Asian Journal of Environment, History and Heritage
December 2018, Vol. 2, Issue. 2, p.55-66
ISSN 2590-4213e-ISSN 2590-4310
Published by Malay Arts, Culture and Civilization Research Centre,
Institute of the Malay World and Civilization

# COMMUNITY BASED APPROACH TOWARDS DISASTER MANAGEMENT IN MALAYSIA

## *(PENDEKATAN BERASASKAN KOMUNITI DALAM PENGURUSAN BENCANA DI MALAYSIA)*

**Haliza Abdul Rahman**

**Abstract**

A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community. The current and future practice to handle or manage the disaster is with the participating and involving of the community towards that. Thus, community awareness has fundamental and their role are the necessary starting point for all other disaster risk reduction initiative. Therefore, to establish a sustainable and resilient environment for the local community, the government must encourage the participation and involvement of community in disaster risk reduction programmes. Furthermore, empowering community within disaster threatened is the key to successful mitigation. However, the roles of community in this issue are often undervalued and at time ignored too. Normally, disaster control measures planned without participation of the affected communities and other stakeholders are unsustainable as they do not meet the needs of relevant stakeholders. These situations can be overcome by establishing participatory planning process. In this context, decision making is a combination of 'top-down' and 'bottom-up' approaches which enables the involvement of all stakeholders on the basis of equity. For conclude, the role of communities in disaster management in Malaysia could be improves.

**Keywords**: Community Based Approach, Community, Awareness, Disaster, Participate and Involve

***Abstrak***

*Bencana adalah kewujudan kejadian yang menjejaskan keadaan sedia ada dan menyebabkan tahap penderitaan yang melampaui kapasiti komuniti yang terjejas. Amalan semasa dan pada masa depan di dalam mengendali atau menguruskan bencana seharusnya melibatkan penyertaan dan pembabitan komuniti. Justeru, kesedaran awam adalah perkara asas dan peranan mereka adalah titik permulaan yang diperlukan untuk semua inisiatif berkaitan pengurangan risiko bencana. Oleh itu, untuk mewujudkan persekitaran yang mampan dan berdaya tahan untuk masyarakat setempat, kerajaan seharusnya menggalakkan penyertaan dan penglibatan komuniti dalam program pengurangan risiko bencana. Tambahan pula, memperkasakan komuniti adalah kunci kejayaan kepada pengurangan daripada ancaman bencana. Namun, peranan komuniti dalam isu ini kerap kali tidak diberi perhatian sewajarnya dan pada masa yang sama diabaikan. Umumnya, langkah-langkah kawalan bencana yang dirancang tanpa penyertaan komuniti dan pihak berkepentingan lain yang terjejas tidak dapat diteruskan disebabkan kegagalan dalam memenuhi keperluan pihak*

*berkepentingan yang terlibat. Perkara ini boleh diatasi dengan mewujudkan proses perancangan partisipatif. Dalam konteks ini, pembuatan keputusan merupakan gabungan pendekatan 'top-down' dan 'bottom-up' yang membolehkan penglibatan semua pihak berkepentingan berdasarkan ekuiti. Kesimpulannya, peranan komuniti dalam pengurusan bencana di Malaysia perlu ditambahbaik.*

***Kata Kunci**: Pendekatan Berasaskan Komuniti, Komuniti, Kesedaran, Bencana, Mengambil Bahagian dan Terlibat*

## INTRODUCTION

Previous studies carried out by United Nation (2006), statistical data showed that 75% of the world's population lives in areas that have been affected at least once by earthquakes, tropical cyclones, floods or droughts between 1980 and 2000. Furthermore, United Nation further discovered that billions of people in more than 100 countries are periodically exposed to at least one of these events. In the last two decades, more than 1.5 million people have been killed by natural disasters. Globalization and the growing interconnectedness of global society mean that catastrophic events in one place have the potential to affect lives and public policies in distant locations (United Nations Development Programme, 2004).

The Asia-Pacific region including Malaysia wasthe region most affected by disasters in terms of human and economic impacts, and also in occurrence. The scenario is expected to worsen in the coming years due to the anticipated effects of climate change. Furthermore, vulnerability and exposure to disasters is increasing as more people and assets locate in areas of high risk. As example, since 1970 the proportion of people living in flood-prone river basins increased by 114 per cent and on cyclone-exposed coastlines by 192 per cent (UNISDR/WMO, 2012). Thus, disaster risk reduction is critical to ensure sustainable development in a planet of earth.

