

By

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Abstract

Unprecedented floods disaster that hit Johore, Pahang, Terengganu and Kelantan was due to abnormal weather conditions. Heavy rain which fall continuously non stop for between 3 to 4 days has raised the water level in some areas to a height of 15 feet deep. The flood disasters have caused devastating loss of property and life and some 100,000 people were evacuated to flood relief centers. Some of the floods victim lost all their belonging and property. Flood disaster has also caused water borne diseases to prevail. The future is bleak for these flood victims. Continuous government assistance is needed for these flood victims who lost everything is needed.

Year in and year out, the monsoon season have cause floods disaster especially in the east coast state and is now a yearly common phenomena. However, the level of awareness and preparedness among the Malaysian community and the government machinery is still questionably low. Presently, there are 18 public universities in the country, the issue is what is the level of awareness does students and staff of the university put on the issue of floods or other natural disaster? Do we at the University are ready to face disaster situations if it occur in the University? At this juncture, the experiences of UniMAP's contribution to the University's community, the local community vis-à-vis the Malaysian Mechanism Disaster Management and functioning alongside the state machinery of Perlis state government during 17 December 2005 flood disaster can be used as an example.

The aim of this study is to examine the disaster preparedness in University and to propagate the importance of disaster preparedness among the students and staffs through education. This pilot project will be conducted through interviews, observations and surveys. It is expected that this study will shed some light for further effective implementation of disaster preparedness management.

Keywords: emergency preparedness, UniMAP experience, disaster machinery.

Beginning mid December 2006, Johore, Malacca, Negeri Sembilan, Pahang, Terengganu and Kelantan experience abnormal weather condition whereby rainfall continuously for 3 days and nights. The abnormal weather condition resulted in massive flooding in the aforementioned states. However, Johore was the worst hit state. Johore experience the first flooding wave on 19 December 2006. Subsequently, on 13 Jan 2007 the second flooding wave hit Johore. Johor Bahru, Batu Pahat, Segamat, Pontian, Kota Tinggi, Muar, Mersing and Kluang were areas affected by flood disaster. Line of communications and essential services were disrupted.

The flash flood that hit Kuala Lumpur on the 10th June 2007 is a caused of concerned. Heavy rain between 5 pm and 10 pm caused the Klang and Gombak rivers to overflow causing massive floods in most part of Kuala Lumpur. The Prime Minister, Datuk Seri Abdullah Ahmad Badawi has expressed dismay at the capital's inadequate flood control measures. The Prime Minister further uttered that "Floods are no longer seasonal and can strike any time".

On the same note, according to Associate Professor Dr. Fredolin Tangang, Universiti Kebangsaan Malaysia (UKM) climatologist, wet weather phenomenon in Malaysia is likely to last for nine to ten months to come and the period between June and August will see Peninsular Malaysia experiencing wet condition. He said the phenomena would peak between December and February during the north east monsoon which will affect Sabah and Sarawak. He further expressed that "with different months different areas will be affected in accordance with the ocean interaction".

Year in and year out, parts of Malaysia will be affected by natural disaster. Although this is the prevailing situations, yet the level of awareness and preparedness in meeting these disasters is still uncertain - what is the state of readiness of individuals and organizations to manage disaster? Do we at the University are ready to face disaster situations if it occurs at our door steps?

Objectives

The objective of this study is:

- a. To examine the disaster preparedness among students and staffs.
- b. To study the organizations preparedness towards disaster management.
- c. To analyse the individual preparedness towards disaster management.

The acronym **UMMPTAR** will be used throughout this paper. It stands for Universiti Malaysia Perlis which is one of the youngest Universities in the country, situated in the state of Perlis. At the time of writing, the University is slightly more than 4 years old.

Current Issues

Presently, there are 18 public universities in the country. Apart from public universities, there are innumerable numbers of private universities, universities colleges and branch campuses of foreign universities and various private colleges. In the present scenario, Malaysia does not encounter major catastrophe. Malaysia has experienced various other types of natural disasters such as monsoon flood, landslides and severe haze and recently Tsunami. Consequently the weather condition in Malaysia from now on is expected to be adverse due weather. The climate change will caused Malaysia to experience various other types of natural disasters such as monsoon flood, landslides etcetera.

