

## EXTREME VERSUS QUOTIDIAN: ADDRESSING TEMPORAL DICHOTOMIES IN PHILIPPINE DISASTER MANAGEMENT

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### SUMMARY

Brief narratives of two recent events in Luzon island—a flashflood in Angeles City and an eruption of Mayon volcano—underscore the disparity between natural hazards as amplifiers of everyday hardship for many Filipinos and the Philippine disaster management system's orientation towards extreme-event response. Three major factors contribute to this dichotomy. First, population dynamics combined with the lack of access to resources compels poor Filipinos to live and work in hazardous areas, discounting risk from extreme natural events to focus on daily needs. Second, the institutional setting of the country's disaster management within the military establishment makes it difficult, though not impossible, to focus and address the underlying causes of vulnerability. Third, existing modes of funding disaster expenditures are all biased towards immediate response rather than long-term risk-reduction. The implications of these findings to disaster management and research in the Philippines are identified. Copyright © 2008 John Wiley & Sons, Ltd.

KEY WORDS — natural hazards; people's vulnerability; disaster management; Philippines

*Contingencies that afflict our country and which we should plan include earthquakes, typhoons, floods, volcanic eruptions, storm surges, epidemics, serious health problems, influx of refugees and even power outages and water supply problems. . . The extraordinary and exceptional nature of these emergencies can be mitigated if not prevented through effective contingency planning.*

(UNHCR/NDCC (2003), *Contingency Planning for Emergencies—A Manual for Local Government Units*, p. 11).

*Two fishermen were killed while three others were missing when a vintage bomb recovered from a sunken warship exploded Sunday evening here [Batangas]. . . Investigators said the victims found four vintage bombs and had planned to sell the metal scraps by cutting the bombs into pieces.*

(Anonymous, *Philippine Star*, 29 August 2006, p. A-24).

### INTRODUCTION

Disasters studies have long focused on the extreme dimension of natural hazards. G. F. White's (1945) pioneering dissertation considered natural hazards as rare in time and extreme in magnitude. Peoples' adjustment, according to White, depends on how they perceive the risk from these rare and extreme threats, giving rise to the perception-adjustment or so called dominant disaster paradigm. Individuals or societies with low-risk perception

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are likely to adjust poorly to threats of natural hazards, while those with a high-risk perception tend to behave in a positive anticipatory way. White's analysis had a powerful and widespread influence on both the scholarly community and the hazards and disaster management professions (Kates, 1971; Burton *et al.*, 1978). In facing nature's threats, White and his followers recommended structural and technical solutions accompanied by soft non-structural measures. The influence of the perception-adjustment school was evident on the eve of the 1990s International Decade for Natural Disaster Reduction (IDNDR) in which the United Nations was pushed for increasing financial, technological and knowledge transfer from disaster-resilient industrialized countries to developing states where natural phenomena wrought much greater havoc (e.g. Lechat, 1990).

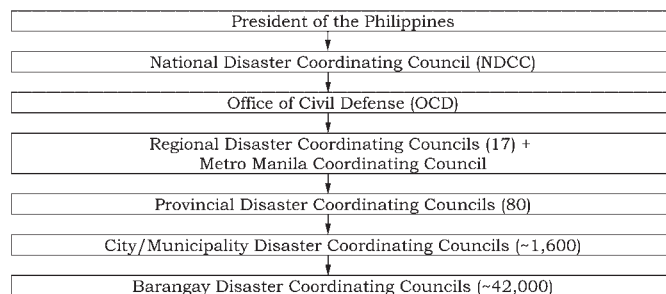
In the late 1970s, the initial challenge to the dominant perception-adjustment paradigm emerged (Waddell, 1977; Torry, 1979). Drawing on cases from the developing world, scholars such as O'Keefe *et al.* (1976), Hewitt (1983) and Wisner *et al.* (2004) argue that peoples' behaviour in the face of natural hazards is constrained by social, economic and political forces much greater than individual risk perception. Political neglect, social marginalization and limited access to resources compel helpless people to live and work in hazard-prone areas. This perspective emphasizes people's vulnerability to disasters, the root causes of such vulnerability and the expression of this vulnerability in their local and quotidian contexts (Cannon, 1994; Wisner, 1993, 2004). Natural hazards are then viewed as amplifier of daily hardship and emergency rather than as extreme and rare phenomena (Hewitt, 1983; Maskrey, 1989). Recommendations to mitigate peoples' vulnerability to natural hazards, in this school, consist largely of non-structural measures, for example, poverty reduction, fair access to land and resources, greater government investments in social services, etc. In addition, this approach emphasizes community-based disaster risk management which underscores peoples' participation in hazard, vulnerability and risk assessment (e.g. Anderson and Woodrow, 1989; Bankoff *et al.*, 2004; Kifle and Murshed, 2006). Such approach was championed by the United Nations (1995) during the 1994 International Conference on Disaster Reduction held in Yokohama, Japan, marking a significant change in international disaster management approach.

