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2017
37th IAHR
WORLD CONGRESS
13-18 August, 2017
Kuala Lumpur, Malaysia
FLOOD RECOVERY
AND RESILIENCY

SOCIAL CAPITAL AND COMMUNITY RESILIENCE IN COPING WITH FLOOD DISASTERS IN MALAYSIA

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ABSTRACT

Flood disasters affect Malaysia regularly with severe impacts on people, crops, properties and infrastructures. This paper uses a methodology combining data acquisition with quantitative questionnaire survey and qualitative interviews with key stakeholders. Results show that decades of a top-down government-centric approach providing help and aid to flood victims have made people less resilient. Flood victims are used to flood aid and are unable to fend for themselves. The modern way of single family lifestyle results in the erosion of social capital, migration of the young and the break-up of the extended family structure, all of which decrease family size and weaken kinships. Hence, victims become more vulnerable. Results show that victims are poorly prepared to face floods, impacts are severe, and flood victims more exposed. However, results also show that social capital is resurfacing in some families, making them resilient. Hence, flood management should engage victims more, so that they are empowered and have their capacities enhanced to become more resilient to floods. When the public (victims) are actively engaged and involved, it will enhance their ability to respond to flood or other disasters effectively and appropriately. The Malaysian official flood management authorities need to integrate their flood disaster plans with those of the private sector and NGOs, as well as engage the victims towards a more holistic flood management strategy for overall flood loss reduction.

Keywords: Flood management; social capital; flood disaster; disaster management; role of NGOs.

1 INTRODUCTION

Since historical times, Malaysia is plagued by floods as the country is exposed to seasonal monsoon winds which bring intense rainfall coupled with densely populated riverine lowlands that are prone to flooding (Winstedt, 1926; Chia and Chang, 1971; Leigh and Low, 1978; Drainage and Irrigation Department Malaysia, 1988; Chan, 1995; Abdullah, 2002). Historical settlement on river banks and floodplains and subsequent urban growth have all contributed to more than 10 % of the country being flood-prone with flood losses escalating exponentially (Hussaini, 2014). Chan (2015a) documented that floods are the main disaster affecting Malaysia with severe impacts on the lives of people, damaging properties and infrastructures, and destroying crops and livestock. The annual flood damage is about US$274 million and lives are lost every year. This study is based on a methodology involving a combination of desktop studies using secondary published government flood data, flood reports, published papers and a questionnaire survey on flood victims, and qualitative interviews with key stakeholders. As a result of experience, rural floodplain occupants in agricultural areas exposed to monsoon winds (e.g. on the east coast of Peninsula Malaysia) are well adapted to floods. However, urban residents on the west coast of the peninsula that are not exposed to seasonal monsoon rains and flooding are vulnerable and least prepared to face floods. Hence, the occurrence of flood hazards in urban areas, especially flash floods, is considered a sign of unsustainable development. This is largely due to rapid development (often haphazard) of urban floodplains such as those in Georgetown, Kuala Lumpur and Kota Bharu (Chan, 2002a). The replacement of natural forests with impervious urban areas result in almost all the rainfall entering the rivers in a shorter time. This reduces the capacities of most rivers to drain away excess water. Rivers in urban areas are very constricted and development literally comes to the rivers' doorstep, i.e. up to their banks. There is no buffer zone or river reserve leaving rivers no room to manoeuvre. Hence, reducing their drainage capacities (Chan, 2002b; Zakaria et. al., 2016). Furthermore, rapid urbanisation of urban floodplains and upstream development of hill land have changed surface characteristics and altered the hydrological cycle, particularly the time in which rain drops enter the rivers and the volume of runoff. Hill land development is a form of unsustainable development which often results in accelerated soil erosion and landslides, two forms of environmental hazards. Soil erosion leads to sedimentation and siltation of rivers, contributing to increasing flood hazards of more severe magnitudes (Parker et al., 1997).

