

A Proposed Framework For Institutional Risk Management For Philippine Tourism Accommodation Establishments

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Abstract: The geographical location of the Philippines is one which makes the country vulnerable to natural hazards such as volcanic eruptions and earthquakes. Being situated in the Pacific Rim, it is also in the path of seasonal typhoons and monsoon rains which eventually lead to floods, storm surges, storms, and other calamities. Recognizing the significance of the need to ensure safety of visitors, employees and the wider community, as well as to secure tourism infrastructure, the study aimed to assess the status of Disaster Risk Reduction and Management (DRRM) in tourism accommodation establishments in the Philippines in coping with natural hazards. As a pioneering research, the study attempted to determine the status of DRRM in terms of risk management, i.e. prevention and mitigation, and preparation of Philippine accommodation establishments to meet the study objective of ascertaining readiness level prior to the occurrence of a natural hazard. From the current practices utilized by the various hotels in the study, and in consideration of the legal requirements vis a vis DRRM in the country, a framework for institutional risk management processes is proposed.

Keywords: Disaster Risk Reduction and Management (DRRM); hotels and tourism accommodation; institutional risk management

1. Introduction

The Asia Pacific where the Philippines is situated is a region that is particularly vulnerable to major types of natural hazards because of its geographical and geophysical characteristics. Terry and Goff (2012) pointed out that the region is comprised of the continental mainland and a vast expanse of ocean throughout which are dispersed thousands of islands, many of which have origins to plate-boundary tectonics along the Pacific Ring of Fire. This makes the islands volcanically and /or seismically active and more vulnerable than continental areas; the low lying shorelines are also prone to tsunamis and storm surges. Tourism is considered a priority industry in the Philippines because of its contribution to economic growth. The World Travel and Tourism Council reported that the direct contribution of Travel and Tourism (T & T) to Gross Domestic Product (GDP) was Php 569 bn in 2015 and is forecast to rise to php 1,009.3 bn in 2026. Jobs generated directed by Travel and Tourism comprise 3.3 % of total employment in the country, with a total of 1,264,500 jobs in 2015. It is forecast that employment in Travel and Tourism will account for 1,649,000 jobs directly by 2026. (WTTC, 2015). Tourism has not been spared of the damaging effects of disasters due to natural hazards. Being a significant industry in terms of economic contribution and employment generation in the Philippines, as in most other countries in the Asia Pacific and around the world, the ability to respond to threats from hazards and mitigate the impacts of a disaster is seen of paramount importance, for the wellbeing not only of visitors, but equally important of employees, as well as the wider community. To a large extent, the sustainability of the industry is hinged on the ability of businesses to secure tourism infrastructure, and more importantly to protect and safeguard lives.

2. Natural Hazards and the Need for DRRM in Tourism and Hospitality

Natural hazards are physical phenomena that are naturally occurring and are caused by either fast or slow emerging events that can be biological (e.g. disease, infections, animal infestation), geophysical (earthquake, volcanic eruption, tsunamis, landslides), climatological (e.g. extremes in temperature, heat/cold wave, wildfire), meteorological (storms/wave surges, cyclones), and hydrological (e.g. floods, coastal flood, avalanches). Disasters, especially caused by natural hazards, are phenomena that cannot be prevented. A disaster is defined as “a serious disruption of the functioning of society, causing widespread human, material or environmental losses which exceed the ability of the affected people to cope using its own resources (IFRCRCS, www.ifrc.org). There have been a number of notable disasters that have affected the hotel and tourism industry within the Asia Pacific, among which include adverse impacts caused by the 2004 Indian Ocean tsunami where coastal resorts in Malaysia, India, Sri Lanka, Maldives and Thailand among others were severely devastated. Thailand was one of those which was hardest hit by the tsunami, which resulted in physical destruction of tourism infrastructure and loss of lives: an estimated 10,000 hotel rooms were seriously damaged and a high death toll of over 5,000 people, including almost 2,000 tourists was recorded (Henderson, 2007). In March 2011, Japan was hit by an earthquake which was followed by a tsunami and subsequently a nuclear emergency, and which caused large scale devastation in many cities. Several leisure facilities were closed, and with more than 500,00 cancelled hotel reservations in the aftermath of the disaster, many hotels had to suspend their operations (Voellm, 2011). More recently in 2018, a powerful earthquake that hit Hokkaido revealed how unprepared Japan was in assisting tourists, prompting the Japan Tourism Agency to create guidelines on response mechanisms to aid tourists (Kawasaki, 2018). In Kota Tinggi, Malaysia, devastating floods in 2006 and 2007 resulted an adverse impact on tourism as historical and natural attractions had to be closed and which caused a drop