The hazard-focused perception-adjustment paradigm had a deep influence in the Philippines (Gaillard, 2005). The high frequency of disasters is almost always explained in terms of the country's location in the typhoon belt and along the Pacific 'ring of fire' (e.g. Luna, 1996; Delfin, 2005; Vicente and Villarin, 2005). Similarly, the official disaster management (DM) system has also long focused on immediate disaster response while largely overlooking the long-term underpinning factors of vulnerability (CDRC, 1992; WB/NDCC, 2004; UNOCHA, 2005). In this paper, we illustrate this dichotomy through the lens of two disastrous events in 2006 that affected the lives of thousands of Filipinos. We begin by describing the Philippine disaster management framework and highlight the institutional roots of an extreme event-oriented approach. To provide a context for our arguments, we provide in the following sections brief narratives of the Abacan river flashflood in Angeles City and the Mayon eruption in Albay province based on our interviews with disaster victims and officials as well as document and news analyses. In our final sections, we further explore the extreme-quotidian dichotomy and what it raises for the practice and research of hazards and disaster management (DM).

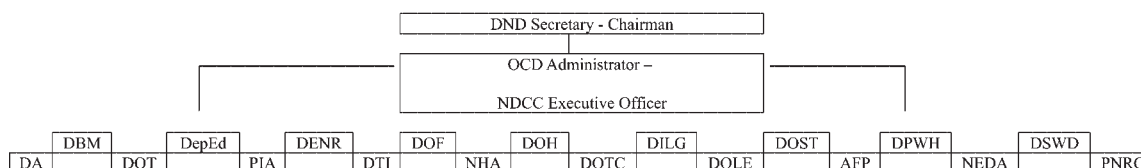
## THE PHILIPPINE DISASTER MANAGEMENT SYSTEM

The institutional roots of the Philippines' DM framework help explain its extreme-event orientation. The current governing law, Presidential Decree (PD) 1566 issued in 1978, established the National Disaster Coordinating Council (NDCC) as the country's highest disaster policymaking body composed of 18 national departments and Philippine National Red Cross, a non-governmental organization (Figure 1). The Secretary of the Department of National Defence (DND) became the NDCC Chair, while the head of the DND's Office of Civil Defence (OCD) was made the NDCC Executive Officer. PD 1566 also mandated disaster coordinating councils (DCCs) at the country's lower administrative levels—regional (RDCC), provincial (PDCC), city/municipality (C/MDCC) and *barangay* (village) (BDCC), a structure copied from local emergency councils created on the eve of WW II (Britton, 2006). This set-up intimately tied the country's DM bureaucracy to the military and defence apparatus. Since the Armed Forces of the Philippines (AFP) is one of the 18-member agencies of the NDCC and the DND

## A) Disaster Coordinating Councils



## B) National Disaster Coordinating Council



DND – Dept of National Defense; DA – Dept of Agriculture; DBM – Dept. of Budget & Management; DOT – Dept. of Tourism; DepEd – Dept. of Education; PIA – Public Information Agency; DENR – Dept of Environment & Natural Resources; DTI – Dept. of Trade & Industry; DOF – Dept of Finance; NHA – National Housing Authority; DOH – Dept. of Health; DOTC – Dept. of Transportation & Communication; DILG – Dept. of Interior & Local Government; DOLE – Dept. of Labor & Employment; DOST – Dept. of Science & Technology; AFP – Armed Forces of the Philippines; DPWH – Dept. of Public Works & Highways; NEDA – National Economic & Development Authority; DSWD – Dept of Social Welfare & Development; PNRC – Philippine National Red Cross.

Figure 1. Organizational structure of Philippine disaster bureaucracy.

Secretary is also the head of the AFP, the military's vast material and personnel are invariably harnessed during the times of calamities.

