Problems and Sufferings of the Flood-Affected People in Malaysia: A Study of Three Villages in Kelantan

[1]A.H.M. ZEHADUL KARIM[†], [1]HAZIZAN MD. NOON[‡], [1]NURAZZURA MOHAMAD DIAH[‡], [1]NOR AZLIN TAJUDDIN, [2]SOHELA MUSTARI[‡‡], [3]MD. SHAHIDUL ISLAM SARKER[*] & [4]SUMON KUMER MAZUMDER[**]

[1]*Department of Sociology and Anthropology, International Islamic University Malaysia (IIUM), Gombak 53100, Kuala Lumpur, Malaysia*

[2]*School of Business Studies, Southeast University, Banani, Dhaka 1213, Bangladesh*

[3]*Department of Sociology and Anthropology, School of KIRKHS, Gombak 53100, Kuala Lumpur, Malaysia*

[4]*Department of Anthropology, Jagannath University, Dhaka 1100, Bangladesh*

E-mail: a.h.m.z.karim@endoramail.com

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ABSTRACT: In December 2014, the north-eastern monsoon flood of Malaysia had hit 11 states in the country, displacing thousands of people and simultaneously damaging huge amounts of properties rendering them in an extremely vulnerable situation. This research is an attempt to explore the socio-economic vulnerabilities of those affected by floods in Kelantan as the hardest hit victims of the calamity. The research seeks to identify the socio-structural vulnerabilities of the effected villagers which are visible even as they continue to engage in daily living and other works during and after the floods. To this end, three villages in Kelantan, named Kampung Laloh, Kampung Manjur, and Kampung Manik Urai Lama, were purposively chosen. Based on participant observations and informal and in-depth interviews, it was found that all the villagers during the flood had suffered tremendously from a lack of suitable shelter which caused them to relocate to higher ground offered by nearby higher lands and hills. Based on the discussions remedial suggestions have been made.

INTRODUCTION

There is no predicting that the natural calamities afflict a person directly or indirectly. Calamities can be a cause of vulnerability through a sense of helplessness, suffering, and distress. For that reason, environmentalists and social scientists view it in a different perspective and deal with natural disasters with indigenous coping mechanisms. Researchers cannot ignore the societal experiences of natural disasters and thus consider both emic and etic viewpoints for solutions of them (Karim *et al*., 2016). Among the natural calamities, flooding is a cause of great vulnerability to the affected people by destroying their livelihood, properties, and bio-diversity (Mustari and Karim, 2015; Karim, 2014; Karim *et al*. 2016; Mustari, 2015).

This paper examines the socio-economic vulnerabilities of three villages in the state of Kelantan following the December 2014 floods in Malaysia. This

[†] Professor
[‡] Associate Professor
[‡‡] Assistant Professor
[*] Post-Doctoral Fellow
[**] Lecturer

goal is to ascertain the problems and difficulties residents faced during the floods and explore their socio-economic vulnerabilities. The severe 2014 flood in Malaysia displaced a large number of people in 11 states, destroying properties worth 560 million dollars. It was reported that as the worst flood in Malaysia for 30 years affecting several States including Kelantan in the north-eastern coast of Malaysia. This flood created enormous social and ecological problems for the people especially for the fishing community and also for those people who entirely depended on tourism for their livelihood (Karim *et al*. 2016). The local business and other economic activities relating to the livelihood of the people was also affected due to flood. As the flood destroyed the agricultural fields, palm trees, rubber plantation farms, many people depending on such farming activities inevitably were the worst sufferers. Apart from these, the social life of the villagers was also affected; many people faced problems in obtaining pure drinking water which caused them health problems. As Malaysians have little experience with such disasters making it likely that they were unprepared to face this natural catastrophe. They simply panicked and did not store dry food or prepare other primary aids to meet the immediate needs. Their miseries were compounded when relief and other support were delayed due to extremely high levels of flooding.

Objectives and Research Methodology: The main objectives of this paper are to identify the socio-economic vulnerabilities of the people in three Kelantan villages in Malaysia in December 2014 Flood which the villagers had experienced in the struggle for maintaining their social life during and after the flood. It also explores the problems that the villagers and farmers faced in running their home-based and commercial livestock farms during the flood. As part of an intensive study, this research has chosen three villages from Kota Bharu, Kelantan State namely, Kampung Laloh, Kampung Manjor and Kampung Maik Urai Lama which was badly affected by the recent floods. The initial phase of the fieldwork continued from May through to June, 2015 where we interviewed 300 families from three villages supported by informal discussions with at least 20 villagers regarding their experiences during and after the 2014 flood. The transcribed qualitative data were then subjected to thematic analytical processes. This paper relied heavily on those transcriptions of the data in qualitative form.

