions in the two communities were not due to the internal properties of disaster survivors (dependency, marginality, urbanism), but were the product of the social relations established between disaster survivors, NGO project managers, and local government officials.

The leadership of the emerging community of disaster survivors in post-Mitch Choluteca was composed of neighborhood and religious leaders who, in the face of a slow local government response, took a proactive role in the search for a permanent solution to their displacement status. These residents identified a suitable locality for housing reconstruction seven kilometers to the east of the city along the Panamerican Highway, a major international road. The site was known as El Limón de la Cerca after a nearby peri-urban community of the same name (figure 1). Because of the sluggish municipality response, the grass-roots leadership of disaster survivors decided to organize a protest to exert pressure on local government. The protest was seen as a divergence from the expected role of disaster survivors, who were expected to be passive and grateful, not pro-active and assertive. As Mary Douglas (1992) and Emma Crewe and Elizabeth Harrison have noted, this is a common expectation on the part of donors and institutional actors in relief programs. Consequently, the municipality intervened by deploying the local police department, arresting protestors, and organizing a municipality land-committee.

The land committee reduced the size of the land parcels from the 400 square meters originally desired by the community leaders to 200, and randomly distributed the land through a raffle. For disaster survivors, 400 square meters were deemed an adequate size for land parcels, as many families practiced animal husbandry and used their gardens to grow fruit trees and vegetable gardens that supplemented household incomes and diets. For municipality and NGO officials, in contrast, disaster survivors were perceived as urbanized populations, for whom minimally-sized land parcels should be sufficient. The leaders who organized the protest were excluded from the raffle and left without lands. The excluded leadership, then, proceeded to invade a neighboring land, and founded Marcelino Champagnat in early 1999.

The random distribution of land parcels by the municipality land committee implicitly conceptualized Limon's residents as alienated subjects who can transform minimal investments into a fruitful resettlement zone. These implicit assumptions, however, resulted in the fragmentation of important networks through which Limon residents guarded each other's homes in Choluteca prior to Mitch, and assisted each other with child care. The raffle created conditions of anonymity, which opened a social space that was filled by adolescent gangs called maras, who, in 2000 moved with impunity during night time hours in Limon. While street-gang graffiti was ubiquitous in Limón during the course of this ethnographic study (figure 2), not a single example of mara graffiti was observed in Marcelino Champagnat.

Conditions of social fragmentation were combined with home construction practices on the part of NGOs that were not suited to the aesthetics, kinship structures, and environmental conditions of the site. In Limon de la Cerca, 1200 homes were constructed, the majority of which (900) followed a basic floor plan: single room 25 square meter structures (Figure 3). The median household size according to our survey was of 7 persons, making the structures crowded at nighttime hours and with limited possibilities for expansion due to the small size of the house lots. The structures were built without reinforcing columns on their corners (Figure 4) and tin roofs that were easily lifted by the semiarid plain's winds (Figure 3). The houses were delivered to their owners without ornamental embellishments such as plaster or paint, and their bare cinder-block walls gave the community a drab uniformity during the course of this study. Twenty seven percent of interviewed male residents reported construction work as their primary employment and demonstrated knowledge of construction techniques. Although these residents requested alternative construction practices, NGO architects and project managers insisted that these requests could not be implemented due to cost-benefit constraints. Ironically, the cost to implement some of the resident suggestions, such as the construction of reinforcing columns, would have increased costs primarily in terms of labor, not materials, which was predominantly provided by the disaster survivors themselves.

At the same time, United States Agency for International Development (USAID) project evaluators noted that considerations of cultural relevance had to be made secondary to the institutional requirement that reconstruction funds be spent within the fiscal year. Spending money on time was a primary challenge for the agency, while residents were denied alternative arrangements of reconstruction resources under the auspices of cost-benefit constraints. It was through this paradox that power was articulated in the reconstruction of Limón in such a way that community residents found themselves challenged in their capacity to transform aid programs into environmentally and socially adequate arrangements. Furthermore, USAID, which funded housing and infrastructure projects in Limón, relied on fiscal transparency and the requirement of integrated solutions (the expectation

that reconstruction communities be in the vicinity of roads that connect them to labor markets and educational facilities and that they be equipped with sewage and electric infrastructure) as its mechanisms for determining whether reconstruction programs were progressing successfully. These requirements, however, were not capable of recognizing the conditions of social marginality emerging as a result of reconstruction practices on the part of local government and NGOs in Limón.

