Contemporary Issue of Destination Marketing: The Impact of Flood and Drought towards Water Supply in Kuala Lumpur

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ABSTRACT

As a result of globalisation, destination marketing has become essential as cities, states, regions and countries compete with one another to attract huge investment and tourists. In order for these destinations to compete effectively, it is essential to explore how natural hazard may have impacted the destination. Basic utilities such as water

resources could have been impacted by natural hazards. To date, little is known on the impact of natural hazards towards water supply which may directly and indirectly affect the destination image. Information on the characteristics of natural hazards, namely flood and drought, (i.e, the time duration, location and the severity) based on the individual destination are also not known. Hence, the main objective of this study is to understand the economic and socio-economic aspects natural hazards (flood and drought) on water supply. To fulfill the research gap, a qualitative study was performed. Specifically, two (2) focus group discussions were executed to household representatives of the Federal Territory of Kuala Lumpur in regards to natural hazards; flood and drought. Based on the research findings, there is no issue of water supply associate with the flood crisis. However, there are mix opinions on the correlation of drought event and water supply, with majority believe that there is no correlation which occur between drought event and water supply of the Federal Territory of Kuala Lumpur. The findings of this qualitative study may serve as the foundation for a quantitative study (i.e., developing sets of questionnaires), and may contribute for policy makers and water providers in comprehending the issue and in taking the precaution measure prior to the occurrences of natural hazards.

KEYWORDS: *Destination Marketing, Water Supply, Flood, Drought, and Sustainable Tourism*

INTRODUCTION

As a result of globalisation, destination marketing has become essential as cities, states, regions and countries compete with one another to attract huge investment and tourists[1] . In order for these destinations to compete effectively, it is essential to explore how natural hazard may have impacted the destination. Basic utilities such as water resources could have been impacted by natural hazards such as flood and drought. According to[2] water is one of the essential basic needs which holds fundamental role for various aspects of life; either in the form of natural habitat (i.e., support for an aquatic ecosystem) or in the form of water services[3]. The benefits of good water resources are enourmous which include for coastal and marine ecosystem [4], for forestry (Guo and Xu, 2019), for agriculture as well as for domestic and industry water supply[5].

Due to the increasing population growth, urbanisation industrialization, and various economic activities [2] tourism activity, the demand for water supply is projected to undergo massive changes especially in urban area such as the Federal Territory of Kuala Lumpur. Yet, the service of water supply is normally taken for granted [2](To date, little is known on the impact of natural hazards, such as floods and drought, towards water supply which may directly and indirectly affect the destination image. Information on the characteristics of natural hazards, namely flood and drought, (i.e, the time duration, location and the severity) based on individual destination are also not known. Therefore, the objectives of this study are two-fold. First, the objective of this study is to explore the characteristics of natural hazards, namely flood and drought, on water supply of Federal Territory of Kuala Lumpur. Second, the objective of this study is to understand the economic and socio-economic aspects natural hazards (flood and drought) on water supply in the Federal Territory of Kuala Lumpur.

LITERATURE REVIEW

Flood

The Federal Territory of Kuala Lumpur is Malaysia's capital state has long known to be at risk of flood hazard. Floods are mostly caused by the seasonal monsoon rain

when inadequate drainage systems cannot channel the water flow properly. The overflow of the rivers is a significant reason for occurring flash floods in the city. The overall impact of flash flood stems from the loss of properties and disruption of economic activities in affected areas. It is noticeable from the community responses that adaptation strategies are essential for planning future mitigation action. In coping with the massive thrive of population growth, urban development, and expansion, it is vital to bring balance and efficiency to the city's performance. As a result, flash floods remain one of the most severe environmental problems[6] of the city, which affected Kuala Lumpur's efforts to achieve the goals of the sustainable city[7].