The enactment of the 1991 Local Government Code (LGC) of the Philippines (Republic Act 7160) completed the existing governing framework on disaster management by formalizing the roles of local government units (LGUs) and chief executives in disaster preparedness and response. A key provision of the 1991 LGC mandated the creation of each LGU's local calamity fund (LCF) from 5% of its annual revenue from regular sources (Aguirre, 1994). Even this important policy instrument, however, reinforces the bias towards extreme-event response rather than risk-reduction and mitigation because the LCF can only be utilized when a 'state of calamity' is officially declared by the local legislatures. Such declaration requires at least two of the following conditions: (1) at least 20% of the population are affected and need assistance, or 20% of all dwellings have been destroyed; (2) at least 40% of livelihood means such as outrigger boats, vehicles and the like are destroyed; (3) major roads and bridges are destroyed and impassable for at least a week and (4) widespread destruction of crops, fishponds, poultry and livestock and other agricultural products (NDCC, 2005; UNOCHA, 2005).

Another important consideration in the functioning of the country's DM system is the status of the local DCCs. A significant role was placed on these organizations because of the principles of self-reliance, self-sufficiency and leadership of local government units (LGUs) in times of disasters that PD 1566 enunciated (Dejoras, 1997; NDCC, 2005). This dovetailed with the devolution of important government functions, such as disaster response, from the central government to local units that the 1991 LGC mandated. A few trends highlight the continuing weakness among local DCCs. First, it is not even known for certain how many of the country's putative 17 regional, 80 provincial, 1600 city/municipality and over 44 000 *barangay* DCCs are actually operational. Anecdotal data suggest that in many jurisdictions these DCCs exist only in paper rather than as working entities. Where they do exist, however, another weakness is the poor coordination between different DCC levels (UNOCHA, 2005). Only in

cases where the chief executive is known to be a high profile advocate for DM is coordination strong and consistent. Third, because the head of the DCCs are the corresponding elected chief executives (except at the regional level where no elective posts exist), council leadership is susceptible to changes in every election. This means that the occasional laudable programmes, and even experienced personnel, can suddenly be changed or even terminated when a political opponent replaces the incumbent. Finally, a heavy burden was placed at the lowest-level council through the stipulation that disaster planning and operation be initiated at the *barangay* DCCs. Yet, there is a widespread agreement that the *barangays* are presently too technically and financially weak to be the viable planning and operational foundation of the country's disaster management system (UNOCHA, 2005).

In summary, the evolution and affiliation of the country's disaster management bureaucracy with the national defence apparatus combined with the dominant mode of public financing of disaster expenditures strongly orient the current system towards extreme event-response. The quality of such response, though highly varied and dependent on the local political leadership, is generally inadequate given the weak capacity, if not non-operation, of many of the country's DCCs. A reorientation of the DM bureaucracy towards risk-mitigation within the confines of its current institutional setting, though difficult, is not impossible. This requires a deeper appreciation of the underlying socio-economic factors that predispose communities towards risky behaviour as the succeeding cases underscore.

### THE JULY 2006 FLASH FLOODS IN ANGELES CITY

Between 13 and 15 July 2006, devastating flash floods triggered by typhoon Florita scrambled down the Abacan River which drains the city of Angeles in the province of Pampanga (Figure 2). They wrought severe damage in the surrounding communities. Word-of-mouth accounts among the victims reported that two children were killed but the official report from the authorities did not confirm these deaths. According to the Angeles City Disaster Coordinating Council (CDCC), 220 families (1161 individuals) were affected and 138 houses were partially or totally washed out. All evacuated families were temporarily relocated in public buildings, schools or hosted by relatives or friends living in the vicinity. Relief goods and food assistance were provided by the City Social Welfare and Development office.

Interviews with local informants show that most of the victims were poor informal settlers whose houses were built on the Abacan river banks despite city ordinance preventing the occupation of these areas. The area hardest hit by flash floods had been occupied for only a year by informal settlers living in makeshift houses. A large number of these settlers were former farmers or fishermen who came from poverty-stricken areas in Bicol, the Visayas, especially the province of Leyte, and Mindanao. They acknowledged being attracted by economic opportunities in Angeles City. However, most of them ended up scavenging and selling solid waste to local junkshops or working as janitors and cleaners in the neighbouring public market. Some families also managed to till root crops and vegetables on terraces of the riverbed or maintain small fishponds to augment food supply. Interviews with the victims revealed four reasons why they opted to live in the flood-prone site. First, the land was vacant. Second, it was close enough to their sources of incomes not to spend on transportation. Third, it was close enough to public schools for their children to attend. Finally, they already had relatives in the area.

