

## Gender Issues and Women Vulnerabilities During Flood Disaster in Kelantan, Malaysia

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**Abstract:** This paper aims to identify the gender issues in flood situation by investigating the experiences of women during flood disaster. This paper seeks to understand whether gender has been adequately addressed in the local disaster management plan and its consequences. By using gender perspective, this study draws on narrative accounts from three focus group discussions, investigating the impacts of floods event on women's lives and livelihoods in Kelantan, Malaysia. The research finding shows that there are still gender gap in flood disaster responses and in the existing disaster management plan. Aids were not equally distributed among victims, women with small children whose husbands were away have to independently survive and single mothers were not given enough attention during the emergency times. Therefore, it is suggested that the current responses and procedures to flood disaster management plan have to be reviewed and gender dimension have to be integrated in order to significantly improve the preparedness and relief program during flood disaster.

**Key words:** Gender issues • Flood disaster • Women • Malaysia

### INTRODUCTION

In Malaysia, flood disaster has become a regular natural disaster that happens nearly every year during the monsoon season. A substantial literature on gender and disasters has shown the importance of gender framework in disaster mitigation. It is also highlighted in the literature how women were the most affected by natural and human-caused disasters and therefore support in the post-disaster environment is very much required since they bore primary responsibility for the care of the young, the elderly, the sick and those living with disabilities [1].

It has been well established that gender determines what is expected, allowed and valued in a woman or a man in a given context. It determines opportunities, responsibilities and resources, as well as powers associated with being male and female [2]. According to Kottegoda [1], women and children are particularly affected by disasters; in addition to the overall impact of the disaster on the general community, the breakdown of infrastructure, displacement and isolation, collapse of

familial and social support networks all specifically add to women's burdens in their social roles, while increasing women's vulnerability, especially to sexual and domestic violence.

In 2014, Kelantan, one of the states in Malaysia faced the worst flood disaster in Malaysian history. This paper is to understand the vulnerabilities faced by women flood victims during the relief program and to suggest the importance of gender dimension in a flood disaster risk reduction to be implemented in Malaysia. Thus, this paper argues that although disasters affect both men and women, the impact and the level of vulnerabilities faced by both could be different and therefore, mitigation efforts need to address such differences to make both men and women resilient to flood disaster.

### Literature Review

**Women and Vulnerabilities:** Vulnerability can be defined as the inability to withstand the effects of a hostile environment. In relations to disaster management, the role of vulnerability is an important aspect to be investigated, not only on the nature of the threat but also the

underlying characteristics of the environment and society that makes them susceptible to damage and losses [3]. Roxana [3] views vulnerability as a creation of various factors including a person's socioeconomic status, gender, age and physical ability. Generally, women are more vulnerable than men and poor women even more so. A poor, disabled, or aged woman head of household is extremely vulnerable, as are young girls whose family structures are shattered by disaster. Vulnerability is also defined as the diminished capacity of an individual or group to 'anticipate, cope with, resist and recover from' the impact of a natural or human-made hazard [4, 5]. The root causes of this vulnerability lie with the lack of access to the resources that allow people to cope with hazardous events – such as income, education, health and social networks. This access may be gendered, in that women and girls in general tend to have less access to, or control over, assets than men and boys [6].

For women, vulnerability is also determined by biology - pregnancy, lactation and the reproductive cycle - which make them more vulnerable when disaster strikes [7]. Gender inequality increases women's vulnerability before, during and after disasters in many ways, depending on the type and location of a disaster and the cultural and social context. The vulnerabilities of women and men change as the disaster-management cycle proceeds. During disaster, cultural norms such as seclusion, which requires women to be accompanied by male relatives in public, resulted in the loss of women's and their dependents' lives. For example, more women died in an earthquake in Maharashtra because they were in their homes while men were harvesting crops, preparing for a festival, or working in other districts and boys were attending school elsewhere [8]. During a 1991 cyclone in Bangladesh, many women perished with their children at home because they had to wait for their husbands to return and decide whether the family would evacuate (World Health Organization, 2002). Women's vulnerability is emerged in the management aspect when women are seldom represented in decision-making bodies and therefore their needs and interests are not taken into account. Women tend to be regarded as helpless victims who need to be protected and told what to do rather than potential resources [9].

**Women's Resiliency in Flood Disaster:** In terms of survival skills, women are less likely than men to have life-saving skills such as swimming, climbing, knowledge of technology because cultural restrictions define gender roles and responsibilities. This puts them in danger during

and after a disaster and prevents them from saving other lives. As a result, casualties are higher among women and girls during and after earthquakes and floods [8]. During disaster response and recovery, little attention is paid to women's needs in emergency-relief provision in terms of privacy, personal hygiene and sanitation, such as their need for sanitary napkins [6]. While women and girls have been recognized as a 'vulnerable' group, their capacities to respond to events and to be the drivers of risk reduction are less recognized [6]. Building women's and girls' resources for resilience will help reduce disaster impact in future.