Literature Review: In the past, academic disciplines and policy makers considered only technical research as the appropriate method to conduct flood risk management. The paradigm has now shifted to socio-economic research those using social science methods for holistic knowledge. With the economic losses it is important to estimate the socio-ecological vulnerabilities for an extensive understanding of the impact of floods on society (Messner and Meyer, 2006). Karim and Mimura (2008) researched the western coastal zone of Bangladesh as a region vulnerable to storm-surge floods which often alter the sea level. Strong winds in stormy weather increase sea levels, especially during the monsoon and post-monsoon periods (Mustari and Karim, 2016).

Buckland and Rahman (’99) mention that a community-based preparation is very essential for handling the overall problems and doing people’s well-being at the community. They conducted a research in three rural communities of Manitoba, Canada, to discover that the community’s alertness in the form of preparedness was an important determinant for their living and survival patterns. In northeast Graham Island, Haida Gwaii (Queen Charlotte Islands) in British Columbia, Canada, Dolan and Walker (2006) studied the vulnerability and adaptability of the community to natural disasters wherein they found that the effects of natural calamities differed across members of the different communities. The authors praised the communities’ adaptation where indigenous knowledge was the major strategy for their survival.

Although Weng (’95) considered relocation of the community as a costly scheme, permanent relocation could be an effective scheme for Malaysians in flood zones. In Germany, Grothmann and Reusswig (2006) adopted the socio-psychological model where they found that some people are not interested in taking precautionary measures to avoid vulnerabilities from floods. They found that those who took precautionary measures could reduce their vulnerabilities. Posthumus, Morris, Hess, Neville, Phillips and Baylis (2009) focused on the impacts of

unexpected floods from heavy rainfall on agriculture. They found that all responsible organisations and donors placed their attention on urban resilience and for that reason rural communities remain uncared for although they were seriously affected by flooding. They found that the sudden flood of 2007 severely damaged the rural agriculture causing significant financial loss in the horticulture sector and all the arable crops were ruined by heavy rain. Livestock farmers also suffered and struggled to manage their food due to high prices.

In Ghana, Armah, Yawson, Yengoh, Odoi and Afrifa (2010) examined the impact of floods on agriculture and livelihood options. They found that floods had ecological effects on agriculture by destroying the fertile soil in addition to humanitarian and economic costs. Floods interrupted business activities causing loss of capital and GDP. Moreover, they lost their farm animals and fishing instruments which negatively affected their livelihoods. Lack of required seeds followed by food scarcity forced many of those affected by the floods to migrate. Karim (2014) studied flood and riverbank erosion displacement in rural Bangladesh which focuses on the indigenous survival strategies of the people in two coastal villages. The villagers were displaced and moved to other areas taking temporary shelter as during the floods they had lost all their essential items.

Immediately after the great flood of December 2014, the Malaysian government set up a national committee to study the immediate cause of the unprecedented phenomenon, estimating an economic loss of the country and asked the researchers and policy planners to come up with suggestions as to how these effects and sufferings of the people could be reduced in the near future. The committee had since completed the study and submitted its findings to the government to take remedial actions. The findings of the study found that due to the 2014 flood, "Malaysia suffered an economic loss of approximately USD 0.7 billion. About 300,000 people throughout the country were affected by it and the report concluded that the worst hit area was the district of Kuala Krai in Kelantan State. The floodwater in the affected areas moved so fast with energy equivalent to that of tsunami, destroying and/or carrying away most of the houses and other properties located along its pathway" (Shamshuddin, Panhwar, Othman, Ismail, Jol and Yusoff, 2016). The review of the literatures suggested the researchers of this paper to narrate the whole situation of this particular flood of 2014 by carrying an intensive study of three villages near to Kuala Krai in Kelantan State in Malaysia.