Conscious of the settlement's dangerous location, the city government tried but failed to relocate some of them before the flashfloods in safer but far-off places in Angeles City. The City Social Welfare and Development office also offered plane tickets to informal settlers who would go back to their native province but no one availed. In parallel, between 22 and 24 March 2006, the CDCC conducted a seminar for village officials to inform and train them about the pending flooding threat. On 20 June 2006, the CDCC further led an information campaign among threatened families and local officials along the Abacan river.

During interviews, local village leaders acknowledged the danger of settling in the Abacan riverbed or on its banks and even informed people of the danger. However, most of the local political leaders were evasive when asked about their role and position in the face of this situation. The common answer in Tagalog is "*Hindi ko sila pinagbawalan pero hindi ko sila pinahintulutan*" (I neither forbade nor permitted them). Local officials claimed that they do not have the financial and legislative capacity to offer alternatives to informal settlers in terms of the

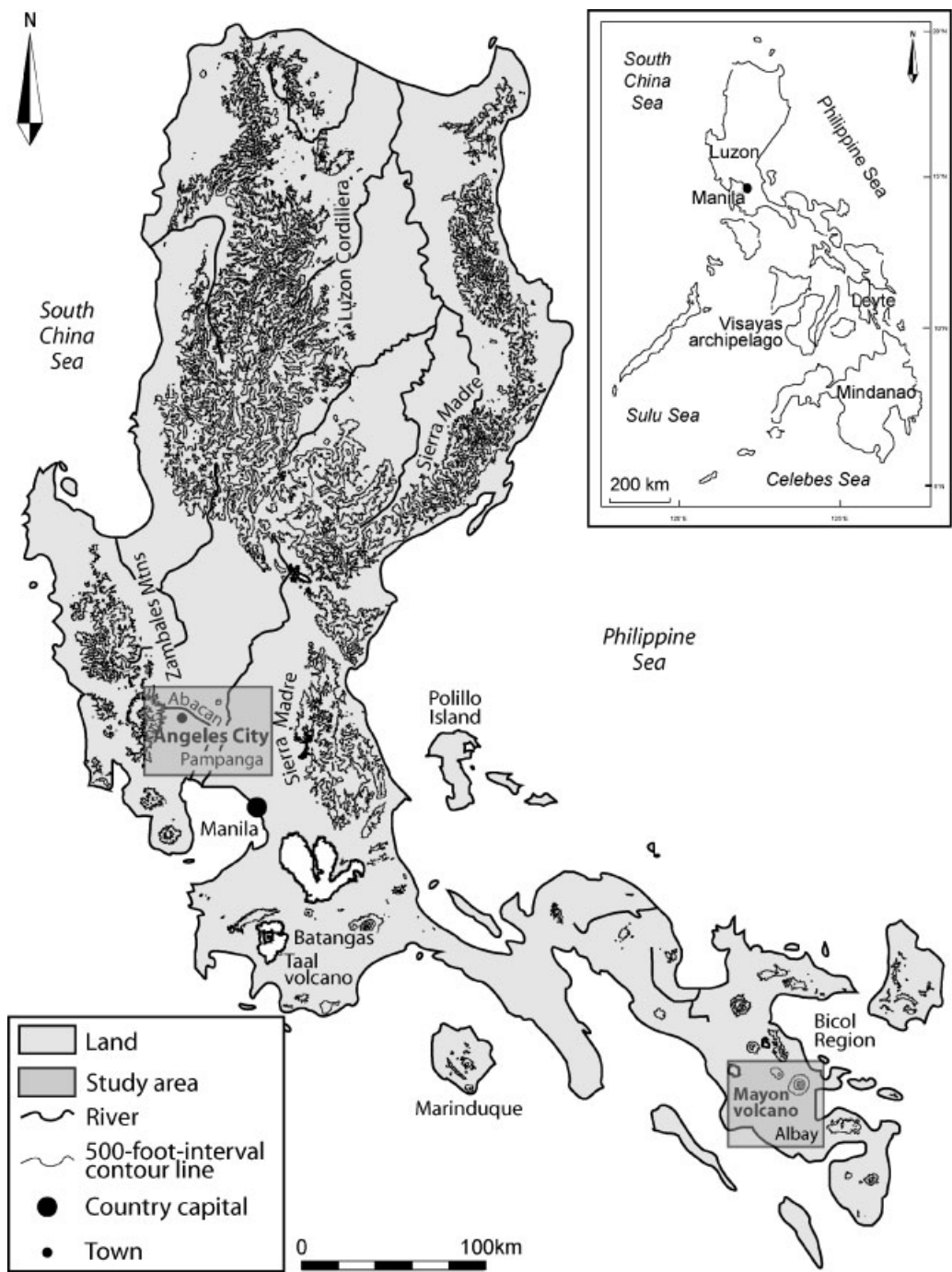


Figure 2. Location of case studies within the Philippine archipelago.



place to live and livelihoods. However, according to several informants among authorities and victims, the village chiefs actually took advantage of the situation. By tacitly allowing poor people to overlook the law, they provided them with a livelihood alternative. Also, in the event of an evacuation, village chiefs shelter the residents in public buildings and sometimes give them relief goods. In return, local political leaders invite squatters to vote for them during elections. Informants among victims claimed to have been invited to register in local precincts as soon as they settled down in view of the upcoming elections in May 2007. This situation thus creates a typical patron–client relationship.

### THE JULY–AUGUST 2006 MAYON VOLCANO ERUPTION

Mayon volcano in Albay province (Figure 2) has been in a state of protracted but low-level unrest since June 1999 (PHIVOLCS, 2006a). Given this history and its nature as the most active volcano in the Philippines, both scientific and local government officials were in a state of heightened readiness since the volcano showed abnormal activity in February 2006. Previous eruptions have led the Philippine Institute of Volcanology and Seismology (PHIVOLCS)—the government volcanological agency—to declare a ‘permanent danger zone’ (PDZ) covering a 6 km-radius all around the volcano’s summit. In addition, a six-level warning advisory has been crafted by PHIVOLCS, ranging from ‘0’ (no activity) to ‘5’ (hazardous eruption on-going) to notify the public and local officials (PHIVOLCS, 2006b). In parallel to PHIVOLCS’s monitoring system, the Albay provincial government has earned a reputation for competence and dedication in DM, one of the few LGUs in the country to have a permanent DM unit within the provincial executive government distinct from the multi-agency local DCCs.

