

Beyond Developmental Relief: Disaster Management and the Case of the Philippine National Red Cross

by

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B. Arts, East Asian Studies
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Submitted to the Department of Urban Studies and Planning
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ABSTRACT

In this study I examine a rural disaster management program in the Philippines, undertaken by a humanitarian organization from 1994-1998. I draw four conclusions regarding what organizations need to consider in order to implement disaster management programs that are demand-driven and sustainable, from evidence emerging from this case.

The first is that organizations should design programs that create demand for disaster management based on the community's understanding of the benefits from mitigation and prevention activities.

The second is that organizations should involve local leaders in program training in order to keep demand for development interventions from obscuring demand for disaster management interventions.

The third is that organizations should develop the operational capacity to carry out programs by increasing cooperation between headquarters and field staff.

The fourth is that organizations should draw distinctions of what constitutes a disaster management intervention, educate their staff on these distinctions, and determine with what sectors within the organization disaster management should or should not overlap.

Thesis Supervisor: Meenu Tewari

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LIST OF ACRONYMS

ICRC	International Committee of the Red Cross
OFDA	Office of Foreign Disaster Assistance
USAID	United States Agency for International Development
PD	Presidential Decree
RA	Republican Act
PNRC	Philippine National Red Cross
ICDPP	Integrated Community Disaster Planning Program
DMS	Disaster Management Services (of PNRC)
BDAT	Barangay Disaster Action Team
BDAP	Barangay Disaster Action Plan
CDMT	Community-Based Disaster Management Training
JICA	Japanese International Cooperation Agency

Chapter One: Why Pre-event Disaster Management?

I. Introduction

“Why did you chose to build a protection wall for your water source beneath this eroded hillside?” I ask the local leader of Gusaran, Kapangan, a remote agricultural community in the mountainous Province of Benguet, the Philippines. “Every year members of our community become sick with diarrhea or typhoid fever when contaminated flood water overflows into our community water supply on this hill,” he replies. “So,” I continue, “why not reforest the hillside to absorb the rains and prevent floods in the first place.” “Oh,” he answers, “we have the seeds, but need a site for a nursery, which we haven’t asked the Red Cross to fund yet. We had to take care of our community’s urgent needs first.”

This conversation, which I had during a visit to a pilot community of a Philippine National Red Cross disaster management program in January 1998, illustrates the problems which organizations attempting to implement community-based disaster management programs face at the local level: a sense of urgency by local leaders to meet developmental needs of the community, and a lack of awareness for natural hazards and the potential benefits to be obtained through pre-event disaster management. In this study I argue that while organizations can not ignore developmental needs when working in hazard-prone areas, they should overcome past tendencies to offer developmental relief by focussing resources on creating community demand for disaster management interventions, which have the potential to offer long-term impacts for such communities.

There is growing currency in the literature on disaster assistance that pre-event disaster management, a preventive approach to disaster assistance, (as opposed to the traditional post-disaster relief-based approach) can reduce the physical, economic, and social vulnerability of communities to natural hazards. The literature emphasizes that such planning would prove especially beneficial for developing countries, where the percentage of gross national product lost to disaster is much higher than that of

industrialized countries, and where 95% of the world's disaster-related deaths occur.¹ Yet, for many reasons, these countries most affected by natural hazards have not engaged in pre-event disaster management. These countries may perceive the costs of disaster management as too high or prioritize development concerns over disaster concerns, at both national and local government levels.

Humanitarian, multi-lateral and non-governmental organizations have played a key role in addressing pre-event disaster management. I argue that these organizations have made progress in disaster management in two ways: (i) innovating and implementing programs independently of developing country governments, and/or (ii) providing governments with technical assistance to encourage the incorporation of pre-event disaster management interventions into their domestic disaster policy. Yet few organizations have actually implemented programs that incorporate mitigation and prevention activities. In this study I focus on one attempt by a humanitarian organization, the Philippine National Red Cross (PNRC), to implement a community-based disaster planning program, incorporating mitigation and prevention activities, in eight rural communities in the Philippines. The PNRC case illustrates that effective implementation requires both innovative program design and successful coordination with government legislative bodies at the local level. This case has particular significance for organizations interested in engaging in pre-event disaster management.

In both the development and disaster assistance fields, organizations have tended to prioritize urban concerns over rural concerns, by targeting disaster assistance to regions with large concentrations of population (Cuny 1983, Anderson 1992). When disaster assistance is delivered in rural communities, it generally suffers from a series of problems: delays in the delivery of relief supplies due to poor infrastructure, unequal access to construction/demolition equipment and building supplies, and delays in registration for both relief and rehabilitation funding from government calamity funds. For these reasons disaster assistance organizations have generally avoided funding programs in rural areas.

¹ Office of the United Nations Disaster Relief Coordinator, "The Protection of Human Settlements from Natural Disasters" (paper presented at the United Nations Conference on Human Settlements, Vancouver, Canada, May 31 – June 11, 1976, p. 3.

It is precisely the past poor performance of relief and rehabilitation efforts in reaching the immediate needs of disaster victims that makes rural areas ideal candidates for pre-event disaster management, which could both lessen the effects of natural hazards and decrease dependence on assistance for recovery. Additionally, evidence indicates that the social conditions often found in rural areas, such as community institutions of collective work, intricate knowledge of environs, and socially intact populations prescribing to recognized norms, may enhance implementation of programs. For these reasons, I will argue in this study that organizations should take advantage of rural areas as testing grounds for disaster management pilot projects.

I hope to make an important contribution to the disaster management literature with this study by presenting a case of one organization that has undertaken a disaster management program in a rural area. I use the Philippine National Red Cross case to illustrate the conditions necessary for community-based disaster management projects to work in practice, drawing examples from implementation in eight rural communities. I find two conditions associated with success: (1) involvement of local levels of government in project training, selection, and implementation and (2) sequencing of training methods that increase community awareness of hazards while creating demand for disaster management interventions.

In this chapter, I present some of the current trends in disaster management, including the targeting of certain vulnerable populations and resources for reducing vulnerability. Then I examine programmatic change in the field of disaster assistance, highlighting shifts from relief to developmental relief, and finally to pre-event disaster management. In the last section I discuss the factors which have recently motivated internal reform by many international organizations, leading them to shift from relief to pre-event disaster management.

I begin by clarifying the various concepts related to disaster management.

II. Disaster Management Concepts

Throughout this study I refer to disaster management, as meaning pre-event disaster management, as opposed to the more familiar post-disaster management consisting of relief, recovery and rehabilitation. Definitions for the general components

of disaster management vary among practitioners and scholars, and among countries. For example, in the Philippines, it is not uncommon to see “rehabilitation” listed as a pre-event disaster intervention in anticipation of a future disaster. Similarly “preparedness” might also be considered in the Philippines as a post-event disaster intervention to prepare for the re-occurrence of a cyclical disaster, such as pyroclastic flows after a volcanic eruption. In the following section I define the interventions used in pre-event disaster management, as I refer to them throughout the text, and state the significance of each for organizations and program objectives.

Pre-event disaster management interventions or PMP, include the following:

- (i) *preparedness*: interventions that make response to a disaster more effective through such measures as the stockpiling of food and supplies, education of evacuation routes, construction of shelters, and so on.
- (ii) *mitigation*: interventions that ameliorate the effects of natural hazards through adjustments to the physical landscape, such as flood control measures (dikes, canals and river diversions), or physical remodeling of unstable structures.
- (iii) *prevention*: interventions that ultimately reduce vulnerability to natural hazards through planning that alters land-use and consumption patterns, such as reforestation, conservation of aquifers and sustainable agriculture and forestry.

Support for preparedness, mitigation and prevention tends to flow from different donors; for example, the Red Cross and United Nations have been strong supporters of preparedness, while USAID has generally supported mitigation and prevention. This in part illustrates inconsistencies in the policies of humanitarian, multilateral and non-governmental organizations. While few humanitarian organizations have prevention as their primary goals, they tend to support prevention activities (Sykes 1989, Bender 1989). Multilateral agencies, which often become involved with disaster through development assistance, prefer to finance prevention and mitigation only *after* disasters occur (Bender 1989). Some agencies perceive the event of a disaster as an opportunity for countries with limited resources to carry out disaster mitigation as part of reconstruction (Cole 1989). Others use the post-disaster period to offer disaster assistance in cases which provide opportunities for rapid development (Cuny 1983). Non-governmental organizations tend to intervene where government or other organizations can not, mostly

in preparing marginalized communities for disasters. The implications of this relatively disarticulated organizational culture in the disaster assistance field through the 1980s were high: organizations did not share lessons learned. As a result, innovation in practice was rare. I return to these implications later in this chapter.

III. Targeting Vulnerable Populations and Resources for Pre-Event Disaster Management

Vulnerability to natural hazards exists in urban and rural areas alike, but the populations affected, as well as resources, tools, and government incentives for reducing vulnerability vary tremendously. Urban areas may have stronger economic or political mechanisms for reducing vulnerability, to the extent which disaster management is considered a public good. In rural areas however, poor infrastructure, lack of political support to improve services, and isolation increase the vulnerability of residents. In the Philippines, for example, local rural governments lack the resources not only to implement preparedness programs, but in some cases to deliver relief to victims of disasters in rural areas after they occur. This means that rural populations often have to rely on themselves in times of disaster.

The PNRC case illustrates that organizations can build upon certain conditions present in rural areas, such as indigenous coping mechanisms. Like the traditional safety nets that families or villages provided as economic and social measures to hunger or deprivation, a similar support system exists for mitigating and recovering from natural hazards, called indigenous coping mechanisms. These include technological mechanisms, such as crop rotation and terracing, economic mechanisms, such as the practice of non-agricultural activities to mitigate against slow disaster (e.g. floods, droughts) and cultural mechanisms, such as practices of risk sharing through mutual aid and self-help groups (Clarke 1992). In the Philippines, disaster practitioners often refer to one such mechanism - "bayanihan" - which conveys an image of villagers helping a flood-stricken family transport their house to unaffected land.

In the past, development organizations have targeted populations with weak indigenous coping mechanisms with varied success. Among the most successful initiatives are developmental relief schemes for rural areas called Food-for-Work (FFW)

programs. These projects fall in certain sectors, such as agriculture, education, health, , natural resource conservation, resettlement, and water and sanitation (Thomas 1986). While FFW programs have in certain circumstances led to employment and asset creation, they are not a panacea for overcoming the gap between relief and development.

These schemes are particularly interesting, however, to compare with pre-event disaster management programs. Both hope to reduce vulnerability, the former by implementing programs after disasters and the latter by implementing programs before disasters, or during the disaster cycle. I argue that for rural communities, building upon latent coping mechanisms may be an important method for promoting disaster management as a tool for reducing vulnerability to natural hazards. In the next section I discuss why it has taken so long for organizations to develop the capacity to undertake pre-event disaster management activities, such as strengthening indigenous coping mechanisms.

IV. Programmatic Change

I attributed the slowness with which change came about in the field of disaster assistance with the attitudes of the international disaster assistance community in the key years of opportunity for change, the 1970s and 1980s. The literature on this period supports this attribution quite well. First, disaster professionals lacked an organizational culture that promoted innovation in practice. This resulted from high turnover rates of staff and the failure of volunteers to perform well in non-medical fields (Cuny, 1983). These factors kept organizations from incorporating experience into future program design, and from diversifying their activities.

Second, international donors hesitated to combine long-term projects with their disaster assistance. In fact, traditional development agencies tended to offer disaster assistance only in cases which provided opportunities for rapid development (Cuny, 1983). Development agencies were unlikely to support long-term community-based disaster management programs, since such initiatives lacked the political and economic incentives found in disaster relief.

Third, methods for evaluating hazard-related mechanisms remained inadequate. While interest in the mechanisms existed among organizations, analysis of such

mechanisms needed to take place before disaster strikes, in fact, in the context of development (Clarke, 1992). Since relief agencies only entered the scene after disaster, and development agencies had little interest or expertise in these mechanisms, this method remained unexplored until the 1990s.

Thus until recently, disaster organizations were reluctant, or operationally incapable, of undertaking programs to address vulnerability before disasters occur. By the early 1990s, organizations had begun internal reform to create capacity for implementing pre-event disaster management programs. As I discuss in the next section, motivations for the organizational shift to pre-event disaster management came from many sources among the organizations.

Organizational Reform in Disaster Management

Organizations' motivations for shifting from relief to pre-event disaster management are largely influenced by sectoral expansion of objectives and operational capacity, as well as response to budget cuts in a diminishing foreign assistance economy. In this section I briefly present some of the actors in disaster assistance which shifted from traditions of relief to pre-event disaster management, namely the International Federation of Red Cross and Red Crescent Societies, the US Office of Foreign Disaster Assistance, the United Nations, and the World Bank.

The International Federation: From Relief to Empowering the Vulnerable

By 1969 the International Committee of the Red Cross decided that the primary responsibility for disaster preparedness should devolve upon the National Red Cross Societies and their domestic governments. It encouraged local societies to push their national governments to develop national disaster plans. With their high visibility through diversified activities, the International Federation of Red Cross and Red Crescent Societies served as a model for other non-governmental and voluntary agencies interested in going beyond relief work (Cuny, 1983).

Two reasons explain why the Red Cross did not switch immediately from relief to pre-event disaster management in the 1970s. One reason was the high cost of technology for hazard prediction, such as meteorological and warning systems, which was thought to

be essential to preparedness. A second reason grew out of a fear of tarnishing the public image of the ICRC and the International Federation. The movement had come to be so intertwined with assistance activities that abandoning that function would be detrimental to the organization. The Red Cross, like other relief agencies during the 1970s, switched to provide “developmental relief,” to help communities rebuild from war or natural disaster, at the time considered a more “long-term” approach. By the early 1990s the International Federation had established an agenda for improving the situation of the vulnerable, which in broad terms places disaster management and poverty reduction among its main non-health focussed objectives in member countries such as the Philippines.

OFDA: Technical Assistance For Preparedness and Mitigation

The Office of Foreign Disaster Assistance of the United States Government (OFDA) first became involved in disaster preparedness through technical assistance (Cuny 1983). Operating within the USAID framework, this agency, through its procurement of grants, increased NGO involvement and accountability for complex humanitarian emergencies (Natsios 1997).

As the USAID bureaucracy established long-term employment, and the bureaucracy grew from the 1970s to the 1990s, the agency continued to mainly provide technical assistance, but expanded its activities to include preparedness and mitigation projects in the field of disaster management. USAID embraced post-disaster rehabilitation as a way to develop mitigation interventions in countries with limited resources, and which might not otherwise engage in such interventions (Cole 1989). Budget cuts in the 1990s motivated the agency to reform its operations, including reductions in the number of staff and support for programs. For disaster management this meant reducing relief funds for disasters, and replacing high-cost disaster mitigation projects such as infrastructure, with low-cost prevention programs such as reforestation.