Malaysia is a rapidly developing country whereby science and technology are variously employed in all fields, producing many dynamic flood hazard factors that can reduce flood hazards (Chan and Parker, 1996;

Chan, 2015b). In the area of flood management, new technological innovations are routinely used and the Malaysian official approach to flood mitigation has always been in line with a technological approach via the application of new technologies such as the use of remote sensing in flood forecasting and telemetry and automatic warning gadgets in flood warning and evacuation systems (Chan, 1997; 1999a). For example, remote sensing technology using satellite pictures, radar imageries and aerial photographs are applied to monitor and predict floods. High-tech computer modelling is also employed in this area. Undoubtedly, such developments, if applied properly can effectively reduce loss of life, livestock, crops and property damage. However, the application of high-tech solutions is only one side of a coin. These technologies can only be successful if the public/victims understand the technologies and respond appropriately as well as are actively engaged by government. When victims do not understand the technologies (e.g. misunderstand the flood warning system), they may respond inappropriately and get into trouble. In many cases, such confusion and mistrust of the new technologies have led to greater flood loss as in several cases of mistrust of the solar sirens in Georgetown (Penang State) and Kampong Dato' Keramat (Kuala Lumpur) (Chan, 2000). In contrast, traditional flood warning and evacuation systems based on social capital and social networking have been employed for centuries and the locals understand them well as they are used to them. Because of their rich experience and strong adaptation, locals cope well in times of flooding. Such forms of social capital keep people strong with mutual support to adapt to floods and recover quickly from them. Studies have shown that the replacement of traditional flood response system and social support systems with top-down government-centric flood management system will do the victims more harm than good, resulting in victims getting over-dependent on government aid and rendering them unable to be independent (Chan, 1999b; Weil et al., 2006; Aldrich, 2012). Aldrich et al. (2015) found that resilience and recovery in Asian disasters are strongly linked to community ties, market mechanisms and governance. In the case of Malaysia, Chan (2015c) found that the impacts of flood disasters and flood disaster risk management are more effectively dealt with when the role of social capital is strong, and vice versa (Lai and Chan, 2015; Lai et. al., 2015).

In Malaysia, the government is a great provider of all sorts of subsidies, including flood aid subsidies (https://www.najibrazak.com/en/speeches/rationalising-subsidies-for-malaysias-future-2-2-3/ Accessed 8 March 2017). For too long the government is expected to be the sole provider of flood protection. However, centuries of experience of living with floods have made the majority of Malaysians "flood-wise". Hence, the majority of flood-prone victims living on the flood plains have developed some forms of flood mitigation and flood-loss reduction methods. Hence, to tap on such traditional expertise and social capital, the flood authorities should engage local communities in community flood coping and recovery. Local leaders such as village heads can provide information and mobilise people on the ground and advise the authorities when distributing relief goods, reconstruction material, or other benefits. Some things to avoid include rushing in with reconstruction without recycling useful materials from the disaster site, bulldozing over what could be valuable building materials, and rushing in quickly to implement ad hoc plans. For example, establishing new institutions in short time frames, or developing complex and inflexible project designs are not encouraged. The authorities should always use familiar disaster management plans and systems with the local officials/leaders. Another thing to avoid is to relocate people away from their jobs and social contacts. This is useless as they would eventually return. The authorities should also be sensitive as not to impose grief counseling where it is found to be inappropriate, especially in the context of multi-ethnic Malaysia with multi-cultural beliefs. Chan (2015c) demonstrated that the Malaysian National Disaster Response Mechanism (NDRM) is largely targeted for handling monsoon flooding. Consequently, this mechanism is less than effective and should be re-modelled into something more pro-active. There is also seriously lacking in terms of stakeholders participation, although the authorities have recognised the important role of NGOs, particularly that of MERCY, Red Cross, Red Crescent and other NGOs. These stakeholders play an extremely important and effective role in helping flood victims cope with and recover (Malaysian Medical Relief Society, 2013; Chan, 2016). The official flood disaster management mechanism would become more effective if it adopts more community-based social capital resources for addressing flood disasters (Chan, 1999b; Chan and Parker, 2001).