Check with the United States Department of Commerce's National and Atmospheric Administration website also reveal a La Nina possibility. Thus, based on this information, the key issue now suggest the need for further enhancement of preparedness and response and mitigation capability. Are the Universities ready to play their own roles and participate in emergency situations to cater its own needs and that of the community or civil authorities? What are the contributions and what is the level of participation required by the Universities towards disaster management?

Disaster Preparedness and Disaster Management in Practice

In Malaysia, the policy on Disaster and Relief Management is governed by the NATIONAL SECURITY COUNCIL (NSC) DIRECTIVE NO. 20: POLICY AND MECHANISM OF DISASTER MANAGEMENT AND RELIEF COMMITTEE. The Directive Number 20: "Policy and Mechanism of Disaster Management and Relief Committee" interpret "Disaster" to means an incident which occurs unexpectedly, which is complex in nature, causes loss of life, destruction to properties or environment and grind down the activity of the community¹. Illustration of the type of disaster which is covered under the aforementioned directives is²:

- a. Natural Disaster such as floods, storm, drought, erosions of the beach, soil, land slide or disaster cause by storm and heavy rain;
- b. Industrial Disaster such as incident of explosion, occurrence of fire, pollution and spilling of dangerous and hazardous materials from

¹ Keselamatan dan Kesihatan Pekerjaan dalam Organisasi, Mohamad Khan, Nor Azimah Chew Abdullah, Ab. Aziz Yusof, Prentice Hall, 2005, page134

² Ibid

depot and installations which process, produce and materials;

- c. Accidents involving transporting, channelling and moving of dangerous materials;
- d. Collapse of building and structure;
- e. Air disaster which happen in populated areas and building areas;
- f. Train collusion or skidding;
- g. Burning which involve a vast areas or fire to high rise building or a special structure where there is a large crowd;
- h. Cracking and breaking up of hydro dams or reservoirs;
- i. Nuclear disaster and radiology involving insertion of nuclear or radio active material where an accident may cause it to be widespread and loss to life, destructions to properties or pollutions to the environment plus hinder daily activities;
- j. The release of poisonous gas in public; and
- k. Haze which causes alarm among the public and obstruct the machinery of the civil authorities or economic activity of the state.

The National Security Division in Prime Minister Department is also the Emergency/Natural Disaster Coordinating Body. The National Security Division is responsible for coordinating activities related to the preparation, prevention, response and handling of disasters. The managing of disasters in Malaysia is being handled by the Disaster Management and Relief Committee at the Federal, State and District Level. The mechanism to administer disaster is base on its magnitude.

To manage disaster, it requires resource, equipment, effective and efficient manpower from the various agencies, the need of coordination of effort to meet eventualities for an unspecified period of time. The system emphasis on coordination and mobilization of agencies involved which are grouped into 7 grouping as shown in **Appendix 1** to carry out specific task

To ensure that the above mentioned committee functions efficiently, Operation Rooms are established. The Disaster Operations Room are established at the scene of the disaster and the Main Operations Room is usually at the headquarters of the Disaster Management and Relief Committee which act as a control centre. The Main Operations Room will coordinate all activities such as evacuations, setting up relief centres, distributions of foods etc

Minister for Higher Education, Datoø Mustapha Mohamad had directed all institution of higher learning to form õBriged Sukarelawan Bencanaö. With this directive University has an additional responsibility, or a secondary role, towards the community during normal peace time as well as during times of disaster.

Disaster Situations

The principal role of the university is academic and research excellence. This has been acknowledged by the societies. However, the university has an additional responsibility, or a secondary role, towards the community during normal peace time as well as during times of disaster. Universities can play two major roles in disaster preparedness and management i.e., respond to internal needs of the University, and assist civil authorities and the local community in disaster relief management.

In times of crisis or during emergency situations, University has an additional role. The University can provide assistance to the university community, local community and the civil authority. Some of the involvements are:

- a. **Assisting civil authorities** in manning relief centre, helping in evacuation of disaster victims, assisting in search and rescue, assisting in giving first aid to victims, helping in casualty evacuation, cooking and distributing foods at designated locations, providing engineering consultancy services, providing temporary accommodation in hostels for disaster victims, complementing the civil medical services through civic actions projects, and assisting the civilian medical services in disaster.
- b. **Assisting the local community** by providing human power in community work such as cleaning up of debris, assisting the community in preparing food, performing casualty evacuations, providing medical assistance, caring for the sick, disabled and injured victims, etc.
- c. **Assisting the university community** in restoration work so as not to jeopardize the University's academic mission.

