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The preliminary study of the role of islamic teaching in the disaster risk reduction (a qualitative case study of Banda Aceh, Indonesia)

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Abstract

The role of religion in the post-disaster has been recognized, yet its contribution to mitigate in pre-disaster stage is limited studied. This study identifies and analyzes the Islamic teaching as one of the aspects in the disaster risk reduction program in school and community. Qualitative data was gathered from observation and in-depth interview of community and school members in one of sub-district severely hit by tsunami 2004, in Banda Aceh, Indonesia. Result of study reveals that Islamic teachings are applied to explain the relationship between religion and natural disaster both in the school and community mostly in the post-disaster context instead of preparedness. In school, the religion-natural disaster relationship messages are focused on the stories of natural disaster in the Holy Quran, accepting natural disaster as God’s will and the importance to ask (Doa) protection to Allah. Such themes can be found in the text books, school walls and teaching processes in school. Islamic messages received by residents are mostly delivered from religious leader directly, mass media and public signboards. The contents are mostly conveying messages that disasters are as a test or a warning from Allah, natural disaster as a God’s will and wrath, and the need to improve beliefs (taqwa) on Allah. Although most of participants believe that disaster is as a God’s will, they believe that people should take a preparation action for the next disaster. The development of risk communication-based intervention should take into account the Islamic teaching to educate people to be more prepared for next disaster by discussing the interpretation of Holy Quran verses related to the natural disaster.

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Keyword: Islamic, teaching, religion, natural, disaster, god’s wrath;
1. Introduction

The role of religion in post-disaster such as reducing psychological its impact, religious-based organizations relief and assistance have been widely acknowledged. In fact, every disaster always causes the feeling of worry, uncertainty, sadness and distress of the survivors especially those who lost their lovely family members [10]. Religious-based relief organizations have been playing important role both in assisting survivors socially [27] and psychologically in building their life. There has been acknowledged that Holy Book contains explanation about the meaning of human sacrifice, life, death and life after death then connects to natural disaster events [2].

On the other hand, the increase in unpredictable natural disasters events for a decade has led to put the disaster preparedness as a central issue in disaster management. Despite such efforts to encourage people to take preparedness action, previous studies on natural disaster is that people neglect to take preparation for such disaster events [29 and 30]. The question is that can the religious teaching contribute to motivate people to be more prepared for disaster as the dominance of religious views that disaster is caused by God’s wrath?

Indonesia is a country valuing religion as a fundamental aspect in building the characteristic of its society and nation. In addition, it is also one of the most vulnerable countries to natural disasters ranging from earthquake, tsunami, flood, landslide, storm, drought and other types of natural disasters. As a country just establishing disaster management last decade focusing on the importance of disaster preparedness, Indonesia is facing problems on how to change misconception that natural disaster is as God’s wrath so people no need to take appropriate preparation. Previous study revealed that around 30% students in primary schools in Banda Aceh--adopted school-based disaster preparedness program--viewed that tsunami was caused by God’s wrath [1]. Other studies also found similar results that people tended to respond disaster based on the cultural and social belief instead of scientific explanation [18].

After struck by tsunami 2004, Indonesia has been massively developing public education to improve knowledge, awareness and preparedness about disaster [1]. Especially in Aceh, Indonesia, one of the regions that was suffered hit by tsunami, there were many programs developed by governments, international institutions, non-government organizations to address the lack of knowledge and awareness of people about disaster. Importantly, Aceh is one of Special Province in Indonesia applying Islamic rules (Shariah), investigations of Islamic teaching in relation to disaster is valuable. Unfortunately, for the best knowledge of author there is no research study focusing on the role of Islamic teaching in promoting people to increase the level of disasters preparedness especially in Indonesia. As the author is neither a theologian nor Islamic expert, this study should be viewed from the perspective of disaster management and it is expected to open discussion about the relationship between Islamic teaching and the natural disasters.

2. Natural Disaster and Islamic Teaching

Disaster mitigation and preparedness are central issue in disaster risk reduction. While the mitigation measures undertaken to reduce the impact of hazard before a disaster occurs, the preparedness is any activities related to anticipation of the hazard events. However, it is often difficult to distinguish the differences of mitigation and preparedness in practical. Mitigation includes structural and non-structural measures. Structural mitigation refers to the physical measurement to prevent the damages caused a potential hazard such as building codes and regulatory measures, relocation, construction of barrier, physical modification and treatment systems [5]. Non-structural mitigation measure is defined as the reduction of the risk through social modification such as regulatory implementation, increasing awareness and public education, non-structural physical treatment, environmental control and behavioral change. However, mitigation measures, especially structural approach tend “to be costly, disruptive, time consuming and in some cases socially unpalatable” [5].
On the other hand, preparedness refers to measures which taken before disaster occurs to ensure a proper response to the impacts of hazards. It can be done through “effective precautionary measures that ensure a timely, appropriate, and efficient organization and delivery of response and relief action” [5]. Preparedness is a mediate action to prevent such a potential hazard. Preparedness action such as developing hazard maps, preparing disaster kits in home, participating in emergency drills and involving in the early warning activities will reduce the loss of lives and injuries. This value of preparation is apparent especially when community encountering unpredictable disaster such as earthquake [29].