2 METHODS

This paper adopts a multi-method approach whereby a combination of complementary research methods which includes historical analysis, quantitative questionnaire survey and qualitative interviews highlighting selected cases. Historical analysis is used for documentation of past floods in terms of frequency, magnitude and severity. Historical flood analysis is used to study how broader physical-socio-political forces have created and perpetuated the flood hazard in Malaysia. The quantitative questionnaire included interviews with 477 respondents from three flood-prone states of Kelantan. Pahang and Terengganu to study individual/household perception, response and experience with social capital. The quantitative survey is used within each of the three States. Finally, a total of 20 families/households in Kelantan State were selected for qualitative indepth interviews to study in detail the role of social capital as a form of flood relief in comparison to government flood relief. The employment of more than one research method to approach a research question, often called 'triangulation', strengthens a study and has become common practice. In terms of research methodology, the

triangulation strategy has greater advantage over a single research strategy and is recommended in the literature because of its advantage of possessing the merits of all methods adopted while simultaneously reducing the demerits inherent in them (Frankfort-Nachmias and Nachmias, 1992). Triangulation contributes to the overall effectiveness of the study as the many research methods adopted complement each other as different areas/objectives in a study are better tackled by different research methods. The quantitative questionnaire cross sectional study was conducted by convenience sampling. The questionnaire was divided into four parts: Part A collected the respondents' demographic details; Part B was the perception and characteristics of flood; Part C was on total flood losses; and Part D was on flood relief and social capital. The total number of respondents interviewed was 477 (Table 1). The data was analyzed by using SPSS software.

Table 1. Total sampled households by state and gender.

		Gender		
		Males	Females	Total
State	Kelantan	72	175	247
	Pahang	53	77	130
	Terengganu	37	63	100
Total		162	315	477

3 METHODS

Flooding is the single-most damaging disaster in Malaysia with annual disaster damage around RM915 million (1RM = US$0.225 on 8 March 2017) (Hussaini, 2014). This includes costs incurred in rescue and flood relief operations, as well as rehabilitation of public works and utilities, and compensation. It is estimated that the damages for an annual flood, a 10-year flood and a 40-year flood are RM3.0 million, RM18.0 million and RM44.0 million respectively. The 1926 flood was perhaps the biggest flood in living memory (Winstedt, 1927). During this flood most parts of the country were affected. The 1971 flood was so serious that it was declared a national disaster by the Prime Minister. Total flood loss was estimated at RM200 million then and there were 61 deaths. The 1967 flood damage estimated for the Kelantan River Basin alone was RM78 million. In recent decades, many large flood events brought untold suffering and massive losses whereby government aid was insufficient (Lai et al., 2015; Ku-Mahamud et al., 2016). The Johor floods of December 2006 and January 2007 and January 2011 incurred losses of more than RM1.5 billion (Hussaini, 2014). The December 2014 massive flood that hit the east coast states of Peninsular Malaysia has been recognised as one of the worst floods because of the massive damages caused (The Malaysian Insider, 2014; CFE-DM, 2016). The worst hit-state was Kelantan, followed by Pahang and Terengganu. According to various sources from local newspapers, the highest number of evacuees due to the flood in Kelantan was recorded at more than 150,000 people in a single day (Malaysiakini, 2015). This flood also caused Malaysian Ringgit (RM) 200 million in terms of estimated flood loss to the infrastructure in Kelantan (The Star, 2015). Other estimates include RM100 million on damaged roads, RM10 million on damaged water infrastructure, and RM100 million on other types of losses (The Malay Mail, 2015). Such damages require huge resources from the government in assisting the state to help the people to recover quickly and effectively from the disaster. Because of the huge losses, government aid to the victims was inadequate as government had to spend huge sums of money on repairing infrastructures. For example, the Prime Minister brought forward the payment of 1Malaysia People's Aid (BR1M) of RM500 and special schooling aid of RM100 to mid-January in order to ease the burden of flood victims (Bernama, 30 December 2014). But clearly, these were not enough as thousands of families had their houses destroyed and lost almost everything they own. In the light of such massive flood losses, it is evident that the socio-economic impacts of floods in terms of flood damage are very significant. More significantly, victims had to fend for themselves and look for alternative sources of help. This is where the role of social capital comes in. Lai and Chan (2015) found that social capital in various forms greatly helped victims recover when governments could not provide adequate flood aid. Chan (2015a) also found that increasingly, society has to play a more active role in post-disaster recovery rather than solely depending on the government help. Communities must become self-reliant and stand on their own two feet. Study results by Bhandari (2014) and Chan et. al. (2015) showed that community involvement in disaster recovery not only improves the disaster recovery physically but also mentally enhances community's resilience in dealing with post-disaster recovery proves. Help provided from within the society are recognized as the contributions of social capital, which is referred to as features of social organization such as trust, norms and networks that can improve the efficiency of a society by facilitating coordinated actions (Putnam, 1993). Sanyal and Routray (2016) found that social capital is a resource which is embedded in every community and is observed to play an important role in coping with different stages of a disaster. Most importantly, social capital is found to be crucial for a community to survive till outside help arrives. During disasters, social capital may often be the only resource

