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## **Disaster Communication and Information Management of the Philippine National Disaster Risk Reduction and Management Council : A Research Proposal**

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### **Abstract**

This study is about the disaster communication process of the Philippine government. It aims to provide readers with an overview of Philippine Disaster Management with emphasis on its communication functions. Information was gathered through a series of interviews with key officials of the Philippine government concerned with information dissemination, disaster management, and presidential communication.

The main research problem presented in the paper asks: Is the current messaging process of the Philippine Government adequate and effective in communicating disaster-related information to the public? This is further divided into the three sub-problems: (1) Are members of the National Disaster Risk Reduction and Management Council (NDRRMC) coordinated in the formulation and dissemination of information?; (2) Is the current communication mechanism (message formulation and dissemination) of the National Disaster Risk Reduction and Management Council effective in informing the citizens?; and (3) Are the people receptive to the information given by the authorities?

Christopher Hood's theory of New Public Management (NPM) was used to guide the research with the doctrines of Explicit Standards of Measures and Performance and Greater Emphasis on Output Controls chosen as theories to address adequacy and effectiveness of communication. According to Hood (1991), Explicit Standards of Measures and Performance means that government should define goals, targets, and indicators of success, which are

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preferably expressed in quantitative terms, especially for professional services. Greater Emphasis on Output Controls on the other hand is seen as resource allocation and rewards linked to measured performance; breakup of centralized bureaucracy-wide personnel management. Its justification is to stress results rather than procedures.

Being that this is a research proposal, the study cannot be deemed as completed since there is a need to go deeper in the fields of communication adequacy and effectiveness. More data and information on the Philippines' disaster management office are currently being studied and evaluated for further research.

**Keywords: Disaster Management / Communication/Philippines**

## INTRODUCTION

The geographic location of the Philippines makes it vulnerable to natural disasters. Throughout its history, the country has experienced a growing mix of earthquakes, typhoons, droughts, and volcanic activity. In a study conducted by the World Bank, the Philippines was reported to have incurred "an average cost of Php 15 billion per year in direct damages between 1970 and 2000, and killing about 866 people per year" (World Bank, n.d.). And recently, the Citizens' Disaster Response Center (CRDC) mentioned the Philippines as having the third highest share of the world's natural disasters in 2010 (GMA News, 2011). Based on these data, the government had taken policy measures implemented programs to address this worsening problem.

On May 27, 2010, President Gloria Macapagal-Arroyo signed Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010, into law. This Act calls for the state to "develop, promote, and implement a comprehensive National Disaster Risk Reduction and Management Plan (NDRRMP) that aims to strengthen the capacity of government to build disaster resilient communities and enhance disaster preparedness" (Section 2, Republic Act 10121). One of the most significant features of this law is the strategy to mainstream disaster risk reduction and climate change in development processes.

A key provision in Republic Act 10121 states the former National Disaster Coordinating Council (NDCC), which in itself carries certain semantic problems, be renamed to the National Disaster Risk Reduction and Management Council (NDRRMC) (Section 5, Republic Act 10121).



Not only did this rectify the linguistic aspect of the Council's name, but it also signified a shift in paradigm, that from a culture of disaster response to that of disaster preparedness and mitigation.

The enactment of this law is believed to be a response to Typhoons Ondoy (International name: Ketsana) and Pepeng (International name: Parma) in September 2009 when the Philippines experienced two of the worst and costliest natural disasters in history (Climate Change Commission, 2013). According to the National Statistical Coordination Board, Ondoy and Pepeng left almost a thousand people dead and economic losses estimated to be at Php 38 billion (NSCB, 2009). There was intense public outrage and despair over what had happened and Philippine Disaster Management would experience its tipping point.

The past years challenged the existing mandate of the NDRRMC due to three devastating typhoons in a span of twelve (12) months. The Philippines experienced a number of typhoons affecting not only the National Capital Region, but also the seldom-affected areas of Mindanao. The most recent typhoon to hit the country was Typhoon Bopha (PH name: Pablo) in December 2012, which left over a thousand people dead and damages amounting to over Php 36 billion (GMA News, 2012). Despite the lower number of casualties vis-à-vis Typhoon Sendong (International name: Washi), Typhoon Pablo incurred more economic losses (ABS-CBN News, 2013).