in tourist arrivals. Hotels suffered a decline in occupancy rates, while other had to suspend operations as the city center was submerged in flood (Hamzah, J., et.al., 2012). In the Philippines, among the major disasters that affected the country's tourism and hospitality industry are those which were caused by seismic activity and storm surges caused by typhoons. In 1990, a deadly earthquake measuring 7.9 magnitude on the Richter scale hit the Philippines and caused damages worth P15 billion. Among the hardest hit areas was Baguio City, a popular tourist destination. Many buildings were destroyed, including the Hyatt Terraces Hotel in Baguio where 80 guests and employees perished as the hotel collapsed (Jardin, 2012). In 2011, there was an enormous wreckage brought about by the force of strong winds and flush of waves along the coast of Manila Bay, which caused flooding in a five star hotel and many other restaurants and food service establishments along the bay area (What you need to remember about storm surges, 2016). Very recently, in November 2019, a hotel in Cotabato was devastated; a portion of the structure collapsed after a deadly quake hit Mindanao, an island in the Southern part of the Philippines (CNN, 2019).

2.1. Disaster Risk Reduction and Management (DRRM)

DRRM is defined as “the systematic process of using administrative directives, organizations and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster” (NDRRM, 2010). A comprehensive cycle of disaster management which was first described by Whilwhite (1999) is useful for visualizing the cyclical nature of activities associated with the management of a disaster. The cycle consists of two major phases: (1) Risk Management (mitigation and prevention, preparedness, and prediction and early warning), and (2) Crisis Management (Impact Assessment, Response, Recovery and Reconstruction). The crisis management phase of the DRRM cycle consists of response and recovery measures. Response constitutes of actions that take place during an emergency, i.e. “putting preparedness plans into action”. It “includes actions taken to save lives and prevent further property damage in an emergency situation as well as those to return to a normal or even safer situation following an emergency.” The recovery phase, on the other hand, are those activities that take place after an emergency and also includes obtaining financial assistance to aid in the recovery process (FEMA, n.d.). The cycle suggests that through improvement of operational capabilities and risk management, the impact of a disaster can be reduced.

2.2. DRRM Regulatory Framework

Due to the country's vulnerability to natural hazards, disaster risk reduction and management laws were enacted. Republic Act No. 10121 or the “Philippine Disaster Risk Reduction and Management (DRRM) Act of 2010” provides for a National DRRM Framework (NDRRMF) as well as the guiding principles in DRRM. It serves as “the principal guide to disaster risk reduction and management (DRRM) efforts to the country” (NDRRMC, 2010). Specifically for the tourism and hospitality industry, guidelines have been issued by the government through the Department Tourism (DOT) to ensure safety and security of stakeholders. Memorandum Circular No. 2006-09 also known as “Adoption of Safety and Security Measures in Hotels, Resorts and Other Similar

Accommodation Establishments”, highlight the duties of hotel managers in order to provide guests with safe and secure environment during their stay in accommodation establishments (DOT, 2006). Also, the National Accommodation Standards for Hotels and Resorts which specifies requirements for hotels for accreditation lists the practices and systems with regard to natural disaster response as one of the major dimensions for classification into a particular star rating (DOT, 2012).

3. Conceptual Framework

Natural hazards are physical phenomena that organizations are exposed to and which can lead to disasters. Through Risk Management which involves Prevention and Mitigation, and Preparation, Monitoring and Early Warning Systems, reduction of disaster risk is an expected outcome. Risk Management represents actions that are proactive, rather than reactive, and is a means by which safety and security of visitors, employees and hotel property can be achieved (refer to Fig 2).