Study by Enarson [10] on disasters and gender has pointed to the social construction of vulnerability to disasters, especially on the basis of gender relations. She argued that mainstreaming gender in disaster management is critically important as women are the key economics actors throughout the disaster cycle of preparedness, mitigation, relief and reconstruction and that women's economic vulnerability to future disasters is due to the lack of attention to gender equity and equality in disaster interventions. Lack of attention has led to the little data on gender issues during the national and state level preparedness and mitigation phases and therefore the existing gender and disaster knowledge have not been systematically compiled and organized.

**Gender Perspectives in Disaster Preparedness and Relief:** Gender analysis is an effective tool for understanding how communities work and the changing differential effects of disasters on men and women in different socioeconomic groups. Gender analysis provides a useful guide for improving accountability regarding effects and impacts of interventions for results-based management [11]. If the Malaysian government is concern over the effectiveness of the existing disaster management plan, a better evidence of the gender analysis of disaster management plan and its impact on the social welfare of the people is very critical. Disaster has been defined as a serious disruption of the functioning of a society, causing widespread human, material or environmental losses which exceed the ability of the affected society to cope using its own resources [12]. Disasters are also considered to be a result of hazards impacting on people who are physically, economically and socially vulnerable. It is also believed that the root causes of vulnerability to disasters are the social and economic processes leading to poverty [13].

Thus, gender perspectives in disaster preparedness is a crucial research to be undertaken for the 2014 flood disaster in Malaysia as well. It is necessary to develop a deeper understanding of the 'gendered nature of potential vulnerabilities' in the context of disasters in Malaysia through a synthesis of conceptual and empirical material drawn from case studies in Kelantan. As Enarson [10] mentioned, women's capacities for mitigating hazards, their self-reliance in crisis and their proactive community work after natural disasters need to be made more visible, as well as women's economic insecurity before, during and after disasters.

## MATERIALS AND METHODS

This paper is based on three focus group discussions involving 23 women of flood victims in Kelantan. The respondents were selected through snowballing sampling. The women were selected to share their accounts of how they experienced the major flood disaster in December 2014. The interview involved an audio-taped interaction between the respondent and the interviewer, conducted using semi-structured questions. The interview started with a general discussion about the demographic profiling, followed by a discussion on access to aid, gender issues during and after flood, specific needs of women at the evacuation centre and social organizational issues. Respondents were encouraged to share stories about their resilience when dealing with the flood disaster. This paper takes a narrative analysis approach, using the narratives of respondents as empirical evidence to support the arguments made by teasing out common threads.

## RESULTS AND DISCUSSION

Gender issues and women resilience during flood disaster are socially constructed under four different conditions: geographic, cultural, political-economic and social conditions. All these conditions have complex social consequences on flood victims. For the purpose of discussion, this section will focus on gender issues that relates to women specific needs during and after disaster.

**Respondents Profiling:** More than 50% of the respondents were above the age of 41 years old. 21.7% of them were below the age of 31 years old. While the majority of the respondents (82.6%) were married, the remaining (17.4%) were single mothers. All of the respondents selected in this study had experienced a partial loss damage due to the 2014 flood. More than 73%

of the respondents were having between 4 – 9 family members in the house (which include husband, children and their parents) when the disaster struck. Out of this, 43% were having between 4 – 6 family members. In terms of shelter, majority of respondents (43%) were staying at several evacuation centers in their areas while 21.8% of them were staying at their relatives and another 4.5% had to stay temporarily with their neighbors. In the meantime, 17.4% of the respondents remained staying at their own houses whereas only one respondent (4.5%) chose to stay at a budget hotel throughout the flood disaster.

### **Early Warning Systems and Decision-making Process During Evacuation:**

Early warning systems is a major element in disaster risk reduction that can prevent loss of life. In this case, women and small children are the most affected by the lack of early warning systems. Based on the interview data, the level of vulnerabilities faced by women flood victims has increased due to lack of warning systems provided by the relevant agencies. In fact, the respondents claimed that there were no informations have been channelled to them pre-disaster and during the flood disaster. One respondent whose mother was bedridden due to an accident said that there was no one informed her and her family on the condition of the flood and also the preparation and techniques to evacuate and where to find shelter. The lack of information forced all respondents to use their local knowledge based on their previous experience to make decision on when to evacuate.