A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community (WHO/EHA, 2002). Disaster occurs rapidly, instantaneously and indiscriminately. Disaster also can be defined as "serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources (UNISDR/ WMO, 2012).

According to Ibrahim (2007), disasters can be classified into three types: i) natural ii) man-made; and iii) hybrid. Natural disasters are catastrophic events resulting from natural causes such as volcanic eruptions, tornadoes and earthquakes over which man has no control. Man-made disasters are those catastrophic events that result from human decisions. Air, land, and sea disasters are examples of man-made disasters. A hybrid disaster is a deathly combination of both human error and natural forces. An example of a hybrid disaster is the extensive clearing of jungles causing soil erosion, and subsequently heavy rain causing landslides.

Traditional democratic theory assumes that the public interest will be hammered out through participation of citizens in government decision making (Berry et al., 1993) including disaster management. However, within the disaster studies and hazards management discipline resilience has, for many decades referred to the ability of societies and places to cope with and prepare for hazards and disaster events, both the expected and unexpected (Buckle, 2006; Manyena, 2006). The ability of a community to respond is seen as an important avenue of participation for local residents and organizations to be involved despite the absence of official training and organization (Thornley et al., 2015). This participation is seen as desirable, not only due to the limitations of government funds, but also due to the efficacy of involving communities that have local knowledge and skills that can be utilized in a disaster response and recovery situation (Coles and Buckle, 2004; Thornley et al., 2015; Vallance, 2011). In short, empowering community within disaster threatened is the key

to successful mitigation. However, the roles of community in this issue are often undervalued and at time ignored too.

The level of participation also varies with local context, power relations among stakeholders, culture beliefs, and resource availability amongst others (Reed, 2008). In some cases, the same criteria are employed to evaluate both process and outcome depending on objective, scope, and timing of the evaluation (Blackstock et al., 2007; Dyer et al., 2014). For example, empowerment, fairness, and transparency are many such variables often used for both process and outcome-based criteria. In recent times, therefore, more integrated approach is proposed while establishing the links between process and outcomes of public participation (Blackstocket al., 2007)

At the higher level, it has been suggested that the local communities could be involved in defining their own vulnerabilities and capacities. In a similar vein, some researchers in recent times are advocating for the involvement of communities in the preparation, implementation, andmonitoring of their development plan (Samaddar et al., 2015). There have been several claims in favor of adopting community participation in disaster risk management, not least including increasing awareness, better accepted decision, conflict resolution, improved preparedness, empowerment and self-reliance of the community (Pearce, 2003; Shaw, 2006). Incorporating local communities in disaster management and programs is recognized, but on how best communities could be involved and what would be the possible outcomes depend on various factors such as culture and level of education.

## THE IMPORTANCE OF COMMUNITY BASED APPROACH TOWARDS DISASTER MANAGEMENT

There has been a significant shift in attitude in addressing the challenges of disasters. For too long disasters have been seen as one-off events that were addressed through humanitarian response and relief efforts. For a few decades there was a clear move towards strengthening preparedness, and ensuring a more effective and efficient response which involving of the community is must. This bottom-up approach is used to assess and develop policies that come from the efforts of the subordinate, the individual or of the people's problems itself (Howlett et al, 2003).

Community is a group of people living in the same place or having a particular characteristic in common. In details, community emerged as a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings (Kathleen et al, 2001). Community must be involved and should be encouraged to participate fully in all aspects of the process of disaster management in order to develop theirs potential and capacities to cope with disasters on their own.

Yodmani (2001) suggests that the failure of a top-down management in addressing the needs of vulnerable communities in disaster management has brought about the alternative involving the vulnerable people themselves in the planning and implementation of mitigation measures. He believes the affected communities are the best judges of their own vulnerability and can make the best decisions about their wellbeing.

Hence, the emergence of Community-based Approaches (CBA) reflected recognition of untapped local knowledge and capacity for organization and action, particularly in relation to small to moderate, recurrent and chronic threats (Kelman and Mercer, 2014). Nevertheless, focusing on large, catastrophic hazards, the acknowledged United Nations framework for guiding disaster reduction from 2005-2015 remained top down in approach and assumed that local people were not to be listened to, rather needed informing and educating (de la Poterie and Baudoin, 2015). Somewhat greater acknowledgement of active role of local populations finally appeared in the UN's successor framework launched in 2015.

