Standard Disruption Management Policy at Mactan-Cebu International Airport

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Abstract*—This study aimed to improve the standard disruption management policy at Mactan-Cebu International Airport during weather standby by developing a detailed action plan for dealing with flight disruptions in terms of Emergency Response Plan as stated in the standard disruption management policy on Emergency Plan (EMPLAN) 10 - Weather Standby. The corresponding literature and studies, which were carefully selected for this study's scope based on their applicability, provided the researchers with a wide range of relevant information. A survey questionnaire was administered to thirty (30) airport personnel and passengers to identify deficiencies in procedures and coordination among key personnel. This observational study used a descriptive quantitative research design with random sampling. The researcher used the type of instrument of a survey questionnaire through google form. The experts in legal studies and aviation regulations validated the questionnaire to get pertinent data for this study and the answers were studied using the qualitative approach. Several statistical tools were used, including frequency and percentage to describe the demographic profile of participants, mean to determine the level of influence of key factors on airline disruption, and Kruskal-Wallis H to determine significant differences in the implementation of the standard disruption management policy during weather standby. The study found that while the standard disruption management policy was implemented, there were still areas that required improvement. The study recommended developing comprehensive training programs, improving communication channels, regularly reviewing and updating the policy, strengthening contingency planning and risk management processes, and implementing an incident reporting and feedback system. Implementing these recommendations will improve the airport's preparedness to respond to emergencies and disruptions caused by adverse weather conditions.

***Indexed Terms*—Airport, Disruption, Policy, Weather**

I. INTRODUCTION

The onset and spread of operational disruptions across spatial-temporal networks lead to lost revenue opportunities, resource wastage, employee overtime shifts, and reduced customer satisfaction, resulting in monetary and welfare losses in various industries, including supply chains, transportation, telecommunications, and medical services. Implementing best practices can mitigate these losses. For instance, flight delays and cancellations result in significant costs across air traffic networks, with estimates of over $30 billion in the United States in 2007 (Ball et al., 2010). Therefore, efficient disruption management is crucial for the smooth operation of airlines.

Inadequate airport capacity can also hinder the effective utilization of airport resources. Wu and Ren's (2016) study on airports in China found that the most significant issues they faced were connected to their lack of proper emergency facilities and equipment. Natural disasters have shown the importance of using all available airport capacity during the early stages of disaster response. Although the New Orleans airport was partially effective in accommodating medical, military, rescue, and humanitarian activities, airports in Port-au-Prince (Haiti) and Yamagata (Japan) could not handle the overwhelming flow of goods, people, and aircraft due to restricted runway capacity.

Emergency planning is a methodical process that involves developing plans for potential occurrences such as significant accidents and natural disasters. The plan, which is a document shared by participants and stakeholders, outlines the tasks and responsibilities adopted by numerous agencies during an emergency response. The plan must be flexible to meet management's needs, being a framework for emergency response, outlining lines of action, collaboration, command, and communication during a civil exigency such as a disaster or significant event. The strategy aims to protect public safety, limit damage, protect the most vulnerable, and make efficient use of resources to save lives, among other things. Emergency planning is a process that culminates in a document and requires regular revision to reflect changing conditions (IATA, 2020).

In view of the foregoing, this study aimed to enhance the standard disruption management policy at Mactan-Cebu International Airport and specifically determine a detailed action plan in dealing flight disruptions in terms of Emergency Response Plan as stated in the standard disruption management policy on Emergency Plan (EMPLAN) 10 - Weather Standby.

II. BACKGROUND OF THE STUDY

A. Flight disruptions

There are various factors that can disrupt an airline's ability to operate its flights according to schedule, including unfavorable weather conditions, airport congestion, and aircraft mechanical issues. Such occurrences are commonly referred to as disruptions

and they have a significant negative impact on airline operations. To minimize the effect of these disruptions, airlines need to make adjustments to their flight schedules, aircraft schedules, crew schedules, and passenger itineraries. However, these adjustments may lead to increased operational costs for the airline, such as additional crew overtime, increased fuel usage, or compensation for passenger delays.

Passengers trust the airline industry every year to transport them safely to their destinations. The collective efforts of stakeholders in the industry have made aviation the safest mode of transportation. Nonetheless, recent events and unknown factors remind us that this exceptional safety record is still vulnerable to rare incidents. Therefore, it is crucial to have mechanisms in place to manage the aftermath of an aircraft being diverted, disrupted, or lost, in order to facilitate recovery. IATA offers assistance to airlines through the provision of best practices for emergency response planning (ERP), which helps airlines manage and recover from adverse events effectively (IATA, 2023).

B. Korean Air flight KE631 Overshoot the Runway at MCIA

On the night of October 23, 2022, a Korean Air flight (KE631) from Incheon, South Korea, had a hard landing at Mactan-Cebu International Airport (MCIA), causing it to swerve off the runway. The airport, which is the second busiest in the country, was temporarily closed due to the incident. The MCIA claimed that heavy weather caused the A330-300 aircraft to overshoot the runway, and according to the local government's assessment, the plane made two failed landing attempts before the third attempt led to the collision. Fortunately, no injuries were reported by the LGU medical staff. As of October 24, 2022, all domestic and international flights to and from Cebu have been suspended until emergency personnel clear the plane from the runway. This information was provided by Michelle Abad of Rapper.com.

C. Emergency Planning

Effective emergency planning involves a coordinated and collaborative preparatory process that matches urgent needs with accessible resources. This process includes researching, writing, disseminating, testing, and updating the plan regularly to account for changing circumstances. An emergency plan must be a dynamic document that serves as a guide for the protocols, processes, and allocation of duties involved in disaster response. It should use carefully constructed scenarios to anticipate demands caused by predictable dangers and offer general guidelines for handling unexpected effects.

This study aimed to investigate whether the current Emergency Plan on Weather Standby at Mactan-Cebu International Airport is effectively implemented to deal with flight disruptions.

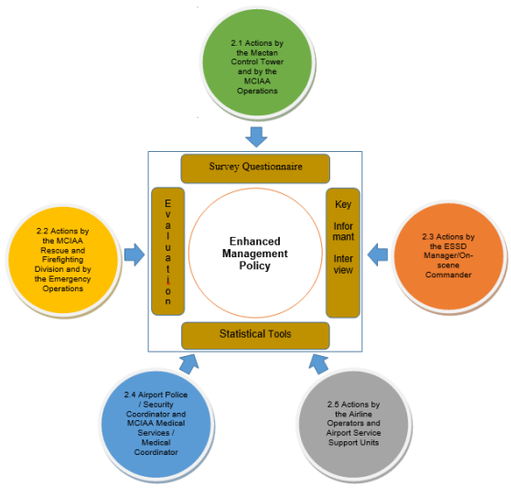

Figure 1
Research Paradigm

The expected outcome of the study, which is to identify the improvements required for a more efficient emergency management plan, is represented by the central circle inside the box.

The aforementioned research paradigm provides a clear visual representation of the various factors that should be taken into account in the enhancement of the disruption management policy at Mactan-Cebu International Airport.