When alert level 1 was sounded on July 13 following light ashfalls and raised to alert level 3 (high likelihood of eruption) at 10 pm the next day, the institutional routines developed by PHIVOLCS and Albay LGUs were put into action. Massive evacuations started on August 7 at 8:00 am when alert level 4 was declared after several consecutive explosions of the volcano. Almost 44 000 people from more than 9000 families living within the 8-km danger zone were brought to safety by military trucks in 26 predefined evacuation centres (schools and other public buildings) located in the surrounding towns (NDCC, 2006). In late August, the government added prefabricated shelters and tents to relieve congestion in evacuation centres. Evacuees were eventually allowed to go back to their villages on September 11 when alert was downgraded to level 3.

Inside evacuation centres, evacuees complained about congestion and poor living conditions. Congestion was partly due to the unexpectedly large number of evacuees some of whom, suspected a town vice-mayor, were from unaffected villages but evacuated to obtain relief goods. In a few cases, congestion was brought on by the victims themselves who insisted on staying with the family members despite the limit on the number of persons per room.

More problematic than inconvenience in the evacuation camps was the difficulty of sustaining daily needs for the evacuees, some of whom were in camps for nearly 3 months. Relief aid brought by different government agencies, NGOs and private donors were stretched thin. As an alternative, some evacuees managed to set up small stores to sell basic needs to fellow evacuees. Others ventured back inside the danger zone during daytime to tend crops and to guard their household properties (Guinto, 2006). Because many of the evacuees were poor farmers, preserving the little household asset they had and obtaining extra cash from tilling vegetables were more important motivators than risking injury from eruption.

The disaster was also difficult for local public administrators, from school teachers to social workers and elected officials. A common complaint was the lack of sufficient funds to pay for the ballooning disaster cost. One public school principal whose school was used as an evacuation site complained about the increased electricity and telephone bills she had to pay out of the regular school budget. The attempt to meet United Nations Children’s Fund (UNICEF) and World Health Organization (WHO) evacuation standards on clean water, sanitation, room size and medical services exhausted the limited budget of the provincial health office. The vice-mayor of one town, most affected by the eruption, admitted that their LCF has been depleted because of the unexpected number of evacuees. Such budgetary constraint was a principal reason why local governments ordered many evacuees to return to their

villages when PHIVOLCS downgraded the situation to Alert level 3, admittedly a lower but still precarious condition.