At this juncture, the experiences of UniMAP in disaster relief management can be used as a model to answer the question on the contribution of universities towards disaster management, functioning alongside the state machinery. It is hoped that through this working paper, UniMAP is able to share its knowledge with other institutions of higher learning in the forms of contribution towards disaster preparedness and relief management in assisting the civil authorities, and at the same time fulfil its internal obligations.

UniMAP Mechanism and Machinery in Disaster Management

The VC's vision on interaction with the local community is stated as "UniMAP has made it a philosophy to be active in serving the local community". Hence, many university-community programmes, such as the "community cooperating services" or "gotong-royong" have been planned and implemented for the local community.

university in Malaysia. At present, it does not have a main campus in rented buildings all over Kangar and the areas surrounding it. UniMAP campus being practically all over in Perlis, it is dubbed "UniMAP Distributed Campus". It covers about 15 zones, with lecture theatres and laboratories located at Kubang Gajah, Jejawi, and Kuala Perlis, administrative offices at Jejawi and around Kangar, and Chancellery offices and the University Library located in Kangar. UniMAP's main lecture hall, which is also an all purpose hall, is located in Kangar. The lecture hall, named "Capitol Hall" was once a movie theatre.

Students reside in housing areas of Kampong Wai, Bintong, and Wang Ulu. They were transported by buses that took them from their residences to their lecture theatre or lecture hall locations.

Due to its distributed nature, it would be very difficult to manage if disaster hits UniMAP. Realizing this situation, the VC planned Emergency Preparedness in 3 Phases, namely:

- a. Phase 1 ó Setting up UniMAP ERT and UniMAP Disaster Management and Relief Committee. As a preliminary step, UniMAP's Disaster Management and Relief Committee, UniMAP ERT and UniMAP Red Crescent Society were established and formally launched by the Chancellor of UniMAP who is also the Crown Prince of Perlis on 3 March 2004. .
- b. Phase 2 ó Purchase basic equipment and implementation of training programmes. UniMAP purchased basic first aid equipment and implemented training programs for members of the UniMAP ERT and the UniMAP Red Crescent Society. UniMAP also purchased an ambulance. The Ambulance Unit was officially launched on 15 December 2005 by the Chancellor of UniMAP.
- c. Phase 3 ó Initiating and implementing Emergency Plan. UniMAP's Emergency Plan would be implemented only if emergency is imminent. The authority to activate the plan rested on the VC of UNIMAP.

UniMAP was put to trial during the flood disaster that hit Perlis on 17th December 2005. For 3 days (14th December - 17th December 2005), rain fell continuously on Kangar and its surrounding areas. The rain resulted in raising the water levels at the nearby Timah Tasoh reservoir. The water levels at the dam rose to above the danger level and hence had to be released. The sea level was far above the ground level too. The combined effects of heavy rain, release of excess water from the dam, and the elevated sea level was the cause of flood hitting the whole of Kangar town and its surrounding area on 17th December, 2005, making the state capital cut off from the whole country. UniMAP campus buildings were not spared either.

and its surrounding areas affected more than 8,000 people to seek shelter at 42 evacuation centres in the State. The floods caused havoc, power supplies to Kangar were cut off, disrupting all forms of transportation to Kangar in particular and in Perlis in general. It was estimated that two-thirds of Perlis was underwater. The State Operation Centre and the State Disaster Management and Relief Committee were activated to handle the situation.