United Nations: In the Midst of the International Decade for Natural Disaster Reduction

The United Nations is another actor that has influenced the shift to pre-event disaster management. The UN introduced formal training in disaster management back in

the 1980s under the UN Disaster Relief Office (Natsios 1997). The UN began a campaign to increase disaster awareness worldwide by proclaiming the 1990s as the International Decade for Natural Disaster Reduction. Like the decade for water and sanitation before it, UN focussed on encouraging cooperation between international organizations and domestic governments to strengthen government capacity for disaster management. At nearly the end of the decade, the Philippines, just one of the many developing countries involved in the decade's activities, has not changed its domestic policy to incorporate pre-event disaster management, despite its active participation in the many IDNDR conferences at home and abroad.² Yet, the IDNDR has been instrumental in strengthening coordination between indigenous and international non-governmental and humanitarian organizations working in disaster management in the Philippines. One of the most visible products of this coordination is the Global Forum of NGOs for Disaster Reduction (GFNDR), established by NGOs that participated in the 1994 IDNDR World Conference on Disaster Reduction in Yokohama, Japan. The President of the Global Forum also runs one of the most active Filipino NGOs involved in disaster management, namely the Citizens Disaster Response Center.

The World Bank

The World Bank's motivation to shift from relief to pre-event disaster management lay in the creation of new lending strategies. World Bank projects have not enjoyed a high record of success for mitigation and prevention for a series of reasons. These include low levels of expertise on mitigation, the complex macro-context of country interventions, the changing nature of mitigation technology, and the challenge of increasing institutional capability to accommodate disaster mitigation. Due to these problems, the Bank has rarely made natural hazard reduction a major theme in its dialogue with borrowers or an important element in its lending program, even in countries particularly prone to disasters (Harth 1989). Yet the Bank's approach for mitigation does break away from past lending policies that created dependence on emergency relief. Since 1990, the bank has revised its strategy to combine multi-donor support for events affecting many sectors, thereby overcoming a central problem facing

² Interview with Raymundo Punongbayan, Director of PHILVOCS, August 5, 1997.

disaster management – that mitigation components have to compete for priority and scarce resources with various other development issues (Harth 1989).

V. Structure of the Thesis

Following this introduction, I begin the discussion of disaster management in the context of the Philippines. In Chapter Two, I examine the role of government in making policy for disaster management in the Philippines. I discuss advances and limitations of both central and local governments' disaster management efforts. I then discuss the role of Filipino and international organizations with a focus on disaster management and frame their efforts to build relationships with local governments for reducing vulnerability in communities. In Chapter Three, I examine pre-event disaster management in practice, by examining the PNRC Integrated Community Disaster Planning Program. Finally, in Chapter Four I present my conclusions and offer implications from this study for organizations attempting to engage in pre-event disaster management in other hazard-prone developing countries.

Chapter Two: The Governmental and Organizational Context of Disaster Management in the Philippines

I. Introduction

The Philippines is a developing country government that lacks resources for undertaking disaster management and perceives the costs as prohibitive. Local governments today have no alternatives but NGOs for attaining funds for pre-event disaster management projects. Therefore coordination between government and organizations involved in disaster management remains the most likely solution to improve domestic disaster policy, and reduce vulnerability of communities lacking strong government initiative. The existing framework for coordination between the two sectors, however, poses potential problems.

Organizations that work within these government frameworks are clearly restricted by the funding system that focuses on post-disaster activities. First, given the nature of resource allocation of the Philippine government, efforts of outside organizations to improve both national and local government capabilities for disaster management have been limited. The lack of resources designated by the Philippine government for disaster management has resulted in a lack of alternative practices (to relief, rehabilitation and preparedness) for pre-event disaster management. Additionally, decentralization reforms that were designed to enable local governments to prioritize disaster management activities on their own neglected measures that would insure appropriate allocation of funding for pre-event disaster management activities. As a result, priorities have changed little: local governments still prefer to allocate limited resources to post-disaster activities, rather than on disaster preparedness training or mitigation/prevention projects.

Second, while municipal and community governments rarely refuse assistance from outside organizations that offer funding for pre-event disaster management activities, these governments often lack the mechanisms to use donor funding strictly for preparedness, mitigation and prevention. In Chapter Three I argue that local governments in the Philippines often don't have the experience in implementing such interventions, nor do they have the legal framework for incorporating interventions into

their development plans. Due to outdated institutional frameworks of local disaster coordinating councils established in 1978, even indigenous organizations have been unable to fully participate in the local forums for disaster preparedness and coordination. While the national government initiated coordination with organizations in the early 1990s, through upgrading the role of NGOs within the development process and disaster relief and recovery phases, actual coordination for pre-event activities has been limited. The disaster literature also lacks examples of how local governments can coordinate with organizations to obtain funds for pre-event disaster management, especially within the new framework of decentralized local governance.

In this chapter I begin by highlighting the Philippines' government legislation for domestic disaster planning from past and current political regimes. I then look at the institutional framework of local development councils and local disaster coordinating councils, emphasizing the different procedures and operational constraints that may hamper coordination between the two implementing bodies. Finally, I examine the potential entry points for disaster assistance organizations, both indigenous and international, given the changing Philippines' political context due to democratization and decentralization reforms.

II. Government's Role: Funding for Relief, Rehabilitation and Preparedness

The Philippine government's longstanding reluctance to designate resources to disaster management has resulted in a domestic disaster policy that lacks alternative practices (to relief, rehabilitation and preparedness) for dealing with disasters. The Philippine government established its domestic disaster policy during two extremely different periods: the centralized regimes of Marcos (1965-1986) and Aquino (1986-1992), and the decentralized regime of Ramos (1992-1998). The primary policy instruments that enable the national government to prepare for and respond to disaster came into being during the Marcos and Aquino regimes. These leaders established policy through Republic Acts (RA) and/or Presidential Decrees (PD). The most consequential policies are PD 1566 and RA 7078 – the first created an organization to assess and direct disaster relief, rehabilitation, and preparedness, while the second provided guidelines for

allocating funds to regions affected by disaster. All three regimes neglected to create policies for allocating resources to prevention and mitigation activities.

One of the first disaster management policies created during the Marcos regime addressed preparedness – a central intervention of pre-event disaster management. In June 1978, Marcos established the PD 1566, or the National Programme on Community Disaster Preparedness, as a comprehensive plan for encouraging national and local efforts in disaster preparedness and response. He set up a principal advisory body, the National Disaster Coordinating Council (NDCC), to be administered by the Office of Civil Defense, under the Secretary of National Defense. Other members of the NDCC included the Presidential Executive Secretary, the Chief of Staff of the Armed Forces, fifteen secretaries of other national departments, the Directors-General of the National Economic and Development Authority (NEDA), the Philippine Information Agency (PIA), and the Philippine National Red Cross (PNRC). This body's primary responsibilities included (i) advising the president on matters concerning disaster preparedness, response and rehabilitation and (ii) organizing and advising coordinating councils at the regional, metropolitan, provincial, municipal/city, and community levels. This was the first advisory body of its kind to include a non-governmental organization, namely the PNRC.

The actual allocation of funds for preparedness, however, did not occur until the Aquino regime, when the government created a fund for disaster preparedness efforts, namely the NDCC Memorandum No. 30. PD 1566 did indeed establish a National Disaster and Calamities Preparedness Plan, to be implemented by all levels of government. Yet this plan, through which the NDCC would allocate funds to local governments for disaster preparedness and encourage periodic community drills, did not receive central government support for more than a decade.

The government again enhanced the role of the NDCC in 1990 when it gave the NDCC responsibility for allocation decisions for disaster funds under the Calamity Fund, or RA 7078. Otherwise known as the Appropriations Act of 1990, the Calamity Fund reserves PhP 1 billion (US\$36.4 million) for aid, relief and rehabilitation services to people/areas affected by calamities and repair and reconstruction of structures damaged by calamities. For an example of how the fund might be distributed between disaster

interventions, in 1990, 80% of the fund went toward rehabilitation, while 20% went toward relief.³ The government insures the maintenance of the fund with the PD 477. Established in 1974, this decree mandates a 2 percent national government reserve for use in calamities. The NDCC releases funds, upon approval of the President, directly to implementing agencies, for use during the budget year, or the prior years, when a disaster occurs.

To ensure legitimate distribution, the NDCC established the procedures and criteria for recommending the declaration of a state of emergency in Memorandum Order No. 3 of 1989, which would qualify decentralized levels of government for support from the Calamity Fund (RA 7078). A city, municipality, province or region is considered to be in a “state of calamity” when two or more of the following conditions are brought about by a natural hazard:

1. At least 30% of the population is affected and in need of emergency assistance or has been rendered homeless;
2. A great number of the means of local livelihood have been destroyed;
3. Widespread destruction of fishponds, crops, poultry and livestock and other agricultural products;
4. Disruption of life-lines such as electricity, potable water systems, transport systems, communications systems and other related systems which cannot be restored within one week; and
5. Major roads and bridges are destroyed or impassable for at least a week thus disrupting the flow of transport and commerce.⁴

PDs and RAs created mechanisms for funding relief, rehabilitation and preparedness, but did not insure implementation or sufficiency of funds. In practice, the legislation suffered from two weak points: the lack of local adoption of the National Programme on Community Disaster Preparedness, and the limited resources provided by the Calamity Fund. First, without the allocation of salaries for paying city employees,

³ Delica, Zenaida G., (1993). “Citizenry-based Disaster Preparedness in the Philippines.” *Disasters* 17(3): 242.

local governments tended not to conduct preparedness activities, such as evacuation drills and first aid training. Second, the Calamity Fund was so small that it could not possibly compensate the disaster needs of the Philippines for a given series of years. For example, the Philippines experiences, on average, a major earthquake every six years, and in 1990 alone, the Baguio Earthquake caused damage to property of US \$450 million dollars. By the time the government rebuilt damaged areas from the 1990 earthquake, it might have had to deal with another disaster (as actually happened with the 1991 eruption of Mt. Pinatubo – the damage for which totaled US \$400-600 million⁵).

Comparing funding for disaster management (as a percentage of GDP) with funding for other sectors, such as health, education and housing, shows that the priority for Filipino welfare lies far from disaster management. For example, the national government budget for disaster assistance in 1990 is equivalent to 0.1% of total 1990 GDP. For health, the allocation in 1990 is 2%, while for education, as much as 2.9 %.⁶ While no data for housing exists for 1990, in 1985 housing expenditure by the national government made up 15% of GDP.⁷

While funding for disaster management seems surprisingly low from a domestic standpoint, it looks rather high when compared with hazard-prone countries in South and East Asia. In the following table I present figures for the Philippines, Bangladesh, Nepal and Korea - all hazard-prone Asian countries with fairly developed disaster institutions and organizations. While Korea and Bangladesh have undertaken efforts to strengthen pre-event disaster management, including preparedness and prevention, the figures I provide below reflect relief and rehabilitation activities only.

⁴ Punongbayan, Raymundo S., and Jean C. Tayag (1993). "Institutional and Organizational Background of the Philippines." In: Institutional and Organizational Backgrounds of Asian Countries in Terms of Disaster Management. Nagoya: United Nations Centre for Regional Development, p. 89-136.

⁵ Delica, pp. 239.

⁶ Reddy, Marlita (1994). Statistical Abstract of the World. New York: Gale Research, Inc., pp. 729-30.

⁷ United Nations Centre for Human Settlements (HABITAT) (1996). An Urbanizing World: Global Report on Human Settlements, pp. 527.

Table I. Disaster Management and Basic Indicators in Four Asian Countries

	Philippines	Bangladesh	Nepal	Korea
Frequency of Disaster	annual ave. of 8 incidents (includes tropical cyclones or typhoons, floods, storm surges, earthquakes, tsunami, volcanic eruptions, droughts) (from 1900-1991) ¹	annual ave. of 7.7 incidents (includes floods, cyclones, tornadoes, droughts, river erosion and earthquakes) from 1980-1989 ²	no figures (includes fires, floods, landslides, hailstorms, windstorms, avalanches, earthquakes and epidemics)	annual ave. of 17.8 incidents (includes typhoons, heavy rain, heavy snow, wind storms, hail, tidal waves, earthquakes) from 1904-1991 ²
GNP (1990 US\$) ³	44.4 billion	22.6 billion	3.3 billion	231.1 billion
Percent of GNP lost annually to disasters (average from 1985-1995) ³	1.27	1.71	1.24	0.045
Annual property damage in 1990 US\$ million.	US\$ 277 million (annual average from 1981-1990) ²	US\$ 568.2 million (annual average from 1947-1991) ⁴	US\$ 26.5 million (annual average from 1983-1990) ²	US\$ 550 million (annual average from 1981-1990) ²
Average annual number of deaths (1971-1995) due to disaster ³	2159	31870	365	174
National government annual budget for disaster assistance ² (1991 US\$)	US\$ 36.4 million (or 1 billion pesos)	US\$ 410 per disaster (or Tk 15,000)	US\$ 150,000-270,000 (or 5.6 million-10million Rs.) spent annually in the early 1990s	US\$ 239 million (or 175.421 billion won)
Population in 1991 ⁵	62.9 million	110.6 million	19.4 million	43.3 million
Percent of population dependent on agriculture ⁶ (1990 unless otherwise noted)	46%	74% (1986)	93%	21%(1991)
Percent of rural population in poverty ⁷	64%	86%	61%	20%
Land Area ⁶	300,000km ²	144,000 km ²	140,800km ²	98,480km ²

Source:

- 1) International Conference on Disasters and Development: The Philippines Experience, 1993.
- 2) UNCRD Institutional and Organizational Backgrounds of Asian Disaster in Terms of Disaster Management.
- 3) International Federation of Red Cross and Red Crescent Societies, World Disasters Report 1997.
- 4) INCEDE Impacts of Disasters on Environment and Development, 1993.
- 5) World Bank Development Report, 1993.
- 6) Statistical Abstract of the World, 1994.
- 7) UNCHS (HABITAT), An Urbanizing World: Global Report on Human Settlements, 1996.

Despite the variation of indicators and time periods from which I derive data on disasters for the four countries, I present Table I only as a means to contrast disaster management efforts in the Philippines with richer and poorer hazard-prone countries in Asia.

In table I, I show that the Philippines, Bangladesh and Nepal have similar percentages of GNP lost annually to disasters, all around 1.5%. Yet, compared with Bangladesh and Nepal, the Philippine government funding for disaster assistance is remarkably high. But is remarkably low in comparison with Korea, which designates nearly seven times the amount of funding for disaster management.

In Table I, I also provide evidence that disaster management in rural areas is an area of great concern for national governments. Countries like Bangladesh and Nepal, for example, have very high percentages of population dependent on agriculture for livelihoods, as well as large percentages of the rural population living in poverty, and thus vulnerable to disasters. Many Asian governments overlook the potential impacts of rural disaster due to their focus on issues stemming from urbanization. Given that urban populations import food and fuel from rural areas, a disruption in rural infrastructure, agricultural production and rural labor may create economic impacts on the entire country. These factors make disaster management in rural areas justifiable.