## DISCUSSION

The foregoing case studies underline three major issues in understanding and addressing temporal dichotomies in Philippine disaster management. First, population dynamics and limited access to resources lead many Filipinos to settle in the hazard-prone areas, tying disaster management intimately to basic economic development issues. In the Angeles city example, people consciously chose to face the seasonal threat of floods in the hope of securing their daily needs. Similar behaviours have been described in Metro Manila where poor migrants encroach on water canal, bayfront dikes and landslide-prone areas to be able to sustain their everyday needs (Liongson *et al.*, 2000; Zoleta-Nantes, 2000; Bankoff, 2003). The observation in Mayon mimics those in Taal volcano island, which is settled by more than 5000 people despite its official declaration as a permanent danger zone by the government (Blaikie *et al.*, 1994; Oppenheimer, 1991; Termelo, 1997). The income potential offered by tourism activities, vacant agricultural lands and small-scale scoria quarry easily overcomes the threat of a volcanic eruption in the minds of Taal people.

The findings from these cases are reflected in similar studies in other parts of the country or other types of hazards (Mahmud, 2000; Crittenden *et al.*, 2003; Luna, 2003; Huigen and Jens, 2006; Gaillard *et al.*, 2007; Gaillard, 2008). In short, population pressure combined with limited access to resources compelled many poor Filipinos to discount threats from extreme natural events in favour of risk related to everyday hunger and poverty. These reinforce a vicious poverty-disaster cycle where a growing number of poor and less resilient population suffer from disaster impacts; this forces the government to spend precious public funds for immediate and politically expedient reconstruction efforts rather than for long-term institution-building and human capital development crucial in reducing poverty.

Indeed, underlying causes of vulnerability are not traditionally viewed as military or civil-defence matters and are thus difficult to capture the sustained attention of the DND Secretary as NDCC Chair or the OCD Administrator. Phrased differently, the current organizational framework of the country's disaster management is another principal factor in the gap between formal government action and disasters as quotidian concerns. Public agencies which have jurisdiction over vulnerability factors such as the Department of Social Welfare and Development (DSWD), the Department of Health (DOH) and the Department of Environment and Natural Resources (DENR) (Figure 1), though officially part of the NDCC, understandably seek to preserve their autonomy and retain primacy over certain issues as part of their agencies' mandate rather than as disaster-related concerns to be decided within the collegial NDCC. That NDCC issues rank low on the agendas of its member agencies is indicated by the failure of most of these member agencies to have a permanent disaster-related units within their own organizations. Except for a few member agencies which have senior and permanent representatives in NDCC meetings, many member organizations typically send different junior officials often with little background on what had previously transpired in past NDCC meetings (WB/NDCC, 2004; UNOCHA, 2005). Such setting makes it hard for NDCC to engage in systematic risk-mitigation and vulnerability policy-making. Still another factor is the military establishment, into which the NDCC is embedded, is a highly hierarchical institution that runs well on a chain-of-command mentality. This orientation is suitable in responding to large-scale extreme events that can be likened to battle situations. In contrast, quotidian pressures on safety and well-being are amorphous, contextual and do not yield easily to top-down and sporadic allocation of resources. Finally, the lingering distrust on the military of some segments of Philippine society as a result of the Marcos dictatorship makes it necessary to deploy the AFP usually in cases of large-scale calamities when military involvement is likely to elicit approval rather than criticisms. In short, the institutionalization of the country's disaster administration within the defence establishment reinforces the system towards extreme-event response.

To be fair, despite NDCC's institutional handicap, it has started to incorporate vulnerability elements in many of its policies and programmes. Part of this comes from NDCC's many local NGOs and international donor partners who foster community-based disaster risk mitigation (CBDRM) as a development objective (e.g. Delica, 1999;

Heijmans and Victoria, 2001; Luna, 2001; Allen, 2003, 2004; Heijmans, 2004). In a 2004 report jointly prepared with the World Bank, for example, NDCC acknowledges the importance of poverty alleviation in reducing disaster risk at the national level (WB/NDCC, 2004). While still largely focusing on hazard-related measures, the latest four-point action plan of the NDCC (2004) stresses the importance of capacity building for LGUs in identified vulnerable areas. A 2007 NDCC circular further underlines the need for government agencies to collaborate with NGOs and other local and international organizations to address priority cross-cutting issues (e.g. population age, diversity, environment, gender, human rights) for the needs of assessment, analysis, planning, monitoring and response (NDCC, 2007).

