

Resilience to Disaster of Beach Resorts in Lianga Bay Municipalities, Surigao del Sur, Philippines

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ABSTRACT

Lianga Bay, Surigao del Sur, Philippines, is one of the coastal areas established with beach resorts regularly visited by tourists. Located along the shorelines, it offers beautiful beaches and scenic tourist spots. However, as it faces the Pacific Ocean, it is highly prone to typhoons and other disasters. This study aims to identify the occurrence of disasters among beach resorts in Lianga Bay municipalities: Barobo, Lianga, San Agustin, and Marihatag, and assess the disaster preparedness activities undertaken by the personnel of each establishment. The study employed a descriptive survey method to gather data in the form of questionnaires. The highest occurrence of natural disasters or calamities that hit the beach resorts of Lianga Bay towns was Tropical Depression based on responses and as were experienced by the townspeople. In terms of disaster preparedness among resort operators, the management plus their crew had a rating of not low or high to signify

they are not well prepared and managed in times of disaster. The LGU will be provided a Checklist of Disaster Preparedness to be used in determining the level of readiness of beach resorts. It will be their guide for requirements in the future construction of beach resorts.

KEYWORDS

Environment, beach resorts, management, disaster, occurrence, disaster preparedness, assessment, descriptive research design, Lianga Bay, Surigao del Sur, Philippines

INTRODUCTION

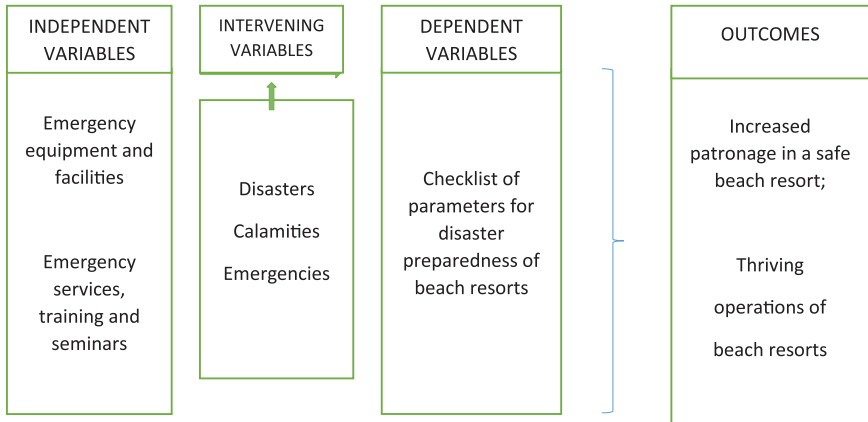
The operation of beach resorts is one of the primary businesses in the coastal areas. Being located nearby the sea, it is largely visited by many tourists because of its beautiful beaches and sceneries tourist's attractions. Lianga Bay, as one of the coastal areas, is highly prone to many typhoons since it faces the Pacific Ocean. The Local Government Units of the bay composed of Barobo, Lianga, San Agustin, and Marihatag, Surigao del Sur has its Emergency Response Team under the supervision of the Municipal Disaster Risk and Reduction Office (MDRRMO), which is mandated to safeguard the locality, including beach resorts, from untoward events during a typhoon, storms, earthquakes, fire, and other calamities whether man-made or natural.

People should be provided training to promote security awareness and improve expertise among its members and constituents, including management and crew of beach resorts. Announcements must be made to aid in the dissemination of information on protective measures to take against existing or upcoming calamities. There should be the provision of guidelines on the effective use and combination of security tools for incident detection and prevention. A collaborative relationship with other entities such as law enforcement, service providers, and telephone companies must be established.

This study was undertaken to provide information about the disaster preparedness of beach resorts in Lianga Bay and, from thereon, take steps to improve disaster preparedness. The output of the study is the provision to the LGU and beach resorts owners in Lianga Bay municipalities a checklist

for disaster preparedness to guide and prepare management and personnel of the resorts in case of incoming disasters.

FRAMEWORK OF THE STUDY



OBJECTIVES OF THE STUDY

The aims of the study are (1) to identify the type of disasters that occurred in Lianga Bay which affected the beach resorts of the Bay municipalities: Barobo, Lianga, San Agustin, and Marihatag, and (2) to assess the disaster preparedness activities undertaken by the management and personnel of each establishment.

METHODOLOGY

The study was conducted among selected beach resort operating in the Lianga Bay municipalities of Barobo, Lianga, San Agustin, and Marihag in the province of Surigao del Sur. It was conducted in the months of October to November 2016. The study employed a descriptive survey method to gather data to determine the necessary information in order to know the level of preparedness of beach resorts in time of disasters as tourism destinations likewise to evaluate skills of operators/ management and crew/personnel when disaster strikes their area of responsibility. Data gathering was in the

form of questionnaires through which resorts operators, the management, or in their absence, among caregivers highly trusted. Only fully operational beach resorts meaning operating with complete permits and having human, material, and technical facilities or capabilities, were identified and included in the study. Mere cottage establishments were not taken into consideration.

The survey consisted of questions focused on areas of identifying disasters or calamities that hit the beach resorts; types of preparations done by the hotel management in the eventuality of a disaster; available and ready human, materials and technical resources; and identified seminars and training attended by resort personnel to make themselves capable managers and responders in times of calamities. The data gathered were summarized, translated, analyzed, and interpreted using descriptive statistics.

RESULTS AND DISCUSSION

Table 1 below shows the highest occurrence among natural disasters or calamities in Lianga Bay towns: Barobo, Lianga, San Agustins, and Marihatag that affected beach resorts, the highest at 78% occurrence was Tropical Depressions based on respondents' responses and as were experienced by the townspeople (LGU-MDRRM Offices, 2016). Cyclone is characterized by extremely large, powerful, and destructive storms with very high winds that turn around an area of low pressure (Meriam Webster Dictionary, 2016 edition). The second was the Earthquakes with 56% and least followed by Floods with 11%. Other most commonly feared calamities such as Storm Surge, Tidal Waves, Tsunamis, and Drowning together with Fire and Explosions held the lowest rate with 100% no occurrence, which means that the resorts never experienced such disasters.