Referred to that, building on the Yokohama strategy and in recognition of the need to address the multidimensional aspects of disaster risk from a development perspective, the

HyogoFramework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters was adopted at the World Conference on Disaster Reduction in Kobe, Hyogo, Japan in 2005. The Framework serves as the guiding instrument for international cooperation, disaster risk reduction and resilience building. This includes national or community targets which are recognized as best practice for effective implementation (UNISDR/ WMO, 2012), in shortrecognize the role of the community in disaster risk reduction.

HFA outlines five priorities for action; i) to ensure that disaster risk reduction is a national and local priority with a strong institution basis for implementation, ii) to identify, assess and monitor disaster risks and enhance early warning, iii) to use knowledge, innovation and education to build a culture of safety and resilience at all levels, iv) to reduce the underlyingrisk factors, and v) to strengthen disaster preparedness for effective response at all levels. Based on five priorities, various activities can be carried out with active participation of local community. HFA does not only account on the role of society in disaster risk reduction, but also focus on the setting up of various foundations for society to actively participate in anydisaster risk reduction programmes. The framework states at least four important points, which are; i) community participation, ii) information management and exchange, iii) education and training, and iv) public awareness (Azrina,2016).

Therefore, CBA has been recognized as the additional element in disaster management necessary to reverse the worldwide trend of exponential increase in disaster occurrence of and loss from small-and medium-scale disasters, build a culture of safety, and ensure sustainable development for all. The local community is taken as the primary focus of attention (in disaster reduction) since that is the common unit which is affected by disaster and, more importantly, responds to deal with the event. Whether a disaster is major or minor, of national or local proportion, it is the people at the community or village level who suffer its adverse effects. They use coping and survival strategies to face and respond to the situation long before outside help from NGOs or the government arrives. They are interested to protect themselves from the damage and harm. Indeed, the community-based approach corrected the defects of the top-down approach in development planning and disaster management which failed to address local needs, ignored the potential of indigenous resources and capacities, and may have even increased people's vulnerabilities.

Furthermore, Turoffet all. (2013), suggest that despite improvements in terms of planning and infrastructure spending, on balance the process of planning and mitigating disasters is subject to improvement. In this regard to improve disaster management, the following issues warrant greater attention: (i) need for proper modelling specific disasters within a given local community; (ii) call for greater collaboration between public, private sector and citizens in creating disaster management systems are more robust (iii)designing systems that bring together both citizen and public sector agencies across the different phases of a disaster.

Moreover, CBA in disaster risk reduction has origins and accumulated practice dating from the 1970s (Heijmans, 2009) and has been strongly endorsed by policy makers for more than 20 years. A group of international non-governmental organizations (INGOs) demanded a more bottom-up approach to reducing disaster risk (Wisner and Walker, 2005). Since the 1994 mid-term review a previous ambitious UN programme, the International Decade for Natural Disaster Reduction, NGOs had been demanding focus on community priorities and local knowledge.

In addition, many disaster scholars have argued that mitigation should be incorporated into the comprehensive plan because that plan has standing with the government and elected officials as a community policy guide and is a focus for public participation (Godschalk et al., 1998). A more recent strand of participatory theory focuses on collaborative planning, in which citizens and stakeholders are given significant roles and degrees of power (Wondolleck&Jaffee, 2000). In the collaborative planning approach, stakeholders are not just responders to staff plans but also are engaged in creating and selecting plan alternatives. Communities build planning and implementation capacity through decentralization and sharing of decision making.

There are various advantages when communities are well-prepared and actively participate in any disaster events. A well-prepared community has the ability to provide immediate assistance and aids in any disaster event. The first 72 hours of disaster is the most critical time. In catastrophic incidents, bringing in outside assistance during this period is difficult, hence, the most effective responses from those who are closest to the scene (Carafano et al., 2007). This is where the community acts as the 'first-responder", helping not only oneself and the family but also the closest neighbour, especially those who are seriously affected and vulnerable members of community. This only can do if the community is highest awareness and well-prepared community.

Another benefit is, involvement of community inany disaster event helps to provide detailed information on the affected area. The community which has been living in the area usually has detailed information on its members and the surrounding area. Thus, the participation of the community in disaster response helps to determine priority needs and culturally appropriate interventions for the affected community. At the same time, the community can help to actively engage people to work for their community's own rehabilitation and development (Azrina, 2016).