The VC of UniMAP activated the disaster management plan following the big flood that hit Kangar and its surrounding areas. The action saw the participation of the ERT, UniMAP Red Crescent Society, and the Ambulance Team voluntarily servicing victims of the big flood. An operation centre was promptly established and manned around the clock. Liaison with the State Disaster Relief Committee and the Perlis Operation Centre was also established. The ERT of UniMAP and the Red Crescent of UniMAP rendered assistance to civil authorities, the local community and the UniMAP community. The form of assistance was limited to help in evacuating flood victims, preparing food for victims at relief centers, and providing first aid. The Ambulance Team was ready on call to provide assistance especially in providing first aid and counselling services. UniMAP Clinic was on stand by mode, awaiting request from the State General Hospital to assist in emergency treatments. The assigned mission was successfully accomplished

State of Disaster Preparedness in Institution of Higher Learning

There are a number of public institutions of higher learning in Perlis namely University Malaysia Perlis (UniMAP), University Teknologi MARA Perlis, Perlis Community College and Perlis Poly-Technical College, Perlis Teachers' College and etcetera. A random survey is made on the students and staffs from the aforesaid public institutions of higher learning in Perlis using questionnaires at **Appendix 2**. A total of 95 respondents comprising of 38 students and 57 staffs from the various university and colleges were chosen.

The results of the survey

The objectives of the study are to examine the disaster preparedness of the organizations, individual preparedness and disaster preparedness among students and staffs in Institution of Higher Learning. The analyses of the findings are as explained below. However further explain on the results of the study is at **Appendix 3**. The results of the survey indicate a mix of positive and negative outlook on the part of the students and staff, the organizations and individuals in the organization with regard to disaster preparedness.

Objective 1 - Disaster preparedness among student's and staff's

Mean Student = 2.11 while Mean Staff = 1.96.

at **Appendix 3**, it is found that both the students and staff with regard to the questions of their preparedness in managing disaster. This was based on the finding output which shows that the Mean Student = 2.11 while Mean Staff = 1.96. This indicates different of opinion towards organization preparedness. However, independent sample T-Test indicates differences which can be claimed as "not significant". Thus, the conclusion is the staffs and students are not aware of the disaster preparedness.

Objective 2 - Organizations preparedness to disaster management

P Value = 0.728

On the question of organization's preparedness towards disaster management, the respondents seem to be giving an unclear opinion whether the organization is well prepared for disaster preparedness. It is based on the T-Test which indicate P Value = 0.728. This indicates that the respondents consider that their organizations are not geared up towards managing disaster.

Objective 3 - Individual preparedness to disaster management

P Value = 0.121

On the questions of individual preparedness towards managing disaster, the respondents also give unclear decisions with regard to their preparedness. This is based on the output which shows the P Value = 0.121 in the T-Test. This indicate that the respondents is not prepared for managing disaster

Conclusion

The public's response to any emergency is based on the understanding of the nature of the emergency, the potential hazards, the likely response of emergency services needed and the knowledge of individuals and groups in handling the matter in order to increase their chances of survival and recovery. Based on the study and analysis of the findings, where do we go or what is our next course of actions? It is concluded that there is a need for the government in general and the universities in particular to increase awareness (students, staffs of the universities) towards preparedness in managing the disasters through education programs.

Therefore, the decision to initiate and support these functions in leading to a better performance of disaster preparedness, management and response must be made at the highest policy-making level in the universities.

Based on the study and analysis of findings in order to enhance awareness and education programs, the following measures are suggested:

1. Internal measures to be under taken by Universities.
 - i. To propagate awareness towards disaster preparedness and management through seminars (out-reach), workshop (in-reach) and mentor-mentee programs together with the students and staff. The disaster preparedness and awareness program to include:
 - a. Disaster awareness campaign and community education. Disaster awareness campaign which include disaster preparedness poster which reminds all concerned at all time on the University's requirement for disaster preparedness and what expected of them.
 - b. Written disaster preparedness policy. This is to ensure all employees understand the university expectation for disaster preparedness.
 - c. Disaster preparedness handbook. The handbook provides in-depth information for emergency and serves as individual training aid.
 - d. The establishment of Disaster Preparedness and Response Team in University.
 - ii. To coordinate the universities disasters programs with the relevant district, state and federal relief committee of the form of assistance required by the aforesaid authorities in time of crisis.
2. External measures to be taken by relevant Government Agencies:
 - i. The government ought to intensify its drive towards all work of life so as to instill the public awareness on disaster preparedness through campaign. The campaign may be focus and take the following forms:
 - a. Public education in school and institution of higher learning to include cause of disaster threat or occurrence.
 - b. Public Information and Extension Programme.
 - c. Special training courses for the public

ent ought to intensify its drive towards propagation of awareness of the disaster preparedness and management using the media.