## OBJECTIVES

The primary objective of this paper is to present an initial assessment of the messaging process of the National Disaster Risk Reduction and Management Council through its implementing arm, the Office of Civil Defense. This paper is aimed at producing a research proposal on effective disaster communication using Christopher Hood's theory of New Public Management (1991) while presenting preliminary findings on the Philippines' disaster management organization. The research seeks to spark interest for researchers to come up with more literature in the field of communication and disaster management.

Though addressing and improving disaster management processes should be holistic in nature, this study will only focus on the role of communication, particularly its messaging function, in the first priority area of the National Disaster Risk Reduction Plan (Disaster Prevention and Mitigation). Communication and information management in other priority areas



are considered vital and should not be taken in any way as an exclusive component of disaster prevention and mitigation. Succeeding researches on other priority areas are highly encouraged to enable readers to fully understand the importance of communication in disaster management.

This study will not feature the current state of the country's communication infrastructure and will not dwell on the topic of Information and Communication Technology (ICT). The author will assume that there are already existing and reliable communication technology like early warning systems and two-way radios that are available for the use of government and are functioning at optimum levels. Should the reader find evidence suggesting a different state of communication infrastructure and equipment in the Philippines, the improvement of information and communication systems should be separately studied in coordination with the Information and Communications Technology Office under the Department of Science and Technology and other concerned agencies.

The study is deemed to be significant since academic literature on communication strategies on disaster management is limited. The author believes that a study on the role of communication in disaster management will benefit governments, especially those who experience natural calamities on a regular basis, and its constituents in the pursuit of casualty-free results.

## RESEARCH PROBLEM

From 1980-2010, the Philippines experienced 363 events that killed 32,956 people; economic damages have totaled to \$7,417,145,000 and 116,212,416 people were affected (Prevention Web, n.d.). In March 2013, the World Bank recently commissioned the Social Weather Stations (SWS) to conduct a survey on climate change information and its impacts. According to the World Bank's press release, "many survey respondents however admit that they have yet to fully understand climate change and its impacts. Thirty eight percent (38%) have "only little" and fourteen percent (14%) have almost no understanding as against twelve percent (12%) who have "extensive" and thirty five percent (35%) "partial but sufficient" understanding (World Bank, 2013). Based on these figures, one can surmise that climate change and disaster management have barely entered the consciousness of Filipinos.



A report conducted by the United Nations University's Institute for Environment and Human Security and the German Alliance Development Works ranked the Philippines third on the list of most vulnerable countries to climate change (Inquirer, 2012). The Asian Development Bank Special Evaluation Study entitled: **ADB's Response to Natural Disasters and Disaster Risks** lists the Philippines as the third developing member country (DMC) at highest risk of human losses and economic damage where 4 out of 5 residents of the Philippines live in areas of high mortality risk (ADB, 2012).

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) conducted a post-disaster assessment on Typhoon Pablo and discovered that "a lack of accessible information and unfamiliarity with disaster warning systems may have contributed to the loss of lives" (OCHA, 2013). Philippine social media users posted comments and reactions blaming the Philippine government for seemingly lack of communication between the National government and the residents of Compostela Valley, the province devastated by Typhoon Pablo. Some posts even went as far as saying that with sufficient and timely information, the country would experience fewer, or avoid any casualties. On the contrary, the government, through the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) and the Office of Civil Defense, released weather advisories as early as a week before Typhoon Pablo intensified.

It is because of this reason that this study wishes to present the main research problem: Is the current messaging process of the Philippine Government adequate and effective in communicating disaster-related information to the public?

The author realizes that setting a measure of success for communication can be problematic as there are arguably no universal standards for quantifying effective communication. However, in the interest of this research, the researcher suggests the measurement success be based on the number of citizens informed on disaster-related knowledge. Based on the interview with officials of the National Disaster Risk Reduction and Management Council and the Office of Civil Defense, successful disaster management is attributed to the total number of casualties experienced.

## CONCEPTUAL FRAMEWORK

The researcher has decided to use the theory of New Public Management (NPM) by Christopher Hood (1991). According to Hood, the origins of NPM can be interpreted as a “marriage of two different streams of ideas.” The first of the two is called ‘new institutional economics’ which is based on the principles of *contestability*, *user choice*, *transparency*, and *incentive structures*. New institutional economics is then coupled with business-type ‘managerialism’ which uses the ideas of ‘professional management’ as portable, paramount over technical expertise, requiring high discretionary power to achieve results and central and indispensable to better organizational performance.