## DISASTER MANAGEMENT IN MALAYSIA

Malaysia's position is outside the "Pacific Ring of Fire" in terms of geographical location. This means it is in an area free of natural disasters such as hurricanes, tsunamis and the like which often hit neighbouring countries such as Indonesia, Thailand and Cambodia. Arguably, most of the disasters that occur in the country are due to human incompetency (Jamilah and Habibah, 2016). Prasana et al. (2013) stated that, Malaysians are anxious of the increasing regularity of the natural disasters and it is disturbing as many of these disasters are caused by the lackadaisical attitude and greed of politicians and policy makers. The public in general are disillusioned as the causes of the problems contributing to such disasters are not put right.

Generally, Malaysia has experienced various magnitudes of disasters ranging from biological, structural collapse, fires and explosions, landslides and meteorological incidents. The country's disaster profile indicates that the severity and unpredictability of such disasters is alarming and results in damage to property and the loss of lives (Dorasamy et al., 2011). In short, the effects of natural and manmade disasters have become more frequent, far-reaching, and widespread. As a result, preserving the safety, security, and prosperity of all parts of society is becoming more challenging.

Disaster management in Malaysia is not focused on a specific type of disaster. Every policy issued is applicable to all types of disasters, including floods. Historically, disaster management in Malaysia has commonly been considered as a government function and is largely based on top-down government-centered machinery (Chan, 1995).Governments have responsibility to reduce risks of disasters. Thus, many agencies were involved in disaster management, include the following (NSC, 1997):

- The Royal Malaysian Police
- The Royal Malaysian Army
- Special Malaysia Disaster Assistance and Rescue Team (SMART)
- Malaysian Meteorological Service (MMS)
- Drainage and Irrigation Department Malaysia (DID)
- The Public Works Department (PWD)
- Social Welfare Department
- The Local Authority
- Non-Governmental Organizations (eg. Malaysian Red Crescent Society and Scout Society)
- Civil Defense Department
- International Cooperation

Towards that, the Inland Major Disaster Management mechanism was formulated in May 1994 to coordinate all emergency agencies and handle relief activities during any major on-land disaster incident entitled the National Security Council (NSC) Directive 20. This was subsequent to the Highland Towers tragedy as an exemplar and reference for future disasters management, where the Policy and Mechanism on National Disaster and Relief Management was formulated.

NSC Directive 20 means, a standard operational procedure (SOP) for all departments involved in disaster management. The main purpose of the Directive is to put in place a comprehensive emergency management program which seeks to mitigate the effect of various hazards, to prepare for measures which will preserve life and minimize damage to the environment, to respond during emergencies and provide assistance and to establish a recovery system to ensure the affected community to return to normalcy (http://www.myhealth.gov.my/en/development-disaster-management-disaster-victim identification-dvi-malaysia/). Among the types of disaster incidents that covered under the Directive 20 are; natural disasters such as floods, storms, drought and mud-slides; major industrial accidents such as fire and explosion; collapse of buildings, railways accidents; nuclear accidents; aviation accidents that occur on residential or build-up areas; and extensive haze condition that resulted in environmental stress and affect public order.The NSC has classified disaster management into three main stages, pre-disaster, during and post disaster to ensure a more holistic management.

From 1 October 2015, the management of disasters in Malaysia has come under the jurisdiction of the National Disaster Management Agency (NADMA). NADMA's roles are to carry out disaster preparedness, search rescue operations (SAR) and relief efforts effectively. One of the NADMA's important roles is to promote community awareness. Disaster risk should be taken seriously in view of the severity of its impact to lives and livelihood as well as development of the nation. It is acknowledged that not all disasters can be prevented, but their impact and all the underlying risks can be reduced. Governments cannot reduce the risk of disasters alone. Therefore, other stakeholders especially community involvement needs to be increase efficiently because in every disaster it is the communities that are on the receiving end and those who suffer the most.

## CBA AS MECHANISM IN FLOOD MANAGEMENT IN MALAYSIA

Flood impact is one of the most significant disasters in the world. More than half of global flood damages occur in Asia. Causes of floods are due to natural factors such as heavy rainfall, high floods and high tides and human factors such as blocking of channels or aggravation of drainage channels, improper land use, deforestation in headwater regions, etc. Floods result in losses of life and damage properties (Rabiul et al., 2016).