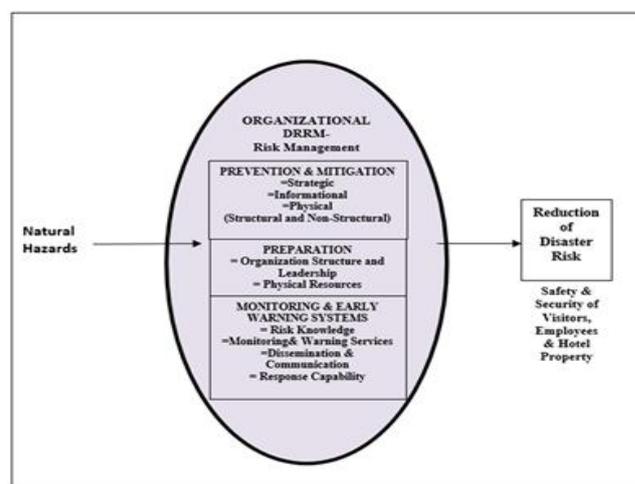


Fig 1: Conceptual Framework

4. Methodology

The qualitative method was utilized. Semi-structured interviews with the DRRM In Charge in each of the 22 accommodation establishments in the study were undertaken in order to obtain in depth information on their DRRM policies and practices. To supplement primary data obtained through the interviews, secondary sources as legal documents, journals, case studies and news articles were utilized. Using the National Disaster Risk Reduction and Management Framework as a guide, a questionnaire which focused on the elements under the risk management aspect of the disaster cycle i.e. Prevention and Mitigation, and Preparation, and Monitoring and Early Warning Systems was developed to obtain information on policies and practices in the hotels.

5. Results and Discussion

In general, risk management as part of a formal DRRM plan is evident in all except one hotel in the study. Although differentiated in terms of extent practiced, the three elements identified as essential for Mitigation and Prevention, i.e. Strategic, Physical and Informational, as well as initiatives which are necessary ingredients in Preparation, such as the presence of a structure in charge of DRRM (organization and

leadership), physical resources mobilization and the existence of essential elements in the monitoring and early warning phase characterize risk management of disasters, as evident in the hotels. It is interesting to note that even the small, independent hotels that are not accredited by the Department of Tourism, also have a DRRM plan. The small sized property in this study which has no formal DRRM plan also monitors environmental conditions and utilizes external sources, i.e. local government advisories, weather forecasts and seismic activity by state institutions such as PAGASA and PHILVOLCS respectively, and flood forecasting and warning by the Project National Operational Assessment of Hazards or Project NOAA, for information and directives on impending hazards. Moreover they also undertake trainings related to safety and security. It can be said that there is generally a conscious effort amongst accommodation establishments to place safeguards against threats from hazards in place.

5.1. Mitigation and Prevention

5.1.1. Strategic Countermeasures

As can be gleaned from the New Accommodation Standards (DOT, 2012), provision for safety and security and preparation for disasters is specified as a mandatory requirement considered in the evaluation and assessment of hotels for purposes of accreditation. It is a specific criterion listed under the "Business Practices" section, that is a must not only for the higher categories (i.e. 4-5 star properties), but for all hotel categories including those of the lower star rating which are typical of the smaller properties. While the small hotels which participated in the study are not yet accredited hotels, it is noteworthy that all, except for one, already have DRRM plans in place. Even the small hotel without the formal DRRM plan likewise has instituted some measures that are intended for safety and security of guests, even if not part of a formal DRRM plan. There is a general awareness that the need for DRRM is essential in hotel operations, and that measures are being pursued to this effect. A common priority reason for having DRRM plans is the concern for the protection of people, both guests and employees. The business side of hotel operations as a concern for having DRRM plans (reducing potential financial loss due to disaster, protection of property and other physical assets) was named as secondary only to the concern for welfare and protection of guests and employees. While review and updating of DRRM is performed by all of the hotels with a DRRM plan, not all undertake this on a regular basis, with some undertaking assessment on as per needed basis only, or when there are circumstances that propel the development of provisions for inclusion in the plan. As pointed out by Quarantelli (1984), updating and refinement of disaster strategies on a continuous basis in order to ensure that new information and/or organization changes are taken into account is a process that hotels should still aim to undertake for the benefit of the organization. Not all hotels actively coordinate with the Local Government Unit (LGU). The hotels located in these cities which are known to have an established DRRM plan, complete with the institutional mechanisms and budget allocation for DRRM, can very well benefit from the strengths that their respective LGU's have built with respect to DRRM initiatives. Close coordination with the LGU and participation in DRRM activities, particularly in information and capability building measures

