Chapter 5

# Challenges and Opportunities of Information Management in Disaster Preparedness:
## The Case of Legazpi City, Albay Province

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## ABSTRACT

*The need to improve local disaster risk reduction (DRR) capacities in the Philippines is crucial in mitigating and responding to future disaster events. Despite being one the most disaster-prone countries in the world, national protocols remain inefficient, marred by corruption and poor inter-agency coordination. In addition, the current top-down and reactive practices have proven to be inadequate in responding to the needs of various stakeholders. The chapter examined these disaster preparation practices through a qualitative-descriptive research design and by using disaster information management (DIM) as the framework. In particular, the authors focused on the disaster preparedness practices of selected parishes of the Diocese of Legazpi and their partner organizations. The study also examined their information management practices and the current information and communications technology (ICT) tools in disaster preparedness.*

## INTRODUCTION

The Philippines is considered as one of the most disaster-prone countries in the world. With an average of 15 to 20 typhoons hitting the country annually, national policies and programs created to address the adverse effects of these natural events. In particular, the landmark 2010 legislation on disaster risk reduction management (Republic Act 10121), resulted in a paradigm shift on how disaster management

is conducted in the country. The law empowers local governments to allocate resources to enable it to respond to disaster events. It also institutionalized disaster risk reduction management (DRRM) in governance through the creation of regional, provincial level disaster offices as well as the integration of DRR in the planning process of the local governments. However, a closer examination of the current Philippine disaster risk reduction management (DRRM) practices reveal its traditional civil defense-oriented nature. This nature is characterized by top-down (unidirectional) programs and information that are focused on disaster response and rehabilitation. Furthermore, it has a centralized nature that places much responsibility on the shoulders of the national government, thus treating local governments and its constituents as disaster aid recipients rather than active partners. On the other hand, a closer examination of the prevailing literature reveals a myriad of new practices that highlights the importance of determining demands, needs and on how to leverage indigenous information sources from local communities. These practices are often governed by social relations, use of information communications technology (ICT) and community data being managed at the village and local government levels.

In this paper, we examined the current community DRR practices using the disaster information management (DIM) perspective. In this view, our efforts focused on the following DIM concepts: a) Information flow and use; b) Identification of data sources and c) ICT tools used by the community and parish-based DRR actors.

To further understand the needs and practices, we adopted a qualitative-descriptive research design focusing on the Diocese of Legazpi and selected participants from the city government of Legazpi, Albay and selected members of the academe. At the end of the paper, we presented recommendations on how to further enhance DIM practices and discussed the future directions of our work.

## BACKGROUND OF THE STUDY

### Viewing the Phenomenon Using the Disaster Information Management (DIM)

Recognizing disaster-related data/information as a vital resource, the Hyogo Framework of Action (HFA) (2011) stressed the importance of information management (IM) and the use of relevant technologies to address DRRM challenges. The HFA cites the need for IM practices to support the phases of the DRR cycle. These IM practices are the following: (a) collection/storage of data- this includes the sorting, digitization of indigenous data and use of cloud technologies; (b) Use of information to produce new knowledge through data analytics, digital mapping among others; (c) Promoting collaboration and the opening of new communication channels through the use of ICT mediums (e.g. Social media, mobile, etc.). The HFA also cites the importance of building capacities through the presence of the right skills set and policy development (UN APCICT, 2011).

Similarly, the disaster information management (DIM) concept supports this HFA call by ensuring that emerging technologies and practices ensure accessible, timely and useful data as well as its high degree of integrity. DIM aims to transform disaster information (e.g. Vulnerabilities, history, risk, impact and early warning) into vital resources (Mutasa, 2013). This can be done by integrating crowd-sourced information to the traditional sources, enabling communities to collaborate, strength information flows, and generate/share information to purposeful recipients (Quiang et al 2014) (Zheng et al, 2013). Similarly, Li et al (2014) stressed that an effective DIM should be capable of collecting, organizing, analyzing and sharing disaster-related information. It must also respond to users' needs and extract patterns and trends

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