III. METHODS OS RESEARCH

The study utilized a specific research design, namely, descriptive quantitative research. According to Babbie (2018), descriptive research is a method of observing and measuring phenomena, which are then used to describe the behavior of subjects or the characteristics of the population being studied. This approach is particularly helpful for this study since it focuses on observation rather than experimentation, and provides a description of the population or phenomenon under investigation.

Furthermore, the researcher employed random sampling in the selection of participants. Random sampling is a type of probability sampling where each member of the population has an equal chance of being selected for the study (Babbie, 2018). This method is considered the gold standard in sampling because it minimizes bias and increases the representativeness of the sample.

As stated by Sekaran and Bougie (2019), non-probability sampling is an alternative to probability sampling that includes methods such as convenience sampling, purposive sampling, snowball sampling, and quota sampling. These techniques are often used when probability sampling is not feasible due to limited resources, time constraints, or when the population being studied is small and homogeneous.
In the case of this study, the researcher chose to use random sampling, selecting employees and passengers in Mactan-Cebu International Airport. The use of this method allows the researcher to generalize the results to the population of interest with a high level of confidence.

1. The demographic profile of the participants in terms of:

Table 2 presents the demographic profile of the participants in the study, which includes their age, sex, educational background, position title/designation, and length of service at the Mactan-Cebu International Airport. The total number of participants is 30, with 11 (36.70%) male and 19 (63.30%) female participants.

In terms of age, the majority of participants belong to the 28-35 years old category, with 17 (56.70%) participants, followed by 21-27 years old with 10 (33.30%) participants. Meanwhile, only 3 (10.00%) participants are aged 35 years old and above. There are no participants in the 18-20 years old age group.

Table 2
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS DEMOGRAPHIC PROFILE

N = 30

Particulars	Category	Frequency f	Percentage %
Age	18-20 years old	-	-
	21-27 years old	10	33.30
	28-35 years old	17	56.70
	35 years old & above	3	10.00
Sex	Male	11	36.70
	Female	19	63.30
Educational Background	Associate degree	1	3.30
	Bachelor's degree	26	86.70
	Master's degree or higher education	3	10.00
Position Title and designation	Staff	12	40.00
	Line Supervisor	6	20.00
	Ground Personnel Services	7	23.30
	Passengers	5	16.70
For Airport Personnel's' Length of Service N=25	Below 3 years	4	16.00
	3 - 8 years	15	60.00
	9 - 15 years	6	24.00
	More than 15 years	-	-

The educational background of the participants is predominantly a bachelor's degree, with 26 (86.70%) participants having this level of education. Three (10.00%) participants have a master's degree or higher, while only one (3.30%) has an associate degree.

Regarding position title/designation, the majority of participants are staff with 12 (40.00%) participants, followed by ground personnel services with 7 (23.30%) participants, and line supervisors with 6 (20.00%) participants. There are also 5 (16.70%) participants who are passengers.

For the airport personnel's length of service, only 25 participants provided the data. Among them, the majority have a length of service of 3-8 years, with 15 (60.00%) participants. Six (24.00%) participants have a length of service of 9-15 years, while only 4 (16.00%) have a length of service below 3 years. There are no participants with a length of service of more than 15 years.

The study's participants are predominantly young adults aged 21-35 years old, with a higher percentage of female participants. They have a high level of education, with a bachelor's degree being the most common. The majority of the participants hold staff and ground personnel services positions at the airport, with only a few holding line supervisor positions. The length of service of the participants is relatively short, with most having a length of service of 3-8 years.

2. Level of implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport in terms of:

2.1. Actions by the Mactan Control Tower and by the MCIAA Operations Center

Table 3
MEAN DISTRIBUTION IN TERMS OF ACTIONS BY THE MACTAN CONTROL TOWER AND BY THE MCIAA OPERATIONS CENTER

Particulars	Ground Personnel Services	Line Supervisor	Passengers	Staff	Mean	Interpretation
1. Implement prompt communication and assistance	3.10	2.58	2.50	2.20	2.60	Implemented
2. Communicate emergency alert systems and teams	3.14	2.28	2.48	2.10	2.50	Implemented
3. Implement easy-to-access contact information, manuals and brochures are available	3.10	3.42	3.30	2.58	3.10	Implemented
4. Precautionary outline is available	2.25	1.58	1.57	1.54	1.74	Partially Implemented
5. Conduct exercise methods and training enhancement	1.70	1.74	2.00	1.75	1.80	Partially Implemented
6. Air traffic control groups collect and provide information, such as the likelihood of future ground delays, to airline operations controllers to improve future airline scheduling and planning.	2.38	2.40	2.82	2.40	2.50	Implemented
Average Weighted Mean	**2.61**	**2.33**	**2.45**	**2.10**	**2.37**	**Partially Implemented**

Table 3 presents the mean distribution of actions implemented by the Mactan Control Tower and the MCIAA Operations Center. The table includes six particular actions, and the ground personnel services, line supervisor, passengers, and staff are the subjects being assessed.

The mean distribution for each particular action ranges from 1.74 to 3.42, with an overall average weighted mean of 2.37, indicating that the actions have been partially implemented.

In particular, actions 1 to 3 have higher mean distribution scores ranging from 3.10 to 3.14, indicating that the actions have been implemented. Action 4 and 5, on the other hand, have a lower mean distribution score ranging from 1.74 to 2.25, indicating that they have been partially implemented. Action 6 has a mean distribution score of 2.50, indicating that it has been implemented.

The table implies that the Mactan Control Tower and the MCIAA Operations Center have implemented the necessary actions to provide prompt communication and assistance, emergency alert systems, and easy-to-access contact information. This can improve the overall safety and satisfaction of the passengers, staff, and other ground personnel.

2.2. Actions by the MCIAA Rescue and Firefighting Division and by the Emergency Operations Center

Table 4
MEAN DISTRIBUTION IN TERMS OF ACTIONS BY THE MCIAA RESCUE & FIREFIGHTING DIVISION AND EMERGENCY OPERATIONS CENTER

Particulars	Ground Personnel Services	Line Supervisor	Passengers	Staff	Mean	Interpretation
1. Command post and contingency plan are available	3.20	3.05	3.15	2.98	3.10	Implemented
2. Maintain additional financial resources, emergency management personnel, staff members, and facilities	3.29	3.35	3.42	3.25	3.33	Fully Implemented
3. Conduct regular facilitators and trainers' training program	3.00	3.25	3.37	3.33	3.24	Implemented
4. Implement prompt communication channel and aid	2.20	2.90	2.44	2.40	2.49	Partially Implemented
Average Weighted Mean	**2.92**	**3.14**	**3.10**	**2.99**	**3.04**	**Implemented**

Table 4 presents the mean distribution of actions implemented by the MCIAA Rescue & Firefighting Division and Emergency Operations Center. The table includes four particular actions, and the ground personnel services, line supervisor, passengers, and staff are the subjects being assessed.

The mean distribution for each particular action ranges from 2.20 to 3.42, with an overall average weighted mean of 3.04, indicating that the actions have been implemented.

In particular, actions 1 to 3 have higher mean distribution scores ranging from 3.00 to 3.42, indicating that the actions have been fully or partially implemented. Action 4, on the other hand, has a lower mean distribution score of 2.49, indicating that it has been only partially implemented.