The flood disasters that have hit Malaysia are flash floods and monsoon floods. As the state's water supply system is entirely dependent on surface water, the dam level decrease reduces the amount of raw water that needs treatment for consumption. The fact is, the water issue in Federal Territory of Kuala Lumpur city centre has never resolved. For instance, in October 2020, Kuala Lumpur residents experienced several disruptions in the water supply to become champions of water supply problems in this country [5]. Flash flood events are common phenomena in the Federal Territory of Kuala Lumpur. Every year, the city experiences several flash floods events, especially during the monsoon period. It is in the floodplain area of the Klang River. The confluence of two major rivers, Gombak and Klang, is situated in the city centre. As a result, flood experience in the city is common and inevitable. Most of the flash flood events in urban areas are due to anthropogenic causes. Due to urbanisation, the surface condition changes a lot, especially the amount of vegetation, type of soil, land use and many other factors altered due to the development process[8, 9]. The inevitable consequence of such changes is reflected by flooding most of the time. The biggest sufferers of urban flooding are the people living in the city and those who come to the city every day for various purposes [10].

Given the lack of knowledge on several aspects of economic and public assessment of flood in the Federal Territory of Kuala Lumpur and its significance to social resilience and the success of emergency plans, this study focuses on economic and public assessment on flood in the Federal Territory of Kuala Lumpur. Even though flooding is one of the most destructive natural hazards in the Federal Territory of Kuala Lumpur, causing economic losses, the significant efforts of civil protection authorities of all levels to protect human lives and assets is a critical piece of information, and how the general population perceives flood risk, is not notable. The focus of flood risk and management in the city has primarily been on structural measures with little attention directed to addressing the social processes that shape flood and drought-affected populations' vulnerability or resilience. Public assessment is an aspect of the social construction of risk. Understanding their perception of flood and drought and how to tackle the drought issue are of utmost importance. Hence, to better understand the issue, this study aims to explore the characteristics of flood on water supply of Federal Territory of Kuala Lumpur, and to understand the economic and socio-economic aspects of flood on water supply in the Federal Territory of Kuala Lumpur[4, 11].

Drought

Occasionally, during the summer monsoon, drought may also affect water resources in Kuala Lumpur. Drought has become a natural hazard affecting several economy sectors worldwide [9]). The drought phenomena have a prolonged impact, unlike the flash flood, which may end after 2-3 hours. The devastation of the drought crisis may take a more extended time to recover; hence proper mitigation work must be formulated to overcome both issues. The economic losses and scarcity of water supply directly impact flash flood and drought phenomenon at the receiving end. Thus, the impact and responses of drought need to be understood from public perspectives. Professionals and planners should thoroughly understand the drought crisis phenomenon and its impact. It will help authorities manage, design, and monitor

development and changes in a city to build a drought resilient city and a better destination image.

Drought can sometimes happen in Kuala Lumpur and can affect water resources. Drought happens after inadequate rainfall for a prolonged period. The meteorological and hydrological drought is related to each other. The low water supply in a river system (hydrological drought) is a manifest of an extended dry weather pattern (meteorological drought) [2]. The low water supply chain in the river system will lead to socioeconomic drought when a water shortage affects water supply for domestic use, industrial, agricultural, etc. With a population of almost 8 million, it can be the main problem if water resources' demand is affected. Based on the Department of [3] Selangor may face a water deficit each year beginning from 2010 to 2050. Selangor depends on a regulated water supply either from water storage or water transfer.

Given the lack of knowledge on several aspects of economic and public assessment of drought in the Federal Territory of Kuala Lumpur and its significance to social resilience and the success of emergency plans, this study focuses on economic and public assessment drought in the Federal Territory of Kuala Lumpur. This study also examines potential correlations of the findings with respondents' demographics. The focus drought risk and management in the city has primarily been on structural measures with little attention directed to addressing the social processes that shape drought-affected populations' vulnerability or resilience. Understanding public assessment of drought and how to tackle the drought issue are of utmost importance. Therefore, to better understand the issue, this study aims to explore the characteristics of drought on water supply of Federal Territory of Kuala Lumpur, and to understand the economic and socio-economic aspects of drought on water supply in the Federal Territory of Kuala Lumpur.