Malaysia experienced major floods in the years 1926, 1963, 1965, 1967, 1969, 1971, 1973, 1979, 1983, 1988, 1993, 1998, 2005 and most recently in December 2006 and January 2007. The years 2009 and 2010 also saw major floods occurring in Kedah and Perlis, two northern Peninsular Malaysia states that are considered relatively dry (Chan, 2012). Flood risks are increasing in Malaysia, despite the huge amount of effort and funds invested to mitigate them (Chan, 1997). Flood damage in terms of losses can be direct or indirect, and both categories include tangible (direct) and intangible (indirect) losses. Thus, floods are the disasters causing the most damage in Malaysia.

The annual costs incurred by the Malaysian Government in rescue and flood relief operations, as well as rehabilitation of public works and utilities, are substantial. It is estimated that the costs of damage for an annual flood, a 10-year flood and a 40-year flood are USD 0.98 million, USD 5.87 million and USD 14.34 million respectively (Chan, 2012). During the 2006-2007 flood disasters in Johor, the estimated total cost was in excess of USD 0.49 billion. These two events are ranked as the most costly flood events in Malaysian history. Recent urbanization amplifies the cost of damage in infrastructures, bridges, roads, agriculture and private commercial and residential properties. At the peak of the most recent Johor flood, around 110,000 people were evacuated to relief centers, and 18 people died (Hussaini, 2007).

Our Nation's traditional approach to managing the risks associated with these disasters relies heavily on the government. However, today's changing reality is affecting all levels of government in their efforts to improve our Nation's resilience while grappling with the limitations of their capabilities. Even in small- and medium-sized disasters, which the government is generally effective at managing, significant access and service gaps still exist. In large-scale disasters or catastrophes, government resources and capabilities can be overwhelmed. The scale and severity of disasters are growing and will likely pose systemic threats. Accelerating changes in demographic trends and technology are making the effects of disasters more complex to manage. For that reason, the current and future trend to handle or manage the disaster is with the participating and involving of the community towards that (http://unpan1.un.org/intradoc/groups/public/documents /APCITY/UNPAN009661.pdf).

Normally, flood control measures planned without participation of theaffected communities and other stakeholders are unsustainable as they do not meet the needs of relevant stakeholders. These situations can be overcome by establishing participatory planning process. In this context, decision making is a combination of top-down and bottom-up approaches which enables the involvement of all stakeholders on the basis of equity. The stakeholders consist of responsible municipal authorities, river basin organizations, regional development authorities; academic institutions, private sector; non-government organizations (NGOs) and concerned citizens and communities. The involvement of stakeholder knowledge from different perspectives together enables a coherent understanding of flood risks. Members of affected communities have the chance to express the community needs and to promote the integration of their demands in the decision making. Stakeholder involvement allows for identification and implementation of flood effective and sustainable management measures because the majority of stakeholders support them (UN-HABITAT, 2001).

In Malaysia, in terms of flood mitigation and management, The Malaysian Flood Disaster Relief and Preparedness Machinery (MFDRPM) were set up after the disastrous flood of 1971 when the National Disasters Management and Relief Committee (NDMRC) was formed. This committee was entrusted with responsibility for planning, coordinating and supervising relief operations during floods. Unfortunately, this was an entirely top-down approach as most of the organizations in the committee were governmental departments/agencies and social organizations that are able to provide shelter, rescue, food and medical supplies.

Therefore, The National Disaster Management Strategy of Malaysia was established. The backbone strategy of the agency is to achieve an effective coordination in and an integrated approach toward building a culture of prevention, protection, and public safety in the community (ADRC, 2009). Its vision is to create a safe environment for the community through disaster management and sustainable development in the 21st century. This strategy was very crucial in order to support the government to encourage dialogue and collaboration between ministries and agencies at the national level with the community in order to involve and empower the community in disaster risk reduction.

Community awareness has fundamental and their role are the necessary starting point for all other disaster risk reduction initiative. Therefore, to establish a sustainable and resilient environment for the local community, the government has encouraged the participation and involvement of community in disaster risk reduction programmes. Towards to that, organizations such as MERCY Malaysia have played a profound role in exploring a more proactive function in enhancing public awareness in disaster risk prevention, mitigation and preparedness.

