

CHAPTER 4

Risk Communication, Risk Perception, and Social Vulnerability

Risk communication is more than a research framework. It has become a concept that is strongly marketed by specific interest groups, and used instrumentally to achieve particular ends (Plough & Krimsky, 1987). Thus, it is recognized that appropriate communication is an essential part of risk and crisis management and not only important for the response to risks and crisis (UNISDR, 2003). Wiles et al. (2019) defined risk communication as a core function that uses risk perception knowledge to tailor information about a risk for a specific audience to enhance understanding of risks and benefit, while stakeholder engagement is a broader function that involves building and sustaining relationships with involved and interested groups through providing opportunities for participation in decision-making processes. Moreover, effective risk communication and management is dependent on other factors to contextualize the most appropriate information (Comfort, 2007; Comfort et al., 1999). One significant factor to consider is the role of the structures,

policies, and coordination in dealing with risk communication and how it affects risk reduction initiatives and implementation (Comfort & Kapucu, 2006; Comfort et al., 2004; Comfort et al., 2004; Comfort, 2007). Meanwhile, social scientists consider risk based on its perceptions is an invaluable concept in understanding and analyzing peoples' behavior when confronted with hazards and disasters (Paek & Hove, 2017).

Sheppard et al. (2012) stated that risk communication definitions are often similar to Covello's (1992) "*the process of exchanging information among interested parties about the nature, magnitude, significance or control of risk.*" However, they also highlighted other definitions that emphasized the importance of risk management (McComas, 2006), the need for dialogue between communicators and stakeholders (Palenchar, 2008) and necessity of ongoing risk monitoring (Coombs & Holladay, 2010). Although scholars have been working for decades to improve risk communication practice and refining communication theories and theories, these authors emphasized that there is no single theory or model can capture the full range of considerations that impact risk communication efforts. Thus, risk communication plays a vital role in the event phases of preparedness, response, and recovery during disasters.

Risk perception, on the other hand, refers to people's subjective judgements about the likelihood of negative

occurrences such as injury, illness, disease, and death which is important in health and risk communication since it determines hazards people care about and how they deal with them. Its dimension covers the cognitive level which relates how much people know about and understand and the emotional dimension which relates to how they feel about them. As such, experts base risk perception more on research findings and statistical evidence (Paek & Hove, 2017).

Scherer and Cho (2003) viewed that risk and the perception of risk are imbedded in the social context. Risk is experienced, and risk perception developed from interaction between individuals and within groups. Relator (2016) discussed that Langford and McDonald in 1997 stressed that the construction of individual risk perception is ever evolving and continually changing as long as new risk information arises. Furthermore, risk perceptions are anchored by risk experience that enables one to view risks as positive or negative. Lack of knowledge and experiences of risks could amplify the distortions and affects the cognitive ability to actions to prepare and think for possible solutions. Furthermore, Wachinger and Renn (2010) stated that perception of risk involves the process of collecting, selecting and interpreting signals about uncertain impacts of events, activities or technologies. These signals can refer to direct observation or information from others. Thus, perceptions

may differ depending on the type of risk, the risk context, the personality of the individual and the social context. Risk in the social context, thus, would refer to the possibility of an effect that would result to the implementation of plans from a decision-making process of people involved (Wang et al., 2018; O’Neill et al., 2016). Moreover, Villanueva (2016) stressed that different people have different beliefs, perceptions, and experiences regarding natural disasters, specifically, flooding. Furthermore, information is a vital form in itself: disaster affected people need information as much as other basic necessities (Wamil, 2010). Thus, risk information should be given equal importance when addressing awareness and preparedness for disasters (Terpstra et al., 2009; Rollason et al., 2018; Okada & Matsuda, 2005). However, Martin et al. (2009) argued that the more risk perceptions are increased, the most likely people would adopt risk mitigation behaviors to protect their property and themselves; and that actual experiences did not have significant impact on risk perceptions. This is contrary to the disaster experiences in the Philippines which have tremendously influenced risk perceptions and attention to preparedness (David et al., 2010; dela Cruz et al., 2010; Estacio, 2013; Garcia, 2010; Magalang, 2010; Sanchez, 2014; Sanchez & Sumaylo, 2015; Saño, 2010; Villanueva & Aid, 2010; Leelawat et al., 2015; Mercado, 2016; Villanueva, 2016). Another factor that may influence risk perception is personal

belief, Garcia (2010) noted that some indigenous communities in the Philippines perceive that risks of disaster can be by observing unusual behaviors of animals in the environment.

Slovic (1987) looked at risk as the judgement of people about acceptability or ignore risks as influenced by risk knowledge on personal experience, attitudes and feelings of people to be affected by the event. Thus, studies of risk perception examine judgements of people make when they are asked to characterize and evaluate hazardous activities and technologies. Hence, this aims to aid risk analysis and policy-making by anticipating public responses to hazards and improve communication of risk information among the lay people, technical experts and decision makers.

Moreover, people's adoption of risk mitigation strategies is influenced by the perceived degree of certainty of anticipated outcomes (Slovic, 1987), stressing the role of risk perception on stronger behavioral intention towards acting to disasters and climate change and reinforcing the link between perception and actual behaviors to reduce impacts of disasters (O'Connor et al., 1999; Vin Hung et al., 2007; Bera & Danek, 2018; Baan & Klijn, 2004). This translates into people's tendency to act upon the risks of flooding when they have actually observed or experienced the risk event.

Social vulnerability refers to the characteristics of a person or group in terms of their capacity to anticipate, cope

with, resist and recovery from the impact of a natural disaster with the indicators of income, access to basic services, access to social protection, attitude and culture to risk or disasters and social capital (Wisner et al., 2004 as cited in Wisner et al., 2012).

Studies on risk communication and vulnerabilities emphasize the role of the social capacities to anticipate, cope with, resist and recover from the impact of a natural hazard (Wisner et al., 2004 as cited in Wisner et al., 2012); reduction of social vulnerabilities towards community resilience (Alexander, 2012); as well as the susceptibility of social groups and networks to potential losses from hazard events (Blaikie et al., 1994; Hewitt, 1977 as cited in Mendes-Victor & Goncalves, 2012). Furthermore, Mendes-Victor and Goncalves (2012) stressed that there are three main research directions on social vulnerability: (1) based on exposure model to identify conditions that make people and places vulnerable to hazards like the studies of Burton et al. in 1993 and Anderson in 2000; (2) measure of social resistance or resilience to hazards is associated with the assumption that vulnerability is a social condition similar to the studies of Blaikie et al. in 1994 and Hewitt in 1997; (3) integrated potential exposures and social resilience with specific focus in particular places or regions such as studies by Kaspersen et al. in 1995 and Cutter et al. in 2000 and 2010. Thus, social vulnerability frameworks and models have been developed.