However, although a number of resources have been expended in an effort to promote behavioral preparedness, a common finding in research on natural disaster is that people fail to take preparation for such disaster events [6, 26, 29, 30, and 14]. There is complex reason why people neglect to take preparation including resources, perception of probability, direct experience of the disaster, proximity, likeability of disaster impact, cultures and religious beliefs [18 and 30].

Discussion of religion teaching related to disaster should look back at the history of conflict between religion and science [22]. Tension between religion and science has been historically starting since the development of modern science as religious leaders in Europe (geocentric) opposed to scientists such as Kepler, Galileo, Copernicus and Bruno [22]. Scientists argue that scientific methodology developed using empirical approach is not able to apply in religious context. However some argue that there has been a relationship between religion and science. Ian G. Barbaour [3], for example, proposes four typologies of science-religion relationship such as Conflict, Independent, Dialog and Integration. Conflict sees that science is an opposite of spectrum: theology and materialism. On the other hand, Independent refers to religion-science relationship as “complementary perspective”. While Dialog is associated with the relationship between religion and science as a comparison in approach, the Integration refers to the claim that there is a common core underlying elements between religion and science.

The relationship between religion and natural disaster connects with the concept of fatalistic view. This concept refers to belief that natural disaster is God’s will so people can do nothing [8 and 18]. In every disaster occurrence especially impact many people killed, debate whether a disaster is caused by God’s punishment or not has been raised. For example, after devastating tsunami 2004, several religious leaders gave opinion that Allah was angry with Aceh people abandoning Qur’an and Hadith [7]. As too other places, religious leaders voiced a direct connection between natural disasters and human sins such as in the case of the Japan Earthquake 2011 [13], Haiti Earthquake 2010 [24], Hurricane Katrina 2005 in USA [4], and recent disasters in Indonesia [25].

Islamic leaders who voice that disaster as God’s punishment due to human sin often referred to Holy Qur’an. Kosim [16] argues that in the Holy Qur’an indicates that natural disasters are as result of God’s wrath because people abandon the God’s message. There are mentioned in Holy Qur’an about stories of disaster such as earthquake (Al-A’raf/7:78, 91, 155, Al-Ankabut/29:37), floods (Al-Ankabut/29:14; and Saba’/34:16), stone rain (Al-A’raf/7:84; An-Naml/27:58), typhoon (Al-Haaqqah/69:6), drought and famine (Al-A’raf/7:130). All of the stories, according to Kosim [16], refer to how God gives punishment since humankind against God. He also refers another message in the Hadith (Islamic stories about Prophet Muhammad deeds and speeches) told by At-Thabrani, Al-Hakim and Al-Baihaqi explaining that “immoral deeds will result in God’s wrath” [16].

On the other hand, there are believers that natural disaster is a natural phenomenon instead of God’s punishment. They argue that Holly Quran acknowledges the importance of science and to encourage humankind to study about scientific phenomena [22]. For example, in Qur’an (Al-Jatsiyah) 45: 3-5, it is mentioned that:

“Within the heavens and earth are signs for the believers. And in the creation of yourselves and what He disperses of moving creatures are signs for people who are certain [in faith]. And [in] the alternation of night and day and [in] what Allah sends down from the sky of provision and gives life thereby to the earth after its lifelessness and [in His] directing of the winds are signs for a people who reason” [22 and 31].
According to Islamic experts [11], these differences of opinion concerning disaster and religion are as a result of the interpretation of Holy Qur’an. Komarudin Hidayat [11] explains that in the Islamic tradition the field of study on how to interpret the meaning of Holy Qur’an has been developed for a long time ago. There have been two different categories of interpretation of Qur’an language. The first is called muhkamat or “finite meaning” and the second is mutasybihat or “interpretable meaning” [21]. However, according to Nurcholis Madjid [21] this condition raises other problems. First problem is related to which is Qur’an’s verse that has the meaning muhkamat or mutasybihat. Second problem is whether we can interpret mutasybihat verse or not. Third problem is, for people allowing the interpretation, who is person has a right or a capability to interpret such verse.