In Malaysia, Community Based Disaster Risk Management, also known as CBDRM, is a process of disaster risk management in which at-risk communities are actively engaged in efforts to reduce their vulnerabilities and enhance their capacities. This programme are designed to encourage participation from the community and local government to identify, analyse, treat, monitor and evaluate the potential risks within their environment, thereby empowering them into

implementation of solutions that they themselves have developed. It moves beyond the traditional disaster management approach of simply focusing on response, rehabilitation and rebuilding after a disaster event. One of the examples is, School Preparedness Programme. The programme is designed to raise awareness amongst students of the hazards they face and to help schools to minimize the risks posed by natural disasters, such as the seasonal floods in many parts of Malaysia. Schoolchildren are taught simple, hands-on activities to prepare them to take responsibility for their own safety in the event of an emergency. Called the School Watching Workshop, the programme introduces a "Community-Based Hazard Mapping" tool to help school communities to identify hazards and risks in and around the schools and then devising solutions to make it a safer place. Total numbers of school children participation in Malaysia from 2007-2016 are 11,048 (http://mercy.org.my/disaster-risk-reduction/).

However, Roosli and O'Brien (2011), in a study related to the flooding in Malaysia policies has stated that the policies were formed in Malaysia for flood disaster management is based on the top-down theory is failed to meet the demands of the victims. Even Chan (2012) in studies on flood risk management was also argued that using the top-down theory, which developed and implemented the policy does not become effective because the government will only act after a disaster occurs without preparing in advance to take the perception of the community related policy really necessary. This is because the policy is established based on top-down theory is not effective and should be changed to a bottom-up theory to get a perception of the victim itself about policy implementation and implications of the disaster to them. According to this theory, the detailed information regarding the needs of victims can be obtained from the grassroots based on the perceptions and complaints from the victims themselves. In addition, it can be assumed that deciding to carry out the distribution of disaster relief and post-disaster stage will be more effective and comprehensive approach is bottom-up. Quarantelli (1991) has also suggested that policy makers should seek the views of the executive and the community to analyse and make plans for disaster relief in the future in line with the philosophy of designing for people not to the government. Most governments still do not take cognizance of the people views of assistance provided, whether successful or not policies are implemented (Hofmann et al, 2004). In practical, community support ofthe implementation of policy and strategy is must because without the support fromthem, operational implementation of the policy would be inefficient.

Overall, the role of communities in disaster management in Malaysia could be improves. Members of the effected community, most of the time, see themselves as the receivers of assistance. Badrudin (2012), describes this as a traditional relief approach where communities are considered as "victim" and "beneficiaries" of assistance only. For other communities (outside the affected areas), they consider it their responsibilities to donate foods, blankets or money and do volunteer works (cleaning up of disaster debris, distributing foods and other basic needs.) for the victims. Such a perception is incorrect and should be changed. Rather, the community should actively participate in disaster preparedness. Carafano et al, (2007), suggest that as the federal government focuses the majority of its effort on preparing for catastrophic disasters, the local communities should oversee relief efforts until national resources can be requested, marshalled and deployed to the scene. The active participation of the community in disaster management is also the main target of HFA and Sendai Framework for Disaster Risk Reduction 2015-2030. Furthermore, Badrudin (2012) describes disaster management is a "holistic and long-term approach with incorporates vulnerability reduction as part of the development planning process" and "this comprehensive approach recognizes that disaster reduction is most effective at the community level where specific needs are met". The community is highlighted as one of the important components in disaster risk reduction.

## CONCLUSION

After the Hyogo Framework for Action, the research on disaster management has shifted from the 'loss reduction' paradigm to resilience based on community participation and involvement towards disaster management. Community must be involved and should be encouraged to participate fully in all aspects of the process of disaster management in order to develop theirs potential and

capacities to cope with disasters on their own. However, the community-based disaster response framework considers capacity building as a long-term process. Thus, supporting communities in forming disaster response organizations strengthens the organizational capacities of communities at risk to enable them to take action towards reducing their vulnerabilities. This enables them to effectively participate in the activities during, after and before disasters. As part of the strategies to increase awareness and knowledge on disaster, community needs to be equipped with relevant knowledge and skills. Therefore, community members can then be the agent of change to cascade down the information to other community members. This helps to create a sense of belonging for the disaster prevention and mitigation project to ensure long-term sustainability.

## REFERENCES


ADRC. 2009. ADRC Country Report - Malaysia: Asian Disaster Reduction Center.