is imperative. As business entities comprising an industry which is of primordial significance to the nation's economic well being, hotels are a major stakeholder within the larger community of the various cities that their respective LGU govern. Noting the character of the relationship between the participating hotels and the LGU, it appears that the potential benefits through stronger linkages between the two has yet to be maximized. More often than not, collaboration is limited to participation in city wide DRRM drills organized by the LGU and receiving advisories in the event of an impending threat. The lack of coordination and communication among DRRM stakeholders was noted in an assessment report by the Commission on Audit, which pointed out that "it was evident that coordination between and among LGU's, national government agencies, civil society organizations, volunteers and private sector left much to be desired" (COA, 2014 p. 20). The same observation was also noted in a study on DRRM in Mandaluyong (Sobrepena, 2001).

5.1.2. Physical Countermeasures

In ensuring the physical requirements of a sound structure that can withstand earthquakes and other hazards, it has been advanced by some authorities that both the structural (SEs) and non-structural elements (NSEs) will have to be addressed (FEMA, 2007; Murty, et. al 2007). As far as the hotels in the study are concerned, very few measures have been taken related to the SEs, while none at all related to the NSEs were mentioned. This is a consideration that hotels still need to seriously work on, given that at any time of the day the whole year round, hotel buildings are occupied with people, guests and employees alike. Non-structural elements in all areas of a hotel, such as the guest rooms, public areas and back of the house areas such as the kitchen, laundry area and the offices are replete with NSEs that are utilized either for hotel operations (functional) or serve as embellishments or ornamental purposes (non functional). The need to secure these for the protection of all lives and property is henceforth imperative. The damaging effects of non structural elements in the event of an earthquake can be seen in the case of Guam in 1993, where an elevator counterweight fell from its supports into the elevator cab below and unnecessarily heavy architectural building elements fell from upper floors in one hotel. (Core Logic Property Risk: Guam Earthquake, n.d.). Another example is the destruction caused by a storm surge on a Food and Beverage (F & B) outlet in a five star property located along the bay area in the Philippines (What you need to remember about storm surges, 2016) in 2011. The impact of the disaster caused the closure of the outlet which had to undergo renovation for an extended period since the physical space became unusable and the facilities for F & B operations were severely affected. With regards the SEs, most of the hotels have not taken any measures to upgrade infrastructures, and strengthening design and safety standards. For those which have undertaken steps to this end, the only measures mentioned are glass film installation, use of tempered glass and retrofitting. Only two of the respondent hotels have resorted to retrofitting, a measure taken to address possible deficiencies in the structural portions of a building, i.e. those components which resist gravity and include columns (posts, pillars), beams (girders, joists), braces, floor or roof sheathing, slabs, load bearing walls and foundations (mat, spread footings, piles). Four of the hotels are housed in buildings which were built before 1992, the rest are in buildings established in the years from

1993 onwards. While it might be safe to conclude that those that were designed and constructed after the National Structural Code was revised in 1992 are earthquake resistant, since there are provisions in the Code which guarantee buildings can safely resist a magnitude 8 to 9 Earthquake, it is seen that all the hotels still need to review the structural soundness of their properties, and to put in place reinforcements and other measures to buttress their structure. It may be recalled that several hotels, including a five star property in the northern part of the country were severely affected when an earthquake that was followed by numerous aftershocks struck in 1990 (Jardin, 2012; The 1990 Baguio City Earthquake, n.d.). The physical structure of some of the hotels that were drastically affected were described as having “crumbled to the ground”, “ripped in the middle” or “collapsed”, dreadful images that compel the need for measures to ensure that a guarantee of the soundness of the physical structure is primordial and need immediate attention. There are more recent examples of structural damages that have led to destruction of tourism infrastructure such as the collapse of old churches and heritage sites in Bohol due to an earthquake of magnitude 7.2 where thousands were displaced and more than 73,000 structures damaged in 2013 (Arquiza, Y., 2013; Philippines: Earthquake, 2013). Typhoons and storm surges likewise have wrought devastation to tourism infrastructure, examples of which include the catastrophic damage to the terminal building of the Tacloban Airport, Convention Center and many hotels and resorts due to a super typhoon, Haiyan which struck the Southern part of the Philippines in 2013 (Mullen, 2013a, 2013b; Prisco, 2013). A repeat of these devastating incidents is unimaginable; stepping up to the requirements to be able to withstand strong earthquakes up to as much as those with a strong magnitude of 8-9 as specified in the National Structural Code of the Philippines is deemed as imperative. Other structural improvements need to be in place to ensure there are safeguards against the impact of typhoons, storm surges and other hazards. Especially for the hotels which are in high risk areas, the measures that are currently being taken in the direction of ensuring structural soundness need a reassessment to ensure that they can safely resist earthquake forces and other hazards. With careful planning and design not only of the structural, but also of the non-structural elements, life and property can be safeguarded.