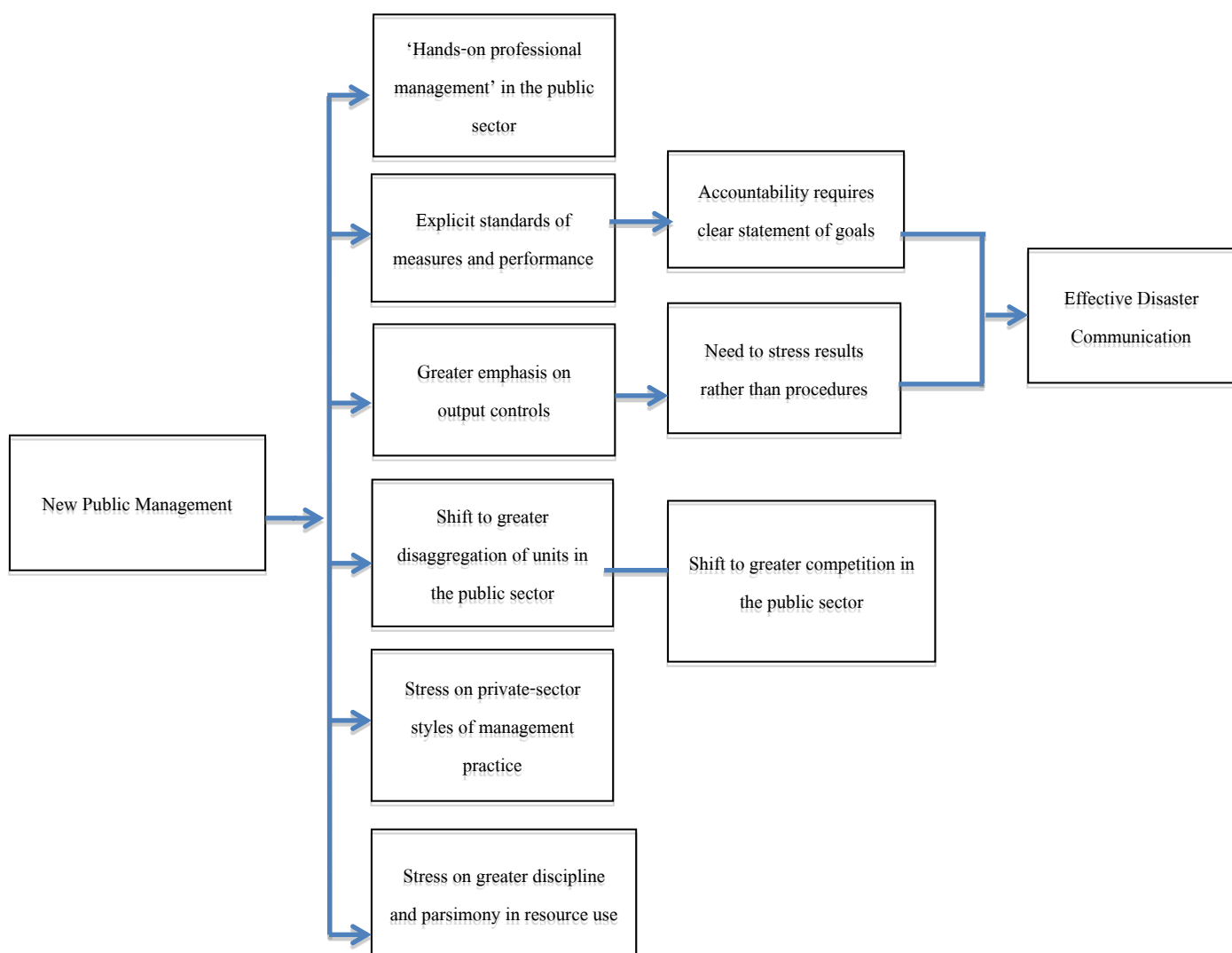


Figure 1: Theoretical Framework. Doctrinal Components of New Public Management

Source: *Classics of Public Administration*. Christopher Hood cited in Shafritz & Hyde, 2007.