AzrinaSobian. 2016. An overview of the participation community and faith-based organisations (FBO) in disaster preparedness in Malaysia. *TAFHIM: IKIM Journal of Islam and Contemporary World*. 9: 87-111.

Badrudin, AR. 2012. Issues of disaster management preparedness: A case study of Directive 20 f National Security Council in Malaysia. *International Journal of Business and Social Science*, 3:85-86.

Berry, J. M., Portney, K. E. & Thomson, K. 1993.The rebirth of urban democracy. Washington DC: The Brookings Institution.

Blackstock, K. L., G. J. Kelly and B. L. Horsey. 2007. Developing and applying a framework to evaluate participatory research for sustainability. Ecological Economics60(4): 726–42.

Carafano, J.J, J.A. Marshall and L.C. Hammond. 2007. Grassroots disaster response: Harnessing the capacities of communities. Backgrounder, No. 2094.The Heritage Foundation. 28 December 2007. p.2.

Buckle, P. 2006.Assessing social resilience, in Paton, D. and Johnston, D. (Eds), Disaster resilience: An integrated approach. Charles Thomas Publisher Ltd: Springfield.88-101.

Chan, N.W. 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.

Chan, N. W. and D. J. Parker. 1997. Aspek aspek sosio-ekonomi berkaitan dengan bahaya dan bencana banjir di Semenanjung Malaysia, in Agus, M. R. and F. N. Sidin (eds.) Proceedings of Persidangan Kebangsaan Kajian Sains Sosial, 29-30 September 1997. Kuala Lumpur: University of Malaya, 294-311.

Chan, N. W. 2012. Impacts of disasters and disasters risk management in Malaysia: The case of floods, in Sawada, Y. and S. Oum (eds.), Economic and Welfare Impacts of Disasters in EastAsia and Policy Responses. ERIA Research Project Report 2011-8, Jakarta: ERIA.503-551.

Coles, E. and Buckle, D. 2004. Developing community resilience as a foundation for effective disaster recovery, *The Australian Journal of Emergency Management*19(4): 6-15.

De la Poterie, A. and Baudoin, M.A. 2015. From Yokohama to Sendai: Approaches to participation in international disaster risk reduction frameworks. *International Journal of Disaster Risk Science* 6(2): 128-139.

Dorasamy, M., Raman, M. 2011. Information systems to support disaster planning and response: Problem diagnosis and research gap analysis, Proceedings of the 8th International ISCRAM Conference – Lisbon, Portugal, May 2011. (An ISI Conference Proceedings.

Dyer, J., L. C. Stringer, A. J. Dougill, J. Leventon, M. Nshimbi, F. Chama and S. Syampungani. 2014.Assessing participatory practices in community-based natural resource management: Experiences in community engagement from Southern Africa.*Journal of Environmental Management*137: 137–45.

Godschalk, D.R., Kaiser, E.J. and Berke, P.R. 1998. Integrating hazard mitigation and local land use planning in: R. Burby (Ed.) Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities. Washington DC: Joseph Henry Press.

Heijmans, A. 2009. The social life of community-based disaster risk reduction: origins, politics and framing. Disaster Studies Working Paper No. 20, Aon-Benfield UCL Hazard Research Centre, London: University College London.

Mercy Malaysia. Disaster reduction.http://www.myhealth.gov.my/en/development-disaster-management-disaster-victim-identification-dvi-malaysia/. [5 February 2018].

Development of Disaster Management and Disaster Victim Identification (DVI) In Malaysia.http://www.myhealth.gov.my/en/development-disaster-management-disaster-victim-identification-dvi-malaysia/. [2 February 2018].

http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN009661.pdf. Resilience refers to the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies. White House, "Presidental Policy Directive 8 (PPD-8)," March 30, 2011. Accessed on 7 Ferbruary 2018.

Hofmann, C. A. L., Roberts, J., Shoham, P. Harvey. 2004. Measuring the Impact of Humanitarian Aid. A Review of Current Practice. HPG Research Report 17. ODI, London.

Hussaini, Hj. A. 2007.'Flood and drought management in Malaysia', Speech Given on 21 June 2007, Ministry of Natural Resources and Environment, Malaysia, Kuala Lumpur.

Ibrahim Mohamed Shaluf. 2007. Disaster types. Disaster Prevention and Management 16(5): 704-717.