FINDINGS AND DISCUSSIONS

Kampung Laloh, Kampung Manjor and Kampung Manik Urai were studied from a socio-anthropological viewpoint. These three villages are located 98 km from the capital city of Kota Bharu, Kelantan. Being in the rural areas, the livelihood of the villagers is centred on agriculture. They were mostly rubber tappers and general workers. As their economic activities are very much dependent on the current market value of raw products, their monthly income fluctuates. The unpredictability of their economic resources is a cause of their relative poverty and low living standards. Those with low income and poor education suffered from acute chronic diseases such as asthma, gout, high blood pressure, diabetes, and others. It was hard to find respondents who have sent their children for higher education which means they have little awareness of the necessity of education as security against vulnerability. Based on the informal interviews, all three villages faced very severe flooding at the end of 2014. They stated that although they face floods almost every year from the local river, the water level and the blowout areas in 2014 were much higher. Some places, according to the villagers, had never been affected by floods before 2014. According to the verbal estimation of the villagers, 90% of the total area was affected during the 2014 flood.

Malaysia is well known for its rainy seasons and thus people are familiar with rain. However it was found in the study that most of the people were shocked and afraid of sudden and heavy rain of December, 2014. People of Kelantan were found psychologically distressed as they were not prepared with the unexpected demolition in their rural lives.

Problems in Housing and Shelter

In terms of housing, the majority of the villagers are still in the recovery process with a number of people still living in damaged houses. In the entrance

of Kampung Manek Urai, at least six families were living in temporary shelters. The outline of the water level was still noticeable in many houses. The villagers felt vulnerable as their houses had been destroyed during the flood. Many houses are still without windows, doors, and some are without roofs and those who are better-off have been able to rebuild them with modern infrastructure. Moreover, because of their social positions some villagers were able to establish good networking with others which helped them to procure economic benefit to overcome their problems in constructing their houses. Others claimed that although they receive financial support from various sources, the amount of money is however, not sufficient to rebuild their houses. The survey (in 2014-2015) shows a pattern of the types of houses in the three villages in Kelantan. The survey results have been shown in Tables 1 to 6. Kampung abbreviated as Kg. in some places.

TABLE 1

Type of houses in study villages

House types	Kampung Laloh		Kampung Manjor		Kampung Manik Urai Lama	
	Abs.	%	Abs.	%	Abs.	%
Temporary	31	31	37	39	45	45
Permanent	68	69	59	61	54	55
Total	99	100	96	100	99	100
Missing	1		4		1	

Source: Field data

Table 1 shows that the highest number of households who are still living in temporary houses are in Kg. Manik Urai Lama (45%) and the lowest is in households of Kg. Laloh (31%). Very significantly, the field observation supports the survey data that at the entry of Kampung Manik Urai Lama, at least six families were found to be living in temporary shelters.

Table 2 shows that though the lowest numbers of households in Kg. Laloh are living in temporary houses, the quality of houses of this village is worst off than those in other villages. The field data show that 53% of the households in Kg. Laloh are living in houses made of wood and bamboo, whereas 37% and 44% of the households are living in houses made of wood and bamboo in Kg. Manjor and Kg. Manik Urai Lama, respectively.

TABLE 2

Quality of temporary houses

House types	Kampung Laloh		Kampung Manjor		Kampung Manik Urai Lama	
	Abs.	%	Abs.	%	Abs.	%
Made of wood and bamboo	52	53	36	37	44	44
Made of brick and concrete	44	44	49	51	42	42
Others	3	3	11	12	14	14
Total	99	100	96	100	100	100
Missing	1		4		–	

Source: Field data

TABLE 3

Showing the sources of finance for houses

	Kampung Laloh		Kampung Manjor		Kampung Manik Urai Lama	
	Abs.	%	Abs.	%	Abs.	%
Self	55	56	70	73	75	75
Bank loan	2	2	1	1	2	2
Other sources	42	42	25	26	23	23
Total	99	100	96	100	100	100
Missing	1		4		–	

Source: Field data

Table 3 demonstrates that the preference to take a bank loan is low amongst the villagers. Though they have very low income and few survival strategies, they prefer to build their houses with their own money. However, a significant number of villagers rebuilt their houses with the help of other sources e.g. local or international aid. It was found that 42% of households from Kg. Laloh and 26% and 23% households from Kg. Manjor and Kg. Manik Urai Lama respectively used other sources to rebuild their houses.