One of the respondents, Yati, 40 years old with 6 young children, explained that she had experienced three major flood disaster in the same village that she lives now. According to her, the major flood happened in every 10 years which was in 1994, 2004 and 2014; the latter considered to be the most destructive. Although, the villagers were quite used with several occurrences of flash floods that earned the village the nickname of '*Kampung Banjir*' (Flood village), they never expected that the 2014 flood have risen up the water level to more than 8 meters. Another respondent, Miza, 63, a single mother, recounted the moment when she first saw the level of water during that fateful day,

*"...it was in the afternoon that day, I did not expect that the rising water can cause major flooding. So, I did not make any preparation to move out and bring my family to the evacuation centre. It was not raining at all that day and I was told by neighbours that the water was coming from the river base.*

*Based on my previous experience, I thought this water would not put me in a dangerous situation. When the night came, the water current became so strong and all of a sudden, I realized that I would put my family at risk if we didn't move out. I called JPAM and Fire Department but they asked me to wait (for assistance). It was already 5 am in the morning, I had to find an alternative. I called my friends who finally came with a boat to rescue my family”.*

Miza's narrative shows that early warning systems are still very much lacking that forced flood victims to find their own way to evacuate their family. In this case, vulnerable individual such as Miza had to use her own knowledge and network of friends to rescue herself from the critical situation. All respondents in fact admitted that they had to rely on previous flood experiences as an early warning signal but unfortunately the knowledge was not reliable enough to deal with the 2014 flood. One respondent, Siti, was still in disbelief every time when she was asked to share her experience:

*“... I think this year's flooding was the most extraordinary. During my stay here for the last 25 years, never once did the flood manage to get to our house as we were staying on a higher ground. It was really shocking.*

The narrations above provide significant evidence that the early warning system is still inadequate which gives impact on vulnerable groups such as women, single mothers and children. This confirm the previous studies that women tend to be more risk averse and more likely to try to prepare for disasters and take self-protective measures, particularly during evacuation process. Early warning systems is a major important element in preventing loss of life and reducing the economic and material impacts of a flood disaster. An effective early warning system to reach the communities at risk, effectively disseminate messages and warnings to ensure that there is a constant state of preparedness.

The discussion above also revealed that all of the respondents have a low level of knowledge in disaster preparedness and they did not receive any early warnings despite the facts that they had experienced several major floods before. Respondents instead claimed that their husbands have more access to information since their husbands have more social contacts and networks of friends. In terms of decision making, about half of the respondents made the decision to evacuate after

discussing with their neighbours through their mobile phone while the other half of them made the decision after discussing with their husbands or adult male in the family.

This study revealed that respondents have to rely on their husbands to find the right information through their husbands' connections. However, those respondents who were single mothers and whose husbands were not with them during the disaster for various reasons such as working outstation were the most vulnerable. Yati, who was anxiously waiting for help, had to keep calling her husband who was working in different state, about 7 hours drives from her home, to get help. Worried about her condition, Yati's husband contacted his friends who worked in one of the government agencies to get help. Eventually, his friend came with his own boat to rescue Yati and her children. Yati explained:

*“...I remember it was early morning... almost after dawn, the water level had risen up so fast.... I could not think of what to do...my husband was outstation in Malacca. I had to go out and get some help. I wanted to use the old tire as my floating jacket but had to give up the idea when I thought about my 2 years old son. I could not leave him with his older sisters and brothers. I tried to call JPA, JPAM, Fire Rescue department... the only things that they said was to wait..wait and wait. Some of them said that there were other places that needed more attention. But how long more do I have to wait?I kept on calling my husbands, asked him to get some help.”*

Another respondent from Pasir Mas, Gayah, narrates her traumatic experience when she decided that she had to leave her house and bring her ill mother to safety,

*“... When it became obvious that we were no longer safe, I hurriedly boarded my ill mother onto a plastic barrel. Slowly, I move the barrel to my nearest neighbor's house. Then, my other older relative use the barrel to guide them walk towards the evacuation center that was located about 2 kilometers away from her house. During this critical time, when there was no help to come by, we have to be 'smart' on what was the best way to bring your family to safety.*

The narration shows that women flood victims can be 'innovative' and proactive in rescuing their families. However, without proper preparedness and relief assistance, these women can be exposed to potential death and injuries. The narrations provide the evidence of

how women, even during disaster, are expected to be the caregivers for the family as part of their gender roles and this role has added extra risk on them particularly during the evacuation process. This study revealed that women with less information and less connection with relevant agencies posed more challenges for them to get rescued during disaster.