The above NDCC innovations are welcome though initial steps in reorienting the country's DM framework but another problem—disaster funding—may be an obstacle to such development. The three existing disaster funding modes—local government's calamity fund (LCF), the national calamity fund (NCF) from the central government's annual budget, and local and foreign voluntary financial donations are all geared towards responding to an extreme calamity, especially the third mechanism. Because the LCF constitutes only 5% of the LGUs annual revenues from regular sources, it can be a viable source of disaster funding for a few wealthy jurisdictions but not for the majority of low-income rural communities which are often the most vulnerable. Furthermore, LCF use is designed by law only for immediate disaster response and rehabilitation rather than for long-term risk-reduction. Recognizing this latter weakness, a joint circular was issued by the Department of Budget and Management and the Department of Interior and Local Government in 2003 allowing LCF use for pre-disaster mitigation activities (Delfin, 2006). However, such directive is ignored by many LGUs and by the country's Commission on Audit because it violates the provisions of the 1991 LGC requiring an official state of calamity declaration prior to LCF drawdown. Interviews conducted indicated that many LGU officials fear being charged with the unauthorized use of public funds if part of LCF is diverted for risk mitigation activities and projects which do not satisfy the state of calamity declaration requirements.

Often LCF shortfalls for meeting local needs have to be met by NCF which can be used for both immediate relief and pre-disaster preparedness. But even here, the bias for extreme event response is intact. First, part of the NCF is *a priori* allocated to a Quick Response Fund (QRF) intended for immediate response by national government agencies. Second, political considerations make it imperative for the President, who as sole authority over NCF releases, to ensure that financial assistance is readily and visibly provided to communities in times of major and dramatic calamities. Third, NCF procedural rules relegate pre-disaster mitigation capital projects as the last priority for funding. Moreover, the NCF cannot be used for repair and rehabilitation of public buildings damaged by fires because these are presumed to be covered by fire insurance. These constraints on LCF and NCF use point to the glaring need to reform disaster funding regulations if fundamental issues related to communities' disaster vulnerabilities are to be addressed.

## CONCLUSION

A dichotomy between people's vulnerability rooted in daily lives and the national DM system geared toward extreme and rare natural phenomena helps in understanding recent increases in number and impacts of Philippine disasters. Three key factors contribute to this disparity: population dynamics and limited access to resources, institutional affiliation of the DM bureaucracy with the military establishment and dominant modes of DM funding. This raises important implications for both public administration and academic research.

First, NDCC member agencies with strong developmental mandates must be vested with greater disaster-related responsibilities. Except for the DSWD, DOH and the Department of Science and Technology (DOST), critical NDCC member agencies such as the National Economic and Development Authority (NEDA), the Department of Interior and Local Governments (DILG) and the DENR lack a strong DM-orientation. These agencies can start by reorienting existing functions, such as national planning, local government manpower training or map production, to be more explicitly DM-oriented. Second, though it is not necessary for the NDCC to be yanked out of its current home within the DND, it is imperative for the OCD as NDCC secretariat to give sustained focus on addressing underlying causes of vulnerability to enhance risk-reduction. This can be done either by strengthening OCD's



in-house capabilities in vulnerability and developmental assessments or, more practically, through greater coordination with member agencies with such mandate and expertise. Third, alternative modes of public spending for DM need to be explored. For instance, LGUs can package their disaster-mitigation capital projects as developmental activities to allow appropriations under LGU's 20% development fund that do not require state of calamity declaration. More broadly, both the national and local governments must examine the possibility of pooling their calamity funds under an insurance system that can perhaps be managed by a joint public-private authority. Lastly, all these disparate efforts can be facilitated by enacting legislation that will reform the country's 30-year-old disaster governing law.

For academic studies and research, some potentially fruitful lines of investigations are identified. These include comparative analyses of other countries' DM system, both existing and historical, of addressing underlying causes of peoples' vulnerability to disasters. Extension of the study to cover man-made accidents, technological disasters and complex emergencies might be another productive endeavour.

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