The table implies that the MCIAA Rescue & Firefighting Division and Emergency Operations Center have implemented the necessary actions to maintain a command post and contingency plan, maintain additional financial resources, emergency management personnel, staff members, and facilities, and conduct regular facilitators and trainers' training programs. These actions can help improve the preparedness and response capabilities of the personnel and enhance the safety and satisfaction of the passengers, staff, and other ground personnel.

2.3. Actions by the ESSD Manager/On-scene Commander

Table 5
MEAN DISTRIBUTION IN TERMS OF ACTIONS BY THE EMERGENCY AND SECURITY SERVICES DEPARTMENT MANAGER/ON SCENE COMMANDER

Particulars	Ground Personnel Services	Line Supervisor	Passengers	Staff	Mean	Interpretation
1. Implement prompt communication channel and aid	2.58	2.40	2.54	2.08	2.40	Partially Implemented
2. Develop output cooperation mechanisms	3.60	3.05	3.13	3.00	3.20	Implemented
3. Maintain a detailed contingency plan	3.05	3.00	3.06	2.88	3.00	Implemented
Average Weighted Mean	**3.08**	**2.82**	**2.91**	**2.65**	**2.86**	**Implemented**

Table 5 presents the mean distribution of actions implemented by the Emergency and Security Services Department Manager/On-Scene Commander. The table includes three particular actions, and the ground personnel services, line supervisor, passengers, and staff are the subjects being assessed.

The mean distribution for each particular action ranges from 2.08 to 3.60, with an overall average weighted mean of 2.86, indicating that the actions have been implemented.

In particular, actions 2 and 3 have higher mean distribution scores ranging from 3.00 to 3.20, indicating that the actions have been implemented. Action 1, on the other hand, has a lower mean distribution score of 2.40, indicating that it has been only partially implemented.

The table implies that the Emergency and Security Services Department Manager/On-Scene Commander has implemented the necessary actions to develop output cooperation mechanisms and maintain a detailed contingency plan. These actions can help improve the preparedness and response capabilities of the personnel and enhance the safety and satisfaction of the passengers, staff, and other ground personnel.

2.4. Actions by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator

Table 6 presents the mean distribution of actions taken by the airport police/security coordinator and MCIAA medical services/medical coordinator. The results show that all the actions presented in the table have been implemented. The average weighted mean of all actions is 2.92, indicating that the overall implementation level of actions is good.

Table 6
MEAN DISTRIBUTION IN TERMS OF ACTIONS BY THE AIRPORT POLICE/SECURITY COORDINATOR AND MCIAA MEDICAL SERVICES/MEDICAL COORDINATOR

Particulars	Ground Personnel Services	Line Supervisor	Passengers	Staff	Mean	Interpretation
1. Command post and support are available	3.33	3.28	3.07	3.00	3.17	Implemented
2. Conduct a continuous management of adhering to and observing emergency protocols and procedures	2.40	3.12	2.18	2.30	2.50	Implemented
3. Maintain a detailed contingency plan	2.40	3.20	3.00	2.58	2.80	Implemented
4. Maintain additional funds, security officers, medical staff, and infrastructure	3.10	3.48	3.20	3.00	3.20	Implemented
Average Weighted Mean	**2.81**	**3.27**	**2.86**	**2.72**	**2.92**	**Implemented**

The first action, which is to have a command post and support available, has been implemented with a mean of 3.17. This means that there is a designated area where emergency situations can be managed and controlled, and support is readily available.

The second action, which is to conduct continuous management of adhering to and observing emergency protocols and procedures, has also been implemented with a mean of 2.50. This means that emergency protocols and procedures are in place, and there is a continuous effort to ensure that they are being followed.

The third action, which is to maintain a detailed contingency plan, has been implemented with a mean of 2.80. This means that there is a well-documented plan of action that outlines the steps to be taken in the event of an emergency situation.

The fourth action, which is to maintain additional funds, security officers, medical staff, and infrastructure, has been implemented with a mean of 3.20. This means that there are additional resources available in case of emergency situations, such as extra security officers and medical staff.

Overall, the implementation of actions by the airport police/security coordinator and MCIAA medical services/medical coordinator is good, indicating that the airport has taken significant measures to ensure the safety and security of passengers and staff.

2.5. Actions by the Airline Operators and Airport Service Support Units

Table 7
MEAN DISTRIBUTION IN TERMS OF ACTIONS BY THE AIRLINE OPERATORS AND AIRPORT SERVICE SUPPORT UNITS

Particulars	Ground Personnel Services	Line Supervisor	Passengers	Staff	Mean	Interpretation
1. Conduct mandatory emergency management planning meeting	2.58	2.40	3.00	2.30	2.57	Implemented
2. Implement efficient support and communication platforms	2.00	2.00	1.50	1.70	1.80	Partially Implemented
3. Maintain output coordination manuals	2.23	2.80	2.08	2.60	2.43	Partially Implemented
4. Inform, provide assistance and compensation to passengers	2.08	3.26	2.59	2.45	2.60	Implemented
5. Replace crew in case of crew unavailability	3.29	3.73	3.60	3.50	3.53	Fully Implemented
6. In time of tarmac delay, deplaning passengers are well executed by providing concise information on the steps that will be taken	3.43	3.55	3.70	3.42	3.53	Fully Implemented
7. Attend immediately in any mechanical disruption and recommend alternative situation	3.10	3.29	3.32	3.20	3.23	Implemented
8. Immediately re-route aircrafts with flight cancellations and delays	2.30	2.60	2.80	2.40	2.53	Implemented
9. Communication	2.42	2.58	3.00	2.00	2.50	Implemented
10. In case of delays or cancellations, communication services like telephone and SMS services are made available	1.13	1.40	1.30	1.23	1.27	Not Implemented
11. Food / Hydration:	3.43	3.15	3.10	3.00	3.17	Implemented
12. Drinking fountains and vending machines in the terminal are readily available	3.74	3.52	3.40	3.44	3.53	Fully Implemented
13. In time of delay, provision (food and water) was given to affected passengers	3.40	3.15	3.12	3.00	3.17	Implemented
14. Cleanliness	3.67	3.50	3.70	3.42	3.57	Fully Implemented
15. Personal hygiene is addressed by providing clean and serviceable restrooms	3.43	3.50	3.70	3.50	3.53	Fully Implemented
Average Weighted Mean	**2.82**	**2.96**	**2.93**	**2.74**	**2.86**	**Implemented**

Table 7 shows the mean distribution of actions taken by the airline operators and airport service support units in response to flight disruptions. Overall, the mean weighted average for all the actions is 2.86, which is considered as implemented.

Actions such as conducting mandatory emergency management planning meetings, informing and providing assistance to passengers, attending immediately in any mechanical disruption and recommending alternative situations, and immediately re-routing aircraft with flight cancellations and delays are fully implemented, with mean scores above 3.0.

However, some actions are only partially implemented, such as implementing efficient support and communication platforms and maintaining output coordination manuals. There are also actions that are not implemented yet, such as making communication services like telephone and SMS services available in case of delays or cancellations.