Institutional economics, being one of the key elements of New Public Management, has various ways of changing the way government works. The concept of *market and quasi-market type mechanisms* (MTMs) is believed to promote cost savings and responsiveness. This particular MTM complements Christopher Hood's theory of New Public Management as it places emphasis on quality "in the sense of making public services more responsive to the wishes of their users" (Larbi, G.A., 2003).

Hood's doctrine on stressing results rather than procedures and identification of goals should serve as a guide for government in addressing disaster-related information management. The effectiveness of communication should have a standard measure for it will be the basis of attaining an agency's goal. Nevertheless, information services should be more preventive than reactive so as to satisfy the needs and wishes of the citizenry.

## RESEARCH METHODOLOGY

The researcher considered approaching this study through both quantitative and qualitative means; but due to time constraints and unavailability of stakeholders, it was decided that the study would employ qualitative research methods such as key informant interviews, group discussions, analysis of official documents and materials, and participant observation. Interviews with various government officials were conducted throughout the research, gathering evidence and opinions from both frontline actors and key decision-makers. Official documents were also secured through the access granted by government websites.

The first interview conducted was with Secretary Sonny Coloma of the Presidential Communications Operations Office, the communication arm of government responsible for information dissemination; second with Ms. Girlie Bangunan, Officer-In-Charge of the Philippine Information Agency's Regional Operations Division; third, with Mr. Nilo Mamacalay, Staff Director of the Philippine Information Agency's Planning and Communication Research Division; fourth, with Mr. Ogie Salvador, Philippine Information Agency representative to the National Disaster Risk Reduction and Management Council's Operations Center (NDRRMC-OPCEN); Major Rey Balido, Spokesman of the National Disaster Risk Reduction and Management Council (NDRRMC); and lastly, with Lieutenant Colonel Edwin Sadang, Senior Military Assistant to the Civil Defense Administrator and Officer-in-Charge of the Office of Civil



Defense's Operations Division. The researcher was also able to attend the National Summit for DRRM for Local Chief Executives on March 20, 2013, which was attended by Defense Secretary and NDRRMC Chairman Voltaire Gazmin, Office of Civil Defense (OCD) Administrator and NDRRMC Executive Director Eduardo Del Rosario, along with various Local Government Chief Executives.

Listed below are some of the questions asked throughout the interviews:

1. What is the current process of information from the source to the receiver?
2. Who are the main actors in the gathering, crafting, and disseminating of information?
3. Have you ever encountered problems or challenges in managing information from the national level down to the local level?
4. What is your role in the information and communication efforts of your agency?
5. Where do you get your information on natural disasters?
6. How does the National Government transmit information to the local governments?

## RESULTS OF THE STUDY AND ANALYSIS

Communications Secretary Sonny Coloma narrated his personal experience and shared his thoughts on the country's communication efforts in disaster management. He cited Typhoon Pablo as an example. According to him, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), the Philippines meteorological agency, sent out warnings a week prior to the typhoon's landfall. Residents in Compostela Valley in Mindanao were informed in advance giving them ample time to evacuate to a safer location. However, it was brought to his attention that the last time a typhoon swept across their area was a hundred years ago. Save for a few centenarians, no one in their area had any experience of a typhoon and how destructive it can be. He said that despite official warnings and information from the government, since no one can account to having ever experienced a typhoon, the warnings were taken lightly. He suggested that information might not be the only deciding factor in this case; but what's more important is an individual's experience to this particular occurrence.



This was also the view shared by Randy David, a professor of sociology from the University of the Philippines, in his article dated December 8, 2012:

To believe that it is sufficient to centralize the issuance of warnings and relevant information in the NDRRMC using radio, television, and the new social media is to assume that the message and its implications for action are uniformly understood. We should know by now that information from agencies like Phivolcs, Pagasa, and the NDRRMC is inescapably filtered by people's own experiential horizons.

The other informants all echoed the same sentiments because Typhoon Pablo stood out as a unique case where government performed its duties yet still resulted in numerous casualties.