- iii. The government ought to establish a close cooperation with Universities and other NGOø organizations to propagate disaster management.

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The Malaysian Disaster Management Organization

Central Disaster Management and Relief Committee		
State Disaster Management and Relief Committee		
It is suggested that University be nominated as a member of this committee. See recommendations		
District Disaster Management and Relief Committee		
Grouping	Organization and Agencies for carrying out operation	Tasks
Search and Rescue <i>Suggested University Emergency Response Team be placed in this grouping. See recommendations</i>	Malaysian Fire and Rescue Department Royal Malaysian Police Malaysian Armed Forces SMART Team (Special Malaysia Disaster Assistance and Rescue Team) Emergency Medical Services Atomic Energy Licensing Board Civil Defence Department	Search and rescue of victims
Health and Medical Services <i>Suggested University Emergency Response Team can play a role in this grouping – see recommendations</i>	Emergency Medical Services Malaysian Armed Forces Red Crescent Society Malaysia St John Ambulance	Management of emergency treatment Management of forensic services Management of public health
Support	District Office Municipal/Town Councils Tenaga Nasional Berhad Syarikat Telekom Malaysia Berhad Malaysian Armed Forces Royal Malaysian Police Public Work Department	Logistic support Communication and other assistance for smooth control of operations and overcoming of disaster
Welfare <i>Suggested University Emergency Response Team can play a role in this grouping – See recommendations</i>	Welfare Department Emergency Medical Service Red Crescent Society St John Ambulance RELA	Evacuating victims Preparing food for victims/duty officers Providing/managing places for evacuations Providing first aid and counselling services
Media	Information Department Broadcasting Department	Press conference Electronic and media coverage
Security Control	Royal Malaysian Police RELA	Provide control at scene of accident Conduct investigation Facilitate communication
Warning and alert	Malaysian Meteorological Service Department of Environment Geological Survey Department Malaysian Centre for Remote Sensing Forestry Department	Detection of risk areas Forecasting and warning on weather Monitoring and alerts on environments

QUESTIONNAIRES

TITLE:

**MANAGING DISASTER PREPAREDNESS FOR INSTITUTION OF
HIGHER LEARNING: AN EXPLORATORY STUDY IN PERLIS**

SPONSORED BY:

**UNIVERSITY MALAYSIA PERLIS
(UniMAP)**

**FOR FURTHER INFORMATION: PLEASE CONTACT
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TELEPHONE NO: 0124335060**

REDNESS QUESTIONNAIRE

Please specify with "X" in the space provided on your status: Student <input type="checkbox"/>				
: Staff <input type="checkbox"/>				
Please mark with "X" in the <input type="checkbox"/> if the statement is appropriate.				
Part 1 – Organization Preparedness				
No	Questions	YES	NO	NOT SURE
1.	Do you think that your organization is reasonably prepared for a disaster such as an earthquake, storms, fire, flood and other such occurrence?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Does your university have a plan for what to do during emergency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Does your university have Emergency Response Team formed by the staff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Have you been told where to meet (rendezvous) outside your university in case of an emergency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Have you practiced an emergency drill in your university within the past year?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Part 2 – Individual Preparedness				
6.	Do you have Family Disaster Supply Kit - things it will take to survive 24 hours which include food and water medicines, blankets, flashlights, etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Are you train in First Aid (within the last 3 years)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Do you know where your family will meet outside your home in case of an emergency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Do all members of your family know how to call for help?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Do you know about disaster plans at your workplace, at your childrens school or day care etc?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

T-Test

Group Statistics

Status	N	Mean	Std. Deviation	Std. Error Mean
1.00	38	2.1105	.38540	.06252
2.00	57	1.9649	.77194	.10225

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Mean_Org	Equal variances assumed	47.207	.000	1.076	93	.285	.14561	.13539	-.12324	.41446
	Equal variances not assumed			1.215	87.245	.228	.14561	.11985	-.09258	.38381

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Mean_Org	95	2.0232	.64700	.06638

One-Sample Test

Test Value = 2						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Mean_Org	.349	94	.728	.02316	-.1086	.1550

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Mean_Individual	95	2.0779	.48492	.04975

One-Sample Test

	Test Value = 2					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Mean_Individual	1.566	94	.121	.07789	-.0209	.1767



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