Table 8
OVERALL SUMMARY OF MEAN DISTRIBUTION ON THE LEVEL OF IMPLEMENTATION OF THE STANDARD DISRUPTION MANAGEMENT POLICY AT MACTAN-CEBU INTERNATIONAL AIRPORT

Variables	Mean	Interpretation
1. Actions by the Mactan Control Tower and MCIAA Operations Center	2.37	Partially Implemented
2. Actions by the MCIAA Rescue and Firefighting Division and Emergency Operations Center	3.04	Implemented
3. Actions by the Emergency and Security Services Department (ESSD) Manager/On-scene Commander	2.86	Implemented
4. Actions by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator	2.92	Implemented
5. Actions by the Airline Operators and Airport Service Support Units	2.86	Implemented
Average Weighted Mean	**2.81**	**Implemented**

Table 8 shows the overall summary of the mean distribution on the level of implementation of the standard disruption management policy at Mactan-Cebu International Airport. The average weighted mean is 2.81, indicating that the policy has been implemented at a moderate level.

The actions by the MCIAA Rescue and Firefighting Division and Emergency Operations Center had the highest mean value of 3.04, indicating a relatively high level of implementation. The actions by the Mactan Control Tower and MCIAA Operations Center had the lowest mean value of 2.37, indicating a relatively lower level of implementation.

Overall, the policy has been implemented, as all variables have a mean value of above 2, which indicates at least a moderate level of implementation. However, there is still room for improvement in certain areas, such as the actions by the Mactan Control Tower and MCIAA Operations Center.

3. The significant difference in the implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport in terms of the above-mentioned variables

Table 9
KRUSKAL WALLIS H TEST RESULT ON THE LEVEL OF IMPLEMENTATION OF THE STANDARD DISRUPTION MANAGEMENT POLICY AT MACTAN-CEBU INTERNATIONAL AIRPORT

Variables	H-Tab χ^2	Degrees of Freedom	p-value
1. Actions by the Mactan Control Tower and MCIAA Operations Center	10.05	3	0.019
2. Actions by the MCIAA Rescue and Firefighting Division and Emergency Operations Center	1.26	3	0.738
3. Actions by the Emergency and Security Services Department (ESSD) Manager/On-scene Commander	2.60	3	0.458
4. Actions by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator	6.38	3	0.094
5. Actions by the Airline Operators and Airport Service Support Units	1.16	3	0.762

Table 9 shows the results of the Kruskal Wallis H test conducted to determine if there is a significant difference in the level of implementation of the standard disruption management policy among the different variables at Mactan-Cebu International Airport.

The results show that there is a significant difference in the level of implementation of the policy between the variables "Actions by the Mactan Control Tower and MCIAA Operations Center" and the others, as indicated by the low p-value (0.017) and high H-Tab value (10.02). This suggests that the implementation of the policy by the Mactan Control Tower and MCIAA Operations Center is different from the implementation of the policy by the other variables.

On the other hand, there is no significant difference in the level of implementation of the policy among the variables "Actions by the MCIAA Rescue and Firefighting Division and Emergency Operations Center", "Actions by the Emergency and Security Services Department (ESSD) Manager/On-scene Commander", "Actions by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator", and "Actions by the Airline Operators and Airport Service Support Units", as indicated by the high p-values (0.738, 0.458, 0.094, and 0.762, respectively) and low H-Tab values (1.26, 2.60, 6.38, and 1.16, respectively).

4. Problems encountered in the implementation of the standard disruption management policy at Mactan-Cebu International Airport on weather standby

1.1. Mactan Control Tower and MCIAA Operations Center

Table 10
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS PROBLEMS ENCOUNTERED IN TERMS OF MACTAN CONTROL TOWER AND MCIAA OPERATIONS CENTER

Particulars	Frequency f	Percentage %	Rank
4.1.1. The Control Tower should declare a Weather Standby under the following conditions:			
1. The weather conditions have become sufficiently severe that the safety of aircraft landing or takeoff is affected.	23	76.70	4
2. The visibility of the airport has deteriorated so that the aircraft on (or approaching) the runway is no longer visible from the Tower.	16	53.30	8
3. The PAGASA Weather Station has issued an Aerodrome Warning of an impending weather condition that could result in the above conditions and/or could also create a hazard to aircraft, personnel and facilities on the ground.	24	80.00	3
4.1.1 Contacting Airport Rescue and Firefighting Division and relay information related to:			
1. On what Runway in use	12	40.00	12.5
2. What operations or services could be adversely affected	29	96.70	1
4.1.2 Commencing other primary notifications to			
1. Airborne aircraft - if affected	12	40.00	12.5
2. MCIAA Operations Center	26	86.70	2
3. Philippine Air Force Operations	5	16.70	14
4.1.4 Commencing Primary Notifications to the:			
1. Rescue and Firefighting Division and Medical Division	14	46.70	10.5
2. Commencing Primary Notifications to the Airport General Manager/Assistant General Manager	19	63.30	5
3. Emergency and Security Services Department (ESSD) Manager and Airport Police Division	15	50.00	9
4. General Services Division and Airline Operators	14	46.70	10.5
4.1.5. Coordination with Tower/ PAGASA for weather updates.	17	56.70	7
4.1.6. Coordination with On-scene Commander for further instructions.	18	60.00	6

Table 10 shows the frequency and percentage distribution of the problems encountered by the Mactan Control Tower and MCIAA Operations Center during the implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport on weather standby.

The most frequent encountered problem by the participants was “Contacting Airport Rescue and Firefighting Division and relay information related to: What operations or services could be adversely affected”, with a frequency of 29 (96.70%) and ranked first followed by “Commencing other primary notifications to MCIAA Operations Center”, with a frequency of 26 (86.70%), ranked second and the third most common problem was “The PAGASA Weather Station has issued an Aerodrome Warning of an impending weather condition that could result in the above conditions and/or could also create a hazard to aircraft, personnel and facilities on the ground” with a frequency of 24 (80.00%).

Another problem encountered by the participants was “Commencing Primary Notifications to the: Rescue and Firefighting Division and Medical Division and General Services Division and Airline Operators with frequency of 14 (46.70%) both ranked 10.5 and “Contacting Airport Rescue and Firefighting Division and relay information related to: On what Runway in use” and “Commencing other primary notifications to Airborne aircraft - if affected”, with a frequency of 12 (40.00%) and rank 12.5, respectively.

These issues need to be addressed to ensure that the policy is implemented effectively and efficiently.

4.1. MCIAA Rescue and Firefighting Division (RFD) and Emergency Operations Center

Table 11 shows the frequency and percentage distribution of participants' problems encountered in the implementation of the standard disruption management policy at Mactan-Cebu International Airport on weather standby in terms of MCIAA Rescue and Firefighting Division (RFD) and Emergency Operations Center.

The data shows that the participants encountered various problems in the implementation of the standard disruption management policy.