5.1.3. Informational Countermeasures

There are methods of alerting guests and providing instructions on actions to take in the event of an imminent threat that were mentioned by the hotels. While there are identified means of reaching out to the stakeholders to get them informed and to guide them on actions that would enable them to protect themselves, increasing the methods per property can enable the authorities to reach more people and increase their chances of survival. Redundancy in the methods used, i.e. utilizing a combination of measures that can serve to complement each other is recommended. Training is given to the employees to enable them to know how to respond to emergency situations. It is commendable that in all the hotels with the DRRM plan, capacity building methods cut across all management levels (top, middle management and supervisors) and includes the rank and file. Guests are also involved and encouraged to participate through equipping them with knowledge (information) and

even enjoining them to participate in drills for evacuation procedures for some hotels.

5.2. Preparation

Top management spearheads DRRM in the various hotels. This is evident from the involvement of key authorities, i.e. the General Manager and other executives, in the various aspects involved in DRRM including the development of the DRRM plans, support for physical resources that are needed as well as increasing capacity building to enable employees to become adept on DRRM and how to respond when needed. Moreover, with institutional arrangements and the creation of organization structures (also referred to as Crisis Management Committees) the stage is set for strong top management leadership in the event of a disaster. It is noteworthy that top management gives importance to DRRM as this sets the tone and extent by which strategies can be implemented in a property. Aside from the head of the organization and key executives of the hotel being basically spearheading DRRM, there is also common strategy of having designated departments in the establishment which serve as the units that have prime responsibility with respect to the overall coordination and implementation of DRRM: Human Resources Development, Security and Engineering. In terms of physical resources that may be needed in the event of a threat, all hotels with the DRRM plan have emergency resources that are stored in a designated area and are easily accessible. These include equipment and tools for emergency communication, power, and for rescuing guests and employees. It is commendable that preparation in terms of what are essential particularly to save lives are in place.

Monitoring and Early Warning (Risk knowledge, monitoring and warning service, information dissemination and response capability) There is no systematic method of risk assessment that is undertaken by the hotels. The same is true for monitoring and warning services that can be set up as internal sources of information on imminent threats. Only external sources of information, i.e. from state institutions such as the PHILVOLCS and PAGASA are relied on. There are already numerous scientific tools that are available and it would be worthwhile for establishments to utilize these techniques in order to identify the specific risks they are faced with, as well as obtain timely information so that quick and appropriate decisions can be made by the hotel authorities. The 2010 National Structural Code of the Philippines has a provision that mandates the installation of earthquake monitoring instruments in buildings more than 50 meters high, or with an occupancy of more than a 1,000 people. However, not all the hotels in these categories, which participated in the study have complied with this requirement to date. In addition to serving the purpose of providing warning to establishments, it has been advanced that the monitoring instruments are also very much needed by Philippine authorities in order to come up with a database for further improvement of DRRM in the country. While the hotels utilize some means of alerting guests and employees and communicating information on actions to take in the event of an imminent threat, it is noted that some utilize only two or three methods, the most common of which are mass notification using public address systems and pre-recorded announcements. These methods can be utilized in combination with each other; redundancy in modes of alerting the guests and employees can be resorted to in order

to reach as many of the stakeholders as possible in a timely manner. With identified areas for evacuation and alternative accommodation for guests who may be displaced in the event the need arises, together with an established evacuation procedure in all the hotels with a DRRM plan, it appears that the hotels have a strong response capability in place. This is also strengthened by the notion that top management, in most cases the General Manager, the head of the hotel, as well as other managers, are in charge and have a direct hand in the process.