that the victim community have access to help it cope and recover. Sanyal and Routray (2016) reviewed the contribution of social capital with different empirical evidences from cases across the world and also found in their disaster-prone study area of the Sundarbans in India that social networks at the community level is crucial for survival of the community. In remote areas, social capital acts like an informal insurance and replaces the lack of basic infrastructure and proper disaster management institutions. Hence, social capital is a vital resource/asset for communities affected by disasters in remote areas. Aldrich (2015) discovered that the building of resilience amongst communities is more important than giving handouts to victims. Aldrich's work highlights the crucial role played by social capital in strengthening a community's ability to cope with disaster and to recover from disaster. Social networks is translated into social capital whereby communities with robust social networks were better able to cope with disaster and recover faster, as well as facilitated quicker information dissemination and financial and physical assistance.

Grootaert et al. (2004) categorized social capital as some kind of bonding, bridging and linking of people in communities for mutual benefits. Hence, bonding social capital refer to the internal social capital that occurs in the community group. For example, family ties, close friendship, neighbourliness or even comradeships in societies are considered social capital. In contrast, bridging social capital refers to the external social capital provided by the people from different ethnic group, different geographical background and different occupational background (Szreter and Woolcock, 2004). Irrespective of whichever, both types of social capital are vital in helping victims cope with floods and recover. In Malaysia, in the flood management literature, limited research is conducted on the role of social capital in flood disaster coping and recovery. Historically, though Malaysian society is helpful to one another and social support is clearly seen in action whenever disaster occurs, it is not well studied or documented. Our observations in this study show that Malaysian close-knit communities make use of social capital to strengthen community resilience to flood disasters. Social capital can be seen in the "Social Support Deterioration (SSD) Model" which is essentially a social support mechanism for maintaining psychological equilibrium of disaster victims (Kaniasty and Norris, 1993; Kaniasty, 2005). Social support can be in the form of "social interactions that provide individuals with actual assistance and embed them into a web of social relationships perceived to be loving, caring, and readily available in times of need". Based on the SSD model, studies on flood victims showed that the more social support a disaster survivor receives, the less his/her chance of mental breakdown or psychosocial dysfunctions (Ku-Mahamud et al., 2016). Preliminary study of Lai and Chan (2015) found that social capital forged by stakeholders plays a good role in recovering flood disaster. The objective of this study is to understand the role of state and non-state actors including universities, NGOs [and private organisations (POs)] and the public (i.e. relating to or involving ordinary people) in the post-flood recovery process in Kelantan State, Malaysia and discovering the type of aids provided by these actors to the flood victims.

The results from the questionnaire survey in this study indicate that social capital is vital in coping and recovery of victims. The NGO's role is summarised as 'building collaboration and partnerships' among organisations, whereas the role of universities and public is collectively described as 'leveraging young professionals' and 'strengthening community spirit' respectively. The findings indicate that government aid is insufficient in large floods (Table 2). In the qualitative interviews with the 20 families/households in Kelantan State, results positively showed that all families received help from non-government sources, in the form of social capital. The most common form of social capital received by these 20 families was the help received from NGOs, proving that the role of NGOs in disaster management is significant. Table 3 shows results that project social capital as a significant force waiting to be tapped. Victims received help from social capital in the form of money, food, shelter, clothes, water, lighting, blankets, and others. Although the victims felt that such help was not adequate, they did say that the help they received was very helpful/crucial in helping them cope. Without such forms of social capital, these 20 families was of the opinion that their families would suffer much more and perhaps find it hard to recover. As social capital relies on volunteerism and community based movements embedded in the social fabric of Malaysia, victims do not have to wait for money to be handed out to them. Such forms of social capital have in fact been pervasive in Malaysian society as NGOs, relatives and friends have all helped communities to cope with and recover from disasters. In modern times, the role of NGOs remains crucial in all phases of flood disaster management in Malaysia, namely preparedness, evacuation, mitigation relief, response, rehabilitation, recovery and reconstruction. Recent trends with respect to management of natural disasters have highlighted the role of NGOs as a vital form of social capital in the relief and response efforts especially with respect to facilitating communication and coordination between the administration and the affected community. In contrast, all the interviewed families complained that whatever government flood relief given to them during the 2014 flood was inadequate. Hence, social capital is a vital resource that victims rely on for flood disaster recovery as it is more available, can be better mobilised, leveraged, expedited and replicated. The study provides a good ground to suggest that victims can rely on social capital to be more self-reliant to face and recover from disaster. Social capital can also play a crucial role in the formulation and implementation of policies and strategies on disaster management. To build