**Decision Making and Division of Labour at Evacuation Centres:** It has been well established that women are most effective at mobilizing community to respond to disasters [14]. Based on the interviews, it shows that women played a central role within the families, transporting the children to safety, finding the best way to rescue their families, working together with the men to secure relief from emergency authorities, to meet the immediate survival needs of family members and managing temporary relocation. However, this study found out that women at the evacuation centre are not being given the opportunity in decision-making position. Although the women are quite active in giving aids and helping in the distribution of aids but due to lack of recognition, majority of respondents claimed that they ended up doing traditional roles such as cooking and cleaning the centre. At one of the evacuation centres, respondents claimed that only 10 women involved in the distribution of food ration and to serve around 4000 flood victims. The number of men volunteers were more than the women volunteers. Although some respondents were also helping in cooking and cleaning but only the committee was allowed to do the distribution of food ration. At the evacuation centre, women are mostly performing their reproductive responsibilities by keeping a continual vigilant eye on young children which again can be emotion-provoking and stress-laden.

**Privacy and Protecting Aurat at Evacuation Centre:** Women, girls, boys and men are all belonging to different age and socio-economic strata. They have a different level of vulnerabilities and this shapes the way they experience a disaster and also their ability to recover from it. Not only are women affected differently than men by disasters, different groups of women also have different needs and will respond differently in the midst of emergencies. The needs of women with small children are likely to be different from the needs of single mothers living alone in a village. Such differences of their needs should be taken into account in preparing for disasters. Based on the

interviews, majority of respondents at evacuation centers were quite satisfied with the abundant supply of food but essential items for women particularly prayer robe (*telekung*), undergarment, sanitary pad (even for elderly women) were reported to be in scarce supply. Majority of flood victims are Malay Muslim. Therefore, items such as prayer robe is an essential items particularly for women as they need special prayer robe to pray whereas men can just wear their t-shirt and trousers to pray. Although it might sound trivial, respondents interviewed admitted that having a comfortable prayer robe and being able to perform prayer would help them in dealing with their traumatic experiences. One respondent, Iza said that:

*“...we were living in an open space such as in big school hall and classroom where privacy was very limited. Luckily I managed to grab my prayer bag before leaving my house. Many of the women at the center could not perform prayer as they did not have prayer robe. Some had to borrow from the others. They felt miserable and vulnerable for not being able to perform prayer”*

Other respondents also share a similar view when they said that being able to perform prayer has helped them in dealing with their vulnerabilities of having to stay in an overcrowded space, with limited space of privacy, for a fairly long period of time. Another gender issue that get less attention particularly during disaster is protecting one's *aurat* particularly among women's victim who are muslim. In a country such as Malaysia, muslim women in general are also expected to protect their *aurat*<sup>1</sup> which is related to the concept of modesty in Islam. For women, the *aurat* means covering her entire body, with the exception of her face and hands [15]. Women's *aurat* is more extensive than men as the men's *aurat* is from the navel to the knee (or mid-thigh in some rulings). Women can only expose their *aurat* within their own *mahram*.<sup>2</sup> Malaysian women who are wearing hijab (*tudung*) are expected to always cover their head in public spaces. During flood disaster, most of the evacuation centres were located at school hall or public hall where there are no public space provided. Therefore, women have to wear hijab all the time even when they were sleeping. This situation has created uneasiness and stress on women, even younger women. Issues of privacy and protecting the *aurat* during disaster especially at evacuation centre is a challenging issues faced by women flood victims but

<sup>1</sup>*Aurat* is defined as the parts of the body that should be covered and this does vary in different situations among different groups of people [15].

<sup>2</sup>A *mahram* is a person one is never permitted to marry, because of a close blood relationship, breastfeeding or marriage [15]

seems to receive lack attention from authorities. In this study, respondents claimed that families who have been located in a classroom experienced more privacy compared to those who were located in a school's hall. Those respondents who have sick family members were given one classroom for their families while the majority of them have to share a classroom with three other families. Iza and her family, for example, was being put together with two other families in a single room. They have to use school chairs and tables to create their own 'private space'.

*"...they put us in a classroom with two other families. It was more comfortable than the big hall. We rearranged the tables and chairs to create our own 'small room'.*

Although a majority of respondents did not find the matter as too troublesome, the lack of privacy space as experienced by young female victims can be too stressful. The requirement to constantly wear their hijab due to limited private space has to some extent increase their level of vulnerabilities. Several respondents suggested that by providing a special room "Only for Women" would be a good alternative to deal with this *aurat* issue. They said, this room can be used as a changing room and space where they can take off their hijab after a long day of constant wearing.