Table 1. Identification of Likely Hazards and Possible Disasters

Likely Hazards and Possible Disasters likely Hazards and Possible Disasters	Occurrence of hazards and disasters in the beach resort (Percentage)		Rate of Preparedness (Mean)	Adjectival Rating
	YES	NO		
Earthquakes	56	44	4.45	Very High
Floods	11	89	4.10	High
Lightning strikes	0	100		
Outdoor	-	-	3.21	Not low not high
Indoor	-	-	3.12	Not low not high
Marine Hazards				High
Storm Surge	0	100	3.21	Not low not high
Tropical Depressions	78	22	4.47	Very High
Tidal Waves	-	100	4.78	Very High
Tsunamis	-	100	4.34	Very High
Drowning	-	100	4.37	Very High
Fire and explosions				
Natural Fires	-	100	3.12	Not low not high
Man-made Fires	-	-	3.43	Not low not high
Major Fire Hazards	-	100	3.54	Not low not high
Sabotage	-	100	3.21	Not low not high
Other Disaster	-	-	3.53	Not low not high
Total Mean				3.82
Adjectival Rating				High

Of the natural hazards, typhoons in particular, affect the Philippine population on a repeated basis. Each year, the Philippines experience an average of 20 typhoons, with five or six causing significant damage (Venton & Venton, June 2012).

In terms of the level of preparedness among operators/ management and crew has the mean of 3.82 with an adjectival rating of high, which meant operators had taken into consideration building safety and standards, water system and sewerage that in the event of an occurrence, that their conduct of periodical checking enables their structures to withstand storms and provide safety to their guests.

Table 2. Disaster preparedness of operators, management and crew

Criteria	Rate of Preparedness (Mean)	Adjectival Rating
Established Standard Operating Procedures	3.25	Not low not high
Established Precautionary Measures for every hazard or disaster	1.65	Low
Presence of an established On-site Disaster Management and Preparedness Team	1.782	Low
Drills	2.78	Not low not high
Trainings and Seminars	3.78	Not low not high
Total Mean		2.64
Adjectival Rating		Not low not high

In terms of disaster preparedness among resort operators, their management plus their crew had a rating of not low or not high with a total mean of 2.64 to signify they are not well prepared and managed in times of disaster.

Although there is a mean of 3.78 for training and seminars, they minimally attended related training and seminar based on their responses. Attendance to training and seminars could have provided the knowledge and skills useful in times of disaster.

Established Standard Operating Procedures with mean a of 3.25 and drills with a mean of 2.78 are only about earthquake drill, fire drill, and drill for a tsunami. The very low mean of 1.78 for On-site Disaster Management and Team Preparedness and the very low 1.65 for Precautionary Measures for every hazard or disaster implied that they lack establishing these primary and vital human resources and procedures that will impair quick response and zero casualties as the ultimate goals of disaster preparedness.

Table 3. Other Disaster Preparedness Measures

Other Disaster Preparedness Measures	Rate of Preparedness (Mean)	Adjectival Rating
Readily Available and Complete Disaster Emergency Kit	4.85	Very High
Available emergency equipment	4.75	Very High
List of Emergency Services	4.65	Very High
Disaster Preparedness Off-site	4.08	High
Evacuation Preparedness and Assessment	4.67	Very High
Total Mean	4.6	
Adjectival Rating		Very High

Respondents claim a very high 4.6 mean for Other Disaster Preparedness Measures, which illustrate that respective beach resorts in Lianga Bay municipalities had very high preparations on other aspects of disasters preparedness. This may be due to the minimal expense involved in the preparation by the management or because the Local Government Unit established the Disaster Preparedness Off-Site and conducted Evacuation Preparedness and Assessment. The proximity of the local Municipal Disaster and Risk Reduction Management Office caters to the necessities.

Beach resort management and crew claim to have Readily Available and Complete Emergency Kits at a very high mean of 4.85, and Available Emergency Equipment for disaster response and management at a very high 4.75 mean also because they can afford to acquire such facilities. However, what they have are very basic medicine kits and life-saving equipment. In fact, few of these resorts have lifeguards and watchtowers. The List of Emergency Services has a very high mean of 4.65 because this is readily available, the resorts having established a partnership with LGUs which have readily available the Emergency Response Team plus the presence of law enforcers such as the Philippine National Police, the Philippine Army and the Bureau of Fire and Protection.

Preparedness focuses on preparing equipment and procedures for use when a disaster occurs. This equipment and these procedures can be used to reduce vulnerability, disaster, mitigate the impacts of a disaster, or to respond more efficiently in an emergency.

CONCLUSION

The study concluded that tropical depression is the most frequent calamity that occurred in Lianga Bay, affecting beach resorts. It also reveals that operators/management and crew in the Lianga Bay municipalities have average knowledge and skills (not high, not low) in terms of disaster preparedness, and beach resorts have readily available minor equipment to use during tropical depressions and earthquakes.

RECOMMENDATIONS

The researchers recommend that beach operators/management and personnel attend more training and seminars for disaster preparedness and management, that they also impose strict laws and rules about safety at the beach, install billboards as signage containing information about safety at sea, important locations and shelters, construct and maintain beach infrastructure according to building code and other policies for beach resorts to withstand calamities and disasters. It is further recommended that they integrate the checklist for preparedness to disaster as part of the LGU permit and licenses and make it the basis for policy formulation/governance of the LGU.

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