In Marcelino Champagnat, in contrast, relationships between residents and NGO program managers took on a different quality. Resident leadership in this community became renown for its resistance to aid that was deemed inadequate. Marcelino residents, for example, opted to remain living in canvas tents rather than accept temporary housing units, which they feared could become a permanent living arrangement. In the same way, they resisted the intentions of the NGO CARE to build 100 single room 25 square meter structures. At the time of this ethnographic study, residents proudly retold their encounter with CARE housing program managers. "We told them we did not want their matchbox houses!" a resident commented during an interview.

In contrast to the experience of Limón residents with NGO housing program managers, CARE staff negotiated the dimensions and floor plans of houses, changing their proposed project to the construction of 80 houses with 35 square meter floor plans with internal partitions for bedrooms, ornamental plaster on the front façade, and reinforcing columns on their corners. While in Limón housing program managers mobilized expert knowledge in the form of narratives of cost-benefit to resist resident requests for alternative housing construction practices, in Marcelino, CARE staff responded to resident resistances in a creative way, negotiating housing design and revising their proposed budget to accommodate the requests of community residents. The CARE program manager reported using architectural blueprints from a nearby reconstruction community, Renacer Marcovia, that allowed for larger dimensions and internal partitions. Using this blueprint allowed him to cut the cost of hiring costly architects. The program manager also opted to use the labor of disaster survivors

Conclusions and Recommendations for Practice

In the case of Limón, we see the perpetuation of the social effects of disaster through the kinds of relationships established between local government and disaster survivors (relationships marked by class difference and cultural expectations on the part of institutional actors that disaster survivors be docile and grateful recipients of minimal aid packages), the rigid application of expert knowledge on the part of NGO program managers (narratives of cost-benefit articulated by NGO architects and project managers were presented as non-negotiable elements of disaster-recovery practice), and the limitations of the knowledge-making mechanisms of agencies such as USAID. At the same time, the case of Marcelino Champagnat demonstrates the importance of resistance in the shaping of relevant community reconstruction programs. The social leadership of Marcelino became renown for its opposition to aid packages and practices that they deemed irrelevant if not potentially marginalizing. This stance, which was originally seen as a threat that had to be contained by the Choluteca municipality and police department (the deployment of police to disband the protest over the delayed municipality response is a case in point), was an important element of crafting disaster assistance programs that were adapted to the specific social and environmental necessities of the reconstruction site. This observation may very well frustrate the practitioner and policy-maker who insists that it is logistically impossible to predict the cultural and environmental contingencies of disaster recovery projects. Social theorists Andrew Pickering (1995) and Pierre Bourdieu (1977) would agree, the practitioner never knows the contingencies that will be encountered in the moment of practice, and this is why the application of reconstruction policy must follow a principle of flexibility and adaptability as one of its central tenets (see Bankoff and Hilhorst 2004). Reconstruction program managers must maintain an

awareness for the possibility that all reconstruction policies and practices inevitably will make assumptions about the nature of personhood, community, and social wellbeing, and that some of these assumptions may not be adequate for the particular locality where a project is to be implemented. These assumptions, although perhaps inevitable, do not have to result in the perpetuation of the social impacts of disasters. Project managers who develop a disposition that allows them to negotiate their projects with disaster-affected populations, as in the case of CARE housing project managers in Marcelino, stand a greater chance to mitigate the impacts of disasters than those who do not. Finally, project managers must maintain an awareness for those principles of reconstruction (cost-benefit narratives, secondary housing markets, equity through random resource distribution) that are upheld as non-negotiable elements of policy, as the rigid application of these "non-negotiables" is likely to act as a limiting factor in the mitigation of a disaster's effects.