In the messaging aspect, Major Balido and Lieutenant Colonel Sadang said that disaster-related information originates from scientific agencies (PAGASA, PHIVOLCS). These data are then transmitted to the NDRRMC and OCD for dissemination. The NDRRMC and OCD modify the format by using their official letterhead before being approved and signed by the Executive Director of the NDRRMC. These advisories are then given to the media for initial broadcast and to the regional offices of the Office of Civil Defense and to the regional disaster management council. These, in turn, are transmitted to the provincial, city and municipal, until it reaches the barangay level. The Philippine Information Agency, through its regional offices, also sends out text blasts to their constituents. These agencies believe that repetitive announcements are beneficial and would result in a more informed citizenry.

## ANALYSIS

One of the turning points of disaster management in the country is the signing of the Philippine Disaster and Risk Reduction Act of 2010. The legal mandate of Presidential Decree 1566 was aimed at strengthening the Philippine Disaster Control Capability. P.D. 1566 also sought to harness the power and reach of communities for disaster preparedness. Republic Act 10121 on the other hand, strengthens the PDRRM system, provides for the NDRRM Framework, institutionalizes the NDRRM Plan, and provides funds for these programs.

Illustrated below is a representation comparing the two legal documents by featuring its main functions and responsibilities :

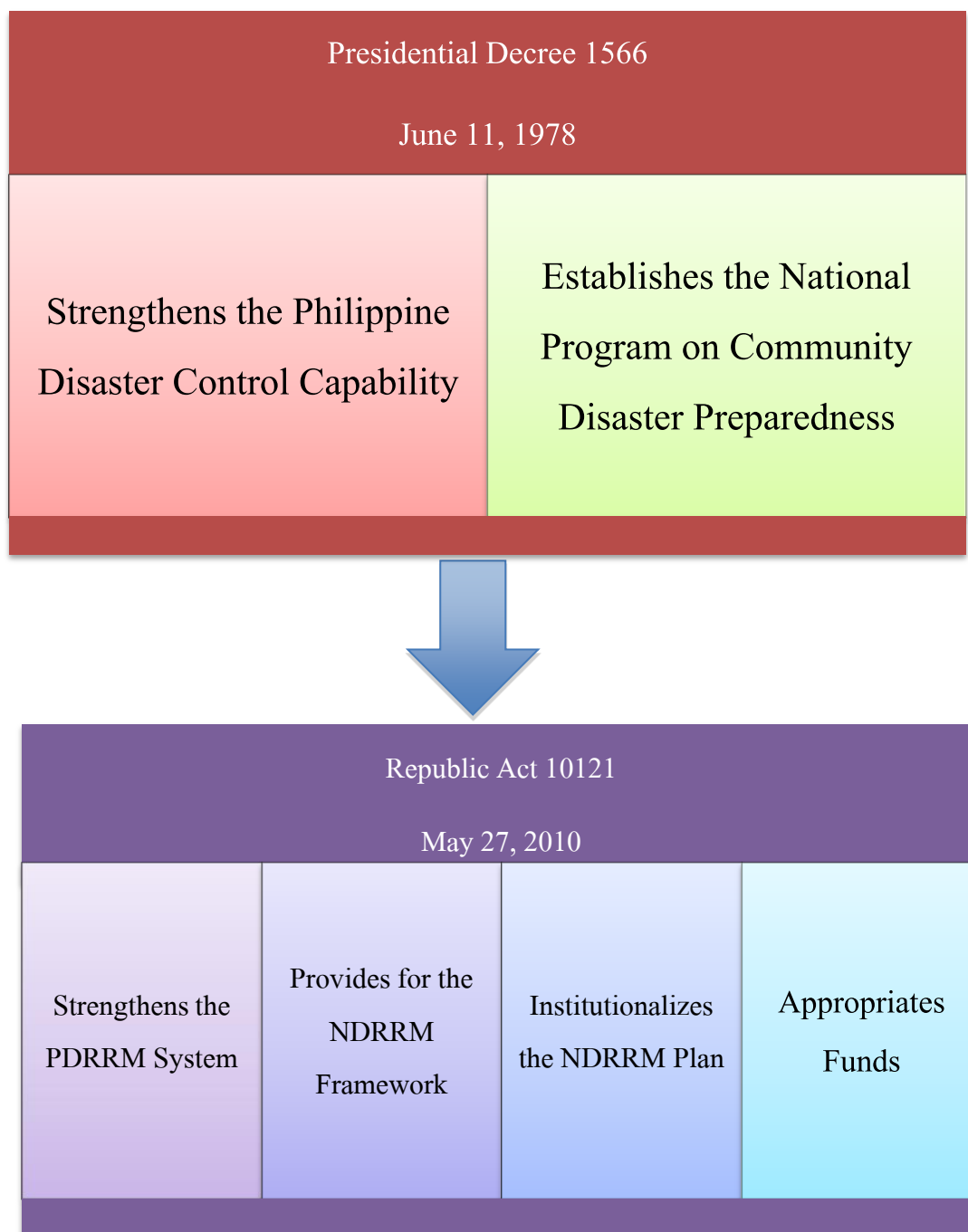


Figure 2: Illustrated comparison between PD 1566 and RA 10121

Source: *State of DRRM in the Philippines*. Undersecretary Eduardo Del Rosario, 2013.



The strengthening of disaster management in the country signaled a paradigm shift from being reactive to proactive:

- *Top-down & centralized disaster management*
- *Disasters as merely a function of physical hazards*
- *Focus on disaster response & anticipation*

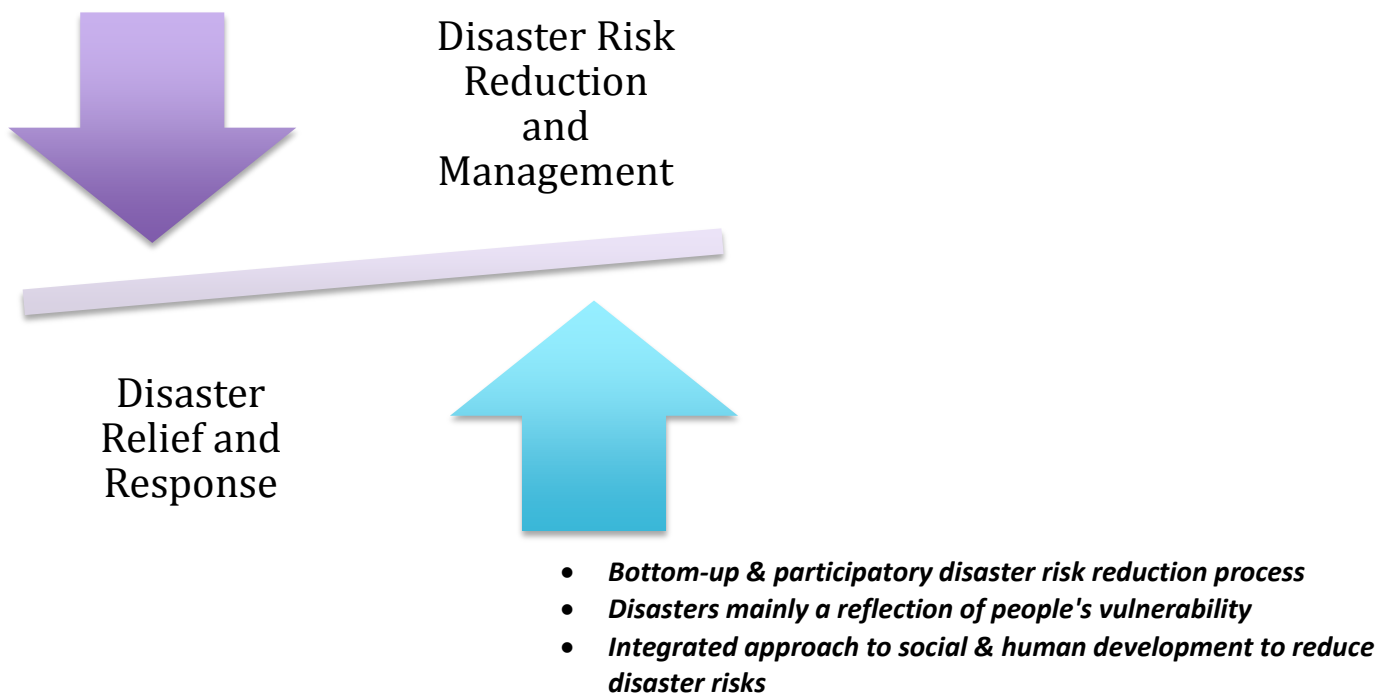


Figure 3: Paradigm shift of Philippine Disaster Management

Source: State of DRRM in the Philippines. Undersecretary Eduardo Del Rosario, 2013.