METHODOLOGY

This study begins with the development of a qualitative interview guide. Based on the flood and drought zoning areas in the Federal Territory of Kuala Lumpur, two (2) focus group discussions were used to interview households representatives (20 interviewees). Specifically, 8 respondents were interviews regarding the flood and 12 respondents were interviewed regarding the drought event in the Federal Territory of Kuala Lumpur. These household representatives were those from the area affected by flash floods and droughts (in the Federal Territory of Kuala Lumpur), making them the ideal respondents. Each focus group discussion took place between 90 to 120 minutes. All qualitative data were successfully collected and transcribed verbatim. Interviews performed in other languages (other than English) were then translated and manually analysed.

FINDINGS AND DISCUSSIONS

Flood

By analysing the transcriptions of focus group discussions, the qualitative findings of a flood have twelve (12) categories. The first six (6) categories or themes (which are location, years, time of the day, season, duration, and flood level) can be classified as the characteristics of flood. The following table illustrate the characteristics of flash flood in the Federal Territory of Kuala Lumpur.

Table 1

Household opinions on the characteristics of floods.

Theme (Concept)	Explanation
Location: (River, Low land, Construction)	Floods in the Federal Territory of Kuala Lumpur usually happen in low land or located near a river. Fields and construction areas are also among the flood areas in Kuala Lumpur.
Years (2020s, 2010s, 1990s)	Floods in the Federal Territory of Kuala Lumpur usually happen in the 1990s compared to the 2000s and 2010s.
Time of the day: (Evening)	Floods in the Federal Territory of Kuala Lumpur usually happen in the evening.
Season: (None, Raining)	Floods in the Federal Territory of Kuala Lumpur usually happen during the rainy season.
Duration: (Hours)	The duration of flood occurrences in the Federal Territory of Kuala Lumpur usually is short, only several hours long and not taking up to several days or weeks.
Flood Level: (Deep, Waist, Thigh, Knee, Calf, Ankle)	There are various opinions from the household representatives regarding the length of floods in the Federal Territory of Kuala Lumpur. The height of floods could be ankle, calf, knee, thigh, waist or quite deep.

Source: Developed for this research (2020)

The next six (6) categories or themes (which are factor, impact, prevention, precaution, preparation, and help) can be classified as the nature of flood. The following figure illustrate the nature of flash flood in the Federal Territory of Kuala Lumpur. The explanation of the nature of flash flood in the Federal Territory of Kuala Lumpur is as shown in the following table.

Table 2

Household opinions on the nature of floods.

Theme (Concept)	Explanation
Factor: (Construction, Rain, River)	There are several factors of flood occurrences in the Federal Territory of Kuala Lumpur. Namely, due to being near to a river, improper drainage, heavy rains and constructions.
Impact: (None, Inconvenience, Immobile, Financial, Damage Property, Productivity, Safety, Reputation, Trauma, Psychological)	There are several impacts of the flood crisis in the Federal Territory of Kuala Lumpur. Among the implications towards households are a financial burden, trauma, immobile, property damage and belongings, in need to relocate (people and belongings), in need of cleaning, may jeopardise the organisation's reputations, product safety, psychological distress and inconvenience.
Prevention (Drainage, River)	Several preventions reduces the chances of flood occurrences in the Federal Territory of Kuala Lumpur. The preventions were a river and drainage.
Precaution: (None, Relocate Belongings, Barrier, Alternative Route, Work Flexibility)	Household took some precaution measures to reduce the impact of floods. Among the precautions undertaken was relocating belongings, putting up barriers, making a boat, giving work flexibility to staff, and using alternative routes.

Help: (Government, Community, Maintenance Office)	Some household representatives receive help from the government, community, and the maintenance office whenever a flood happens. However, some do not get any help regarding the flood.