Disaster in rural areas also contributes significantly to the percentage of GNP lost annually to disaster. As I show in Table I, the Philippines' percent of GNP lost to disaster is quite high, second only to Bangladesh. In actual 1990 US dollars, however, the Philippines loses, on average, \$564 million per year, greater than Bangladesh's loss of \$387 million per year. Some of these losses occur in the agricultural sector. For example in 1990, damages in the agricultural sector accounted for US \$48 million or 10% of all damages due to the Baguio earthquake

In this discussion I have illustrated that since governments focus on relief and rehabilitation, there is a lack of resources for alternative policies. Lack of alternative policies is especially pertinent for rural areas, where disasters contribute to annual losses of GNP and where the majority of population lives in poverty, thus inhibiting local capacity to prepare for or recover from disasters. Alternative methods, such as

prevention, may decrease losses in productivity that affect both urban and rural areas by securing land and natural resources vital to agricultural production.

In the next section I examine how fiscal decentralization of government resources for development affects local appropriation of resources for disaster management. I elaborate on an argument I began at the beginning of this chapter, namely that inconsistencies between the institutional frameworks for development councils and disaster coordinating councils hamper coordination between them, and with outside organizations.

Decentralization and the Local Government Code of 1991

Decentralization, initiated by the Aquino government, aided the spread of responsibility for disaster management from the national government to provincial and local governments, especially to the municipal level. But the reforms neglected to create measures to ensure appropriate allocation of funding for pre-event disaster management activities. Decentralization alone therefore, did not influence a shift away from post-disaster activities toward pre-event disaster management.

The Local Government Code of 1991, or RA 7160, decentralized resource allocation to the municipal and even community level for development and disaster relief. The Local Government Code established an unprecedented legal provision for the allocation of disaster funding by the municipal and community government levels. Sections 287 and 324d mandated a 5% allocation for disaster *relief* from a 20% development budget taken from the Internal Revenue Allotment. This portion of revenue would only be used for expenditures arising from the occurrence of a disaster, in areas of a local government unit that the president has declared to be in a “state of calamity.”⁸

The national government’s recognition of the role of local disaster councils in PD 1566 encouraged self-reliance, but did not ensure implementation of preparedness efforts, leaving a gap between legislation and practice. The NDCC Memorandum No. 1 of 1989, set guidelines for reorganizing the dysfunctional disaster coordinating councils, established under PD 1566. This memorandum proposed that local (provincial, municipal and community) DCCs be able to fully respond to emergencies by training

⁸ Local Government Code of 1991, Section 324d, p. 132.

DCC service units in rescue, evacuation, emergency relief and health services. But it did little in the way of providing funds for these tasks. Thus, DCC training by local civil servants was left to the discretion of the local government.

Legislation of 1989 also elevated the role DCCs should play in approving the Calamity and Disaster Preparedness Plan of local governments, but gave them little operating power. To prepare for the procurement of relief and rehabilitation funds in the event of a disaster, local governments were required to submit local Calamity and Disaster Preparedness Plans stating their perceived disaster relief or rehabilitation needs to coordinating councils in higher levels of government. For example, the Chairman of the Provincial DCC, or the Provincial Governor, would approve municipal plans. This system theoretically gave the DCCs an overseeing role in local allocation of funds, specifically within the 20% development fund, but also for the allocation of the Calamity Fund. In practice, however, DCCs may have had little control over the distribution of funds, since they were not involved directly in the planning.

Thus, the decentralization reforms and revisions of PD 1566 in the late 1980s, neglected to create measures that would insure appropriate allocation of funding for pre-event disaster management activities. Additionally, coordination efforts between operating bodies created under centralized legislation (local disaster coordinating councils) and operating bodies created under decentralized legislation (local development councils) did not motivate change away from the central government system of funding, but rather hindered it. While local development councils follow a decentralized code, guidelines for disaster coordinating councils, for the most part, still reflect national government legislation of the past. More specifically, the outdated PD 1566 provides guidelines for drawing up municipal disaster coordinating councils that do not include NGO actors; while the Local Government Code of 1991 states that non-governmental actors shall constitute not less than one fourth of the members of every local development council.⁹

DCC operations are inconsistent with local government institutions in other matters as well. For example, disaster coordinating councils (DCC) have high turnover rates of council members, especially at the local level, which inhibits long-term

⁹ Local Government Code of 1991, Section 107a2,b4,c4 p. 49.

planning.¹⁰ In addition, DCC membership may not coincide with government electoral cycles. Inconsistent institutional procedures not only inhibit systematic coordination, but they also reduce the potential for local governments to make better use of NGOs in the disaster planning process.

Without strong coordination between these two bodies, decision making on pre-disaster measures is left to the discretion of local city administrators. Lack of a strong institutional mechanism to push for pre-event disaster management initiatives gives local political figures the incentive to deal with the effects or symptoms of past disasters. As mentioned above, the local government has choices for approaching disaster management: it can allocate the 5% of its IRA to relief and rehabilitation activities, and use the 5% if a disaster occurs within the budget year. The local government can also request assistance from the Calamity Fund for activities in the budget year when the disaster occurs, or for damage incurred from disaster in prior years. Because local governments have access to two sources for disaster assistance, some governments allocate the 5% in their budget, but spend it on non-disaster related concerns, such as local government salaries. In short, local governments tend to use disaster funds in accordance with past damage, present damage, or for response to disasters that may occur in the budget year. I argue that given the current set of incentives, it is difficult for organizations working within the system to promote pre-event disaster management. But some examples of NGO changing government performance do exist, as I present below.

A Role for NGOs in Changing Government Performance?

Support from government for NGOs came partially out of a strategy to systematize unpredictable NGO activity, as well as to build upon the lessons learned in disaster assistance, namely how to recognize victim needs and organize victims for receiving relief supplies and resettlement. Following the involvement of NGOs in the Baguio City Earthquake of 1990, the Aquino government realized the opportunity local NGOs could provide in strengthening local disaster management efforts. Executive Order No. 434 (1990) established guidelines for the participation of relief agencies and

¹⁰ Punongbayan, et. al., 110.

voluntary agencies, with a proven record in providing relief work in the implementation of livelihood and social services, in the rehabilitation efforts in Baguio.

Around the same time, the NDCC, with the advice of the PNRRC, reformed the DCC system to assuage coordination between the disaster coordinating council and other NGOs. The NDCC tried to reform and upgrade the responsibilities of the DCCs, especially for response. It even submitted a proposal for more funds for disaster preparedness to the halls of Congress via two bills: the House Bill No. 27073 known as the Philippine Disaster Preparedness and Prevention Act, reintroduced later as House Bill Co. 33684. But even these attempts by the NDCC to increase NGO involvement lay dormant in the house.¹¹

Without national government legislation, the role of NGOs in pre-event disaster management is still obscured by constraints of the national funding system for disaster assistance. Efforts of bilaterals and business associations to upgrade the performance of government disaster management planning, through technical assistance to local governments, has proven ineffective largely due to the national funding system itself. The municipality of Carmen, Davao, is a good example. While proclaimed by its donors, USAID and the Mindanao Network for Disaster Response, as a success story of pre-event disaster management, Carmen may more likely be a story of how resources for pre-event disaster management can be obtained from post-disaster rehabilitation funds.

The Mayor of Carmen, in his third and last four-year term, arranged for resources from the Calamity Fund to be used in a rehabilitation project, called the Comprehensive Drainage System. The mayor claims that this plan is a mitigation project, which both rehabilitates obsolete infrastructure and creates new infrastructure to direct floodwater past vulnerable communities. The mayor did not receive funding from the national Calamity Fund when he applied for support for a “mitigation” project, but did receive funding when he applied for support for a “rehabilitation” project. While the mayor insists that the project represents his government’s efforts to implement pre-event disaster management projects, he did not propose any projects for increasing disaster awareness in the municipality’s flood-prone barangay, a key part of pre-event disaster management.

¹¹ Punongbayan, et. al., 111-112.

Rather, the mayor focussed on coordination with provincial extension offices of national agencies, including the National Irrigation Agency (NIA) and the Department of Public Works and Highways (DPWH), as a way to ensure implementation. Both of these agencies have a tendency to implement mitigation projects, regardless of local consent or local capacity to implement other types of projects. But even representatives of the DPWH note that Carmen's Comprehensive System as a mitigation project alone, would not provide an effective solution to the problem of flooding in Carmen. In an interview, a DPWH engineer stated that the only way to affect the flooding would be through preventive interventions, such as reforestation. This case suggests how and why local governments that select projects based on criteria set for funding under the current system of resource allocation, are confined to implementing rehabilitation. But it also suggests the potential for coordination with provincially based extension agencies of central government to enable local governments to implement at least mitigation-type interventions.

In this section I presented the problems endemic to the decentralized disaster funding system of the Philippines. I illustrated the need for more coordination with outside organizations, and provided some examples of how coordination has enabled organizations and government to work together to implement pre-event disaster management activities. In the next section I present the growing tasks and roles of local and international organizations involved in disaster management in the Philippines, and suggest ways in which this group can play a critical role in influencing the adoption of pre-event disaster management methods in future disaster policy of the Philippines.

III. NGOs: Working Outside the System to Affect Change

Most studies focussing on natural disasters in the Philippines dwell on the archipelago's status as the most hazard-prone country in the world. These technical accounts tend to overlook a critical component of the Filipinos' relationship with natural hazards: the intricate network of local people's organizations that intervene to lessen the effects of disasters, both before and after the event. In this subsection I examine the factors that led various indigenous organizations, known as People's Organizations (POs)

or Private Voluntary Organizations (PVOs), to become active players in the disaster management field. In the following subsection I present how they and their counterparts, international NGOs, provide assistance within the changing institutional environment.

People's Organizations (POs) and Private Voluntary Organizations (PVOs)

One of the reasons I chose to study disaster management in the Philippines is because it provides an interesting case for comparing how organizations with different objectives become involved in disaster management. Founded by local activists in the pre-Marcos years, indigenous organizations such as POs or PVOs gained expertise in the advocacy for resettlement and income generation during the Philippine Rural Reconstruction Movement. These organizations worked in areas where government wouldn't, such as marginal or non-serviced habitats. From the early 1980s, organizations such as the Citizens' Disaster Response Center (CDRC), voiced criticism of the way that national government responded to disaster. Their work addressed strategies for providing alternatives to the typical top-down, politically motivated relief that forces victims to resettle away from their livelihoods, and keeps the poor from participating in the revitalization of disaster-stricken areas. These organizations later served as advocates for the resettlement of disaster victims and provision of socialized housing. As advocates of the poor they helped victims of government land invasions, and organized invasions of private land for squatting. While some organizations diversified their activities more than others, by the early 1990s, most centered on issues of resettlement and revitalization of income generation for the poor.

Today, the national government recognizes these POs and PVOs as NGOs, due to their legal role in regional and local government as members of development councils. While their staff has not changed, their nature has. Whereas before they organized victims to protest government and criticized government actions, now they voice the concerns of the underprivileged in frameworks that recognize their role in the development process. Indigenous NGOs today still find it difficult to offer more than disaster preparedness, given the constraints of funding and lingering mistrust between indigenous NGOs and government.¹²

¹² CDRC interview

After decentralization in the Philippines, the NGO presence in local government development councils also became an important route through which overseas funding could make an impact on local government attention to disaster. Funding for the Citizens' Disaster Response Center (CDRC) and other organizations comes largely from European-based Christian organizations.¹³ The Citizens' Disaster Response Network, headed by the CDRC, includes 19 national, regional and local centers for disaster response. The CDRC helped form the Inter-Agency Network for Disaster Response (IANDR), which in 1993 had included both indigenous organizations and international branches of major NGOs.¹⁴ Outside funding fuels a dynamic relationship between NGOs and local government. Since local governments may lack the funding for disaster response, let alone preparedness, NGOs based in local areas can support the local government in carrying out demand-driven local projects.¹⁵

The Philippine National Red Cross

The most influential Filipino NGO in disaster management, the PNRC, evolved in a similar fashion to the indigenous NGOs, out of a pre-existing network of volunteers who became active during times of conflict. During the 19th century colonial revolution against Spain, and the later Filipino-American war, Filipino women ministered to the wounded and sick among the fighting forces. These women formed a Filipino Red Cross Association in 1899, under which they maintained emergency hospital supplies and clinics for civilians and the military.¹⁶ While the PNRC had primarily concerned itself

¹³ Donors for FY 1996 included Diakonisches Werk (Emergency Desk), Bread for the World, Dutch Interchurch Aid, Caritas Nederlands, and Christian Aid. From: Citizens' Disaster Response Center, Annual Report, 1996. Manila: CDRC, 18.

¹⁴ These included Adventist Development and Relief Agency, Care Philippines, CDRC, Catholic Relief Services, Council for People's Development, Luzon Secretariat for Social Action of the Catholic Bishops' Conference of the Philippines, Philippines Business for Social Progress, PNRC, and the Philippine Rural Reconstruction Movement.

¹⁵ Bruno, Crisandra S., and Luce Agnes B. Simeon (1993). "NGO Accreditation Baguio and Benguet: A Preliminary Look on the Institutionalization of NGO Participation in Local Governance." CSC Issue Paper No. 6. Baguio: Cordillera Studies Center, pp. 1-57.

¹⁶ Filipino and American leaders in Manila officially established The Red Cross movement in the Philippines in the year 1905, with the Philippine Branch of the American Red Cross. But attempts to establish an autonomous Philippine Red Cross were hampered by the outbreak of war in 1941. After the war ended, the American Red Cross officials came to rehabilitate the organization, and instituted a civilian aid program, including home services, safety services, and nursing services. Thus began the role of the PNRC in development, including a military welfare service. An autonomous Philippine National Red Cross

with improving health since the post-WWII period, the people's revolution of the late 1980s led the organization to revert to its past role, as a neutral body providing medical care to wounded civilians and armed forces.

How then, did the PNRC become involved in disaster management? Since 1978, when the government established the National Programme on Community Disaster Preparedness under PD 1566, PNRC has played both an advisory and operational role in addressing the emergency needs of victims of natural disaster. But concern for pre-event disaster management activities is only a recent part of PNRC's programs. From 1994, PNRC efforts have focussed on "improving the situation of the most vulnerable,"¹⁷ through capacity building of vulnerable people as a main activity of PNRC projects. While stated in such broad terms, reducing vulnerability could be as much of a development objective as a disaster management objective. But the method reducing vulnerability is clear: PNRC promotes capacity building for the vulnerable through its Disaster Management Training Programs.

As of 1994, disaster management training had been carried out in 46 chapters, with 11,688 graduates of the training from a total of 184 classes. As part of its strategy to move from the traditional approach of relief to development the PNRC also incorporates "innovative" community development activities, including livelihood projects, developmental programs, skills training, cooperative organizations, and income generating projects.¹⁸ Such activities are considered innovative in the development literature because they build self-reliance, and avoid creating dependence on outside organizations. While these activities are important for reducing poverty, they are not specific ways to reduce vulnerability to disasters, a point that remains misunderstood by many PNRC staff. The new initiatives, which are more costly to promote and implement, have made up a smaller percentage of the Disaster Preparedness Program's activities. The opportunity to test the effectiveness of these non-traditional approaches in

was finally established after the Philippine government officially adhered to the Geneva Convention on February 14, 1947.