In terms of women's undergarment, respondents claimed that some centers do provide women's undergarment but sometimes the size provided was not suitable for adult/older women. Women items are the most needed items at the evacuation center because when flood victims arrived at the evacuation center especially women, they were mostly coming without an undergarment. Yati has this to say:

*"... When a villager came with two boats to rescue us, I just grabbed my 2 year-old son and asked the other five children to get into the two boats. I grabbed any clothes within my reach. 2 clothes for each child. So, I have basically one bag for my 6 children. I didn't remember of putting on any undergarment at that time as I was already in the water. I didn't think about changing my clothes that I had been wearing it since the night before. I realized that I didn't wear any undergarment when I was already at the evacuation center.*

According to Yati, those who have extra money might be able to buy their own undergarment from the nearest supermarket but still that took them several days before they could go out and withdrew money from the bank. However, many felt that they need the money to provide food for their family rather than to spent it on buying undergarment. Issues of privacy and protecting the *aurat* during disaster especially at evacuation centre has indeed a challenging task faced by women flood victims.

**Recommendations:** The narration provided above shows that women and young girls do not face the same needs and vulnerabilities during the flood disaster. There are differences within each group and between individuals particularly specific protection concerns and capacities during and after the disaster phases. However, the discussions above also clearly described the lack of gender-sensitivity in the disaster management system. The majority of respondents suggested that there should be a clearer information and procedure in the event of a flood disaster. The study revealed that the inadequate early warning system, lack of appropriate equipment and the shortage of staff in charge has a significant impact on women and young children during flood disaster. Therefore, some of the following recommendations are suggested for a more gender-sensitive disaster management initiatives.

Disaster preparedness and mitigation through the formation of Women Flood Management Group at village level are essential to promote resilience and preparedness. The group should consist of villages, village committee (JKKK) and representatives from each household, especially from those who are the most vulnerable. This group will be managed by the community that eventually will empower the community with advance information on risks that can be readily translated into prevention, preparedness and response actions. Volunteers from the local villagers can be recruited and these volunteers will be trained on key issues in flood management.

It is also highly recommended that this Flood Management Group should represent a balanced gender distribution, as often the case women have lower proportion in the local level political representation. Women are usually absent from the decision-making and planning in Disaster Risk Management. Hence, often the case when priorities are established, the interests of women are often poorly represented. Women often have

limited opportunity to decision-making power structures due to patriarchal norms in the society that prevent them from participating in emergency planning and action. Due to their gender role, they have limited interaction beyond domestic sphere compared to men and as a result they are less informed, not well-prepared when disaster struck.

It is recommended that village committee and local leaders should work with relevant local government agencies such as JPAM and Fire Department to set up an early warning system to alert villages about incoming disasters through support group via social media etc. It is recommended that this Flood Management Group should work with local schools as well in disseminating information about flood management with both students and teachers in primary, secondary and high schools. Most importantly, more awareness campaigns should be conducted to promote understanding of women issues during disaster such as access to facilities, decision making, sanitation, hygiene and many others.

In this aspect, relevant government agencies should seriously enforce the section of law that protects the rights of women in order to remove all aspects of discrimination against women. Equity and social justice provide a level playing ground for women and men in all life opportunities, including floods-related adaptation [9]. This will remove all forms of disproportionate gender vulnerability particularly during disaster.

## CONCLUSION

All groups in the society suffer from the devastating effects of floods but women and children are often the most suffered [16, 17]. The discussion above provide the evidence of women vulnerabilities during flood disaster. This study contribute to the body of knowledge in women and disaster particularly among Muslim women in Malaysia. The gender perspective employed in this study reveal the vulnerabilities faced by women's victim particularly on the issue of private space and protecting *aurat*. In terms of relief distribution and emergency response, relevant authorities should recognize the specific needs and concerns of women in a disaster situation as well as the specific contribution that women can make to sustainable recovery and reconstruction. Therefore, it is argued here that gender mainstreaming in disaster management is critical because otherwise, women will continue to be disproportionately affected by disasters. The research findings indicate that all disaster

responses and interventions should be designed based on gender-sensitive understanding. In the context of Malaysia, the inclusion of a gender perspective in all procedures established to mitigate and manage disasters is important as has been emphasized in other studies in this field.

It is also important to increase the awareness of gender bias in disaster practice, e.g. through training, planning guidelines, recruitment and retention of gender-aware staff and mechanisms for professional accountability to gender issues. Special attention should also be paid to strengthen and support women's leadership at the local and community level as well as at the national level. For this to become a success, training and capacity-building programs for women before, during and after disasters is an important step in the process of mainstreaming gender into the flood disaster management initiatives.

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