Part of the strengthened DRRM law is the directive to formulate a National Disaster Risk Reduction and Management Plan. In the recent National DRRM Summit for Local Chief Executives, Office of Civil Defense Administrator and NRRMC Executive Director Undersecretary Eduardo Del Rosario presented the strategic NDRRM Plan 2011-2028.

## ***NDRRM Plan 2011-2028, February 2012***

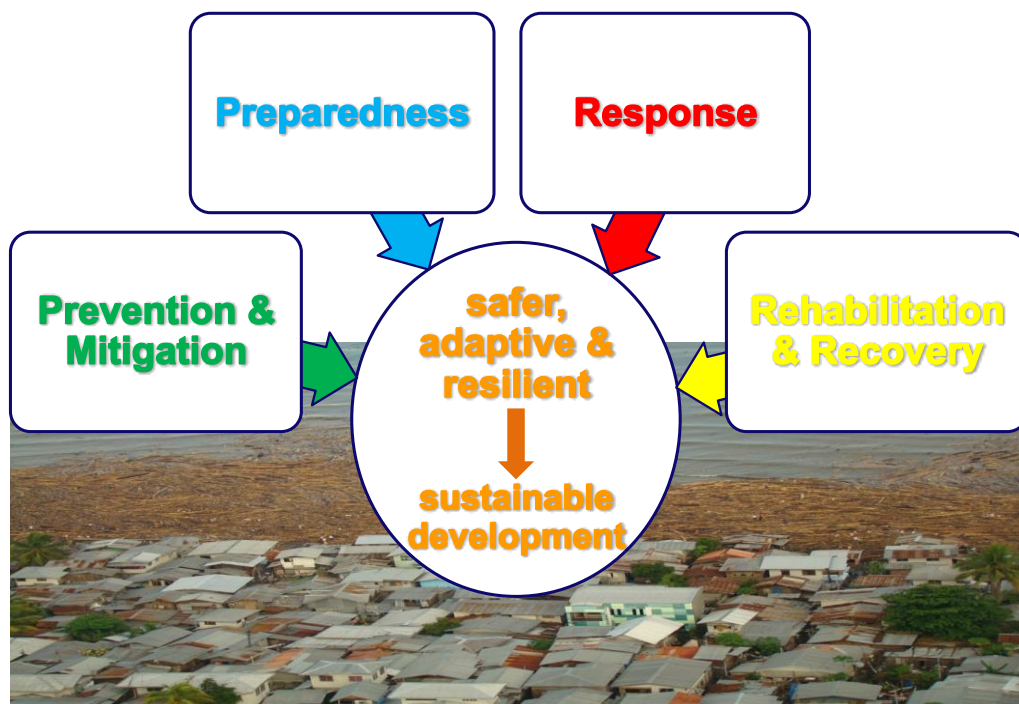


Figure 4: National Disaster Risk Reduction and Management Plan 2011-2028

Source: State of DRRM in the Philippines. Undersecretary Eduardo Del Rosario, 2013.

The current NDRRM framework and strategic plan aims at a balanced approach to disasters by employing the four (4) priority areas of Disaster Prevention and Mitigation, Disaster Preparedness, Disaster Response, and Disaster Recovery and Rehabilitation. Notwithstanding its efforts implementation, the researcher believes that there are more ways to improve disaster management through the use of communication.



The framework below suggests education and communication interventions with the goal of boosting current efforts of disaster management by including the third and most important aspect of communication, behavior/behavioral change.