¹⁷ Philippine National Red Cross Operational Plan 1995-2000, "Strategies Toward the 21st Century: 'Improving the Situation of the Most Vulnerable,'" Manila: PNRC, June 1994.

¹⁸ Masing, Lourdes, and Rodolfo D. Juan, "The Philippine National Red Cross in Transition: from Relief to Development," in *Natural Disaster in the Philippines*. Manila: DOST-PHILVOLCS, 1994, 281-283.

conjunction with disaster management came in 1994 when the Danish Red Cross offered to fund a disaster management pilot project.

IV. From Mediator to Innovator: Continued Role for NGOs in Disaster Management Within The New Government Framework

The case of the PNRC, a voluntary organization that took on a powerful role in disaster relief as a result of a presidential decree, suggests that demand for NGO services has changed. While indigenous NGOs in the 1970s served as providers of disaster assistance in reaching areas where government could not go, what role should indigenous and international NGOs play in pre-event disaster management, given today's decentralized government system? I argue that role for NGO involvement has changed in two ways. First, while still acting as advocates, NGOs are no longer seen as "mediators" between government and populations affected by disaster. Rather, the participation of local NGOs is required by the Local Government Code in certain local councils. Therefore, governments anticipate, and may even rely on, the input of NGO actors in the political process. Second, NGOs in many cases act as consultants to local governments, operating innovative programs outside of government, for disaster awareness and preparedness - programs which governments may emulate in their own policy. Furthermore, cooperation with government benefits NGO innovation. Local governments rely on NGOs for new tools and methods to increase disaster awareness at the community level, and NGOs rely on local government cooperation to test out their innovations.

But cooperation is not seamless. In Chapter Three, I present evidence from the PNRC that suggests in some cases, working within local government frameworks may undermine the innovative characteristics of NGO disaster management programs. For example, NGOs that attempt to integrate their tasks into the local system, by building upon local government capabilities, may have to substitute disaster-specific projects with more widespread development techniques, specifically infrastructure and health care. Evidence from the field suggests that involving local leaders in the training and selection of projects helps organizations avoid such outcomes. Yet, some local leaders are bound

to be suspicious of disaster management projects, simply because they are not familiar with the benefits they offer, given the lack of government support for such projects.

In the next chapter, I present my findings from research conducted in the Philippines during August 1997 and January 1998 on the Benguet Pilot Project, one part of the Integrated Community Disaster Planning Program (ICDPP). This case not only provides a unique opportunity to evaluate what conditions are necessary for communities and local government to choose pre-event disaster management interventions, it also illuminates what conditions are necessary for organizations to live up to their promise to support pre-event disaster management interventions.

Chapter Three: The Integrated Community Disaster Planning Program (ICDPP) of the Philippine National Red Cross (PNRC)

I. Introduction

In this chapter I make two points. First, I argue that the Integrated Community Disaster Planning Program evolved from a program that promotes disaster awareness to one that creates community demand for disaster management interventions through its *sequencing* of barangay (community) hazard and needs meetings. I present this argument while examining the two phases of the ICDPP, illustrating how and why PNRC staff changed the sequencing. The barangay hazards and needs meetings take two forms: (1) small meetings of elected participants for training on disaster planning tools and methods (such as hazard mapping and mitigation planning) and (2) community-wide meetings for assessing hazard needs and debriefing on general health and safety (such as disaster preparedness and maintenance of public facilities). In Phase I of the ICDPP, which ran from 1994-1996 and covered six communities, the ICDPP staff conducted the community-wide session before the small session in each participating community with an aim to increase disaster awareness and foster receptivity for the ICDPP components. Later in Phase II, which runs from 1996-1998 and incorporates an additional two more communities, ICDPP staff reversed the order of the two sessions.

My research shows that the sequencing of these sessions in Phase I resulted in poor performance by the communities in addressing hazard needs. The ICDPP methods did not overcome the main problems faced by past disaster planning programs, namely, teaching communities to differentiate between development projects and disaster management interventions. Making this distinction has been a challenge for communities that live with disaster as they find it difficult to separate the symptoms of disaster from the symptoms of development. For example, while some communities easily connect flooding to the erosion of forest and agricultural land; others associate the effects of natural hazards, such as contamination of community water supplies by floodwater, directly to the floods themselves, not the erosion that induced the floods. If communities can't make such distinctions between the cause and the effect, they are unlikely to show

demand for programs, such as the ICDPP, that target vulnerability reduction through disaster mitigation and prevention activities.

The second point I make in this chapter is significant for organizations attempting to undertake decentralized disaster management programs. I argue that the ICDPP suffered in Phase I from poor operational capacity, stemming from two factors: (i) inadequate cooperation between PNRC Manila headquarters and Benguet chapter staff, and (ii) demands of the Danish Red Cross (DRC), the donor for ICDPP, on the resource allocation for the ICDPP Benguet Pilot Project. The effects of these factors are most evident in the discrepancy between the Benguet staff's submission of community-chosen projects for Phase I communities, and the approval of Phase I projects by the headquarters staff. In this chapter I will illustrate how poor operational capacity hindered the PNRC from fully testing its innovative community development activities in conjunction with disaster management, an organizational objective from 1994, and the reason that PNRC undertook the ICDPP in the first place.

In this chapter I present evidence from four stages of the ICDPP: (i) training to build community disaster awareness/receptivity for disaster management methods at the project level, (ii) community selection of projects, (iii) donor and PNRC headquarters approval of projects, and (iv) sustainability of projects as measured by continued community involvement and maintenance of projects. I begin the chapter with a brief introduction to how PNRC conceived of the ICDPP and program design. After that I discuss the criteria for selection of the provinces, municipalities, and communities, and present factors affecting municipal and community government receptivity for the ICDPP. In Part IV, I present the training, project prioritization and approval, and resource allocation for Phase I. I then discuss the implications of these factors on the efficacy of the Benguet pilot project as a mechanism for testing pre-event disaster management methods. In Part V, I present headquarters staff revisions of the Benguet Pilot Project after Phase I, and then examine how these changes affected the Phase II training and project selection. The chapter ends with a discussion on sustainability of the projects, drawing evidence from interviews about Phase I community involvement, plans for project maintenance and future interventions.

II. Origins of ICDPP and Program Design

Following PNRC Disaster Management Services' (DMS) internal review of the Disaster Preparedness Program in 1993, headquarters staff pointed to the program's lack of capacity for community disaster management planning. To create the means to address this weakness, PNRC approached the Danish Red Cross (DRC) for undertaking a community disaster management program. DRC allocated 1.9 million DKK (1994 US \$ 312,170) to Phase I and Phase II, with a cost/capita/year of 10 DKK (1994 US \$1.64) for each two-year phase of the Benguet Pilot Project.¹⁹

The PNRC Disaster Management Services designed the ICDPP to make five improvements to past DMS programs.²⁰ First, DMS applied new methods and tools for defining community priorities into the ICDPP (e.g. role plays, non-technical hazard and resource mapping); whereas before communities simply received recommendations from staff on points of vulnerability that the community should address. Second, DMS integrated disaster preparedness (e.g. safety, first aid, and procedures for evacuation) into the community development process; whereas before the ICDPP, DMS did not consider coordination with local development councils for promoting pre-event disaster management activities. Third, DMS designed the ICDPP as a means to aggregate community and national level data to improve hazard and resource mapping of the communities; since such data is largely lacking in the Philippines, and the collection of data is a priority of the International Decade for Natural Disaster Reduction domestic committee. Fourth, DMS designed the ICDPP to enable communities to identify disaster mitigation measures by themselves; whereas previously, municipal and provincial government agencies identified necessary interventions. Fifth, DMS designed the ICDPP to enhance PNRC capability for replicating disaster management efforts across the Philippines by coordinating with local disaster coordinating councils; whereas before NGO involvement had been limited due to the restrictions of PD 1566 (as discussed in Chapter Two).

However, PNRC staff hoped to achieve so many aims with the ICDPP, perhaps too many given the limited funding and operational capacity, that classifying the program

¹⁹ Calculations based upon an end-of-year 1994 rate of 1 Danish Krone = US \$0.16. The cost/capita/year is calculated using the original target number of sixty barangays, to participate in all three phases.

²⁰ Step 2 Report Manila: PNRC.

poses a challenge. At first glance ICDPP looks like a technical assistance program, offering training and hazard mapping using a Global Positioning Satellite (GPS) system. However, given the commitment of the Danish Red Cross, the PNRC went beyond technical assistance to integrate the construction of “disaster mitigation projects”²¹ with institution building for sustainable implementation. PNRC also hoped to contribute to its own organizational strategy of improving the situation of the most vulnerable, by targeting the program to the poorest provinces of The Philippines and supporting income generating projects when proposed by communities. PNRC aimed to replicate the program in three provinces, and within these provinces in over sixty communities. The wide aims of the headquarters for the ICDPP kept the program from focussing on disaster management, and rather overextended the ICDPP to accommodate both headquarters objectives, and other Benguet chapter programs, namely the Primary Health Care Program (PHC), as will be discussed below.

Program Design

The ICDPP Benguet Pilot Project includes two phases: Phase I covers six barangay (communities) and ran from 1994-1996,²² while Phase II incorporates an additional two Benguet barangay and runs from 1996 to 1998.²³ By Phase II, the PNRC staff reduced the target number of provinces from four to three, and limited the project implementation period for the Phase II Benguet Pilot communities.

From the outset of the program in Phase I, ICDPP designated numerous tasks to be carried out by the ICDPP staff, consultants, and participating communities. They included:

- a) ICDPP staff gathers data using GPS system,
- b) ICDPP staff validates/follows-up on location of hazards with barangay members,
- c) Manila-based consultant processes and analyzes hazard data,

²¹ The PNRC refers to any project that reduces vulnerability to natural hazards as a disaster mitigation project, even if these projects don't perform a mitigating function, as defined by my descriptions in Chapter One.

²² These included the following: Barangay Gusaran, Kabayan; Barangay Balakbak, Kapangan; Barangay Ansagan, Tuba; Barangay Abiang, Atok; Barangay Karao, Bokod; and Barangay Ekip, Bokod.

²³ These include the following: Barangay Palina, Kibungan, and Barangay Bagu, Bakun.

- d) ICDPP staff establishes linkages with NGOs, communities, and local government,
- e) ICDPP staff conducts information sharing among decentralized levels of government on ICDPP activities and recognized community hazards,
- f) ICDPP staff conducts barangay hazard and needs meetings (community-wide meetings),
- g) ICDPP staff conducts barangay hazard priority workshops (small meetings of elected, multi-sectoral participants),
- h) Communities establish Barangay Disaster Action Teams (BDAT) and these teams draw up Barangay Disaster Action Plans (BDAP) or a prioritized list of disaster mitigation projects, for each participating community,
- i) ICDPP staff completes barangay profiles (municipal and provincial sources), and
- j) ICDPP staff conducts technical workshops at the barangay level.²⁴

The implications of the wide aims of the ICDPP for Phase I are twofold. First, the program objectives overlapped with other organizational goals of the PNRC, which meant that fulfilling all the aims would distract from carrying out the main tasks of raising awareness of hazards and the tools to combat vulnerability. Second, since the program incorporated both technical components and community organizing components, and the former preceded the latter in the implementation schedule, resources and time for ICDPP staff to carry out meetings would be contingent on how efficiently the ICDPP staff completed the hazard identification and mapping.

In the next section I examine the first problem that the ICDPP project staff encountered in implementation. Although PNRC staff could target populations that, according to assessments of vulnerability, seemed most likely to benefit from the ICDPP, Benguet chapter staff could not guarantee community receptivity for the ICDPP methods or demand for disaster management projects.

²⁴ Taken from Step 2 Report and interviews with project staff.

III. Selection on the Basis of Vulnerability: A Role for Demand?

Provinces and Municipalities

PNRC headquarters staff selected Benguet Province and its municipalities based upon vulnerability to disaster. The PNRC staff measured vulnerability with reference to three criteria: (i) the level of poverty, (ii) the frequency of disasters, and (iii) accessibility (degree of isolation). As I have presented in previous chapters, drawing from the disaster literature, locations characterized by high levels of poverty, frequent occurrence of disaster, and isolation, can benefit greatly from pre-event disaster management efforts. PNRC hoped to apply disaster management as a tool for communities that lacked government support, by employing self-help schemes for implementing mitigation projects.

Benguet Province met these vulnerability criteria quite well. The province is one of the twenty poorest provinces in the Philippines. At this level of poverty, most of the province's population is vulnerable to disaster, as the disaster literature, in more general terms, suggests. The poor tend to engage in livelihoods that put them in direct contact with hazards, such as farming on flood-prone land or transportation of goods on landslide-prone infrastructure (Cuny 1983). Additionally, the poor find it difficult to recover from disasters, especially when disasters inflict damage to agricultural production and infrastructure, on which they depend for their livelihood.

Benguet also has an extraordinarily high occurrence of natural hazards, including high-intensity earthquakes and numerous typhoons that hit the province annually, triggering floods.²⁵ The ragged, mountainous terrain and poor infrastructure make Benguet's municipalities and communities difficult to access in disasters, reinforcing the burden placed on the poor to recover. A look at Benguet Demographics enumerates the vulnerability of its residents.

²⁵ The 1990 Baguio earthquake destroyed much of the city's infrastructure and killed over sixteen-hundred people across Benguet Province.