Source: Developed for this research (2020)

The key findings of the focus group discussions with the household and organisation representatives suggest that there is no issue of water supply associate with the flood crisis in the Federal Territory of Kuala Lumpur, as illustrated in the following table:

Table 3

Household opinions on water supply relating to flood crisis.

Opinions on Water Supply relating to Flood Crisis: (No Issue)	There is no issue of flood event and water supply in the Federal Territory of Kuala Lumpur.

Source: Developed for this research (2020)

Drought

By analysing the transcriptions of focus group discussions, the findings of qualitative relating to drought listed into nine (9) categories. The first five (5) categories or themes (which are occurrence, time of the year, duration, time of the day, and temperature) can be classified as the characteristics of drought. The following table illustrate the characteristics of drought in the Federal Territory of Kuala Lumpur.

Table 4

Household opinions on the characteristics of drought..

Theme (Concept)	Explanation
Occurrence	There are various opinions (from household and organisation representatives) on the occurrences of drought in the Federal Territory of Kuala Lumpur. Some representatives stated that the drought has never happened, and some stated that there was an occurrence of drought, but it was not noticeable.
Time of the year	The drought in the Federal Territory of Kuala Lumpur usually happens between the beginning and middle of the year.
Duration: (Days, Months)	Some representatives mentioned that the droughts in the Federal Territory of Kuala Lumpur vary, several days to several months.
Time of the day: (Afternoon)	The droughts in the Federal Territory of Kuala Lumpur usually happen during the day and night and in the afternoon.
Temperature: (Hot, Extra Hot)	The temperature of drought in the Federal Territory of Kuala Lumpur is hot and extra hot.

Source: Developed for this research (2020)

The next four (4) categories or themes (which are factor, impact, water supply, help on water disruption) can be classified as the nature of drought. The following figure illustrate the nature of flash flood in the Federal Territory of Kuala Lumpur. The

explanation of the nature of flash flood in the Federal Territory of Kuala Lumpur is as shown in the following table.

Table 5

Household opinions on the nature of drought.

Theme (Concept)	Explanation
Impacts (Uncomfortable, Inconvenience, Plant, Low Water Level, Less Rain)	Among the implications towards households are uncomfortable and inconvenient for human beings, impact toward plants, and impact on mother nature; lower water level and less rain.
Water Supply (No Issue, Bad Quality)	There are varies opinions regarding water supply from the household representatives. Some representatives had no water supply issue, while some representatives experienced bad water supply quality, especially after the water disruptions.
Water Disruption: (No Impact, Impact, Severity, Factor)	There was a lot of information received from the household representatives concerning water disruptions. Some of the representatives experience no issue with water disruptions, while some others do experience water disruptions. Similarly, some experience the impacts of water disruptions, while others do not share any effect of water disruptions. There is also representatives which suggest that the factor of water disruptions is due to frequent water maintenance.
Help on Water Disruption: (Precaution, Help, No Prevention)	There are several precautions (i.e., stock up water and disbursement of information by the authorities, colleagues, and relatives) preventions (i.e. install a water tank) and help (i.e., retrieve water from petrol station or nearby residences) about water disruptions in the Federal Territory of Kuala Lumpur. Majority of the interviewees do not have any prevention measure in regard to water disruption, and some of them do not receive any help.

Source: Developed for this research (2020)

The key findings of the focus group discussions with the household representatives suggest that there is mix opinions on the correlation of drought event and water supply in the Federal Territory of Kuala Lumpur. Some suggest that there is a possible correlation, and some uttered that they are unsure whether the correlation between drought event and water supply exists. Majority of the interviewees have the opinions that there is no correlation which occur between drought event and water supply of the Federal Territory of Kuala Lumpur.

Table 6

Household opinions on correlation between water disruption and drought event.

Correlation between Water Disruption and Drought: (Correlation, Uncertain Correlation, No Correlation)	There is mix opinions (possible correlation, unknown, and no correlation) of drought event and water supply in the Federal Territory of Kuala Lumpur.