Jamilah Ahmad and HabibahLateh. 2016. Media and the environment in Malaysia: An analysis on news coverage of landslide disaster in Kuala Lumpur.*Malaysian Journal of Communication*32(2): 525-544.

Kathleen M. MacQueen, Eleanor McLellan, David S. Metzger, etc. 2001. What is community? An evidence-based definition for participatory public health. *Am J Public Health*. 2001 December; 91(12): 1929-1938.

Kelman, I. and Mercer, J. 2014. A knowledge integration tool for disaster risk reduction including climate change. In Lopez-Carresi, M., Fordham, M., Wisner, B., Kelman, I. and Gaillard, JC (Eds). Disaster Management: International Lessons in Risk Reduction, Response and Recovery, Earthscan: London.287-299.

Manyena, S.B. 2006. The concept of resilience revisited. Disasters, 30(4): 434-450.

National Security Council, Department of Prime Minister, Malaysia. Directive 20 (Reviewed version). 1997.

Quarantelli. E. L. 1991. Urban Vulnerability to Disasters in Developing Countries: Managing Risks. In Disaster Research Center, 25. Newark: University of Delaware.

Pearce, L. 2003. "Disaster management and community planning and public participation: How to achieve sustainable hazard mitigation". Nature Hazards, 28: 211–28.

Prasana Rosaline Fernandez, Lean, Mei Li, Khor and Yoke Lim. 2013. Media coverage: the Bukit Antarabangsa landslide. *Journal of the Southeast Asia Research Centre for Communications and Humanities*5(1): 35-55.

Reed, M. S. 2008. Stakeholder participation for environmental management: A literature review. Biological Conservation 141(10): 2417–31.

Rabiul Islam, RoslinaKamaruddin, SitiAznor Ahmad dan lain-lain. 2016. A Review on mechanism of flood disaster management in Asia.International Review of Management and Marketing 6(1): 29-52.

Roosli, R., & O'Brien, G. 2011. Social learning in managing disasters in Malaysia. *Disaster Prevention and Management: An International Journal*20(4): 386-397.

Samaddar, S., J. Choi, B. A. Misra, and H. Tatano. 2015. Insights on social learning and collaborative action plan development for flood risks mitigation: Practicing Yonmenkaigi System Method (YSM) in flood prone Mumbai.Natural Hazards, 75(2): 1531–54.

Shaw, R. 2006. Critical issues of community- based flood mitigation: Examples from Bangladesh and Vietnam.Science and Culture, 72(1/2): 62.

Thornley, L., Ball, J., Signal, L., Lawson-TeAho, K. and Rawson, E. 2015.Building community resilience: learning from the Canterbury earthquakes", *Kōtuitui: New Zealand Journal of Social Sciences Online*,10(1): 23-35.

Turoff, Hiltz, Banuls, Van Den Eede. 2013. Multiple perspectives on planning for emergencies: An introduction to the special issue on planning and foresight for emergency preparedness and management. Technological Forecasting and Social Change, 80(9): 1647-1656.

United Nations. 2006. International strategy for disaster reduction, available at: www.unisdr.org/

United Nations Development Programme. 2004. Reducing disaster risk: A challenge fordevelopment, Bureau for Crisis Prevention and Recovery, New York, NY.

UNISDR/WMO. May 2012. UN System Task Team on the Post-2015 UN Development Agenda.Disaster risk and resilience, Thematic Think Piece.
WHO/EHA. 2002. Disasters & emergencies definitions. Panafrican Emergency Training Centre, Addis Ababa.
Wisner, B and Walker, P.JC. 2005. The World Conference on disaster viewed through the lens of political ecology: A dozen big questions for Kobe and Beyond. Capitalism Nature Socialism 16(2):89-95.
Wondolleck, J. and Jaffee, S. 2000. Making collaboration work: Lessons from Innovation in natural resource management. Washington DC: Island Press.
Yodmani, S. 2001. Disaster Risk Management and Vulnerability Reduction: Protecting the Poor. Paperpresented at The Asia and Pacific Forum on Poverty.

Haliza Abdul Rahman
Institute for Social Science Studies (IPSAS)/
Department of Environmental and Occupational Health,
Faculty of Medicine and Health Sciences,
Universiti Putra Malaysia,
43400 Serdang, Selangor, Malaysia.
Email: dr.haliza@upm.edu.my

Submitted: July, 13, 2018
Accepted: August, 14, 2018