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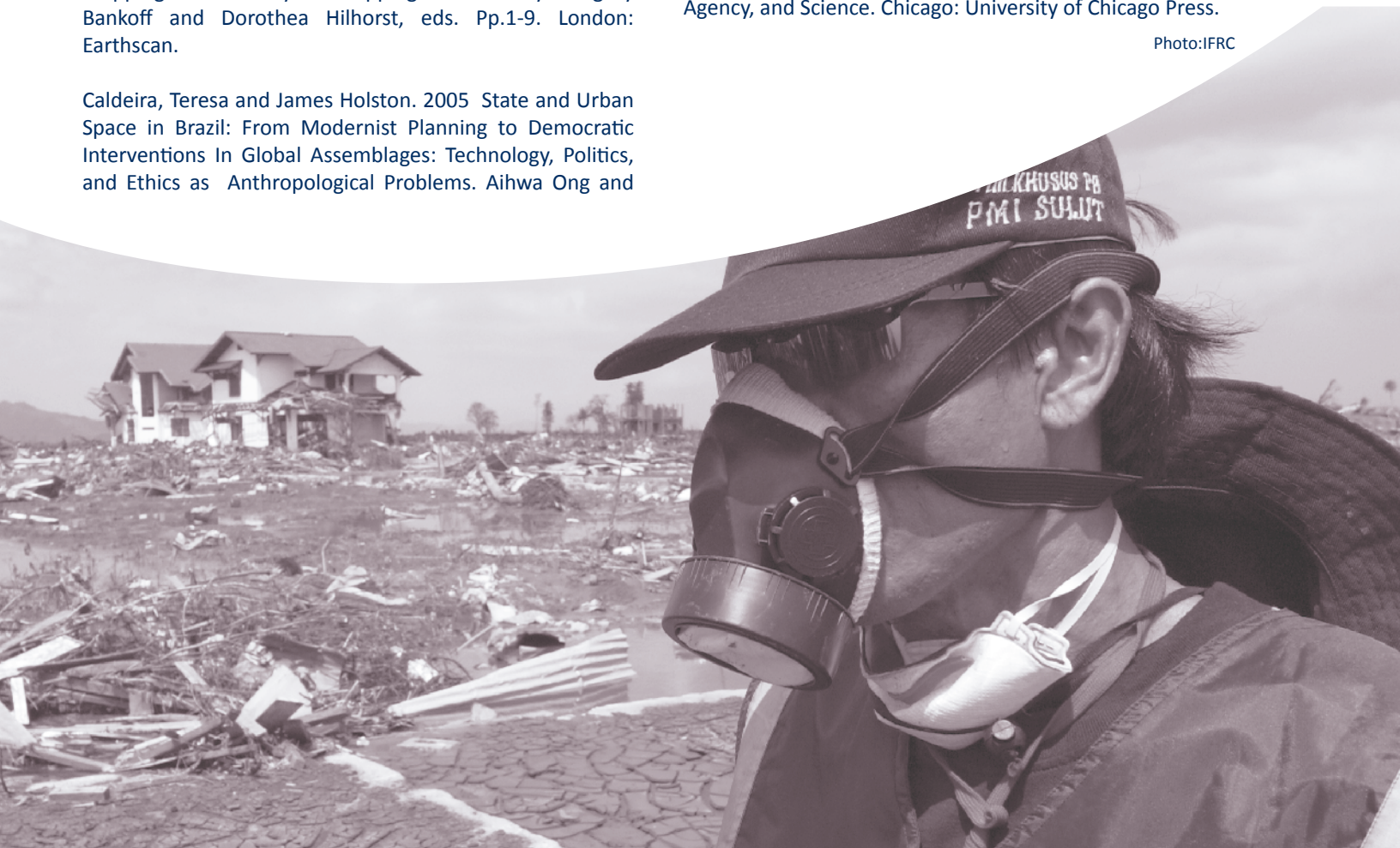
Contingency plans for coping with disasters: A need that cannot be postponed

Photo:IFRC

Preamble

This article is based on a presentation called "Methodological Aspects of a Contingency Plan" made by the author (who was then a member of the Commission's Technical Committee) at the "Bi-national Seminar for the Development of a Modus Operandi on Cooperation and Mutual Assistance in Cases of Emergency and for the Preservation of Ecosystems," held in San Cristobal on June 28 and 29, 1991 at the meeting of the Colombian-Venezuelan Commission for Border Issues.

Both the presentation and this article are based primarily on the experiences gained during the development of the "Contingency Plan of the Eastern Coast of Lake Maracaibo," better known as Plan COLM, and the activities taken by the author during the last few years in the field of disaster risk reduction.