*Learning from Benguet Demographics: Incongruities of Municipal and Community Socio-Economic Conditions*²⁶

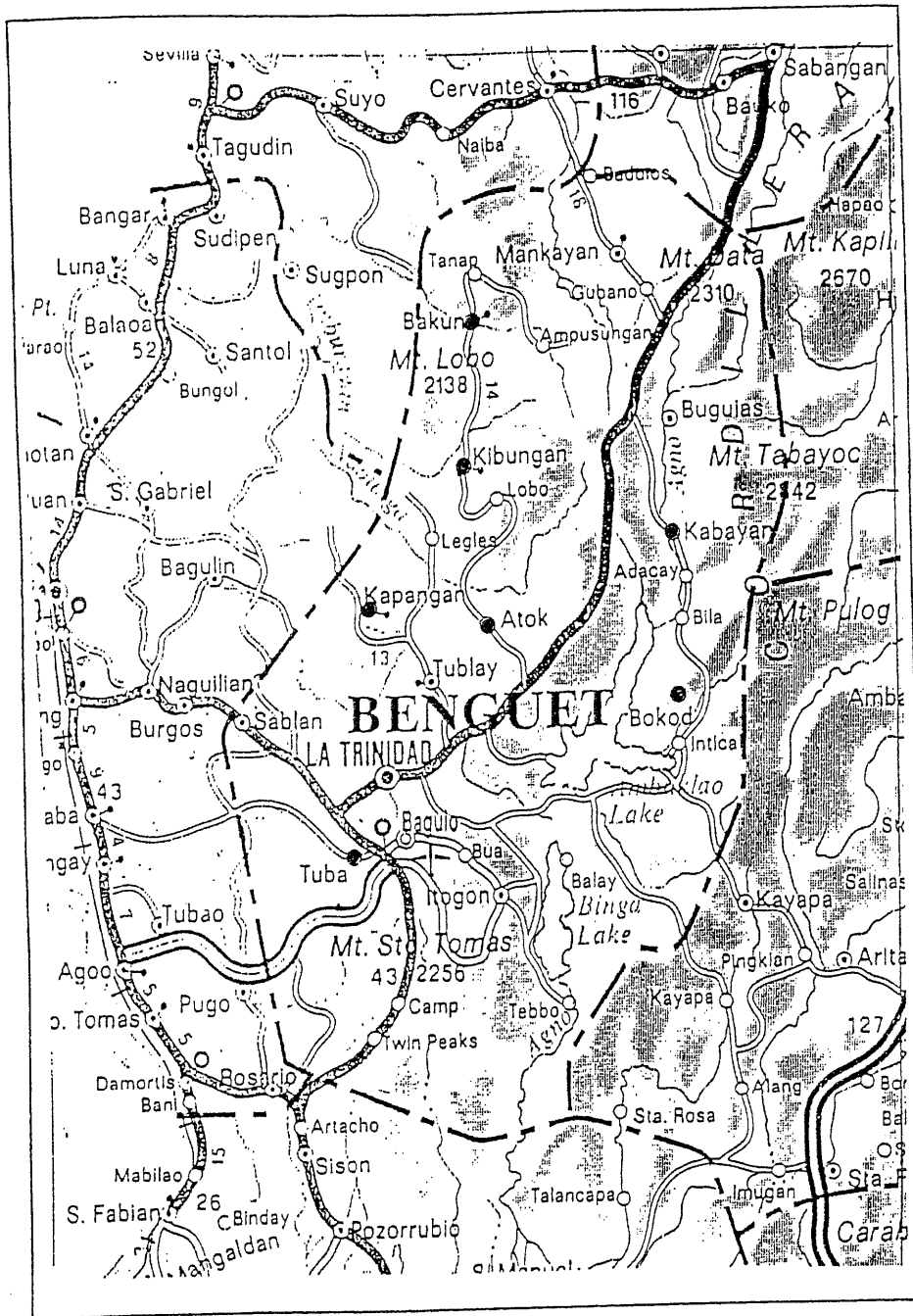
Set at the entryway to the Philippines' Cordillera region, Benguet province was established in 1966, and later became home to the summer capitol of Baguio City. Before the earthquake of 1990, Baguio had been famous for its urban market, to which rural farmers brought and sold fresh fruits and vegetables from the province's surrounding thirteen municipalities. Benguet's main source of livelihood is agriculture, and combined with hunting and forestry, makes up 58.5 percent of the workforce. The remaining 41.5 percent of the workforce is employed in industries such as mining, trade, construction, manufacturing and services. The latest census, taken in 1995, enumerates Benguet's total population (not including Baguio City²⁷) at 313,833, with a surprisingly low growth rate of 0.7 percent. Benguet's population is quite young, with 40 percent under the age of fifteen, 57 percent in the productive age group (15-64), and a mere 3 percent of at least 65 years of age. This makes for a high dependency ratio of 76%. At the time of the 1995 census, the average household size was 5.1 persons.

The province is divided by natural, legal, and cultural boundaries, resulting in particularly unequal distribution of income among municipalities and communities. According to the latest census, educational attainment was low. Only 45 percent of the population aged 7 years and over attended or had completed elementary education. The proportion of the population that received no education decreased from 7.6 percent in 1990 to 5.8 percent in 1995. Despite some evidence of improvement in welfare on the whole, Benguet's population still has varying levels of education and health services, which means that ICDPP is targeting communities with different levels of dependency on service provision from governments and NGOs. These figures also imply that the demand for disaster management interventions will differ among communities, based on how communities prioritize reducing vulnerability to hazards over improvements to the community such as infrastructure for health or education.

²⁶ Source: 1995 Census of Population, Report No. 2-16 N (Benguet) Socio-Economic and Demographic Characteristics. Manila: National Statistics Office, March 1997.

²⁷ The National Statistics Office provides separate counts for total populations of "highly urbanized cities" from the provinces in which the city is located. Baguio is one of these cities, with a total population of 226,883 persons in 1995.

Figure 1. Map of Benguet Province Indicating Pilot Project Municipalities



Selection of Pilot Communities

The PNRC approached the selection of communities based on perceived needs, not actual estimates of community demand for disaster management interventions. The PNRC staff used similar criteria for selecting communities as those used in the selection of provinces and municipalities, but added one criterion to communities with the highest number of vulnerable people. While centralized information for Benguet indicated how well the province fulfilled the three criteria for selection, the PNRC staff had a harder time picking which communities to target. The province had no centralized, let alone local, records of disasters. So the ICDPP staff conducted surveys to identify community resources that residents perceived to be vulnerable to hazards, based on residents' experience in previous disasters,²⁸ but neglected to assess the demand for interventions to reduce vulnerability to future disasters. Such an assessment would have been more than possible, given that the ICDPP staff conducted surveys in 54 barangay, including 475 sitios (inhabited agricultural clusters), which took one year to complete. While the staff did not assess the community demand for disaster management interventions, the staff did report the findings of its surveys to the community, municipal and provincial government, to make them aware of areas that the community perceived as vulnerable, as well as to keep them informed on the ICDPP progress.

Receptivity

Municipal and community governments showed different levels of receptivity, which suggests that different sectors of government acquired varying levels of understanding about the benefits of disaster management. While municipal administrators reacted positively to ICDPP, noting that all local and provincial governments lacked funding from the national level to conduct pre-disaster training, some barangay captains (local leaders) doubted that the program would deliver what it promised.²⁹ In fact, the barangay captains became the main opponents to the implementation of ICDPP. Their opposition was largely in reaction to the program

²⁸ This was the first instance where the ICDPP used a PHC program method - the collection of information on casualties and injuries from disaster was similar to the collection of health statistics pioneered by the Red Cross in rural areas of the Philippines in the 1980s.

design, which gave no part to the barangay captain in the pre-implementation stages of training and project selection. This strategy was designed by the PNRC staff in order to promote participation by all members of the training. But given the literature on participation, specifically that building on existing institutions increases the likelihood of sustainability for programs once donor funding ends (Rietbergen-McCracken, 1996), it is surprising that PNRC neglected the barangay captains. Most barangay captains did not support ICDPP; and many created barriers against the implementation of mitigation projects by not including the ICDPP on the agenda of barangay council meetings. Loosing the support of local leaders early on in the implementation process made it difficult for the ICDPP staff to coordinate with local legislative bodies for promoting disaster preparedness, an activity that the PNRC staff had hoped to undertake with the ICDPP.

Loosing the support of local leaders also affected the number of targets, as the barangay captain of one community even went as far as to refuse the implementation of the program in his community, explaining that “Ambuclao is (too) rich (for this program).”³⁰ The exceptional reaction of this one community forced the ICDPP to include receptivity as a criterion for community selection. Yet, the PNRC headquarters seemed to have overlooked the implication of having a local leader refuse the program - not all communities expressed demand for the ICDPP, and one in particular equated accepting this kind of “gift” from an outside organization as admitting to being poor or backward. As a result, in February and March of 1996 two smaller communities in the municipality of Bokod replaced barangay Ambuclao, after it dropped out of the program. While the ICDPP still spent much of Phase I trying to learn how to encourage community receptivity, especially that of the barangay captain, it neglected to assess demand for disaster management.

Another factor that influenced receptivity of the ICDPP, this time in a positive light, is community experience with (or knowledge of) self-help programs similar to the ICDPP. This included prior community participation in programs organized around rehabilitation or construction of infrastructure. Many of the communities had

²⁹ Step 2 Report. Manila: PNRC, p.18.

³⁰ Step 4 Report. Manila: PNRC, p.13.

experienced working with governmental or non-governmental organizations in the past, and were thus receptive to self-help schemes, such as Food for Work. Those which had not were likely to have heard about the benefits of self-help from neighboring communities. Yet, the ICDPP staff found it difficult to promote the self-help ethic in those communities in which NGOs had worked but had not employed self-help schemes.³¹ To gauge how important receptivity to ICDPP was, I now turn to examine the influence of training on project selection.

IV. Phase I: Preference for Safety, Health and Rehabilitation

The community-based meetings for Phase I began in November 1995. Benguet program staff carried out hazard mapping of communities using GPS based on the results from hazard needs meeting. These meetings, in Phase I, were open to the whole community and gave residents the opportunity to identify hazardous areas in their sitios. Then, local leaders accompanied the ICDPP staff around the sitios (residential clusters), sometimes for days, to collect data for the GPS maps. Due to delays in processing the GPS maps in Manila, Phase I communities drafted barangay disaster action plans (BDAP) based on preliminary maps hand-drawn by ICDPP staff. Communities carried out mitigation projects approved by the PNRC Secretary General and Hanoi-based DRC consultant during 1995 and 1996. Below I present the training and projects selected and approved for Phase I.

Training

ICDPP staff conducted barangay hazard needs meetings first in community-wide meetings and then conducted hazard priority workshops, using the PNRC Community-Based Disaster Management Training (CDMTs) method in small group meetings. Anyone from the community could attend the large group meetings. Some local leaders report as much as one quarter of the community, or an estimated 100 to 200 persons in attendance at the meetings.³² ICDPP staff used the large meetings to educate the

³¹ Two municipalities, Kabayan and Bokod, had NGOs working in them, which made convincing communities, even those in which the NGOs did not directly work, that ICDPP was worth the effort.

³² According to interviews in Barangay Gusaran, out of a community of forty-six households with a total population of twelve hundred, about one hundred persons attended these large community meetings.

community on ICDPP objectives, methods, and disaster management interventions. In most cases the ICDPP staff and volunteers from the nursing service, also talked about health care issues and suggested projects for the communities to undertake.³³ According to ICDPP staff, in these sessions, community members overwhelmingly expressed demand for water and sanitation infrastructure. In response, the ICDPP staff tried to tighten the discussion around disaster management, but the community-wide meetings proved too unfocussed to accomplish this. In most cases the ICDPP staff deferred specific talk of disaster management interventions for the CDMTs in small group meetings. These sessions consisted of, on average, thirty-four members, and staff estimated attendance rates at less than 50% of the target set (see Table I).

Table I. Participants in Phase I CDMT by Municipality, Community, Population and Date

Municipality	Community	Population	Participants in CDMTs	Dates of CDMTs
Kabayan	Gusaran	1051**	34	17-19 November 1995
Kapangan	Balakbak	1085**	35	21-24 November 1995
Tuba	Ansagan	1885*	31	27-29 November 1995
Atok	Abiang	1916*	34	27-30 November 1995
Bokod	Karao	837**	27	26-28 February 1996
Bokod	Ekip	784**	42	4-6 March 1996

*Estimated population figures used by ICDPP (source unknown)

**Population figures from the 1995 Census of Benguet Province

During Phase I these meetings were conducted when time and resources permitted.³⁴ For most communities, ICDPP staff offered an introduction to methods and tools of disaster management, including the construction of a tri-dimensional contour map and community hazard mapping. The ICDPP staff gave additional training sessions to the Phase I barangay disaster action teams (BDAT), self-elected from the small groups, for drawing up the barangay disaster action plans (BDAP), when time and resources permitted. The BDAP listed prioritized interventions that reduced the threat posed by natural hazards,

³³ While all of the communities were targeted to receive both PHC and ICDPP training, at the point when this research was conducted program staff reported that not all communities had received training in PHC.

³⁴ Many communities wanted more training sessions, as is evident in the project priority lists given in Table II.

based on BDAT recommendations and technical assessments such as soil quality and forestation density, conducted by local consultants.

Selection of Projects

The selection of projects in Phase I mostly involved actors from outside of the communities. Many community members pointed out in interviews that the community members did not choose projects, but rather that the ICDPP staff suggested projects, with which the barangay disaster action team agreed. Furthermore, ICDPP staff did not involve participants of the CDMTs in the hazard identification process, nor did they present the results of the GPS maps to communities until as late as 1998, nearly two years after some communities began constructing the disaster mitigation projects. According to ICDPP staff, after communities continued to request water and sanitation infrastructure, specifically private water connections for households, the staff felt obliged to recommend projects to communities. ICDPP staff recommended that Phase I communities pursue safety-oriented projects such as protection of water sources and cement pathways, which the community agreed were vital to income generation, health, and the safety of their children. That the staff had to recommend projects to communities even after the CDMT suggests that the training did not raise awareness of hazards, nor of the benefits to be had from disaster management interventions. Furthermore, that staff recommended projects that were not disaster oriented, suggests poor operational capacity of the staff itself.

The following Table lists the projects chosen by communities in Phase I *and* approved by PNRC for implementation, the nature of those projects implemented, and projects that BDAT prioritized on the BDAP but did not implement.

Table II. Description of Projects in Phase I (Both Implemented and Proposed)

Municipality	Community	Project Description	Nature of Project	Other Projects Not Undertaken
Tuba	Ansagan	two cement pathways, footbridge, water tank, rehabilitation of water pipes	safety, rehabilitation	improve vegetation cover, training on health and safety, rescue and first aid equipment
Bokod	Ekip	two cement pathways, footbridge, public toilet, water pipes	safety, health	rescue and first aid equipment, communications equipment, communal storage, fireline to prevent forest fires, signs for hazardous areas, irrigation facilities, nursery/reforestation
Bokod	Karao	two cement pathways	rehabilitation	toilets, garbage pits, ban on selling of liquor, preparedness, information center, nursery/reforestation
Kapangan	Balakbak	two cement pathways, public toilet, water tank, water pipes	safety, health	canal improvement, cross drainage, rescue and first aid equipment, information center, toilet and garbage pits, nursery/reforestation and tree planting, training on health and safety
Atok	Abiang	foot trail, cement pathway with footsteps, public toilet, water pipes	safety, health	emergency facilities and equipment, training on health and first aid, rehabilitation of clinic, rehabilitation of four footpaths, nursery/reforestation
Kabayan	Gusaran	protection wall for water source, two cement pathways, water pipes, livelihood program	health, safety	street traffic signs, communications equipment, repair of irrigation damn, nursery/reforestation

Source: Step 2 & 4 Reports. ICDPP Benguet Pilot Project. Manila: PNRC.

This table shows that most of the communities implemented projects that can be characterized as “safety, health, or rehabilitation.” Of these three categories, only rehabilitation should be considered as being a disaster intervention, and at that, a post-disaster intervention. Only two out of the six communities, Ansagan and Karao undertook rehabilitation (of water pipes and pathways). The remaining projects, falling under the categories of safety and health, offered little more than developmental relief.