Source: Developed for this research (2020)

CONCLUSION

Based on the first focus group discussions, the floods usually occur on the low land or near the river, construction area, Masjid Jamek, KL Territory, Jalan Sultan Hishamudin, Field, Segambut, PWTC, and surrounding areas, and KLCC. The household state that floods in the Kuala Lumpur Federal Territory usually happen in

the 1990s compared to in the 2000s and 2010s, and frequently occur in the evening. Some of the household representatives mentioned that floods usually happen during the rainy season. Still, some said that floods could occur at any time of the year without a specific season. The duration of the floods in the Kuala Lumpur Federal Territory is usually short; it is only a few hours long and does not take up to a few days or even weeks. There are different opinions from household representatives on the floods' length in the Kuala Lumpur Federal Territory. The length of .the floods could be ankle, calf, knee, thigh, waist, or deep.

There are several impacts of the flood crisis in the Federal Territory of Kuala Lumpur. The impacts on households and businesses include financial burdens, trauma, immobility, damage to property and belongings, the need for relocation (people and belongings), the need for cleaning, the risk of compromising the business's reputation, product safety, psychological distress and inconvenience. The preventions can be divided into rivers, drainage, and land preventions. Therefore, households are taking steps to mitigate the effects of floods and avoid them. The measures taken include moving goods, constructing walls, building ships, providing workers with flexibility at work, and using alternate routes. Whenever a flood occurs, several households receive assistance from the government, community, and maintenance office. There are still those, however, who do not receive any flood support.

For the second focus group discussion, there are various opinions on the occurrences of drought in the Federal Territory of Kuala Lumpur. The majority of the representatives believe that the Federal Territory of Kuala Lumpur has experienced drought; usually happens between the beginning and middle of the year. Based on the opinions, it was argued that droughts occur during the day and night and in the afternoon. Some representatives indicated that the droughts in the Federal Territory of Kuala Lumpur might take several days to several months, in which the drought temperature is between hot and extra hot.

There are several impacts of drought in the Federal Territory of Kuala Lumpur. The effects on households are unpleasant and uncomfortable for humans, impact on plants and impact on Mother Nature; lower water level, and less rain. Regarding water supply, there are various opinions from the household. Some representatives had no water supply issue, while some representatives experienced bad water supply, especially after the water disruptions. All in all, the conclusion of the qualitative research is as shown in the following table.

Table 7

Conclusion of Qualitative Study.

Conclusion for Qualitative Study on Flood:	Conclusion for Qualitative Study on Drought:
There is no issue of flood event on water supply in the Federal Territory of Kuala Lumpur.	There is mix opinions (possible correlation, unknown, and no correlation) of drought event and water supply in the Federal Territory of Kuala Lumpur.
Conclusion of Qualitative Study (Flood and Drought): There is no major issue of flood and drought event on water supply in the Federal Territory of Kuala Lumpur. Hence, there is no socioeconomic impacts of flood and drought event on water supply in the Federal Territory of Kuala Lumpur.	

Source: Developed for this research (2020)

IMPLICATIONS AND FUTURE RESEARCH

This study provide both theoretical as well as practical contribution. Theoretically, the findings from this study (characteristics of flood and drought of urban area as well as the economics and socio-economic impacts of flood and droughts on water supply) may serve as the foundation for future research. In order to generalise these qualitative findings, future research may undertake a quantitative approach. The findings of this qualitative study on flood and drought may serve as the foundation for a quantitative study, such as developing sets of questionnaires; flood and drought questionnaire to be distributed to household. Practically, this study may also contribute to policy makers and water providers in comprehending the issues of water disruptions caused by natural hazards, and taking the precaution measure prior to the occurrences of natural hazards. Without the strong understanding of water disruptions issues of a destination (such as in the Federal Territory of Kuala Lumpur), the destination image may not be improved.

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