Risk reduction management in Venezuela

The disasters caused by the hydro-meteorological phenomenon that battered a considerable portion of Venezuela in December 1999 (see "Un experto damnificado o un damnificado experto," EIRD Informa, Number 1, 2000 and "A cinco años de la tragedia de Vargas," EIRD Informa, Number 11, 2005), and other hydro-meteorological related disasters that have continued to hit the country since then, have made it clear once again that there is an urgent need to prepare our population to cope with these disasters, regardless of their origin (natural, technological, anthropogenic, or environmental) through preparedness, dissemination of information, and the development of appropriate contingency plans.

These plans will not eliminate the negative effects of such disasters on the population, the environment, and the infrastructure, but it will contribute to mitigating them.

While isolated and local efforts have been made in Venezuela in this sense (I refer to the Contingency Plan for the Eastern Coast of Venezuela, known as PLAN COLM), we are very far from having local, municipal, state, and regional plans within a national policy of disaster risk mitigation.

This article aims to present the most relevant conceptual aspects of a contingency plan, regardless of its area of implementation (local, municipal, state, regional, or national), as well as the problems that must be addressed when preparing for disasters, disseminating information, and establishing plans, and what some of the solutions to those problems might be.

The importance of contingency plans

The need to plan and prepare to prevent and mitigate the effects of disasters is not as evident as it should be, since there is a resistance on the part of the population in general and of the ruling class in particular to confronting an inevitable truth: disasters arising from natural phenomena have occurred, do occur and will continue to occur.

This resistance is understandable in some ways, but it is not necessarily acceptable. In a world like ours, wracked by thousands of problems, and with millions of people seeking to meet urgent needs, it seems almost natural that our decision-makers (whether government officials or private enterprise leaders) would tend to be involved in solving the most immediate day-to-day problems, leaving the less immediate problems for later. Less immediate problems are not necessarily less important, however, and that is the case with disaster response, mitigation, prevention, and management.

To try to convince —to educate— our political and private enterprise leaders to commit what, in the end, are very modest resources for planning for disaster prevention and mitigation will be a fruitless exercise if we do not keep in mind how low a priority these activities generally are for these leaders. We must begin by raising their awareness and by educating them.

All planning activities (related to the development of contingency plans) include actions to instruct ourselves and others about how to act in a crisis situation. In perhaps more conventional terms, when we talk about training and education, we are referring to the dissemination of information to different audiences, in various ways and at different levels of education —to raise public awareness (defining ahead of time what is "public").

So far we have been talking about "contingency plans" in one context or another. But perhaps we should talk about "planning" instead of talking about a "plan." A plan must be dynamic, living. It must be practiced using exercises and drills in the daily life of the people the plan is aimed at. A contingency plan must contribute to raising awareness of risk among the population.

The primary goal of a contingency plan is, therefore,

to minimize the social and economic impacts caused by a disaster. The key word here is minimize because no contingency plan, no matter how well designed, prepared, and practiced, will be able to totally eliminate the negative effects of a disaster, regardless of its origin or scale.

A successful contingency plan must:

- Reduce response time in an emergency, whether there is prior warning (such as in the case of hurricanes, storms, floods, and volcanic eruptions) or not (as is the case with earthquakes, tornadoes, landslides, fires, or explosions).
- Make systematic, ordered, and efficient what would be arbitrary, chaotic, and inefficient without a duly conceived of and practiced plan.
- Control contingencies through good decisions and consistent actions.
- Comply with legal standards.

Conceptual framework of a contingency plan

A successful contingency plan must be based on a conceptual framework such as the following:

- Goal
- Risk analysis and definition of the affected area
- Collection and analysis of basic information
- Mapping
- Inventory of buildings and service infrastructure
- Demographic information (censuses and surveys)
- Analysis of scenarios/ impact assessment
- Warnings
- Development of a specific plan
- Dissemination of information
- Training and education (exercises and drills)
- Updating and refining.

Finally, we must devote more efforts to raise awareness among decision-makers, both government officials and private parties, in order to prepare contingency plans aimed at mitigating the negative effects that disasters due to natural origen have on the population, the environment, and development processes.