While communities may have perceived certain development projects, such as cement footpaths and protection walls for community sources, to be disaster-oriented, these types of projects have little effect on reducing community vulnerability to disaster. For example, the community of Gusaran justified its implementation of cement pathways as a means to prevent landslides, stating that eroded pathways used by children to walk to school could give way without reinforcement. But a solution such as cementing only deals with the symptoms of disaster, not the cause. In this case reforestation to deal with the erosion would have had greater impacts over the long term. Other projects, such as public toilets, water pipes, or water tanks, are clearly health-oriented development projects, offering little to communities other than protection against disease in the event of a disaster.

While the Phase I communities did not implement any disaster mitigation or prevention projects, the table unexpectedly shows that a few communities *did* prioritize mitigation or prevention types of interventions (e.g. improvement of canals, vegetation cover, fire lines to prevent forest fires, investing in a nursery and reforestation) within their disaster action plans. The fact that PNRC did not approve these interventions for implementation needs to be explained. It is this explanation that I turn to next.

Approval of Phase I Projects: Fulfilling the Objectives of the Integrated Community Disaster Planning Program (ICDPP) or the Primary Health Care Program (PHC)?

If PNRC believed that communities could reduce their vulnerability to natural hazards through disaster mitigation projects, what factors led PNRC to approve anything but disaster mitigation projects, namely development projects? In Table II, I illustrate that during Phase I of the Benguet Pilot Project, the PNRC Secretary General favored the approval of projects that benefited both the ICDPP *and* PHC programs. I argue in this section that due to the Benguet chapter's incapacity to increase local government and extension agency support for the ICDPP, chapter staff had to integrate the ICDPP and PHC in order to: (i) decrease operational costs of the PHC, (ii) carry out monitoring of implemented projects, and (iii) ensure implementation of projects listed on the barangay disaster action plans, but not guaranteed funding by the DRC.

First, the Benguet chapter hoped to subsidize the operational costs of the PHC using ICDPP funds. The PNRRC decided to implement the PHC program in Benguet following the commencement of the ICDPP. The donor of both programs, the Danish Red Cross, allocated a significantly lower budget to the PHC program than the ICDPP, making the division of chapter staff between the programs problematic. It is not surprising that the PHC program receives less support, given the International Federation's argument that health programs may strengthen local chapter service delivery and fund-raising activities.³⁵ The Benguet Red Cross chapter has actually raised funds locally through raffles and government pledges. For example, in 1997 the mayor of Kapangan gave PhP 10,000 (US \$400) to the ICDPP. Yet the amount raised for ICDPP from local government and extension agencies in Phase I was far less than the designers of the ICDPP had expected. While the DRC probably thought that implementing the PHC in the same province as the ICDPP would increase resources for the Benguet chapter as a whole, the donor probably did not anticipate that the chapter would integrate the two projects when funding from the donor stopped at the end of 1998.

Limited resources for the PHC made resource sharing with ICDPP necessary for the PHC to function. In communities participating in both ICDPP and PHC activities, ICDPP supported PHC operations in areas such as transportation, labor and training materials. PHC lacked a separate program vehicle,³⁶ so to decrease transportation costs, project staff have had to stay in communities that they serve for extended periods. For labor, the PHC program relies almost exclusively on volunteers (mostly university graduates in nursing) without much compensation. DRC also allocates less funding to PHC training (including transportation for participants and materials costs).

Chapter staffs insist that the ICDPP will benefit from the integration of the two programs after 1998. Integration of the programs will become a means of monitoring and maintaining the top priority projects as well as implementing projects that remain on the Phase I communities' BDAPs and fulfill objectives of both programs. The chapter head,

³⁵ Agreement 1.7 of the ICDPP-PHC Project Joint Meeting, held in Baguio City, August 19, 1996. In: Philippines Integrated Community Disaster Planning Programme, Phase I: Evaluation. Manila: PNRRC, November 1996.

³⁶ Sharing transportation was largely curtailed when one of two Toyota field trucks, donated to the Benguet Chapter by the Japanese Red Cross, sustained severe damage after an eroded portion of a road in Kapangan Municipality collapsed beneath the truck and its driver.

in fact, is convinced that integrating the PHC and ICDPP programs may be the only way to finish implementation of the projects after 1998, at least for Phase I.³⁷

But integrating the two programs has greater implications for the PNRC than merely finding a way to monitor the projects. First, ICDPP's support of and dependency on another program disturbs the conditions necessary to test the efficacy of the pilot projects. Due to the closeness of chapter staff to the communities, staff want to deliver on the promises made to support community implementation of projects, despite the headquarter staff's insistence of bringing Phase I to a close. The headquarters staff have a valid concern: integration would make it difficult to measure whether the ICDPP alone reduces vulnerability in communities, and whether ICDPP projects are sustainable or replicable in other regions without the presence of the PHC program. But poor cooperation of headquarters and chapter staff in Phase I have undermined the conditions for testing the ICDPP Benguet pilot project.

A lesson to be learned from Phase I is that integration of the two programs over the long term might have been avoided had the PNRC staff based the selection of communities on community demand for disaster management interventions and receptivity of the local leader. Community demand for disaster management compel local leaders to pursue support for ICDPP from higher levels of government, such as sources earmarked for development or rehabilitation, as the example from Carmen, Davao, that I presented in Chapter Two, illustrates. Rather, integration became an insurance mechanism for the PNRC when the local chapter could not secure support from local governments for future implementation of projects. Only two out of six Phase I communities mustered support from the municipal government for disaster management projects. One of those communities, Barangay Balakbak, has secured funds from the Mayor, based on the mayor's understanding of the projects contributing to development efforts, not vulnerability reduction to natural hazards.³⁸

In the next section I will show how a turnover in staff actually helped the program by revising the sequence of the training and increasing the involvement of community members from the beginning, to foster demand for disaster management interventions.

³⁷ Interview with Peter Polilen, January 14, 1998, in regards to water and sanitation projects in Balakbak.

³⁸ Interview with Mayor Liso Agpas, Municipality of Kapangan, January 14, 1998.

V. Revising the ICDPP: Phase II Projects

Staff Turnover: The Opportunity to Revise the Benguet Pilot Project

Between the completion of Phase I and the beginning of Phase II, staff turnover for both the ICDPP program coordinator and community development officer positions created the opportunity for revision of the ICDPP. The new staffs' motivations for revising certain components of the ICDPP did not rest solely in promoting disaster management as the primary objective of the ICDPP. Most of the revisions grew out of pressure put on the new staff by headquarters to increase efficiency during Phase II. While it may not have been the staff's sole objective, the improved components contributed in important ways to the prioritization of disaster mitigation and prevention projects in the Phase II barangay disaster action plans (BDAP) over the projects of Phase I.

The new ICDPP program coordinator, Roy Malibiran, transferred from his management position in the PNRC Community Health and Nursing Services, bringing with him knowledge of community service delivery and support for the PHC model. The old community development officer, who served in Phase I of the Benguet Province Pilot Project, took on the lead of the Phase II Leyte Province Pilot Project. Therefore PNRC hired a new community development officer, namely Albert Munoz. These two headquarters staff, in conjunction with the Benguet Chapter Administrator and the Benguet Chapter ICDPP Project Manager, revised the program with a focus on improving four components: (i) barangay hazards and needs meetings and hazard priority workshops, (ii) hazard identification and data collection using GPS, (iii) BDAT composition, and (iv) implementation of ICDPP activities using the low-cost PHC model. They picked these areas because in Phase I, PNRC had wasted resources by relying on chapter staff and consultants for the verification of hazards and feasibility studies, and as a result limited resources remained for actual implementation of projects.

First, they proposed that barangay hazards and needs meetings should *follow* the barangay hazard priority workshops, the sequencing of which they believed would lead to more disaster-focussed interventions in the barangay disaster action plans (BDAP).

Second, they proposed that the participants in the hazard priority workshops, or the barangay disaster action team (BDAT), should participate in hazard identification using the Global Positioning Satellite (GPS) System. They believed this would save up to 80% of the time needed to identify hazards by GPS staff because BDAT members knew the terrain and past points of hazard, and that it would better prepare local government and community members to prioritize identified risks.³⁹ In Phase I the identification of hazards took ICDPP staff so much time, and the processing of the data was delayed due to technical difficulties, so that the GPS maps were not available before communities prioritized interventions.

Third, they proposed that the BDAT should have a multi-sectoral composition, in order to facilitate “the integration of the Primary Health Care Program into the ICDPP target areas.” To increase receptivity, ICDPP staff encouraged BDAT to include community members likely to promote Red Cross efforts at the community level based on their involvement in community organizations. The multi-sectoral group would ideally include barangay health workers, nutrition scholars, and auditors of health organizations, who were recognized by the community for their work in health; and community figureheads, who possessed knowledge of municipal and provincial finance, as well as leverage in the political system.

The exclusion of the community figurehead in Phase I had created two problems. First, it made the BDAT unable to integrate barangay disaster action plans into the community development plan. Integration of the plans would enable BDAT to focus on non-development concerns of the community. Second, BDAT had to gain the support of the barangay captain to sign the disaster action plan, and to approach municipal governments for additional funding to what ICDPP could provide. But in most cases, the barangay captain would not support the BDAT, as the captains viewed the BDAT chairman as a competitor for political support from within the community.

Fourth, the new staff proposed low-budget community projects for the Phase II communities, based on the PHC model, since funds from the Danish Red Cross were minimal for Phase II of the Benguet pilot project. This low-dependency model involves instruction to communities on how to build projects, and introduces how to tap the

³⁹ Progress Report: January to September 1997. Manila: PNRC.

appropriate resources available in government. The community development officer felt that by limiting the resources on projects, communities would be discouraged from prioritizing high-cost infrastructure projects, and instead move toward low-cost disaster prevention projects. Headquarters also justified allocating a low budget for Phase II, because they intended Phase II to test the replicability of the ICDPP, not to introduce new methods. In fact, despite the reduction in support, Phase II made many improvements to the program, such as training, and the projects proposed by the Phase II attest to this fact.

Phase II: Prevention Solutions

PNRC selected communities for Phase II in 1997. Training for the BDAT took place in the capitol of Benguet Province in January 1998, and implementation of the projects should be completed by the end of 1998, when funding for the Benguet project ends. PNRC will phase out major funding by February 1998, at which point the ICDPP Phase II will run on PHC standards for implementation of projects (e.g. no dedicated local ICDPP vehicle, extended stays by chapter staff in the communities, and increased use of volunteers).⁴⁰ A preview of the projects shows that revised training fostered better community understanding of ICDPP methods and disaster management interventions, which may have increased receptivity for the program, and even demand for the disaster management interventions.

Training

Unlike Phase I, training for Phase II focussed on refining the Barangay Disaster Action Team (BDAT), the mechanism for increasing disaster awareness, through improvements to composition and training. The ICDPP staff not only reversed the sequence in which hazards and needs meetings (community-wide meetings) and hazard priority workshops (small meetings for Community-Based Disaster Management Training (CDMTs)) fell, but the latter occurred outside the community. The following table shows the participants of the CDMTs by municipality, community, population of the community, participation rate and dates of the training.

⁴⁰ Phase II: Annual Review of the ICDPP by the PNRC and DRC. Unpublished Document. October 1997.

Table III. Participants in Phase II CDMT by Municipality, Community, Population and Date

Municipality	Community	Population	Participants in CDMT	Dates of CDMTs
Bakun	Bagu	1016**	8	12-16 January
Kibungan	Palina	1103**	8	12-16 January

*Estimated population figures used by ICDPP (source unknown)

**Population figures from the 1995 Census of Benguet Province

In comparison to the actual number of participants reported for Phase I training (see Table I), the number of participants for Phase II may look low. In fact, in Phase II the ICDPP staff set lower targets for the number of participants in the small group training to ten persons per community. Therefore, the rate of participation, 70% for Phase II, is significantly higher than the less than 50% of community members targeted whom participated in Phase I. There are many reasons for this increase in participation in Phase II.

The ICDPP staffs believe the main reason for increased participation is that they held training in the capitol, which actually provided incentives for participants to join the barangay disaster action teams (BDAT). One might argue that this forced participants, most of whom were farmers, to leave their workplace, which should yield even higher rates of absence. Yet, participants gained from the off-site location for two reasons. First, training in the capitol was more convenient for participants. While the time for travel to the training site took most participants seven to eight hours each way, PNRC arranged and paid for the transportation, making it easy for participants. PNRC also paid for participants' room and board for the long duration of six nights. When training took place at the community level in Phase I, some members could not get to the training site, especially when training took place in neighboring communities, due to inconvenient transportation and accommodation in neighboring towns.

Second, participants took advantage of the free transportation to take care of personal matters. Two participants visited clinics in the capitol city during the training, while others extended their stay by one day to sell products at the Baguio market and buy needed goods which they could not purchase in their own communities. These two reasons compensated for time lost from work in the community.

Holding the training outside of the communities, in the capitol of La Trinidad, also had positive effects for the program, mainly by increasing the role of BDAT

members in the hazard identification and planning process. First, it created a sense of camaraderie among barangay disaster action team members, who all became delegates of the PNRC in their communities. This gave members a sense of responsibility. After returning to their communities, BDAT members would assist ICDPP staff in hazard identification as well as in debriefing residents on the benefits of disaster management interventions for reducing vulnerability. This is in contrast to Phase I, when ICDPP staff organized BDAT *after* they held the large group meetings, thereby involving large numbers of people in the process, most of whom would not hold positions of responsibility after the meetings.

Second, holding the training in a politically neutral location encouraged all members to participate equally, but did not exclude the barangay captains. The sixteen participants for Phase II represented various community organizations, including members of the Barangay Health Unit (a local extension of the Ministry of Health), women's organizations, youth organizations, the religious sector, and barangay officials, including the barangay captain of each community, two councilors, one treasurer, and two barangay nutrition scholars. ICDPP staff viewed the inclusion of the barangay captain in Phase II as critical to creating the conditions that would enable the BDAT to select disaster-oriented projects. ICDPP staff recognized that barangay captain had many assets to contribute to the program, including a deep understanding of the local government institutions and a well-established tradition of participating in and obtaining support from municipal government councils. The development literature also suggests that these elite understand the needs of the poor communities in which they live, and the limitations of the municipal government to provide for those needs. This understanding may increase the barangay captain's receptivity of and demand for the ICDPP.

In conclusion, in Phase II training, ICDPP gave participants in the training roles of responsibility in the identification of hazards and promotion of ICDPP in communities. Staff also made an effort to involve the barangay captains in the training and pre-project implementation phase. In this way, the ICDPP staff succeeded in increasing support for ICDPP methods and increasing understanding about disaster management interventions within a small group of participants. In the following section I examine how this affected the preliminary selection of projects by Phase II communities.

Projects

The following table shows what type of projects the BDAT from Phase II communities tentatively selected to implement. While implementation will rest on the results of GPS mapping for location verification, technical feasibility studies, and headquarters approval, the data overwhelmingly points to the communities' focus on mitigation and prevention interventions, in contrast to Phase I.