6. Recommendations

While in general hotels practice DRRM, there are areas for improvement that need to be addressed in order to further strengthen the current initiatives of accommodation establishments. The recommendations provided herewith focus on three major areas for hotels to consider in strengthening the DRRM initiatives already in place: structural soundness of the physical property, capacity building with respect to DRRM, and collaboration with LGU's.

a. Structural soundness of the physical property as a priority concern

Ensuring the soundness of both structural elements (SE) and non-structural elements (NSEs) should be considered a priority of all hotels, whether large or small. Given that any structural damage that may occur due to the impact of an earthquake may lead to the loss of many lives, guests and employees alike, in a 24 hour, whole year round operations of hotels, it is imperative that a serious assessment of the soundness of the physical structure of the buildings which house the establishments be undertaken. A scientific assessment of possible structural damage and implementation of corresponding measures by all properties is called for in order to avoid a repeat of these scenarios, which may not only lead to loss of lives and damage to property, but ultimately would also have negative repercussions on country's the tourism industry and in the longer run, the economy as a whole. As hotels engage in upgrading equipment, facilities and their physical structure in line with DRRM, there are technological developments and innovations, and measures based on scientific studies which can be adopted as part of their initiatives to strengthen mitigation and preparation measures.

b. Use of scientific tools in disaster management (early warning devices, vulnerability risk mapping, atlas, etc.)

Nowadays there are a variety of scientific tools that have been developed and which private businesses can utilize in disaster risk reduction management. A designated authority can be assigned the responsibility of ensuring that the appropriate scientific tools that are suited to the needs of the establishment are identified and utilized to support decision making processes by policymaker and leaders within the organization. For instance, installation of Earthquake Recording Instrumentation (ERI) in the building as part of monitoring and early warning to ensure preparedness is imperative. This should be a priority concern of hotels, especially those which are high rise structures, not only in compliance with a legal requirement of the state, but also to contribute to the data collection on seismic activity that is being undertaken in order to support earthquake disaster mitigation efforts. The objective of data gathering for the

purpose of further improvement of the country's DRRM efforts is clearly spelled out in the Guidelines and Implementing Rules on Earthquake Recording and Instrumentation for Buildings issued by the DPWH as part of the Implementing Rules and Regulations of the National Building Code. The recorded data from the ERI will be used by authorities to further improve the safety provisions of local structural code. In the longer run, data recorded from several buildings in a particular area or several areas will be used as the basis for the state's disaster mitigation/remedial and rehabilitation strategies, as well as emergency response and relief operations programs. In sum, installation of the earthquake monitoring device serves the twofold result of ensuring that not only will hotels be better prepared for any threats due to earthquakes, but also can contribute to the nations' efforts to come up with a relevant and information based DRRM for the entire country.

c. Continuous capacity building on DRRM

Employees play a critical role in the event of an impending threat since guests of the hotel rely on them to carry out appropriate actions in the event of an emergency and depend on them for guidance. Equally important, the staff also have a role in making the guests remain calm. Enabling all concerned to fully play their respective roles within the DRRM policy framework of the establishment is an integral part of DRRM strategy. Hotels, however, may face challenges in this undertaking, particularly for those where high staff turnover is commonplace, and in which there is a considerable number of apprentices, trainees and students undertaking their practicum at a given time. It is in this light that the role of Human Resources Development (HRD) is underlined, to ensure that all employees and other persons engaged by the establishment to render service to guests are well trained and have the capacity to quickly respond to any emergencies that may arise. Training and continuous capability building on DRRM should also cover trainees and employees who are transient employees, i.e. employment arrangement with the establishment is only for a limited period of time. This will ensure that at any given time, all employees have the capabilities that are necessary for them to perform their DRRM roles.