Table 11
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS PROBLEMS IN TERMS OF MCIAA RESCUE AND FIREFIGHTING DIVISION (RFD) AND EMERGENCY OPERATIONS CENTER

Particulars	Frequency f	Percentage %	Rank
1. RFD Manager/OIC or the most senior ranking Fire Officer assuming as temporary Incident Commander in the absence of the ESSD Manager.	16	53.30	3
2. Determining level of standby needed and prepare for possible deployment of equipment and vehicles to affected areas.	21	70.00	1
3. Coordination with Operations Center/EOC regarding weather updates.	13	43.30	6.5
4. Taking appropriate action to secure Fire Station and equipment against severe weather if so indicated.	14	46.70	4.5
5. Coordination with Operations Center for the activation of the EOC if needed.	13	43.30	8
6. Coordination with airport tenants, airport staff, security services, etc. as may be required to ensure the safety and continuity of airport services.	14	46.70	4.5
7. Coordinating evacuation, rescue and/or clearing operations.	11	36.70	9
8. If activated, relaying instructions from the On-scene Commander to the concerned units. Likewise, relaying response information from the concerned unit back to the On-scene Commander.	17	56.70	2
9. Monitoring movements of response units and advise the On-scene Commander.	13	43.30	6.5

The most frequently encountered problem is determining the level of standby needed and preparing for possible deployment of equipment and vehicles to affected areas, with a frequency of 21 (70.00%) and a rank of 1. This indicates the importance of having adequate resources available and ready to be deployed when needed.

The second most frequently encountered problem is relaying instructions from the On-scene Commander to the concerned units and relaying response information from the concerned unit back to the On-scene Commander, with a frequency of 17 (56.70%) and a rank of 2. This highlights the importance of effective communication among the response units to ensure a coordinated and efficient response.

Other problems encountered include coordinating with the Operations Center/EOC regarding weather updates, coordinating with airport tenants, airport staff, security services, etc., as may be required to ensure the safety and continuity of airport services, coordinating evacuation, rescue and/or clearing operations, among others.

The implications of the findings suggest the need for regular training and drills to ensure that response units are adequately prepared and equipped to handle disruptions caused by severe weather. Effective communication and coordination among response units and with the Operations Center/EOC are also critical for a successful response. The results also suggest the importance of having adequate resources available and ready to be deployed when needed, as well as the need to secure Fire Station and equipment against severe weather if so indicated.

4.2. Emergency and Security Service Department (ESSD) Manager / On-scene Commander

Table 12
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS PROBLEMS ENCOUNTERED IN TERMS OF EMERGENCY AND SECURITY SERVICE DEPARTMENT MANAGER/ON-SCENE COMMANDER

Particulars	Frequency f	Percentage %	Rank
1. Assuming as On-scene Commander.	11	36.70	3
2. Recalling personnel as needed.	16	53.30	2
3. Proceeding to the EOC or at the site and coordinate emergency response activities.	24	80.00	1

Table 12 shows the frequency and percentage distribution of the problems encountered by the participants in implementing the standard disruption management policy at Mactan-Cebu International Airport on weather standby in terms of the Emergency and Security Service Department (ESSD) Manager/On-scene Commander.

The table reveals that assuming the role of On-scene Commander was the most common problem encountered by the participants, with a frequency of 11 and a percentage of 36.70. Recalling personnel as needed was the second most common problem, with a frequency of 16 and a percentage of 53.30. The least common problem encountered was proceeding to the EOC or at the site and coordinating emergency response activities, with a frequency of 24 and a percentage of 80.00.

The results suggest that there may be a need for more training and preparation for the role of On-scene Commander to ensure that the designated personnel are equipped to handle emergency situations. Additionally, improving communication and coordination between the ESSD Manager/On-scene Commander and other units or departments involved in the emergency response may also be necessary. Finally, ensuring that personnel are available and ready to be recalled as needed may require a review of the current staffing and scheduling policies.

4.3. Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator

Table 13 shows the frequency and percentage distribution of the problems encountered by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator during the implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport on weather standby.

Table 13
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS PROBLEMS ENCOUNTERED IN TERMS OF AIRPORT POLICE/SECURITY COORDINATOR AND MCIAA MEDICAL SERVICES/MEDICAL COORDINATOR

Particulars	Frequency f	Percentage %	Rank
1. Coordination with the On-scene Commander and standby for further instructions.	14	46.70	4
2. In addition to their regular security duties, providing assistance to the emergency evacuation/rescue operations.	12	40.00	5
3. Preparing to dispatch medical/rescue personnel, ambulance, medical supplies and equipment to affected area if needed.	20	66.70	1
4. Preparing medical clinic to accommodate possible victims.	15	50.00	2.5
5. Coordination with the On-scene Commander and standby for further instructions.	15	50.00	2.5

The most frequently encountered problem by the participants was "preparing to dispatch medical/rescue personnel, ambulance, medical supplies and equipment to affected areas if needed," with a frequency of 20 (66.7%) and ranked first. This indicates that emergency response planning and preparedness are crucial in ensuring the safety and well-being of airport passengers and personnel during severe weather conditions.

The second most common problem was "preparing medical clinic to accommodate possible victims" with a frequency of 15 (50%) and ranked 2.5. This highlights the importance of having adequate medical facilities and personnel to handle potential injuries and medical emergencies.

Another problem encountered by the participants was "coordination with the On-scene Commander and standby for further instructions," with a frequency of 14 and 15 (46.7% and 50%, respectively) and ranked 4 and 2.5, respectively. This suggests that effective communication and coordination among emergency response teams are critical in managing severe weather disruptions.

4.4. Airline Operators and Airport Service Support Units

Table 14 presents the frequency and percentage distribution of participants' problems encountered in the implementation of the standard disruption management policy at Mactan-Cebu International Airport on weather standby in terms of airline operators and airport service support units.

The results show that the top priority for airline operators and airport service support units during weather standby is the implementation of necessary precautions to ensure the safety and security of parked aircraft, ground equipment, facilities, and personnel, which garnered a frequency of 23 (76.70%) and ranked first.

Table 14
FREQUENCY & PERCENTAGE DISTRIBUTION OF PARTICIPANTS PROBLEMS ENCOUNTERED IN TERMS OF AIRLINE OPERATORSAND AIRPORT SERVICE SUPPORT UNITS

Particulars	Frequency f	Percentage %	Rank
1. Implementation of necessary precautions to ensure the safety and security of parked aircraft, ground equipment, facilities and personnel.	23	76.70	1
2. Providing assistance as required by the On-scene Commander.	17	56.70	4
3. Actions by the Airport Ground Operations Division to Standby and determining what actions may be required as to secure airport ramp and ground operations areas.	20	66.70	3
4. Actions by the Airport Ground Operations Division as to Airport Ground Operations Division	11	36.70	7
5. Actions by the Airport Ground Operations Division as to Coordination with On-scene Commander.	15	50.00	5
6. MCIAA Engineering Department standby and determining what actions may be required to secure airport facilities, equipment and buildings.	14	46.70	6
7. MCIAA Engineering Department in Coordination with On-scene Commander	9	30.00	8
8. Other Service Support Units in coordination with the On-scene Commander or the Operation Center and in preparing the necessary resources for dispatch upon instructions from the Operation Center / On-scene Commander.	22	73.30	2

This is followed by the preparation of necessary resources for dispatch upon instructions from the Operation Center/On-scene Commander, which got a frequency of 22 (73.30%) and ranked second. The third priority is the actions by the Airport Ground Operations Division to standby and determine what actions may be required to secure airport ramp and ground operations areas, with a frequency of 20 (66.70%) and ranked third.