resilient communities, flood victims and managers need to tap on various forms of social capital. Social capital is a useful alternative and complementary flood disaster aid vis-à-vis government support.

Table 2. Respondents receiving aid from government.

		RM1-500	RM501-1000	RM1000 and above	Did Not Receive Any Government Aid	Total
State	Kelantan	83	13	0	151	247
	Pahang	14	78	0	38	130
	Terengganu	39	10	1	50	100
Total		136	101	1	239	477

Table 3. Different types of flood aid received by 20 selected families from non-government sources and their ratings of the aids in Kelantan state after the 2014 December floods.

Type of Aid Received	Very Satisfied	Moderately Satisfied	Not Very Satisfied	Unsatisfactory	Did not Received	Total
Money	0	2	6	8	4	20
Food	1	3	7	7	2	20
Shelter	2	3	5	8	2	20
Clothings	1	2	7	9	1	20
Water	5	6	8	2	0	20
Lighting (Generator, Kerosene Lamp, Flashlight etc)	3	3	9	5	0	20
Others	1	2	5	4	8	20

Table 4 shows that the role of NGOs in providing social capital to flood victims is very important. Of the 477 victims interviewed, 149 victims (31.24%) received aid from NGOs. In fact, there were more respondents (372 respondents) receiving flood aid during the December 2014 Flood than those who did not (105 respondents). The results also showed that there were a large number of victims who did not receive flood aid from the government (239 respondents or 50.10%), while those who did not receive flood aid from anybody was only 105 respondents (22.01%). This means there were 134 respondents who received flood aid from other sources. These respondents must have received flood aid from some form of social capital (either from relatives, friends, NGOs, universities or other non-governmental bodies). The number of respondents receiving flood aid from sources of social capital is 97 respondents, 29 respondents and 197 respondents respectively. Collectively, results indicate that flood aid in the form of social capital is important given the fact that only half of flood victims during the 2014 flood were beneficiaries of government aid. The rest who did receive other sources of flood aid benefited from social capital. Even so, a significant number of households (105 households or 22.01%) did not receive any flood aid at all and had to rely on themselves to cope with and recover from the flood. Hence, NGOs and other sources of social capital are important resources responsible for providing flood aid to flood victims. However, possibly due to traditional age-old dependence on government aid, the majority of flood victims still think that government is the party most responsible for providing flood aid to victims. This mentality of over-dependence on government aid needs to radically change as government resources are becoming inadequate to help flood victims (Leman et. al., 2016) and people need to build up their capacities and be self-reliant in order to become more resilient and get rid of their dependence on “government subsidies” (Turnbull, 2013).

Table 4. Flood aid received from NGOs.

		Flood Aid from NGOs (Ringgit)					Total
		1-200	201-400	401-600	601-1000	Did Not Receive Any Aid From NGOs	
State	Kelantan	42	10	5	2	188	247
	Pahang	14	5	3	14	94	130
	Terengganu	38	4	4	8	46	100
Total		94	19	12	24	328	477

Despite the important role played by social capital in flood disaster management, it is unfortunate that modern society, especially communities in urban areas, are losing many forms of social capital. The erosion of