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Agents of Change: The Role of Children and Youth in Disaster

Photo: Thomas Tanner

Summary

Children and youth have been regarded as passive victims in disaster situations, which are becoming increasingly frequent in our countries. Heretofore, the main concern has been how to protect children during and in the aftermath of a disaster. This article looks at links between the participatory experiences of youth groups in development and the emerging focus on risk reduction and disaster prevention. Case studies from El Salvador, Central America, illustrate the enormous potential of youth groups as agents of change in their communities. They also point to important mechanisms for actively involving children and youth in risk management and disaster prevention, which is critical to addressing climate change.

Children, youth and disasters: vulnerability and creativity

The literature characterizes children and youth as a vulnerable group with specific protection needs during and in the aftermath of a disaster. Several health studies have looked at high mortality rates among children due to extreme events; over the next decade, an estimated 175 million children could be affected annually by climate-related disasters.1

In recent years, children and youth have become involved in risk management activities through the school system. This approach has mainly entailed the use of educational materials and measures to protect school infrastructure. There are also examples of the

1 Save the Children (2007). Legacy of Disasters: The impact of climate change on children. Save the Children Fund, London.

participation of youth groups in community-based analysis and decision-making processes pertaining to risk management.

Research on actions related to disaster risk and climate change: the case of El Salvador

Research involving youth requires a careful and sensitive methodological design. The primary method used to generate data for this study was direct contact with target groups and semi-structured interviews in households to gather information from other family members, as well as with governmental and non-governmental institutions.

Community profiles

The communities of Potrerillos and El Matazano 1 are part of a sample of ten localities in El Salvador. They were selected as part of a broader research effort that also includes comparative communities in the Philippines. El Salvador is affected by frequent disasters such as earthquakes, floods, hurricanes and landslides. Case studies show that this vulnerability profile is associated with its mountainous topography, as well as its high poverty rates. These two communities were chosen for a comparative analysis that juxtaposes two national scenarios: rural and urban areas. There are significant differences between these two social categories in terms of access to resources, production models, social dynamics, and political contexts.

Potrerillos is a rural village [canton] in Carrizal municipality, Chalatenango department, located on the Honduran border. Half of its population of approximately 427 is under 19 years of age. The community relies primarily on subsistence agriculture, and its main crops are sorghum, beans, annatto, squash and loroco (an edible flower). Most families rely on remittances sent by relatives in the United States, for a significant portion of their income.

El Matazano 1 is located in Santa Tecla municipality, La Libertad department. Approximately 56% of its population of 1,363 people is under the age of 19. Formerly an agricultural community, urbanization processes have overtaken its coffee and corn plantations. Because of its proximity to the cities of Santa Tecla and San Salvador, most locals now commute to urban areas to work.

Youth groups initiatives

With support from the Church, the mayor's office, the Japan International Cooperation Agency (JICA), CARITAS, and Plan El Salvador, groups from these two communities have been trained as part of an effort to increase the participation of children and youth, and equip them with basic skills to manage their organizations. Trainings have covered topics such as youth leadership, risk prevention, first aid and drills, preventive health, financial management, children's rights and computer lessons. Courses lasted between one weekend and a full week.

It is worth mentioning the importance of the training sessions on Vulnerability and Capacity Analysis (VCM), an important methodology for assessing, planning and implementing risk management-related actions. The VCM includes a number of tools such as seasonal and historical calendars and community risk maps, among others.

The following components were examined:

- Community history
- Seasonal calendars
- Community risk maps
- Stakeholders analysis
- Maps of community resources and capacity.

Following the conclusion of the VCM training, emergency committee members[2] organized community presentations.

Children and youth as effective actors in disaster prevention

The children's and youth organizations studied show that they play an important leadership role at the community level in four basic areas:

- Strengthened capacity for risk analysis and identification
- Ability to implement actions in response to risk, in keeping with the capacity developed
- Communication skills on different topics including risk prevention
- Decision-making.

[2] Emergency committees comprise organizations of children, youth or adults whose members have been trained to assist families in their communities in case of a disaster (earthquakes, landslides, floods, etc.)

The data reflect similar evidence from other countries where children's and youth groups had developed important skills in identifying risks in their communities. The groups acquired such skills by participating in risk management training processes and exchanges. Children and youth show increased awareness of hazards such as landslides, floods, power lines that could fall down, excessive driving speeds, water pollution and deforestation.