However Hidayat [11] gives a fundamental and important idea on how to understand the religion language from the hermeneutic perspectives. He argues that any Holy book as representing God message to Prophet needs to be understood not only as text but also context. Therefore, human should interpret the meaning of language of merely based on the words stating in Holy book but it should be understood based on the social context when God’s messages transferred to the prophet.

In terms of Islamic teaching-disaster relationship, similar views have been supported by Ghafory-Ashtiany [8] where Islamic teaching can be guided to principally reduce the impact of earthquake by understanding Islamic views on disaster, nature, God will, God’s kindness and wrath and human life. This study concluded that God who is kind rather than wrathful encourage humankind to develop and use knowledge to improve humankind life [8].

Nasution [23] argues that in Holy Qur’an, there are many verses that encourage people to take preparation for disaster. For example Quran (Ali ‘Imran) 3:200 mentions that “O you who have believed, persevere and endure and remain stationed and fear Allah that you may be successful” [23]. Another need for preparation is mentioned in Qur’an (An’aam) 6:131 and (Al-Hasyr) 59:18. These verses can be interpreted that it is necessary for people living in the disaster-prone areas should be prepared from disaster. In addition, Nasution [23] explains that the early warning in disaster can also be found in Holy Quran (Asy Syu’ara’) 42:26.

In conclusion, although the previous studies have been limited focusing on the understanding of Qur’an verses-disaster management relationship, theoretical perspectives on how Islamic teachings view on science and natural disaster give us a framework to this study to investigate the Islamic teaching used in the disaster public education focused on the disaster preparedness.

3. Data and Method

This study is an exploratory qualitative research as the dynamics of social life from the point of view and experiences of the participants can be naturally further explored (Silverman 1997: 1-11, Clarke, cited in Gilbert 2001: 33) [9]. Direct observation and interviews were applied to gather data in sub-district, Aceh Province, Indonesia. The regions were chosen because based on the impact of the tsunami 2004, availability of disaster education program and prone- tsunami disaster areas.

To obtain qualitative data in-depth interview was conducted to tap participants and key informants feeling, opinion, view and response related to disaster and Islamic teaching. Interview guidelines were applied to directly gather people’s views and recalled experiences of the various questions addressed. Researcher also observed and documented the social setting [20] by staying and interacting with people in the village.

The data was collected from different characteristic of participants. Participants were chosen randomly representing the different characteristic of population. There were six students involving as participants consisted of two students from Junior High School (School A) and four schoolchildren from two Primary Schools (School B and C). Three teachers in represented schools were also interviewed to share their experiences in implementing the disaster education in schools.
For the community members, there were eight persons participated in this study living in three different villages. The characteristic of participants were school teacher (1 person), trader or shop-owners (2 persons), young man (1 person), farmers (2 persons) and religious leaders (2 persons).

Another data was obtained from the direct observation especially focusing on Islamic messages contained in the textbooks, school walls, signboard in public space, mosque and other media in different places. The method of analysis applied was a qualitative analysis approach. Data gathered from the transcript and notes concerning specific opinions, issues and topics relating to the aims and objectives of research are classified into themes and issues [19 and 28]. The themes which have been identified and discussed in the literature review and compared to the data which emerged were applied as a framework for analysis.

4. Participants’ Characteristic, Experiences on Tsunami 2004 and Religious Activities

All schoolchildren interviewed in primary school were fifth grade or about ten years old. Schoolchildren in school C experienced directly the tsunami 2004, since their house only about one kilometer from the beach. They were swept by big tsunami and saved after holding woods and others inflated debris that could save them. Although two schoolchildren B did not direct experienced the tsunami 2004, they saw how the water inundated their house causing they evacuated to safer places. Two participants from Junior High School were in 11 grades. Only one of them had experienced with tsunami 2004. Teachers in three schools did not directly experience due to several reasons. One of them did not stay in Banda Aceh and another two teachers lived in the safer places when tsunami happened in 2004.

Different from students and teachers experiences, most of the participants from community members were experienced with tsunami 2004, only two persons (farmer and religious leader) did not experience it. They who experience tsunami lived in less than one kilometer from the beach. When tsunami occurred, some of them were at home, however some were traveling to centre of Banda Aceh city to see the impact of earthquake damaging buildings close to the Baiturrahman mosque. Three participants were caught by tsunami in the beach and other just experienced big flooded in their areas. They were not aware that tsunami would happen after earthquake.