On the other hand, the least priority for airline operators and airport service support units is the coordination with the On-scene Commander or the Operation Center and in preparing the necessary resources for dispatch upon instructions from the Operation Center/On-scene Commander, which garnered a frequency of 9 (30.00%) and ranked eighth. This implies that airline operators and airport service support units must prioritize the safety and security of parked aircraft, ground equipment, facilities, and personnel during weather standby. They should also ensure that they have the necessary resources prepared and readily available for dispatch upon instructions from the Operation Center/On-scene Commander. Coordination with the On-scene Commander or the Operation Center is also essential to ensure smooth and efficient emergency response activities.

On the common problems encountered in the implementation of the standard disruption management policy during weather standby:

Table 15
THEMATIC ANALYSIS ON THE COMMON PROBLEMS ENCOUNTERED IN THE IMPLEMENTATION OF THE STANDARD DISRUPTION MANAGEMENT POLICY DURING WEATHER STANDBY

Interviewee	Interview Extract	Codes	Themes
Informant 1	(1) Delays and Cancellation (passenger's part) – In cases of delays and cancellation caused by weather condition, most times passengers cannot comprehend the situation and continuously ask the airline of the reason or compare as why the other aircraft departed. As a result, passenger's displeasure or hostility can be encountered. (2) Zero visibility – Airport operation usually stops during zero visibility. It restricts movements of aircrafts thus aircrafts on ground gets stuck at bay area awaiting clearance from ATC. Flight schedules may be affected as a result.	(1) Delays and Cancellation, Passenger Displeasure, Hostility, Incomprehension, Comparison, (2) Zero Visibility, Airport Operation Stop, Aircraft Movement Restriction, Bay Area, ATC Clearance, Flight Schedule Disruption	Passenger Displeasure, Hostility, Incomprehension, Flight Schedule Disruption, Zero Visibility
Informant 2	The following are the common problems encountered: (1) it's the inconvenience caused to the passengers, (2) the capacity of airport terminal, (3) huge conflicts like flight connections, (4) Financial problem, (5) Limited access of communication (signal) and (6) restrictions due to danger zone alert. Standard management disruption policy hinders passenger to express his/her right. but since its force majeure it's an event for which no party can be held accountable, and prevent passengers from fulfilling all obligations.	(1) Passenger Inconvenience, (2) Airport Terminal Capacity, (3) Flight Connection Conflicts, (4) Financial Problems, (5) Limited Communication Access, (6) Danger Zone Restrictions, (7) Standard Management Disruption Policy, (8) Passenger Rights	Passenger Inconvenience, Airport Terminal Capacity, Flight Connection Conflicts, Financial Problems, Limited Communication Access, Danger Zone Restrictions, Standard Management Disruption Policy, Passenger Rights
Informant 3	The preparedness of the airport in accommodating any flight disruptions and possible alternative solutions. Rotational Delay. Dealing with flights delays, compensation and guarantee of passenger transfers. Different airports have different standards when it comes to delays caused by adverse weather conditions.	(1) Airport Preparedness, Flight Disruption Accommodation, Alternative Solutions, (2) Rotational Delay, (3) Flight Delay, Compensation, Passenger Transfers, (4) Different Standards	Airport Preparedness, Flight Disruption Accommodation, Alternative Solutions, Different Standards

Based on the information provided by the three informants, it appears that severe weather conditions can lead to significant disruptions in airport operations, including delays, cancellations, and inconveniences to passengers. The common problems encountered in implementing the standard disruption management policy during weather standby include passenger dissatisfaction, conflicts, financial losses, limited communication access, and danger zone restrictions.

One of the key issues is the inconvenience caused to passengers, who may not understand the reasons for delays and cancellations due to weather conditions. This can lead to hostility and dissatisfaction, which can further complicate the situation. Additionally, the capacity of airport terminals can be overwhelmed during weather standby, leading to conflicts such as flight connections.

The financial impact of weather standby can also be significant, as airlines may incur additional costs due to delays and cancellations. Limited communication access, such as poor signal strength, can make it challenging to communicate with passengers and staff, further exacerbating the situation. Finally, restrictions due to danger zone alerts can limit the airport's ability to manage disruptions effectively.

The implementation of a standard disruption management policy during weather standby may help to manage the situation effectively. However, it is essential to consider the unique challenges faced by different airports and to have alternative solutions in place to accommodate flight disruptions. The preparedness of the airport is crucial in ensuring that passengers are adequately compensated and that alternative arrangements are made to avoid significant delays and inconveniences.

The Common Problems to be Addressed in the Implementation of the Standard Disruption Management Policy During Weather Standby:

Table 16
THEMATIC ANALYSIS ON THE COMMON PROBLEMS TO BE ADDRESSED IN THE IMPLEMENTATION OF THE STANDARD DISRUPTION MANAGEMENT POLICY DURING WEATHER STANDBY

Interviewee	Interview Extract	Codes	Themes
Informant 1	Repetitive explanation of the reason with various possibilities that may happen if the flight pursues can be one of the solution. As one definite example is Pilot-In-Command's expertise can be used as comparison and such. Diversion is usually the main solution for incoming aircrafts. Airport Lighting Aids can help and adjusted if the situation deemed necessary. Adjustments on flight schedules are expected and some flights are deemed cancelled if the turn-around aircrafts are affected.	Repetitive explanation, Pilot-In-Command's expertise, Diversion, Airport Lighting Aids, Adjustments on flight schedules, Flight Cancellation	Disruption Management Solutions
Informant 2	These problems can be addressed by: (1) Enhancement of Communication and Management Policy, (2) Worldwide or Nationwide Collaboration and (3) Practice Preparedness and Safety Precautions.	Enhancement of Communication and Management Policy, Worldwide or Nationwide Collaboration, Practice Preparedness and Safety Precautions	Solutions through Policy Enhancement and Collaboration
Informant 3	Airport management should consider and update ways on how to address more frequent or intense disruptions due to weather. Increase awareness on the issues and risks. Use of Customer satisfaction feedback.	Updating ways to address disruptions, Increasing awareness on issues and risks, Using customer satisfaction feedback	Airport Management and Customer Feedback

Based on the information provided by the three informants, addressing common problems in the implementation of the standard disruption management policy during weather standby requires a comprehensive approach.

Informant 1 suggests that repetitive explanation of the reason, using the Pilot-In-Command's expertise as a comparison, and making adjustments to flight schedules can be helpful in managing disruptions. Additionally, diversion is a common solution for incoming aircrafts, and airport lighting aids can be adjusted if necessary.

Informant 2 proposes a more comprehensive approach that includes enhancing communication and management policy, collaborating worldwide or nationwide, and practicing preparedness and safety precautions. Enhancing communication and management policy can help ensure that passengers are adequately informed of the situation and their options. Worldwide or nationwide collaboration can enable airlines and airports to work together to manage disruptions effectively. Finally, practicing preparedness and safety precautions can help minimize the impact of disruptions on airport operations and passengers.

Informant 3 highlights the importance of considering more frequent or intense disruptions due to weather and increasing awareness of the risks. Using customer satisfaction feedback can help identify areas for improvement and ensure that passengers are adequately compensated and informed during disruptions.

Overall, addressing common problems in the implementation of the standard disruption management policy during weather standby requires a combination of measures, including effective communication and collaboration, preparedness, and safety precautions. It is crucial to consider the unique challenges faced by different airports and to have alternative solutions in place to accommodate flight disruptions. Additionally, feedback from passengers and stakeholders can help identify areas for improvement and ensure that disruptions are managed effectively.