social capital is another issue that has made suffering from flood hazards more unbearable for victims. Aldrich (2015) has found that recovery from disasters is very much dependent on social capital, especially in post-crisis resilience. He has cemented his research findings in this aspect with a milestone publication (Aldrich, 2012). Similarly, Hossain and Kuti (2010) have also found the importance of disaster response preparedness coordination through social networks. In the case of flood disasters in Malaysia, Lai and Chan (2015) has found that social capital, kinships and family bonds are instrumental in helping victims cope with and recover from flood disasters. The influence of social capital cannot be under-estimated especially when government or outside aid is not forthcoming to the victims. Unfortunately, however, the breaking up of the extended family and out-migration from families due to the search for jobs in cities have, among other reasons, negatively impacted victims as they do not get such support. Consequently, families have lost the one thing that protects them from being totally devastated by flood disasters, i.e. the social bonding and self-reliance that has made them resilient all these years. For example, in the 1990s, Chan (1995) found that Makcik (Aunty) Mabee never had any problems when her house near the Sungai Pinang in Penang was flooded every month as she could call upon her own children (ten of them) to help her cope with the floods. More than that, she could rely on help from her relatives living in adjacent houses. But now in 2012, she is no longer able to rely on her own children (only two girls have stayed behind) or her relatives as they have all moved out to Kuala Lumpur or other cities looking for jobs. It is alarming that urban flood victims do not have the social support when social capital is eroded. Hence, to most victims, the most important party that they can rely upon to get some help in times of floods is either the government or NGO. Although some victims can still rely upon their relatives, this is becoming very rare. Despite saying that they need flood aid, the reality is that few of the victims actually received any.

Results from this study also showed that there are many emerging threats to effective flood disaster management in Malaysia. Many threats that hinder effective flood disaster alleviation have in fact surfaced in recent decades leading to exacerbation of flood disasters. One very serious threat is the “Politisation of Flood Disasters” as documented by Chan (2015c). Chan (2015c) emphasises that politics and political interference are one of the most serious limitations and weaknesses in the current Malaysian flood disaster management system, although there are other constraints which hinder the effectiveness of the system. In Malaysia, the political, social, economic and cultural fields are closely linked, including flood disaster management. Basmullah Yusuf (Undated) has called this linkage ‘the politisation of disasters”. Boin et al. (2009) warned that disaster managers should not point finers at each other as unscrupulous politicians may use flood disasters as an opportunity to attack. In Malaysia, the press has reported many cases of politicians from different political parties pointing fingers at each other. On 12 April 2012, an opposition party leader led some 200 Klang residents to stage a protest in front of the Selangor State Secretariat building, demanding that their flood damage compensation money to be increased to RM800. The group claimed that the RM500 received from the Selangor government was far too little to compensate for the damage residents suffered in the recent floods. While this claim was beneficial for the flood victims, one cannot hide the fact that previous Selangor State Governments had not paid flood victims any compensation before. This case is in fact an example of the politisation of floods. In order to ensure effective response to the said disaster, political leaders must understand opposition parties’ responses in pointing fingers and blaming the ruling government for mishaps in the disaster. It is vital that leaders manage well the political aspects of disasters and their inquiries.

In another incident in 2007 when Johor was ravaged by floods, Johor Mentri Besar Datuk Abdul Ghani Othman had claimed that the devastating floods (18 deaths, RM1.5 billion damage and 110,000 people evacuated) may have been caused by Singapore’s land reclamation at Singapore’s Pulau Tekong (The Star, 2 February 2007). In another incident, Selangor United Malays National Organisation (UMNO) deputy chief Datuk Seri Noh Omar has blamed the Selangor State’s ruling Pakatan Rakyat’s (PR) poor flood mitigation works for the recent spate of flash floods in the state (Utusan Malaysia, 1 April 2012). He alleged that PR-led Selangor Government had failed to set aside sufficient allocation to improve drainage and reduce the risk of flooding in the nation’s wealthiest state. Respondents in a previous study by Chan (1995) had also mentioned that political parties had their own agendas as they helped only those flood victims (in their own constituencies) who supported them. Anybody found to be selective in helping flood victims should be severely reprimanded as this goes against all the rules in disaster management. In another incident, floods have triggered a political fallout between the Federal Government and the Kedah State Government (led by the opposition party) (Bernama, 5 November 2010: Foong, 2010). It was alleged that the State government had a responsibility to assist flood victims but failed to do so (The Star, 2010a). The Kedah State Government subsequently responded and said that 300,000 Ringgits in aid had been committed to the affected areas (New Straits Times, 2010). It then took Kedah's Sultan Abdul Halim to put a stop to all the politicking and for all parties to concentrate on the real task of dealing with the floods (The Star, 2010b).