Various methodologies have been used to develop objective perceptions of risk in communities. One of these is risk mapping which, based on a sui generis symbolism, identifies the most vulnerable individuals, families, and geographical areas.

Another important sign of their increasingly proactive role, is that children and youth are already addressing risks in their communities. Their activities fall into two categories: 1) Risk reduction, such as the construction of speed bumps, plastic trash pick-ups to prevent pollution, reforestation, and awareness-raising about risk management, and 2) Preparedness and surveillance, including measures to organize and facilitate effective warning, rescue and recovery operations in the event of a disaster. This is particularly true of the youth group in El Matazano 1, which has increased its capacity to manage temporary shelters, conduct victim censuses and organize brigades. In addition, when warning systems are activated in the area, children and youth patrol the most vulnerable areas to ensure the well-being of people.

All of the groups analyzed have also improved their communication skills, participated in activities to communicate risks that arise in the community, and used communications strategically to leverage resources for their projects. The new focus on the human dimension of vulnerability, rather than strictly physical aspects, has challenged the dominant approaches to risk regulation and notions about the types of hazards that experts should communicate to the public.

Conclusions

The examples of these two communities in El Salvador highlight the potential of children and youth to directly participate in development processes in their communities. Children and youth have built relevant capacities for risk management, not only based on

physical aspects, but also on psycho-social and cultural elements.

In terms of psycho-social risks, there is evidence of consistent efforts to strengthen group identity and solidarity, which reinforces their status as relevant actors in their communities. It also helps them resist the risk of joining a gang, and reduces their sense of social exclusion due to their economic and social status or the feeling that they are merely observers of development. Contact with institutions that value their role has boosted their self-confidence and encouraged them to forge ahead.

In terms of culture, there is a strong presence of young people seeking to recover the cultural elements that shape their identity, especially in the context of globalization and the tendency to adopt lifestyles that are culturally distinct from local customs. This entails a much broader vision of what risk represents.

(Endnotes)
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The submerged economy of risk:
the case of the Dominican Republic

After spending over a year talking to hundreds of people in the Dominican Republic who live in risk areas and are affected by floods, the same questions kept arising: What measures would you take to keep your house, your crops and your cattle from being flooded out and your buildings from being destroyed? If you were able to manage risk in this country, where would you aim your strategies? The same answers also kept cropping up. More "picks and shovels" for emergency agencies, an effective communications system for early warning and rapid evacuation, greater collaboration among organizations, better facilities, and the one heard most often: "raise public awareness about risk." I agree with all these responses, in particular with raising public awareness to educate people about what risk is all about.

In the city of Baitoa, located in Santiago province, downriver from the Taveras dam, a woman living alongside the river told me her house had been destroyed by the "discharge from the dam during Tropical Storm Olga," in December 2007. And, to my question as to why she rebuilt her house on the same site where it had been destroyed by the flood, she said that she did not have any money to build in town and there, where she was living, no one asked her for money. This is but one example of the many similar stories one hears throughout the country.

But I am not going to talk about the people who are unaware of existing risks, but rather about those who know it well. They know it so well that they take advantage of catastrophes and disasters, and profit from the flooding of their cropland and pastures, and from the loss of their home and other assets.

In the Dominican Republic, it is well known that many people live in areas that are highly exposed, and therefore, at high risk —such as riverbanks, unstable hillsides, entire neighborhoods crammed into highly dangerous urban ravines... It appears that there can be a payoff from living in a high-risk area, because of the high probability of being the prize-winning victim in the next catastrophe. With a little luck, the Civil Defense Bureau will come and get them out of their homes, which will then be knocked down by floods, rains or

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some other natural phenomenon.   The result: thousands of homeless, and public institutions building houses in areas that are supposedly not at risk, in order to house all these people.[1] According to ECLAC, floods in November 2003 left 16,160 houses damaged or destroyed, with a cost of 62 million pesos (US$1.8 million) for rebuilding and relocation processes.

Most of the people who were relocated either had informal subsistence jobs, or devoted themselves to farming or livestock, and now their uninsured lands and herds have been harmed, or they are out of work altogether. Now, they have no capacity for saving and their source of income has dwindled or dried up. But they do have a house, the sale of which could give them enough money to live off of for a few years, until the next disaster comes along.