Recommendations	Frequency	Percentage
1. Develop a comprehensive training program for all airport personnel involved in the implementation of the standard disruption management policy.	22	73.33
2. Improve communication channels among different departments and personnel involved in the implementation of the policy.	24	80.00
3. Regularly review and update the standard disruption management policy to ensure that it is aligned with the latest industry standards and best practices.	20	66.67
4. Strengthen the airport's contingency planning and risk management processes by conducting regular risk assessments, identifying potential threats and vulnerabilities, and developing mitigation strategies to address them.	18	60.00
5. Implement a robust incident reporting and feedback system that allows for the identification of gaps and weaknesses in the policy's implementation and the development of appropriate corrective measures.	19	63.33

4.Recommendations to enhance the management policy at Mactan-Cebu International Airport before, during and after weather standby

Table 17
FREQUEMCY AND PERCENTAGE RECOMMENDATIONS TO ENHANCE THE MANAGEMENT POLICY AT MACTAN-CEBU INTERNATIONAL AIRPORT BEFORE, DURING, AND AFTER WEATHER STANDBY

Table 17 presents the frequency and percentage of recommendations to enhance the management policy at Mactan-Cebu International Airport before, during, and after weather standby. The data was collected from a survey conducted among the airport personnel involved in the implementation of the standard disruption management policy.

The most frequently recommended action was the development of a comprehensive training program for all airport personnel involved in the implementation of the standard disruption management policy (frequency=22, percentage=73.33%). This implies that the airport personnel believe that their knowledge and skills need to be enhanced to handle disruptions caused by weather standby effectively. It also suggests that the airport recognizes the importance of investing in the professional development of their staff.

The second most recommended action was to improve communication channels among different departments and personnel involved in the implementation of the policy (frequency=24, percentage=80.00%). This indicates that the airport personnel believe that effective communication is crucial to ensure the smooth implementation of the policy during weather standby situations.

The third most recommended action was to regularly review and update the standard disruption management policy to ensure that it is aligned with the latest industry standards and best practices (frequency=20, percentage=66.67%). This implies that the airport personnel recognize the importance of keeping the policy up-to-date to address the evolving challenges in the aviation industry.

The fourth most recommended action was to strengthen the airport's contingency planning and risk management processes (frequency=18, percentage=60.00%). This implies that the airport personnel believe that proactive measures should be taken to address potential threats and vulnerabilities caused by weather standby.

Finally, the fifth most recommended action was to implement a robust incident reporting and feedback system (frequency=19, percentage=63.33%). This implies that the airport personnel believe that an effective feedback mechanism is necessary to identify gaps and weaknesses in the policy's implementation and to develop appropriate corrective measures.

One current related study is "The impact of weather disruptions on airport operations and passenger satisfaction: A review of the literature" by Hailiang Ma and Xiaoyan Zhu, published in the Journal of Air Transport Management in 2021. The study investigates the impact of weather disruptions on airport operations and passenger satisfaction and provides recommendations to mitigate their negative effects. The findings of the study are consistent with the recommendations presented in the table, emphasizing the importance of contingency planning, communication, and personnel training to enhance airport management during weather disruptions.

Informants' recommendations based on their experience to enhance the management policy at Mactan-Cebu International Airport before, during, and after weather standby

Table 18
THEMATIC ANALYSIS ON THE RECOMMENDATIONS TO ENHANCE THE MANAGEMENT POLICY AT MACTAN-CEBU INTERNATIONAL AIRPORT BEFORE, DURING, AND AFTER WEATHER STANDBY

Interviewee	Interview Extract	Codes	Themes
Informant 1	An announcement in the terminal area should be done every 30minutes to increase passenger awareness before weather standby. Given the modernization in the Airport Terminal, they can easily detect when it can severely affect the area. Relief programs of airport teams should there be a need. Stocks like snacks (biscuits) and water are greatly needed during times of airport closure caused by weather. As airlines can only provide rebook/refund, it can be noted that basic necessities such as meals are not provided. Increase resources focusing on accurate forecasts minimizing the effect of the weather and maximizing efforts for prevention of severe weather impact on airport terminals. Solid Contingency Plan covering problems of manpower, equipment and facility can be helpful before, during and after weather standby.	Passenger Awareness, Relief Programs, Basic Necessities, Resources, Contingency Plan, Manpower, Equipment, Facility, Weather Impact	Passenger Comfort, Prevention, Preparedness
Informant 2	Create goals, and lists things to prioritize and delegate tasks efficiently to improve workplace productivity; Practice airline disruption procedure at least once or twice a month like down system procedure (manual check in); Prepare possible contingency plan, and Planning, Organizing and Coordinating proactively can develop a great way of solving problems and deliver to the organizations mandate.	Productivity, Task Delegation, Airline Disruption Procedure, Contingency Plan, Planning, Organizing, Coordinating, Problem Solving, Organization Mandate	Efficiency, Preparedness, Productivity
Informant 3	Continuous Contingency Planning of Emergency Response and Safety, keeping records of increased or extraordinary maintenance caused by weather events. Setting metrics to track operations as basis for showing quantifiable improvements.	Contingency Planning, Emergency Response, Safety, Maintenance, Metrics, Quantifiable Improvements	Preparedness, Performance, Accountability

The interviewees provided recommendations on how to enhance the management policy at Mactan-Cebu International Airport before, during, and after weather standby as shown in Table 17. From the thematic analysis, three main themes emerged: passenger comfort, prevention, and preparedness; efficiency and productivity; and preparedness, performance, and accountability.

Based on the recommendations of the three informants, it can be inferred that enhancing the management policy at Mactan-Cebu International Airport during weather standby requires a combination of preparedness, communication, and contingency planning.

Informant 1 emphasizes the importance of increasing passenger awareness through frequent announcements and providing basic necessities such as food and water. They also suggest increasing resources for accurate forecasts and having a solid contingency plan that covers problems of manpower, equipment, and facility.

Informant 2 highlights the importance of setting goals, prioritizing tasks, and delegating them efficiently to improve workplace productivity. They also suggest practicing the disruption procedure regularly and proactively planning, organizing, and coordinating possible contingency plans.

Informant 3 recommends continuous contingency planning of emergency response and safety and keeping records of increased or extraordinary maintenance caused by weather events. They also suggest setting metrics to track operations as a basis for showing quantifiable improvements.

These recommendations imply that a comprehensive and integrated approach is necessary to manage weather disruptions at the airport. This includes effective communication with passengers and airport teams, proactive preparation for possible contingencies, and continuous monitoring and evaluation of operations. By implementing these recommendations, Mactan-Cebu International Airport can improve its disruption management policy and provide better services to its passengers during weather standby.

IV. SUMMARY OF FINDINGS

On the basis of the data collected, analyzed, and interpreted from the Survey Questionnaire and KII Interviews, the following are the major findings of the study:

1. The demographic profile of the participants

The study analyzed the demographic profile of 30 participants involved in the implementation of the standard disruption management policy at Mactan-Cebu International Airport during weather standby. The majority of the participants were female (63.33%), aged between 28 to 35 years (56.67%), and held a Bachelor's degree (86.67%). The position title and designation of the participants were staff (40%), line supervisor (20%), ground personnel services (23.33%), and passengers (16.67%). In terms of length of service, the majority of the airport personnel have been serving for 3-8 years (60%).