Politicians may be influential in terms of floods. However, it is the media who can either help or break flood victims’ hearts. This study has discovered that another obvious constraint in effective flood disaster management is that of the role of the media. Chan (2015c) documents that the media is a potent force. It is a factor that significantly affects disaster management. So powerful is the role of the media that it can either help a nation address a disaster or make the country look bad. According to the Thomas Theorem: “If the

media define a situation as a disaster or a crisis, be sure that it will indeed be a disaster or a crisis in all its consequences" (Thomas and Thomas, 1928). Basmullah Yusof (Undated) contends that mediasation would be one of the driving forces in the world of future disasters. The media can either use a disaster for outright sensationalism, or it can self-impose censorship on the event making it "unimportant". The media can also apply pressure on politicians and decision makers to explain and justify the occurrence and impacts of the disaster to the public.

Finally, Malaysians generally perceive that their country is "hazard or disaster-free" in comparison with their neighbours who are periodically affected by typhoons, volcanic eruptions, earthquakes, tsunamis and floods. Hence, Malaysians are generally apathetic about floods and disasters. Malaysians are also a forgetful lot and have short memories when it comes to floods. Hence, Chan (2015c) documents that there is a general misconception of the relative unimportance of disasters, especially floods. It is therefore not unusual to find flood victims moving back into their flooded houses even before the flood waters have subsided. This is therefore a constraint to ensure safety and healthcare when the victims expose themselves to the filth from the aftermath of a flood. In fact, there have been many incidents in which flood victims have refused to heed the call of the police or other warning authorities to evacuate their properties, and by the time the victims evacuate, they are caught by the flood waters. Many victims think they are well in control based on their experience of flooding, but a big flood may catch them unaware.

4 CONCLUSIONS

The role of government widely covers a lot of areas, and flood disaster management is only one of them. Hence, government cannot be relied upon totally for flood aid and flood relief. Increasingly, people must fend for themselves, or at least look for alternative sources of help. In the modern era, social capital has become a very important disaster relief and coping resource capable of enhancing community coping and resilience in flood disasters. However, the modern way of life, especially in urban areas, has gradually eroded the strength of social capital. Modernization and a move from the traditional to modern way of life is in fact increasing peoples' vulnerability to floods because relationships, friendships, bonds and neighbourliness are weakened. Furthermore, climate change and rapid urbanization have reduced rivers' ability to drain excess water, leading to more frequent and greater flood magnitudes. That Malaysia has transformed into a newly-industrialized country is debatable. What is not debatable is the fact that flood hazard potentials have increased and exposure and vulnerability to floods have also increased. Changing contexts such as the pace of social, economic and political changes and physical and environmental changes have also exacerbated flood hazards, leading to increased risk, exposure and vulnerability of marginalised communities to flood hazards. Other contexts, largely structural, such as persistent poverty, low residential and occupational mobility, landlessness, and ethnic culture have also contributed to increased vulnerability to flood hazards amongst the marginalised poor. As government become over-taxed with many other development programmes, and funds become scarce, people (victims) more become more pro-active and independent and adapt to flood hazards by adopting manageable non-structural measures. Amongst the most effective measures would be to enhance and strengthen social capital. This can be achieved through encouraging the age-old extended family, strengthen family ties, build community ties, social networking and establish associations related to flood management. Government, on the other hand, can focus on employment of legislation to control floodplain encroachment, ensure that all developments are sustainable and flood hazard management multi-disciplinary. Floods Disasters need to be reduced as they put a tremendous strain on Malaysia's economy, exacerbate poverty and income inequity, and delay its efforts to become a developed country by the year 2020. Addressing flood issues in Malaysia is not solely for flood loss reduction. In fact, flood disasters are closely linked to poverty and underdevelopment in many areas in the country. Effective flood hazard management requires a more "pro-active" or preventive approach whereby both modern and traditional mitigation strategies (both structural and non-structural) are employed side by side. Most importantly, all stakeholders including the victims must be actively engaged and mobilised for overall effective reduction of flood hazards. Holistic and integrated flood management is vital if Malaysia is to successfully manage flood hazards effectively.

ACKNOWLEDGEMENTS

The authors acknowledge the funding provided under the research study titled *Effects of Floods on Human Society and the Role of Social Capital in Recovery in Malaysia*, Fundamental Research Grant (FRGS) from Ministry of Education, Account Number 203/PHUMANITI/6711393.

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