Table IV. Projects Proposed by Phase II Training Participants (BDAT)

Municipality	Community	Project Description	Nature of Project	Community Population
Bakun	Bagu	flood control, agro-forestry, reforestation, footpath and handrail	mitigation, prevention, safety	1016*
Kibungan	Palina	watershed protection, reforestation, fire prevention	prevention	1103*

*Population figures from the 1995 Census of Benguet Province

I argue that Phase II barangay disaster action teams overwhelmingly expressed interest in the mitigation and prevention projects for two reasons. First, with the inclusion of the barangay captains on the BDAT, participants were not compelled to prioritize development projects in the disaster action plan. This was mainly possible because the barangay captains in both cases were active in development councils and could assure funds for development from elsewhere. Therefore, unlike in communities from Phase I, an urgency for development efforts did not obscure funds for disaster management. This finding is surprising and reflects highly on the part of the Phase II communities, given the literature that mitigation components usually have to compete for priority and scarce resources with various other development issues (Harth 1989).

Second, ICDPP staff's focussing of training on disaster management, without the overlapping content of health interventions, contributed to a deeper understanding by

participants of the roots of vulnerability and the benefits of disaster management interventions to reduce vulnerability. By understanding the benefits disaster management interventions can provide to their communities over the long term, such as the preservation of soil quality, farming land, and water supply, participants' demand for the interventions increased.

In the final section of this chapter I discuss field observations of communities from both Phases I and II. I examine the sustainability of projects by measuring community commitment through proxies such as maintenance of projects and intention to implement projects remaining on the barangay disaster action plan. This discussion shows that the factors which made Phase II successful are mostly missing in Phase I, that is barangay captain commitment to the ICDPP, and community understanding of the benefits of disaster management interventions.

VI. Replicability and Sustainability of the ICDPP? A Survey of Three Communities

I started my research in Benguet during January of 1998, on the very day when ICDPP staff began training the Phase II barangay disaster action teams (BDAT) in Benguet's capitol city of La Trinidad. My impressions of sustainability of the projects comes from visiting the Phase I communities of Balakbak and Gusaran, the first two communities to take part in hazard needs meetings in November of 1995, and implement projects in 1996. I also engaged in intensive talks with the Phase II pilot communities of Palina and Bagu during the training, and made the day long pilgrimage to Bagu following the training (accompanied by the Benguet chapter head, who had never visited the remote community). The three communities of Balakbak, Gusaran, and Bagu have similar hazard needs, but have proposed different means to sustain their projects. In the following section, I estimate community commitment to sustaining the ICDPP by using three proxies, including the frequency of BDAT meetings, presence of BDAT members in other community decision making bodies, and intent or evidence of financial capability to support maintenance of projects, where applicable. I find that the communities of Gusaran and Bagu fulfill the above proxies the best.

The Phase I community of Balakbak seems to be the most dependent on the ICDPP, suggesting sustainability will be short lived. In an interview, the BDAT

chairman described to me how the community can't get funds from the local government, and expects to continue asking ICDPP to fund the completion of a public toilet, and new projects such as the construction of stone walls, and the repairing of concrete-lined creeks. While the BDAT and barangay captain had disagreements over the ICDPP projects, the BDAT chairman today is active in barangay council meetings, and the barangay captain likewise became a member of the BDAT. The Balakbak BDAT meets once a month or every other month, and participants include officers of the sitios, the chairman, vice chairnan, secretary, treasurer, auditor and selected sitio representatives. Furthermore, the barangay assembly convenes every month. While the institutional mechanisms for prioritizing and carrying out new projects may exist, support from ICDPP is lacking due to the end of Phase I support from DRC. As for other sources, government-sponsored income generating projects have failed in the past, and NGOs, such as Plan International, have not deemed Balakbak as a suitable site for support either.

Gusaran, on the other hand, has institutionalized self-help to sustain the projects constructed during Phase I. The women of the BDAT took responsible for sustainability of the projects, by establishing the Gusaran Weavers' and Sewers' Association. This cooperative, which employs twenty-seven members, began operating in January of 1997 with a grant from the ICDPP for looms and thread. The cooperative plans to contribute 5% of all profits from sales of its merchandise to maintaining the Phase I mitigation projects. The cooperative has already given funds to the BDAT for repairing part of the ICDPP cement pathway.

It is also clear from interviews with five of the women from the cooperative that the income generating project has not only created a means for supporting the maintenance of already implemented projects, but as time goes on and the cooperative generates more revenues, it will support the implementation of new projects. The women of this cooperative, one of whom lost a spouse in a flood disaster, feel the cooperative empowers them to overcome their vulnerability, not only before disasters, but during them as well. While in the past women would be stuck in their homes during typhoons and floods and rendered unable to work for days or even weeks, now the women congregate in the cooperative to weave and sew.

The Gusaran BDAT's strong commitment to holding meetings also indicates that the ICDPP has taken root in the community and is sustainable. The BDAT currently has fine relations with the Gusaran barangay council, although it met resistance from the barangay captain who held office from 1994-1997. As a result, the BDAT chairman implemented projects without the barangay captain's involvement. The new barangay captain supports the ICDPP and invites the BDAT to attend the barangay council meetings. The BDAT meets often: in 1996 it had six meetings, while in 1997 that number increased to ten meetings. The cooperative joins the BDAT meetings once a year, which the BDAT chairman would like to see increase to two or three times a year. It is clear that the two associations work hand in hand in implementing and maintaining the infrastructure.

In comparison with Balakbak, the community of Gusaran has considerable experience with development, and disaster mitigation and prevention projects in the past. The municipal government supported the construction of cemented footpaths, while the Department of Public Works and Highways gave the barangay money to implement rehabilitation of roads after the Baguio earthquake. Additionally, another NGO in the area created an "Economic Self Reliance Program," in which the barangay provided materials for constructing a footpath and a toilet at the local high school. Experience in sustaining these projects and receptivity to self-help labor contribution programs also makes Gusaran a likely candidate for sustaining its projects, given that the cooperative can continue to generate revenues.

Finally, the poor, isolated community of Bagu, ironically, seems to be the least dependent on the ICDPP and the most likely to sustain the ICDPP projects. I attribute this to three factors. First, the barangay captain is an active member of municipal politics, which makes him capable of securing funds for development outside of the ICDPP. He is also eager to promote the ICDPP within the municipal government, due to the attention his community will receive as a testing ground.⁴¹ The barangay captain supports the ICDPP, and has offered the BDAT to meet with the barangay council two

⁴¹ The barangay captain Mario B. Morales has served as captain since 1994. During his first term he served as president of the Association of Barangay Captains for his municipality, and mandated that all captains become members of the municipal development council, on which he served before becoming captain (1988-1992).

times per month. Furthermore, the BDAT members live close to the community center, which the barangay captain feels will increase the attendance rate of meetings. Second, the community has participated in self-help projects in the past, namely with the Japanese International Cooperation Agency (JICA), which makes it less “needy” for basic development projects than other communities and more self-reliant for labor. Third, not only BDAT members, but the entire community is receptive of the ICDPP. Discussions with community residents who were not part of the BDAT reveals a true concern for the contamination of agricultural land due to soil erosion. The severe erosion of the hillsides has been a problem for as long as anyone can remember. These factors make the community of Bagu an ideal case for vulnerability reduction using disaster mitigation and prevention projects.

VII. Conclusions: Lessons Learned from the ICDPP

I present the lessons learned from the ICDPP in terms of how organizations attempting to undertake disaster management projects can learn from them.

The first lesson learned from ICDPP is that organizations must design programs that create demand for disaster management based on the community’s understanding of the benefits from mitigation and prevention activities. Demand for mitigation and prevention interventions is crucial for communities to implement projects that reduce vulnerability and to maintain these projects over the long term.

The second lesson for organizations is that incorporating local leaders in the hazard priority training is important to keep demand for development interventions from obscuring demand for disaster management interventions. This is especially clear when one compares the results of projects chosen by Phase I and Phase II communities.

The third lesson for organizations is that they must develop the operational capacity to carry out programs by increasing cooperation between headquarters and field staff. Otherwise inconsistencies will develop between the headquarters staff’s approval and commitment to the implementation of projects and the field staff’s recommendations for projects and promises to local communities for funding.

The fourth lesson for organizations is that in order to carry out pre-event disaster management projects, organizations must draw distinctions from the beginning of what

constitutes a disaster intervention, and what sectors disaster management overlaps with. Otherwise, as the PNRC case illustrates, the objectives of disaster management might be compromised by resource sharing, or even integration with, other programs undertaken by the same organization.

Chapter Four: Conclusions and Implications for Findings

I. Challenges in Pre-event Disaster Management and Organizational Imperatives

There is growing currency in the literature on disaster assistance that pre-event disaster management, a preventive approach to disaster assistance, (as opposed to the traditional post-disaster relief-based approach) can reduce the physical, economic, and social vulnerability of communities to natural hazards. The literature emphasizes that such planning would prove especially beneficial for developing countries, where the percentage of gross national product lost to disaster is much higher than that of industrialized countries, and where 95% of the world's disaster-related deaths occur.⁴² Yet, for many reasons, these countries most affected by natural hazards have not engaged in pre-event disaster management. These countries may perceive the costs of disaster management as too high or prioritize development concerns over disaster concerns, at both national and local government levels.

Organizations involved in pre-event disaster management have made progress in disaster management in two ways: (1) innovating and implementing programs independently of developing country governments, or (2) providing governments with technical assistance to encourage the incorporation of pre-event disaster management interventions into their domestic disaster policy. Yet few organizations have actually implemented programs that incorporate mitigation and prevention activities. In this study I focus on one attempt by a humanitarian organization, the Philippine National Red Cross (PNRC), to implement a community-based disaster planning program, incorporating mitigation and prevention activities, in eight rural communities in the Philippines. The PNRC case illustrates that effective implementation of pre-event disaster management programs requires both innovative program design and successful coordination with government legislative bodies.

⁴² Office of the United Nations Disaster Relief Coordinator, "The Protection of Human Settlements from Natural Disasters" (paper presented at the United Nations Conference on Human Settlements, Vancouver, Canada, May 31 – June 11, 1976, p. 3.

II. Targeting Rural Vulnerable Populations

In both the development and disaster assistance fields, organizations have tended to prioritize urban concerns over rural concerns, by targeting disaster assistance to regions with large concentrations of population (Cuny 1983, Anderson 1992). When disaster assistance is delivered in rural communities, it generally suffers from a series of problems: delays in the delivery of relief supplies due to poor infrastructure, unequal access to construction/demolition equipment and building supplies, and delays in registration for both relief and rehabilitation funding from government calamity funds. For these reasons organizations have been reluctant to provide disaster assistance to rural areas.

It is precisely the poor performance of past relief and rehabilitation efforts in reaching the immediate needs of disaster victims that makes rural areas ideal candidates for pre-event disaster management, which could both lessen the effects of natural hazards and decrease dependence on assistance for recovery. Additionally, the social conditions often found in rural areas, such as community institutions of collective work, intricate knowledge of environs, and socially intact populations prescribing to recognized norms, may enhance implementation of programs. For these reasons, I argue that organizations should take advantage of rural areas as testing grounds for disaster management pilot projects.

III. Resources for Pre-Event Disaster Management

Vulnerability to natural hazards exists in urban and rural areas alike, but the populations affected, as well as resources, tools, and government incentives for reducing vulnerability vary tremendously. Urban areas may have stronger economic or political mechanisms for reducing vulnerability, to the extent which disaster management is considered a public good. In rural areas however, poor infrastructure, lack of political support to improve services, and isolation increase the vulnerability of residents. In the Philippines, for example, local rural governments lack the resources not only to implement preparedness programs, but in some cases to deliver relief to victims of disasters after they occur. This means that rural populations must rely on themselves in times of disaster.

The PNRC case illustrates that organizations can build upon certain conditions present in rural areas, such as indigenous coping mechanisms. Like the traditional safety nets that families or villages provided as economic and social measures to hunger or deprivation, a similar support system exists for mitigating and recovering from natural hazards, called indigenous coping mechanisms. These include technological mechanisms, such as crop rotation and terracing, economic mechanisms, such as the practice of non-agricultural activities to mitigate against slow disaster (e.g. floods, droughts) and cultural mechanisms, such as practices of risk sharing through mutual aid and self-help groups (Clarke 1992). In the Philippines, disaster practitioners often refer to one such mechanism - “bayanihan” - which conveys an image of villagers helping a flood-stricken family transport their house to unaffected land.

In the past, development organizations have targeted populations where indigenous coping mechanisms were no longer intact, with varied success. Among the most successful initiatives are developmental relief schemes for rural areas called Food-for-Work (FFW) programs. While FFW programs have in certain circumstances led to employment and asset creation, they are not a panacea for overcoming the gap between relief and development.

These schemes are particularly interesting, however, to compare with pre-event disaster management programs. Both hope to reduce vulnerability, the former by implementing programs after disasters and the latter by implementing programs before disasters, or during the disaster cycle. I argue that for rural communities, building upon latent coping mechanisms may be an important method for promoting disaster management as a tool for reducing vulnerability to natural hazards.

IV. Programmatic Change and Organizational Reform

From the 1960s to the 1990s disaster management went through three phases: relief, developmental relief, and pre-event disaster management. Here, I briefly discuss both the organizational factors that delayed shifts from one phase to another, and the organizational reforms that brought the shifts about.

During the first phase, in the 1960s, disaster professionals lacked an organizational culture that promoted innovation in practice. This resulted from high

turnover rates of staff and the failure of volunteers to perform well in non-medical fields (Cuny, 1983). These factors kept organizations from incorporating experience into future program design, and from diversifying their activities from relief. During the second phase, in the 1970s, international donors used developmental relief to offer disaster assistance in cases which provided opportunities for rapid development (Cuny, 1983). For example, The Red Cross provided “developmental relief,” to help communities rebuild from war or natural disaster; while USAID embraced post-disaster rehabilitation as a way to develop mitigation interventions in countries with limited resources, and which might not otherwise engage in such interventions (Cole 1989). During the third phase, in the 1990s, budget cuts motivated many agencies to reform operations, which meant reducing relief funds for disasters, and replacing high-cost disaster mitigation projects such as infrastructure, with low-cost prevention programs such as sustainable development. Development agencies began to support long-term community-based disaster management programs in the early 1990s, often with a focus on reducing vulnerability; yet as agencies tend to enter the scene after disaster, attention to indigenous coping mechanisms has remained largely unexplored throughout the decade.