None of the three villages had proper and immediate flood shelters. The lack of flood shelters caused many to seek for shelter in nearby schools. However, the high flood levels (around 25 feet or approximately reaching the third floor of the schools) meant that schools neither were no longer appropriate shelters nor were they sufficient to accommodate the number of those displaced. This situation caused many villagers to move up to higher grounds and hills where they stayed until the flood subsided. During the flood, transportation was a great problem as the villagers did not have any boats. Although a few boats were given by the government and non-government

organisations, they were not sufficient to meet the requirements of so many distressed families. For that reason, families with elderly, women, and children had to suffer moving up to the mountains and other higher grounds. Since the mountains did not have proper habitable facilities, people faced problems with regard to their food or drinking water until they could come down from those places. Many people reported very frustratingly, that for two long days, they starved without food or water. Sanitation was poor and observing religious rituals was difficult.

Problems in Receiving Flood Aid

Since many people became homeless and jobless due to flood, it is quite likely they had to depend on aid for their survival (Karim *et al*., 2016). In this context, the non-government organizations or the NGOs played an appreciative role in helping the villagers in different ways. The villagers however, were not happy with the overall management of aid distribution as many of them complained that they did not receive food, water and other basic necessities in due time. Many families who had toddlers and infants mused over the crisis of baby food. The villagers also complained that there was no coordination among the various donors for which there was duplication of aid for some whereas others did not receive any aid at all. However, the villagers in general expressed their gratitude to non-government organisations as they tried their best to supply the required necessities starting from food to housing infrastructure. Many non-government organisations from Korea and China donated housing infrastructure. A few universities like UPSI and other organisations provided financial assistance to the villagers to help them rebuild their houses (Karim *et al*., 2016).

TABLE 4

Kampung Laloh villagers' level of satisfaction towards receiving aid from different sources

	Government (%)	Local rich people (%)	Relatives (%)	Friends (%)	Outsiders (%)	Local people (%)
Very dissatisfied	17	9	1	2	2	2
Dissatisfied	29	2	1	1	1	3
Neutral	26	56	30	40	31	45
Satisfied	22	29	55	41	52	35
Very satisfied	6	4	12	15	14	15

Source: Field data

Table 4 shows that villagers of Kg. Laloh were dissatisfied (29%) with the government's role in distributing aid during and after the flood. However, the villagers of this village were satisfied with the role of their relatives (55%) and outsiders (52%) in distributing aid during and after the flood.

TABLE 5

Kampung Manjor villagers' level of satisfaction towards receiving aid from different sources

	Government (%)	Local rich people (%)	Relatives (%)	Friends (%)	Outsiders (%)	Local people (%)
Very dissatisfied	12	4	1	–	–	–
Dissatisfied	13	3	1	1	1	2
Neutral	27	57	26	46	18	43
Satisfied	39	25	48	31	50	30
Very satisfied	9	10	22	21	29	25

Source: Field data

Unlike Kg. Laloh, villagers of Kg. Manjor were found to be satisfied (39%) towards the governments' role in distributing aid during and after the flood. However, like Kg. Laloh, the villagers of Kg. Manjor were also satisfied towards the role of their relatives (48%) and outsiders (50%) in distributing aid. Like the two other villages, villagers of Kg. Manik Urai Lama were satisfied with the role played by the local people (48%) and outsiders (41%) in distributing aid during and after the flood.

TABLE 6

Kampung Manik Urai Lama villagers' level of satisfaction towards receiving aid from different sources

	Government (%)	Local rich people (%)	Relatives (%)	Friends (%)	Outsiders (%)	Local people (%)
Very dissatisfied	8	3	2	2	2	2
Dissatisfied	14	3	1	–	–	2
Neutral	34	50	32	46	20	10
Satisfied	37	36	50	41	48	41
Very satisfied	7	8	15	11	30	15

Source: Field data

Health Issues

The villagers named the flood '*Bah Kuning*' (Yellow Flood) because the deep water level had turned yellow. They had yellow water all around which they used daily including for ablution and sanitation. Many used this yellow flood water for cooking rice and for other purposes (Karim *et al.*, 2016). Most admitted that they did not suffer from diarrhoea or any severe water borne diseases despite taking the risk in using the polluted water (see Table 7). However, diarrhoea and skin diseases were found among the villagers during and right after the flood. Villagers of Kg. Manik Urai Lama were attacked by skin diseases (34%) more than the villagers in the two other villages, Kg. Laloh (28%) and Kg. Monjor (17%), respectively. Similar results were found in the case of diarrhoea whereby 22% of households of Kg. Manik Urai Lama were attacked by it during and after the floods, whereas, only 12% and 20% households were attacked in Kg. Manjor and Kg. Laloh, respectively.

