

**The impact caused by the natural disaster in
Malaysia: Flood and Landslide**

BY.

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FOR REFERENCE ONLY

Being a project report submitted to.

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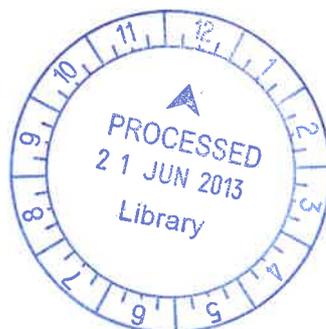
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Abstract:

Natural disaster is the consequence of the combination of the natural hazard and human activities, human vulnerability, caused by the lack of appropriate emergency management, leads to financial structural and human losses.

In Malaysia, there are many kind of natural disaster attack to our country every year, but there are two major disaster that attacking our country, it is **flood** and **landslide**, especially flood event, every year we have encounter flood event , e.g. . The flooding of Kuala Lumpur in the 1970s caused serious damage to lives and properties and called for flood mitigation schemes in Kuala Lumpur.

In construction industry, landslide and flood event keep climbing up year by year. There is many source give rise to the landslide and flood event, people should pay attention and put awareness on it, this is because some of its cases can be avoid or reduce like inadequate drainage system, overdevelopment, design error and so on.

If the flood and landslide event incessancy attack to ours country, for sure there will cause some issues like finance lose, life been threated, image of the country also been affected, people lose confident toward the government, GDP of our country also will fall down.

In this thesis also showing the comparison of the contract clause in PAM ,PWD and others standard form. For sure, there is the some of the method to reduce or avoid the natural disaster event like landslide and flood. This two natural disaster event has some similar way, they always have the related with the water, so to reduce this problem, and we have constructed a proper drainage system to fulfill the rain water and so on.

Sometimes we may have constructed a proper drainage system, but after certain year, when the population is increase, the overdevelopment will cause the system out of service, so we need to upgrade the system and do the maintenance frequently. Nevertheless, government should organize some talk to increase the awareness of the public and set more strict rules in apply to start the project in site like revise the term and condition in PAM to make it more detail.

In construction industry, the developer can transfer the risk to contractor, and the contractor can transfer the risk to insurance company and sub-contractor. When the risk is prohibit to transfer, contractor can done some safety assessment before start the project to make sure the site is under control and safety.

In conclusion, people should put awareness on landslide and flood, there is the some mitigation method to reduce or avoid it like build the smart tunnel or retaining wall, life is more important than everything. Some project spend less in quality improvement, it may bring a lot of problem in the future. Since the landslide and flood event is frequently attack to our country, we may construct the building that can reduce the natural disaster event like construct more bigger dam, high quality of the retaining wall and so on.

Acknowledgement

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I also place on record, my sense of gratitude to one and all who, directly or indirectly, have lent their helping hand in this venture.

Declaration

I hereby declare that this thesis is my own work and effort and that it has not been submitted anywhere for any award. Where other sources of information have been used, They have been acknowledged. And also the interview responses from the participant have not edited.

Signature: 

Date: 7 April 2013



Introduction:

1.0 What are the types of natural disaster that attacked in Malaysia?

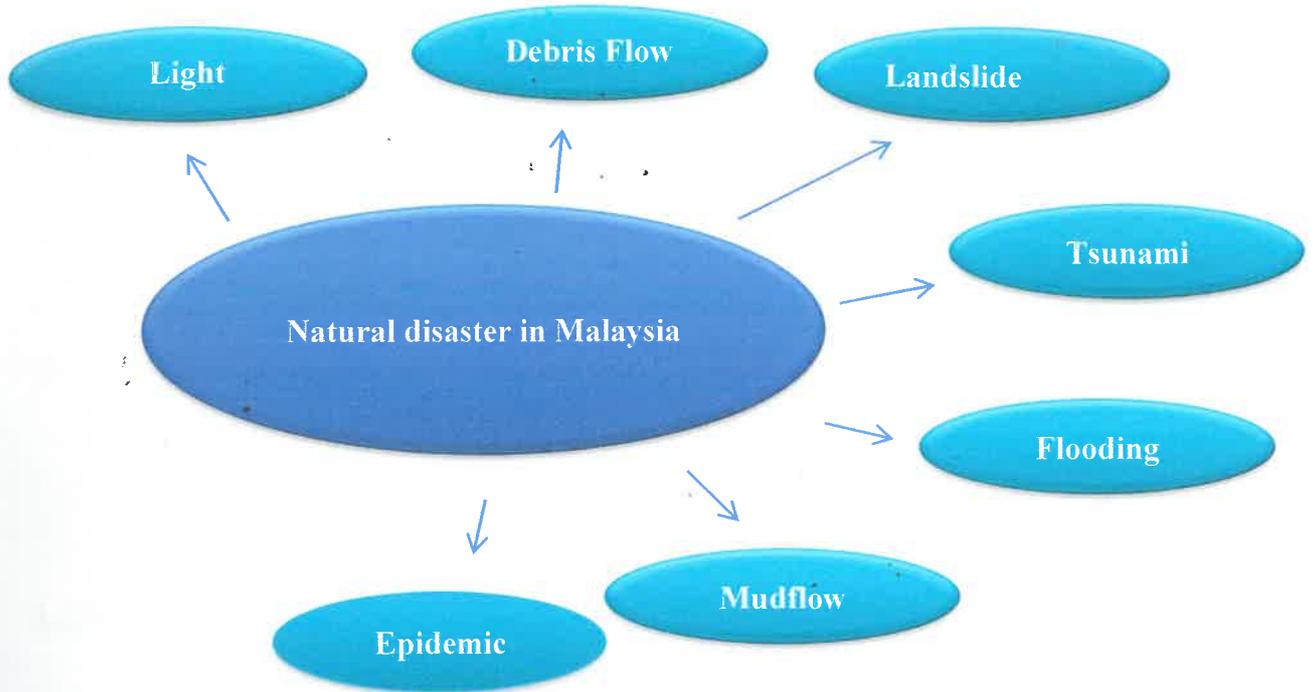


Figure 1.1 showing the types of natural disaster in Malaysia

Natural disaster is the consequence of the combination of the natural hazard and human activities, human vulnerability, caused by the lack of appropriate emergency management, leads to financial structural and human losses.

In Malaysia, there are many kind of natural disaster attack to our country every year, but there are two major disaster that attacking our country, it is **flood** and **landslide**, especially flood event, every year we have encounter flood event , e.g. . The flooding of Kuala Lumpur in the 1970s caused serious damage to lives and properties and called for flood mitigation schemes in Kuala Lumpur.



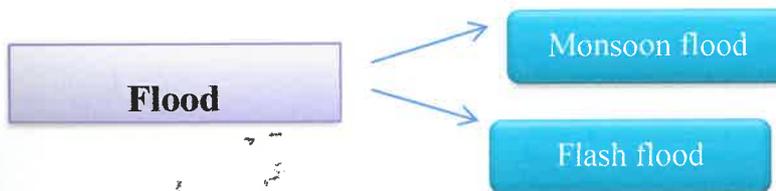
Accordingly to the Malaysia report on 2008, most common hazards in Malaysia are flood, and landslides. Below is the table showing the impact of flood and landslide from year 2005 till 2008.

Year	Disaster	Killed	Injured	Total affected	Damage (USD)
2008	Flood			10210	
2008	Landslide	11	15	1422	
2007	Flood	33		158000	225m
2006	Flood	19		138000	343m
2005	Flood	17		100000	66m
2005	Mud flood	3		2793	

(Source: <http://www.adrc.asia/countryreport/MYS/2008/malaysia2008.pdf>)

1.1 Flood

There are two type of flood that attacking to our country



Monsoon flood	<p>Monsoon season is a welcome relief to drought conditions in many areas of the world. Monsoons can also bring about widespread famine and enough rain to kill hundreds of people in floods. While the Asia and India monsoons are famous, there are even monsoon season in the United States.</p> <p>For e.g. Floods triggered by torrential monsoon rains in Malaysia has</p>
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	forced almost 14,000 people to flee their homes and seek shelter at relief centers on 26 December 2012
Flash flood	<p>Flash floods are just that; intense, short-duration floods. Usually they abate an hour, but can last as long as 24 hours. They occur throughout the southwest, and generally start high up in a mountain or canyon. Rain torrents follow the path of least resistance, initially canyons and arroyos. But along the way they pick up speed and debris.</p> <p>For e.g. there are over 600 students, teachers trapped in school by flash floods on 5 September 2012.</p>

Figure 1.2, showing the type of flood in malaysia



Figure 1.3 showing people sit on an unoccupied stall to avoid flood waters in Hulu Langat, March 8, 2012.