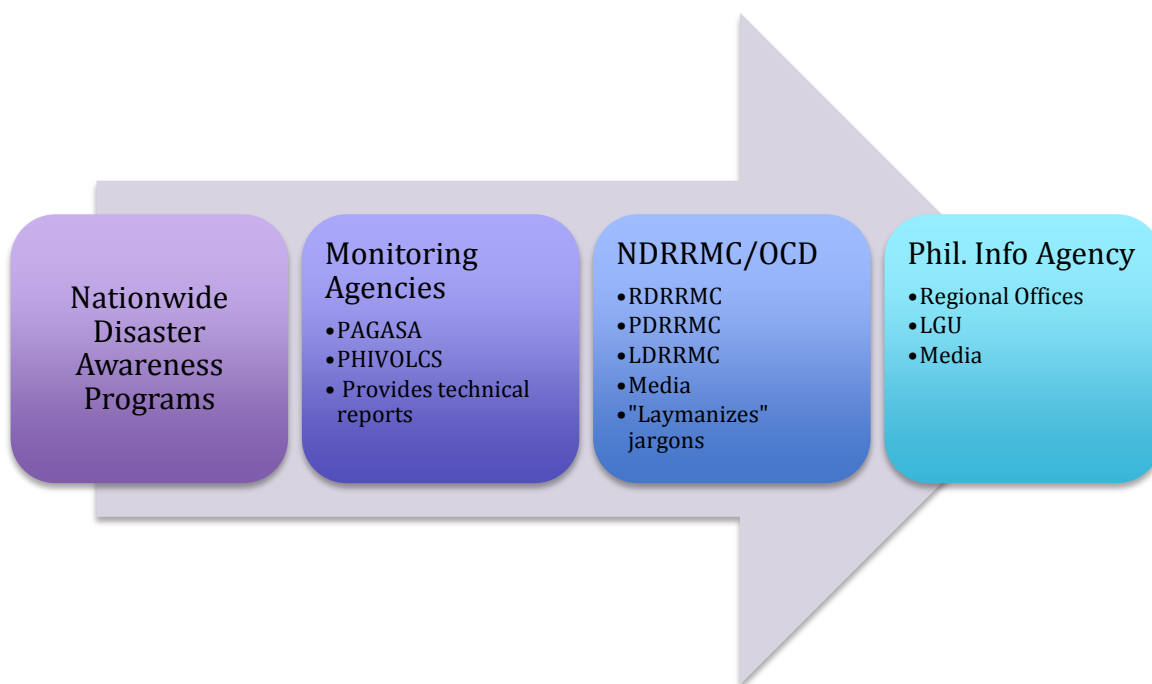


Figure 5: Conceptual Framework

As part of the prevention and mitigation efforts of the NDRRMC, Nationwide Disaster Awareness Programs (NDAP) should be in place allowing people to gain more knowledge on disasters and disaster management. These programs should not be construed as a replacement for existing communication efforts but should complement the already existing DRRM framework.

## CONCLUSION

The researcher acknowledges that in order to measure the adequacy and effectiveness of the government's messaging process, one must not only study the source of the message but also consider what the receiver does once the information is delivered to them. The formulation and dissemination of messages, which are considered part of the duties and responsibilities of the government to its citizens, are only the first steps to achieving disaster preparedness. This can be identified as the government's information management system.



The more important role now lies with the receiver wherein the information given by government should be translated to knowledge, or what we can call knowledge management. Guided by Christopher Hood's theory of New Public Management, the components of effective disaster management can be viewed using the lens of doctrines such as explicit standards and measures of performance and greater emphasis on output controls.

The conceptual framework of introducing National Disaster Awareness Programs and expanding the role of the National Disaster Risk Reduction and Management Council and the Office of Civil Defense will not only educate citizens on inevitable and imminent natural calamities but will translate complicated and technical information into clear and comprehensible knowledge.

This paper serves as a research proposal for academicians and public administration practitioners who wish to go into a more detailed investigation of the effectiveness of government information management and study the field of communication. The preliminary findings will aid researchers as it provides data on the Philippines' current plans and goals for the future.

## RECOMMENDATIONS

According to studies conducted by various international agencies and statistics presented by numerous sources, there are still gaps in disaster management that government needs to address. The information aspect alone has been experiencing challenges brought about by lack of knowledge and understanding on disaster-related issues as evidenced by the SWS survey. This gives future researchers preliminary data to serve as the starting point in their plan to expand this study.

In this regard, it is recommended to further explore and add to this research by surveying local government units and their constituents as the receiver of information. The choice of cities and municipalities should be diverse as there are areas where natural calamities are either rampant or rare. The researcher should also take caution as some local government units may deny the existence of information sharing between the national and local government due to political reasons. This was suggested by some of the researcher's key informants.



Finally, a comparison of the Japanese model of disaster management is highly suggested. The Philippines can learn from Japan's best practices by adopting some of their policies and programs that allowed them to recover from disasters and prepare for forthcoming calamities.

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