d. Collaboration with LGU's

The hotels located in cities which are known to have a very strong DRRM plan, complete with the institutional mechanisms and budget allocation for DRRM, hence, can very well benefit from the strengths that their respective LGU's have established with respect to DRRM initiatives. One area that should be further strengthened is with respect to the relationship between the hotels and their respective LGU's. Accruing to their geographical location, each accommodation establishment has its own unique threats which must be ascertained in order to be better prepared for mitigation countermeasures to hazards. Close coordination and constant communication with the respective LGU's which base the destination DRRM on the natural hazard in the locale, must therefore be constantly maintained. LGU's with a DRRM Plan are constantly updated on developments that may need to be immediately addressed. One source of vital information is the National Operational Assessment of Hazards (NOAH), a program for disaster prevention and mitigation which developed a web-GIS tool which is heavily used by local government units and that enables them to

disseminate critical information to as wide an audience possible (Lagmay, A.M., 2012). Hotels can definitely benefit from maintaining close coordination and communication and their respective LGU's, particularly in obtaining advanced warnings and real time information that are useful in making timely decisions. The proposed framework for institutional risk management advances that an overall risk reduction strategy at the organizational level can best be formulated with the inclusion of major types of actions that fall under thematic areas within the various stages of the risk management cycle which consists of warning and monitoring systems, preparation, prevention and mitigation. Through adherence to a systematic and comprehensive risk management process, the impact of a disaster can be reduced (Refer to Fig 2).

tour operators are negatively affected especially with phenomenon that influence propensity to travel. History has shown that disasters caused by threats from natural hazards can create adverse impacts on tourism infrastructure, loss of lives and property, and hence, negative consequences on the economy. The need for mitigation and prevention, and preparation of business establishments, together with the wider community it is a part of, is henceforth imperative. A proposed institutional framework for DRRM can serve as a guide for DRRM Philippine tourism accommodation in ensuring safety and security of visitors, employees and the property. Future studies may be undertaken on a larger scale to include hotels in other regions, particularly in those areas without a DRRM plan. Further, Crisis Management practices of hotels particularly those which have been affected by a disaster can also be explored.

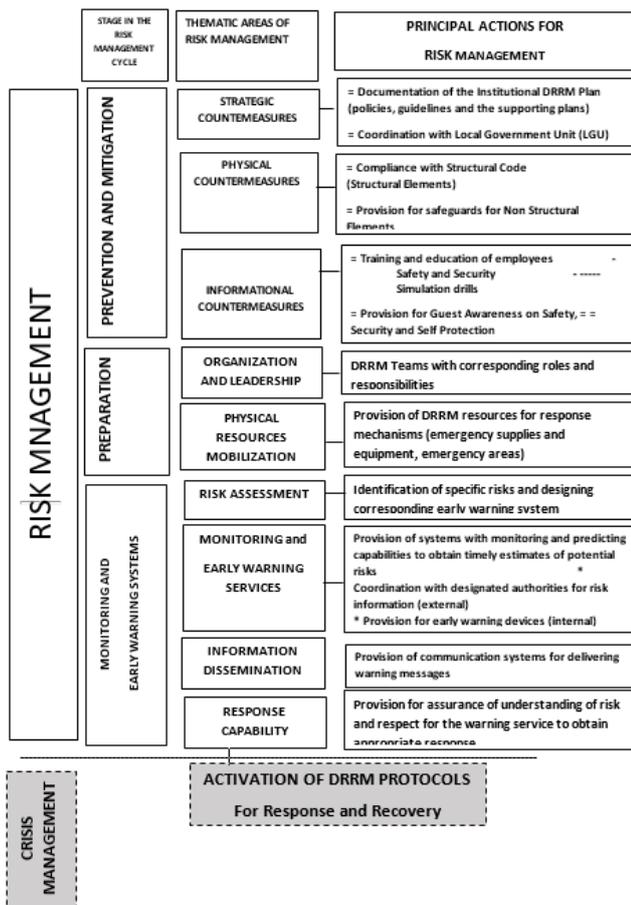


Fig 2: Framework for Institutional Risk Management for Tourism Accommodation Establishments

7. Conclusion

The hotels which participated in the study have indicated the existence of DRRM plans which cover the essential elements for mitigation and prevention of risks: Strategic, Physical and Informational aspects. Furthermore, preparation as part of risk management is evident in the presence of a structure and leadership for DRRM, education and training initiatives and physical resources. This is seen as consistent with national directives and the Philippine legislative framework on DRRM. Tourism is a significant industry in the Philippines, with its contributions in employment generation and economic growth. However, it is highly vulnerable to changes in the environment, and business operations of the various tourism sectors such as hotels and other accommodation establishments, restaurants, attractions and

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