V. Key Findings from the Integrated Community Disaster Planning Program *Receptivity of the ICDPP*

In Chapter III, I offer two points that emerge from the case study as crucial for organizations to implement pre-event disaster management programs at the local level. First, I argue that the Integrated Community Disaster Planning Program evolved from a program that promotes disaster awareness to one that creates community demand for disaster management interventions through its *sequencing* of barangay (community) hazard and needs meetings. I present this argument while examining the two phases of the ICDPP, illustrating how and why PNRC staff changed the sequencing. The barangay hazards and needs meetings take two forms: (1) small meetings of elected participants for training on disaster planning tools and methods (such as hazard mapping and mitigation planning) and (2) community-wide meetings for assessing hazard needs and debriefing on general health and safety (such as disaster preparedness and maintenance of public facilities). In Phase I of the ICDPP, which ran from 1994-1996 and covered six

communities, the ICDPP staff conducted the community-wide session before the small session in each participating community with an aim to increase disaster awareness and foster receptivity for the ICDPP components. Later in Phase II, which runs from 1996-1998 and incorporates an additional two more communities, ICDPP staff carried out these sessions in reverse order.

I argue that the sequencing of these sessions in Phase I resulted in poor performance by the communities in addressing hazard needs. The ICDPP methods did not overcome the main problems faced by past disaster planning programs, namely, teaching communities to differentiate between development projects and disaster management interventions. If communities can't make such distinctions between the cause and the effect, they are unlikely to show demand for programs, such as the ICDPP, that target vulnerability reduction through disaster mitigation and prevention activities.

The second point I make in Chapter III is significant for organizations attempting to undertake decentralized disaster management programs. I argue that the ICDPP suffered in Phase I from poor operational capacity, stemming from two factors: (1) inadequate cooperation between PNRC Manila headquarters and Benguet chapter staff, and (2) demands of the Danish Red Cross (DRC), the donor for ICDPP, on the resource allocation for the ICDPP Benguet Pilot Project. The effects of these factors are most evident in the discrepancy between the Benguet staff's proposal of projects for Phase I communities, and the approval of Phase I projects by the headquarters staff.

Selection of Disaster Mitigation Projects in Phase I

In Phase I, communities overwhelmingly identified development oriented projects, such as water and sanitation infrastructure and safety measures such as cemented pathways. While the Phase I communities did not implement any disaster mitigation or prevention projects, a few communities *did* prioritize mitigation or prevention type interventions (e.g. improvement of canals, vegetation cover, fire lines to prevent forest fires, investing in a nursery and reforestation) within their disaster action plans. Yet, the PNRC approval of projects in Phase I revolved around the decisions of actors from outside of the communities. These included provincial engineering consultants that provided estimates and construction plans, and local academic

institutions for confirming the geological information obtained from GPS hazard mapping. Therefore, actual choice of projects depended more on the consultants' and project staff's recommendations than communities' prioritization of projects.

Organizational Imperatives: Demands on ICDPP and Revisions to the Program

PNRC hoped to achieve so many aims with the ICDPP, perhaps too many, given the limited funding and staff. PNRC ran into difficulty exclusively promoting ICDPP as a disaster management program for funding reasons. I argue that due to the Benguet chapter's incapacity to increase local government and extension agency support for the ICDPP, chapter staff had to integrate the ICDPP and PHC for three reasons: (i) to decrease operational costs of the PHC, (ii) to carry out monitoring of implemented projects, and (iii) to ensure implementation of projects listed on the barangay disaster action plans, but not guaranteed funding by the Danish Red Cross.

Between the completion of Phase I and the beginning of Phase II, staff turnover for both the ICDPP program coordinator and community development officer positions created the opportunity for revision of the ICDPP. The new staffs' motivations for revising certain components of the ICDPP did not rest solely in promoting disaster management as the primary objective of the ICDPP. Most of the revisions grew out of pressure put on the new staff by headquarters to increase efficiency during Phase II.

The new program coordinator and community development officer, in conjunction with the Benguet Chapter Administrator and the Benguet Chapter ICDPP Project Manager, revised the program with a focus on improving four components: (i) barangay hazards and needs meetings and hazard priority workshops, (ii) hazard identification and data collection using GPS, (iii) BDAT composition, and (iv) implementation of ICDPP activities using the low-cost PHC model. They picked these areas because in Phase I, PNRC had wasted resources by relying on chapter staff and consultants for the verification of hazards and feasibility studies, and as a result limited resources remained for actual implementation of projects.

Phase II Training and Project Selection: Focussing on Mitigation and Prevention

The ICDPP staff not only reversed the sequence in which hazards and needs meetings (community-wide meetings) and hazard priority workshops (small meetings for Community-Based Disaster Management Training (CDMTs)) fell, but the staff conducted training outside the community. The ICDPP staff believes the main reason for increased participation in the CDMTs is that ICDPP staff held training in the capitol, which actually provided incentives for participants to join the barangay disaster action teams (BDAT). PNRC paid for participants' transportation, room and board for the long duration of six nights. Participants took advantage of the free transportation to take care of personal matters, such as visits to clinics and purchasing supplies unavailable in the community. Holding the training outside of the communities, in Benguet's capitol of La Trinidad, also had positive effects for the program, mainly by increasing the role of BDAT members in the hazard identification process and in debriefing community members on benefits of disaster management. It created a sense of camaraderie and responsibility for barangay disaster action team members, who all became delegates of the PNRC in their communities. Furthermore, holding the training in a politically neutral location encouraged all members to participate equally, but did not exclude the barangay captains. By holding the training in the capitol, the ICDPP staff succeeded in increasing support for ICDPP methods and increasing understanding about disaster management interventions within a small group of participants.

Phase II barangay disaster action teams overwhelmingly expressed interest in the mitigation and prevention projects. I present two suggestions for why this happened. First, with the inclusion of the barangay captains on the barangay disaster action teams, participants were not compelled to prioritize development projects in the disaster action plan. Second, ICDPP staff's focussing of training on disaster management, without the overlapping content of health interventions, contributed to a deeper understanding by participants of the roots of vulnerability and the benefits of disaster management interventions to reduce vulnerability. By understanding the benefits disaster management interventions can provide to their communities over the long term, such as the preservation of soil quality, farming land, and water supply, participants' demand for the interventions increased.

Replicating and Sustaining the ICDPP

Replicating and sustaining the ICDPP in the two proposed provinces to follow the Benguet Pilot Project poses a formidable challenge for the PNRC. Given the evidence I present in Chapter Three illustrating the reliance of the ICDPP on PHC for long-term sustainability, it is difficult to measure replicability of the ICDPP alone. I argue that it is possible to estimate sustainability, however, by using proxies for community commitment to the ICDPP, such as the frequency of BDAT meetings, the presence of BDAT members in other community decision making bodies, and the community's intent or evidence of financial capability to support maintenance of projects, where applicable. In Chapter III, I present evidence from field visits to communities in both Phase I and Phase II. I find that the community from Phase II fulfills the above proxies the best.

Program Design: Self-Help as an Implementing Mechanism

PNRC chose to use Food-for-Work (FFW) schemes in the ICDPP, as a mechanism for implementing disaster management projects. In the following subsection I discuss the schemes in greater detail given (i) the various links in the development literature between FFW and disaster assistance, and (ii) that PNRC employed a tool formerly used in developmental relief in Benguet Province, to carry out its disaster mitigation projects.

The literature deems five structural components necessary for the successful implementation of FFW schemes. First, FFW should incorporate local traditions of self-help, to create a sense of legitimacy in the community for the project and facilitate community mobilization for the implementation of projects. Second, arrangements should be created between the PVO and local institutions to avoid simply handing over resources to local government. Third, the structure must provide local autonomy and discretion through guidelines and accountability to an external authority. Fourth, the structure should take account of distributional goals of the program, for which it must account for technical inputs, flow of commodities and resources and set the supervisory arrangements (Thomas 1986). The ICDPP design mirrored these components remarkably

well. The question remaining is why the PNRC chose the FFW scheme, given the many examples that point to self-help schemes as failures in stimulating long-term results.

I argue that PNRC chose FFW as a way of giving communities a sense of ownership and pride for the mitigation projects. The first pilot province, the agricultural region of Benguet, was chosen due to the intactness of its tradition for deriving labor from the community for both agricultural collective work and support after disasters, or *bayanihan*.⁴³ The PNRC hoped to institutionalize these indigenous coping mechanisms, or at least the habits behind them, to carry out projects in a way that would involve project participants.

PNRC could not predict the outcome of using self-help for project implementation. As I argue in Chapter III, communities' experience with self-help programs affected receptivity of the ICDPP. Receptivity of the self-help method was higher in communities with experience, or knowledge of, self-help programs, such as rehabilitation and development programs involving the construction of infrastructure by the community. Yet, the ICDPP staff found it difficult to promote the self-help ethic in those communities for which NGOs had worked and not employed self-help schemes. While past community experience may have weakened resistance to the idea of communities contributing labor, it may have also led communities to mistakenly associate the ICDPP goals with those of past government rehabilitation programs. The possible effects of this link are most evident in Phase I, when BDAT chose rehabilitation-type interventions; in some cases, the very same interventions carried out in prior government-sponsored FFW projects in their communities.⁴⁴ This illustrates that in Phase I the ICDPP training and organizational methods were not persuasive enough to facilitate a distinction between the purpose of FFW in the developmental relief and disaster management contexts.

⁴³ Interview with Albert Munoz, Community Development Officer, ICDPP, PNRC, January 16, 1998.

⁴⁴ Gusaran had taken part in a Department of Natural Resources and Environment project and reforested eroded areas, while it cemented pathways under a project of the municipal government. The Barangay Captain noted in an interview that the municipal government, in partnership with the Department of Public Works and Highways had implemented flood control projects after the Baguio earthquake, but that Gusaran did not receive funds (Interview with Isabello P. Kingy, January 17, 1998).

VI. Implications for the ICDPP in Moving Beyond Developmental Relief

A. Coordination

The PNRC case illustrates that effective implementation requires both innovative program design and successful coordination with government legislative bodies. Without coordination, disaster management programs are unlikely to succeed, especially at the local level, for two reasons. First, programs can not be incorporated into local development or disaster planning, the resources for which are determined by local leaders. As I argue in Chapter Three, incorporating local leaders in the hazard priority training is important to keep demand for development interventions from obscuring demand for disaster management interventions.

Second, coordination with a local leader is necessary to approach higher levels of government for supplementary or additional funding projects. I present evidence in Chapter Three that four of the six Phase I communities did not secure funds from municipal government, as the designers of the ICDPP had intended them to. I argue that the incapacity to even approach municipal government lay in the fact that barangay captains were reluctant to support the BDAT. Increasing coordination is therefore essential for organizations to overcome the past tendencies of simply channeling aid to one-time developmental relief projects, since rural communities clearly needed help in sustaining the benefits obtained from relief projects.

The PNRC case has particular implications for organizations attempting to engage in pre-event disaster management work in countries that have outdated disaster policy (focus on relief and rehabilitation) and that do not provide funding for local level initiatives. For local governments working under these conditions, coordination with outside organizations may be the best alternative for increasing capacity to implement disaster management projects. But these governments may not understand the objectives of pre-event disaster management, given their limited exposure to it in government legislation. Under such circumstances, as the PNRC case illustrates well, the organization must inform all levels of government about the objectives of the program and supply them with relevant information collected from communities as the projects develop. Both NGO and government involvement in pre-event disaster management efforts is necessary to promote reform of developing country disaster policy.

B. Self-Help as a Model

The PNRC's choice of the self-help method for disaster management, has implications for organizational learning as well as for the future directions for structuring disaster management programs. First, the organization's objective of using self-help must be presented to communities to help communities: (i) distinguish between developmental relief and disaster management interventions, and (ii) increase community receptivity for using self-help. As I argue in Chapter Three, the ICDPP methods did not overcome the main problems faced by past disaster planning programs, namely, teaching communities to differentiate between development projects and disaster management interventions. Making this distinction has been a challenge for communities that live with disaster as they find it difficult to separate the symptoms of disaster from the symptoms of development. But understanding the greater benefits provided by programs that use disaster management interventions, over past programs that merely provided developmental relief, is crucial for communities to demand pre-event disaster management interventions such as mitigation and prevention.

Second, organizations can incorporate self-help mechanisms, either indigenous coping mechanisms, or community work traditions, into disaster management programs; but organizations should not expect these mechanisms to create equitable distribution of benefits among all vulnerable community members. Rather, self-help used in constructing disaster mitigation projects may inhibit fair access to resources just as much as developmental relief may. My field research indicates that barangay disaster action teams prioritized projects for many reasons, one of which was proximity to the center of the community. Organizations that are worried about reaching all members of communities should use self-help mechanisms with caution.

C. Demand As a Criterion for Implementation

According to interviews with community leaders in Benguet, the ICDPP was seen largely as a "gift," for communities, or as aid given without requirements on the part of the communities, outside of participation in the construction of mitigation projects. This is indeed how past models of developmental relief have been viewed, as gifts to select

communities based on severity of damage from natural disasters. Although disaster management programs may target communities based on vulnerability, organizations must estimate the community's demand for the program. While sectors of development, such as water and sanitation, have used the "Willingness To Pay" method to gauge community demand for certain services, this approach is bound to fail in areas that have no way of estimating the benefits of disaster management in monetary terms. Rather, an organization should engage in discussion with communities about what constitutes a disaster mitigation project, whether or not the community needs it, and whether or not the community would prefer to participate in another project, say health or infrastructure improvement. By assessing community demand, an organization can better ensure that the interventions are feasible and sustainable for a given community. Programs that expect to make communities capable of sustaining and continuing implementation of disaster mitigation projects past the completion of the program are bound to fail without this kind of demand assessment.

D. Organizational Capacity

The PNRC case illustrates how important organizational capacity is for carrying out disaster management programs. As I argue in Chapter Three, organizations must increase cooperation between headquarters and field staff. Otherwise inconsistencies will develop between the headquarter staff's approval and commitment to the implementation of projects and the field staff's recommendations for projects and promises to local communities for funding.

Another problem faced by all organizations, and one the PNRC illustrates well, is that organizations must draw distinctions from the beginning of what constitutes a disaster intervention, and with what sectors disaster management should or should not overlap. Otherwise, the objectives of disaster management might be compromised by resource sharing, or even integration, with other programs undertaken by the same organization. This requires that both implementing organizations and donors establish clear objectives for the programs, and avoid overextending the program to incorporate objectives from other programs.

VII. Reflections on Disaster Management

In this study, I have tried to present the case of the Philippine National Red Cross' Integrated Community Disaster Planning Program in as unbiased a way as possible. At times I have been critical of the organization, or have pointed out steps that the organization might have taken, such as using the initial one-year survey period to create demand for disaster management, rather than simply assessing the vulnerability of hazard-prone communities. As a student of disaster management, I have the luxury to make such suggestions. Yet as a believer in preventive actions, I have great respect for and gratitude to PNRC, as an organization that engages in pre-event disaster management despite the poor framework for coordination with government, and the past reluctance of organizations to pursue disaster management in rural areas. The PNRC staff who designed the ICDPP simply believed that pre-event disaster management could improve the quality of the lives of those vulnerable to natural hazards. However we weigh the immediate successes or failures of this case, it remains in my mind a humanitarian attempt to promote a method that other organizations and government too often underestimate.

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