In May 2009, during a seminar on "Risk Management Inclusion in Planning and Public Investment," Guarocuya Félix, Undersecretary of Planning, stated that, "natural disasters require allocating approximately 1 percent of the national budget each year to mitigation measures and compensation for damages."
Public institutions invest money in building houses, but in the end, the situations looks similar to the way things were before the disaster: people living in the

[1] ECLAC, Economic Commission for Latin America and the Caribbean (2004). República Dominicana: Evaluación de los daños ocasionados por las inundaciones en las cuencas Yaque del Norte y Yuna, 2003. Page 39, table12.
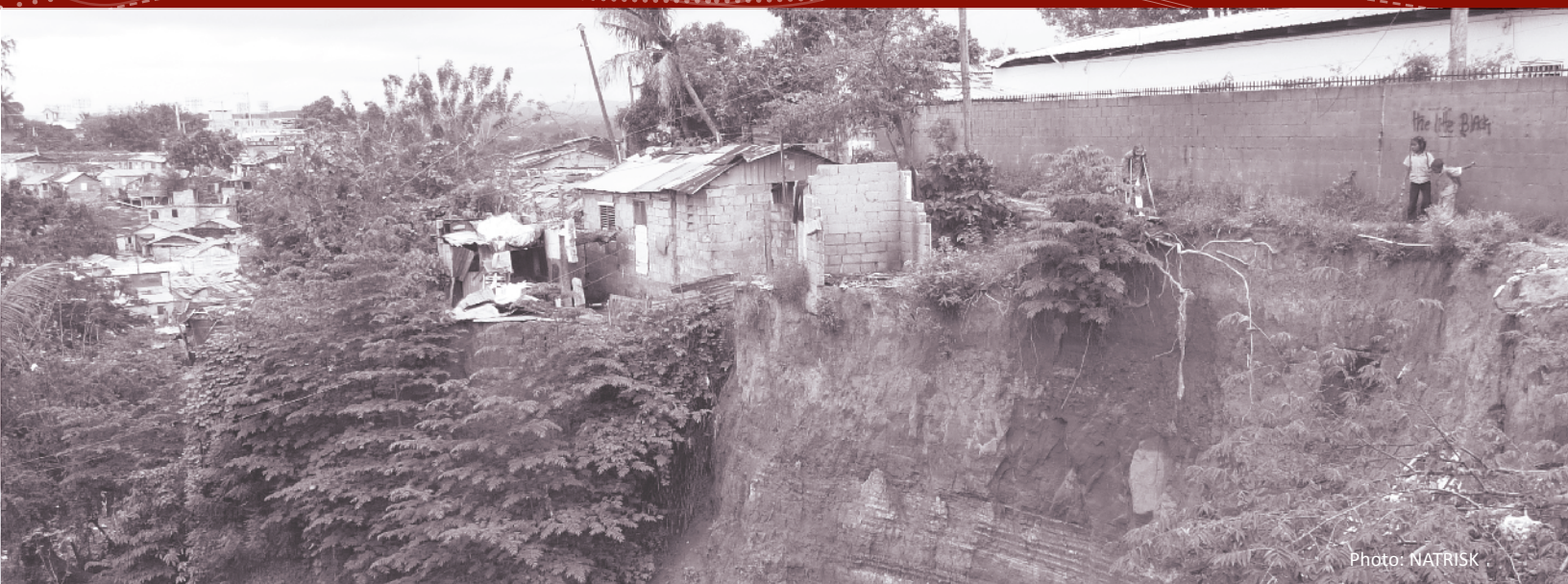
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same areas that were affected. And this not only refers to residents who were living in those areas before, but also more people who move there and are eager to "win a house" in the coming years. Their exclusion from society forces these people to become outlaws. The submerged economy often offers livelihoods to the disadvantaged who take a beating from an economic system that has failed to meet their needs.

But is it only the people who engage in these practices who benefit from this risk? No. They are the true losers in this system, which forces them to gamble with their lives and put a price on their children's heads, in order to provide for them while subsisting in makeshift housing.

The true "submerged economy of risk" develops when these situations are permitted, when quick fixes are sought for short terms of no more than four years, in time to earn votes for the next election. These are the true hidden revenues earned from disaster.