(source:<http://www.themalaysianinsider.com/malaysia/article/over-600-students-teachers-trapped-by-flash-floods>)



1.2 Landslides

Landslide

Landslide, also called landslip, is the movement downslope of a mass of rock, debris, earth, or soil (soil being a mixture of earth and debris). Landslides occur when gravitational and other types of shear stresses within a slope exceed the shear strength (resistance to shearing) of the materials that form the slope.

For e.g. The landslide at Bukit Setiawangsa (Kuala Lumpur) literally hit close to home for two Members of Parliament. On 30 December, 2012.



Figure 1.4 showing Malaysia, Saturday, Dec. 6, 2008. Malaysia will ban new hillside projects after a massive landslide at a hillside estate in the country's largest city killed four people early Saturday and left at least 15 others injured, officials and police said.

(source: http://newshopper.sulekha.com/malaysia-landslide_photo_574573.htm)



1.3 Problem Statement:

There is a one general question that nonstop, what are the events that give rise to the flood and landslide? Besides that, the report also will going analysis about the problem statement related with the flood and landslide, below is the table that is make to analysis the parties whom have involves in the flood and landslide event

<i>Parties that involves in the flood and landslide</i>	<i>Problem / Question</i>
Government	<ol style="list-style-type: none">1. What is the government policy to indemnity the victim?2. How government aware the public to increase their awareness to the flood and landslide?3. What is the black area and peak season for flood and landslide?4. What is the preparation done by the government to prevent or reduce the loss and damage caused by the flood and landslide
Construction team (Civil engineer, architect, contractor and etc.)	<ol style="list-style-type: none">1. How to reduce the loss and damage caused by the flood and landslide in term of design?2. Who shall be responsible if attacked by the flood and landslide in construction site?3. What is the insurance coverage for the flood and landslide?4. Is there any government subsidy for the construction if attacked by flood or landslide?



Public /economy

1. What is the impact toward to Malaysia's economy?
2. How the floor or landslide events give rise to the inconvenience to the public?
3. What the public can do to minimize the impact caused by the flood and landslide?
4. What is the public's responsible toward to the protection of environment?

Figure 1.4 showing the parties that involves in construction industries

1.4 Objectives:

To study the impact caused by the flood and landslide event in Malaysia's construction industry.

1. To review flood and landslide problems in Malaysia's construction industry.
2. To investigate the method to reduce the loss caused by the flood and landslide event in Malaysia's construction industry.
3. To propose adequate way to transfer the risk or reduce the impact caused by the flood and landslide event in construction industry.



1.5 Expected Outcome:

Able to identify the impact caused by the flood and landslide event in Malaysia's construction industry.

1. Able to identify flood and landslide problems in Malaysia's construction industry.
2. Able to propose adequate the method to reduce the loss caused by the flood and landslide event in Malaysia's construction industry.
3. Able to analysis the risk or reduce the impact caused by the flood and landslide event in construction industry.



1.6 Research Method:

<u>Type of research method</u>	<u>Description</u>	<u>Example</u>
The analysis of literature review /documentary evidence	Find out the evidence in writing that provide a truth information	Newspaper, Journal, Report from authority and etc.
Designing and administering questionnaires	To design and set the question that you wish to ask in a questionnaires and send out to relevant party.	Set the questionnaires about the interim payment and send to contractors.
Descriptive Qualitative and Descriptive Quantitative	Detailed descriptions of specific situation(s) using interviews, observations, document review and questionnaire	Make analysis of the questionnaire like how many percentage of woman involves in construction industry and what is the range of salary of them
Correlation/ Regression Analyses	Quantitative analyses of the strength of relationships between two or more variables	Compare the contract form in construction to find out which is the better one.

Figure 1.5 showing the types of research method

There are some methodologies to guide in the preparation of the thesis. First, use literature review method to- collect related information by reading and searching



website, book, journal or newspaper and get the relevant documentary evidence from official website or authority's department, the purpose using this method as background study is to find out the impact of natural disaster in Malaysia and how the natural disaster affect the economy in construction industry. In addition, comparison of different clauses that related with natural disaster will be study.

Second, to collect more data, design a questionnaire and send to the relevant parties like contractor, developer and investor to indicate what is the loss and damage incurred in natural disaster in construction industry and how they handle the financial problem and any other, for sure, questions that will help to achieve my objectives.

Furthermore, will use the methodology method like Descriptive Qualitative and Descriptive Quantitative to present the analysis from the questionnaire and conclude the information that have collected. End but not last, Correlation/ Regression

Analyses also will be used to make comparison from the data get and find out what is the appropriate method to solve the current issues.