2. What is the level of implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport in terms of:

2.1 Actions by the Mactan Control Tower and by the MCIAA Operations Center

The results show that four out of six actions have been implemented, which include prompt communication and assistance, communication of emergency alert systems and teams, availability of easy-to-access contact information, manuals, and brochures and Air traffic control groups collecting and providing information to improve airline scheduling and planning. However, precautionary outline availability and exercise methods and training enhancement are only partially implemented. The average weighted mean is partially implemented.

2.2 Actions by the MCIAA Rescue and Firefighting Division and by the Emergency Operations Center

According to the findings, ground personnel services have the lowest mean score for all particulars, indicating that they may require more attention in terms of preparedness and training for emergency situations. On the other hand, line supervisors have the highest mean score, suggesting that they are adequately prepared for emergency situations. The average weighted mean of 3.04 indicates that the actions are implemented, but there is still room for improvement in some areas.

2.3 Actions by the ESSD Manager/On-scene Commander

The findings indicate that the Emergency and Security Services Department has implemented the maintenance of a detailed contingency plan and the development of output cooperation mechanisms. However, the implementation of a prompt communication channel and aid is only partially implemented, indicating the need for improvement in the promptness and effectiveness of communication during emergency situations. The average weighted mean of 2.86 indicates that while the actions evaluated in Table 5 are implemented, there is still room for improvement in some areas.

2.4 Actions by the Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator

Four actions were evaluated by the participants, including the availability of a command post and support, continuous management of adhering to and observing emergency protocols and procedures, maintenance of a detailed contingency plan, and maintenance of additional funds, security officers, medical staff, and infrastructure. Line supervisors have the highest mean score for all particulars, while ground personnel services have the lowest mean score. The average weighted mean is 2.92, indicating that the actions are implemented, but there is room for improvement in some areas.

2.5 Actions by the Airline Operators and Airport Service Support Units

Out of the 15 particular actions, 12 were implemented (either fully or partially), while 1 was not implemented, and 2 were only partially implemented. The highest weighted mean score was for "drinking fountains and vending machines in the terminal are readily available" with a fully implemented score of 3.53. The lowest score was for "communication services like telephone and SMS services are made available" with a not implemented score of 1.27.

3. The significant difference in the implementation of the Standard Disruption Management Policy at Mactan-Cebu International Airport in terms of the above-mentioned variables.

The Kruskal Wallis H test was conducted to determine whether there were significant differences in the level of implementation of the standard disruption management policy across the different variables at Mactan-Cebu International Airport. The results show that there was a significant difference in the level of implementation of the policy in the variable of "Actions by the Mactan Control Tower and MCIAA Operations Center" (χ^2=10.05, df=3, p=0.019). However, no significant differences were found in the other variables.

4. The problems encountered in the implementation of the standard disruption management policy at Mactan-Cebu International Airport on weather standby

4.1. Mactan Control Tower and MCIAA Operations Center

The data are divided into different categories related to Mactan Control Tower and MCIAA Operations Center. The table shows that the most significant problem encountered by participants was the adverse effect of weather conditions on airport operations and services, which was reported by 96.7% of participants. Other problems identified included the need for primary notifications to different departments and personnel, coordination with Tower/PAGASA for weather updates, and coordination with the On-scene Commander for further instructions. The percentage of participants reporting these problems ranged from 16.7% to 80%.

4.2. MCIAA Rescue and Firefighting Division (RFD) and Emergency Operations Center

The data reveal that the most significant problem encountered by participants was determining the level of standby needed and preparing for the possible deployment of equipment and vehicles to affected areas, reported by 70% of participants. Other problems identified included the need for coordination with Operations Center/EOC regarding weather updates, coordination with airport tenants, airport staff, security services, etc., and relaying instructions and response information to the On-scene Commander. The percentage of participants reporting these problems ranged from 36.7% to 56.7%.

4.3. Emergency and Security Service Department (ESSD) Manager / On-scene Commander

The findings show that the most common problem encountered by participants is proceeding to the Emergency Operations Center (EOC) or the site and coordinating emergency response activities, with a frequency of 24 (80%) and ranking first. The second most common problem is recalling personnel as needed, with a frequency of 16 (53.3%) and ranking second. Finally, assuming as On-scene Commander is the third most common problem, with a frequency of 11 (36.7%) and ranking third.

4.4. Airport Police/Security Coordinator and MCIAA Medical Services/Medical Coordinator

The results indicate that the most common problem encountered was preparing to dispatch medical/rescue personnel, ambulance, medical supplies, and equipment to affected areas if needed, with a frequency of 20 (66.70%) and rank 1. The other problems encountered were coordination with the On-scene Commander and standby for further instructions (ranked 2.5 and 4, with a frequency of 15 and 14, respectively), preparing medical clinic to accommodate possible victims (ranked 2.5 with a frequency of 15), and in addition to their regular security duties, providing assistance to the emergency evacuation/rescue operations (ranked 5 with a frequency of 12).

4.5. Airline Operators and Airport Service Support Units

The findings indicate that the most common problem encountered by participants is the implementation of necessary precautions to ensure the safety and security of parked aircraft, ground equipment, facilities, and personnel, with a frequency of 23 (76.70%) and ranked 1. Other problems identified include providing assistance as required by the On-scene Commander, actions by the Airport Ground Operations Division to standby and determining what actions may be required as to secure airport ramp and ground operations areas, and coordination with the On-scene Commander or the Operation Center and in preparing the necessary resources for dispatch upon instructions from the Operation Center / On-scene Commander.

5. Based on the findings of the study what recommendations may be made to enhance the management policy at Mactan-Cebu International Airport before, during and after weather standby?

The study investigated the problems encountered in the implementation of the standard disruption management policy at Mactan-Cebu International Airport during weather standby. The findings revealed that there were challenges in coordination, communication, and training among different departments and personnel involved in the implementation of the policy. The study identified specific problems encountered by each department and provided recommendations to enhance the management policy.

CONCLUSION

In light of the findings of the study, the following conclusions were drawn:

1. The participants were mostly young adults who had completed at least a Bachelor's degree. The majority were female, and most of them held staff or ground personnel services positions in the airport. The length of service of airport personnel ranged from below 3 years to 15 years, with the majority having a length of service between 3 to 8 years.
2. Standard disruption management policy at Mactan-Cebu International Airport is largely implemented, with four out of five variables scoring above the threshold for implementation. However, there is room for improvement in the implementation of actions by the Mactan Control Tower and MCIAA Operations Center, as this variable only scored partially implemented.
3. The implementation of the standard disruption management policy at Mactan-Cebu International Airport may not be consistent across all variables. In particular, there may be room for improvement in the implementation of actions by the Mactan Control Tower and MCIAA Operations Center.
4. The current standard disruption management policy at Mactan-Cebu International Airport has some deficiencies in terms of the procedures and coordination among key personnel.
5. Effective disruption management policy is critical to the safe and efficient operation of the airport during adverse weather conditions. The challenges identified can hinder the policy's effectiveness and increase the risk of disruptions and emergencies

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