TABLE 7

Percentage of health problems in all the three villages

Health problems	Kampung Laloh		Kampung Manjor		Kampung Manik Urai Lama	
	Yes	No	Yes	No	Yes	No
Diarrhoea	20	80	12	88	22	78
Skin diseases	28	72	17	83	34	66
Other health problems	31	69	39	61	2	98

Source: Field data

CONCLUSION

The timing of the support was not something that respondents approved of, as during the flood, people survived on their own and the aid arrived after the flood subsided. The government, whether federal or state, should be more prepared in the future to face this type of calamity. Government assets such as boats and helicopters must be fully utilised during search and rescue missions. Food and immediate shelters must be properly managed. The government or policy planners should consider meaningful preparation in moving the villagers by increasing the number of carriers to transfer them especially, the elderly, women, and children to safer places. In addition, they should focus on distributing aid properly during and after the disaster based on their needs. Political issues and mismanagement had also been mentioned by the interviewees related to the distribution of aid. Some claimed that the local authorities who received aid did not properly distribute it among the villagers; rather, they only chose their family members and friends. This is an act of injustice according to the flood victims. There should be proper coordination among various organisations in providing aid so that all the victims receive aid equally. People hoped that the government would support them financially so that they can rebuild their houses and get on with their lives. Apart from this, job opportunities should also be created in order to improve their living conditions. We also suggest that the government and other agencies responsible in disaster management should establish a number of formal shelter houses so that the villagers can take care of themselves and their needs; subsequently reducing their vulnerabilities in the future.

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REFERENCES CITED

Armah, F. A., D. O. Yawson, G. T. Yengoh, J. O. Odoi and E. K. Afrifa 2010. Impact of floods on livelihoods and vulnerability of natural resource dependent communities in Northern Ghana. *Water*, 2(2):120-139.

Buckland, J. and M. Rahman 1999. Community based disaster management during the 1997 Red River Flood in Canada. *Disasters*, 23(2):174-191.

Dolan, A. H. and I. J. Walker 2006. Understanding vulnerability of coastal communities to climate change related risks. *Journal of Coastal Research*, 1316-1323.

Grothmann, T. and F. Reusswig 2006. People at risk of flooding: Why some residents take precautionary action while others do not. *Natural Hazards*, 38(1-2):101-120.

Karim, A. H. M.Zehadul 2014. Flood and riverbank erosion displacees: Their indigenous survival strategies in two coastal villages in Bangladesh. *Asian Social Science (Canada)*, 10(4): 6-26.

Karim, M. F. and N. Mimura 2008. Impacts of climate change and sea-level rise on cyclone storm surge floods in Bangladesh. *Global Environmental Change*, 18 (3): 90-500.

Karim, A. H. M. Zehadul., H. M. Noon, N. M. Diah, N. A. Tajuddin and S. Mustari 2016. Torrential floods in Malaysia: Assessing the loss and vulnerabilities in three Kelantan villages. *Unpublished article submitted in Mediterranean Journal of Social Sciences (Italy).*

Messner, F. and V. Meyer 2006. *Flood Damage, Vulnerability and Risk Perception – Challenges for Flood Damage Research* (pp. 149-167). Springer: The Netherlands.

Mustari, S. 2015. Vulnerabilities and resiliency of the coastal people of Bangladesh: A sociological study of Sathkhira coastal areas. *Unpublished Ph.D. Thesis. Department of Sociology and Anthropology, IIUM. Malaysia.*

Mustari, S. and A. H.M.Zehadul Karim 2015. Understanding resiliency in coastal areas: A review paper from sociological perspectives. *International Journal of Social Science Studies* (USA), 3(3):123-128.

— 2016. Water scarcity: A fact or fiction for a coastal village of Bangladesh! *Mediterranean Journal of Social Sciences* (Italy), 7(4): 695.

Posthumus, H., J. Morris, T. M. Hess, D. Neville, E. Phillips, and A. Baylis 2009. Impacts of the summer 2007 floods on agriculture in England. *Journal of Flood Risk Management*, 2(3): 182-189.

Shamshuddin, J., Q. A. Panhwar, R. Othman, R. Ismail, H. Jol, and M. A. Yusoff 2016. Effects of December 2014 great flood on the physico-chemical properties of the soils in the Kelantan plains, Malaysia. *Journal of Water Resource and Protection*, 8(02): 263.

Weng, Chan N. 1995. Flood disaster management in Malaysia: An evaluation of the effectiveness of government resettlement schemes. *Disaster Prevention and Management: An International Journal*, 4(4): 22-29.