The definition of risk has been amply studied, along with the elements involved in it: hazard, exposure and vulnerability. With regard to hazard, nothing can be done; these are natural and no one can keep a tropical storm, hurricane and other adverse natural events from occurring. In the face of vulnerability, which refers to the intrinsic conditions in the population for anticipating, surviving, resisting and recovering in the face of adverse events, numerous measures exist, though some are long-haul and costly. This falls outside the study of risk and gets more into macroeconomic concepts at the government level. We are left to deal with exposure: if we are vulnerable, but we are not exposed, our risk will be considerably less.

There are a great number of things that can be done to reduce the level of exposure of the population. The first of these measures would be not to allow communities to grow on river flood areas, even less so when these people have already been relocated elsewhere. To achieve this, risk needs to be mainstreamed into all public sectors, so that all regulations consider risk management. One solution would be to enact a law that prohibits selling houses obtained as part of disaster relocation processes. Another measure would be to enable some of the country's institutions, such as the Civil Defense Bureau, the Dominican Army or the National Police, to take actions to prevent people from settling in defined risk areas. Obviously, implementation of these measures is complex in a society that has historically lived with risk and whose perception of it is much more permissive than what would be desirable. For this reason, these measures and actions would be unpopular, but that does not make them any less necessary.

If we are truly determined to deal with a problem that hits the Dominican society time and again —in particular its most disadvantaged citizens— tangible results must be achieved, rather than simple band-aid solutions that leave the problem festering and waste time and effort. When public monies are invested, criteria must be used that look further than the next election —towards the transformation from a society that "faces risk" repeatedly into one that "manages risk" as effectively as possible to reduce its consequences.

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Not everything is climate change's fault!

When the human body is exposed to certain excesses, such as food-related issues, drugs, emotional stress and even extreme physical effort, it may respond through a number of changes that, sooner or later, will lead to disease. We will never know exactly when these conditions appeared for the first time and to what extent, or when and if we will end up losing our lives because of them. What we know is that if we continue living our lives that way, it will result in something negative.

But, even if we are aware about the potential effects in our bodies —some of them are irreversible— we continue exposing ourselves to these extremes, even after listening to the opinion of health professionals, in hopes that nothing will happen to us.

Something similar is happening to Earth: a number of human activities that have caused deforestation, air and water pollution, and other damage, are gradually getting our planet sick. And people talk about a type of climate change that is causing some negative impacts. During the last few years, we have heard about some of the effects attributable to climate change, such as sea level rise and the disappearance of coastal areas, more intense heat waves and drought, extreme rainfall and floods, the reduction of arable land, insect migration and the incidence of viruses in areas where they did not survive before, more severe atmospheric events, decreases in glaciers, more pollution, and conflict between human groups because of water-related issues.

But is it really climate change what we are experiencing? Although we may not be able to clearly determine this yet, we know that something is happening to the planet, and something more serious might arise in the next few decades. However, we still hope that nothing will happen, so we continue deforesting, burning down forests, killing protected animal species, littering, discharging toxic substances into rivers and oceans, polluting the air, and increasing greenhouse gas emissions.

Currently, in Veracruz, media outlets report more accurately and timely on the damage caused by weather-related phenomena, and inform that rainfall is more intense than 30 or 50 years ago. However, when reviewing climate statistical data, we have been observing similar rainfall patterns for many years. What is true though is that heavy rainfall is now causing more severe damage. This is why we should ask ourselves, what is happening? Is it because the population has increased, because we obstruct river flows, or because we build our houses along riverbanks or in unsafe areas that could flood after a mild rain event? Or is it because our houses are built on steep slopes that after continuous rainfall cause landslides because there are no trees that help hold the soil together, or because there is a low level of development planning in urban centers?

It is worth asking ourselves, what is really happening? Is it indeed climate change? If that is not the case, what will we face when climate change actually arises?

As a whole, society should stop for a moment to think about all actions that we are taking against Earth and ourselves. As the popular adage says, "God can always forgive, man sometimes forgives, but nature never does." What we are witnessing now could be nothing compared to what could happen to us when the full effects of climate change arise.

Governments should take the lead in taking actions to mitigate and/or stop climate change. However, we, as a united society, also have an unavoidable duty: respect for nature.

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