In terms of involvement in the religious activities, students and schoolchildren attend Special Class of Religion after school time in the Mosques located close to their houses. According one of teachers, in Banda Aceh, it is part of culture that parents send their children to go to Mosques to study religion such as reading of Holy Qur’an, history of Islam, how to perform an appropriate praying and other aspects. They also often involved in the religious events conducted in their community and schools such as Maulid Nabi (commemoration of Prophet Muhammad moving from Mecca to Medina), Idul Adha (Sacred Day), Ramadhan and other activities. Similar to the students, participants from community generally were active in the Islamic events carried out in their community. Several of them, for example, are members of Islamic congregation (pengajian) which conducts meeting every month in mosque.

5. Information Concerning Religion-disaster Relationship

In relating to source of information about natural disaster, participants were asked about how they got information (education) about natural disaster. All of students said that teachers and textbooks in school were main sources of information about disasters. In school A and B, as disaster theme have been integrated into curriculum (School-based Disaster Preparedness Program), most of the students and schoolchildren learned about disaster from textbooks, signboards and teaching processes in class. Because school B has not adopted disaster theme into curriculum, most of disaster topic taught in the form of training or special session by both teachers and facilitators from non-government organization. However, all of three schools conducted activities related to disaster education such as disaster drill, dissemination and extracurricular activities despite of different in frequency.
In terms of relationship between Islamic teaching and natural disaster, participants were asked about what source of information and the content message associated with Islamic teaching and disaster. Students and schoolchildren from school A and B mentioned that in the Textbook of Religion Subject there is explanation that natural disasters are told in Qur’an. For example, there are stories about prophet of Noah and the flood disaster. Another content of messages mentioned by students was the subject that explained that humankind should always remember to Allah and ask for protection only from Him. Another topic was although people hit by tsunami they should believe Allah and people must improve the quality of praying to Allah. This topic was also often taught by teachers or other persons disseminated about natural disaster in schools. However, based on the observation, in school A and B there were Islamic messages put in the walls or signboards although it was not quoted the Qur’an verses instead just referring the God power (see Figure 1).

Schoolchildren in school C said that explanation of the relationship between religion and natural disaster were acquired from some teachers when they conducted disaster training or dissemination in school. The messages that have been received from teachers or source of information were mostly similar focusing on the history of disaster in Holy Qur’an, the power of God and the need for always perform praying to Allah.

However students and schoolchildren also reported that religious leaders also acted as an important source of information about religion-natural disaster relationship. For example, they often heard in Friday sermon, religious regular meeting and other activities in mosques that tsunami is a test and warning people so people should change their behavior to avoid next tsunami.

On the other hand, participants from community members received information about natural disaster mostly from mass media. Television was the first media that informed about natural disasters. Newspaper and radio was the second and the third ranks of source information used. However, after tsunami 2004 they explained that some of them attended a workshop conducted by local government, NGO and other institutions. Since then, they have not get any specific information unless from mass media. A few of them received information about natural disasters regularly from workplace.

In terms of information about the religion-disaster relationship, participants from community members received information from religious leader directly (face to face) and from the mass media. According them, in every Friday Praying conducted in mosque, speaker often reminded the community to implement the Quran values in their daily live to avoid another disaster. Some of them also mentioned that some religious leader warned that tsunami was because of human sins. This message was also
conveyed in any Islamic events either in mosques or other places. Only a few of participants noticed a signboard quoted Quran verses placed in the tsunami monument, graveyard, mosques that found in the areas studied (see Figure 2). For example, in one of Tsunami Monument, it quoted Qur’an verse (Al-Baqarah: 286) “Allah does not charge a soul except [with that within] its capacity. …. "Our Lord, do not impose blame upon us if we have forgotten or erred…

6. Participants Views of Natural Disaster-Islamic Relationship

To obtain views of participants about their belief relationship between religion and disaster, they were asked about the cause of natural disaster especially tsunami that attacked their areas. Most of the students (schoolchildren) answered that natural disasters are caused by natural phenomenon. Some gave an example that tsunami was caused by the giant of sea wave triggered by earthquake. One student from school C however did not know how tsunami happened. However, they believe that any natural disasters or any kind of phenomenon are will of God. When they were asked whether tsunami is a test of human kind by God, most of them agreed. They also added that tsunami as one of Allah warning to the Moslem becoming close to Allah.

On the contrary of the students about the cause of tsunami, only two residents participated in this study knew about the cause of tsunami that triggered by earthquake. Most of them gave opinion that tsunami was caused by God’s will. Another residents expressed their opinion that the cause of tsunami was that God wants to test the patience of humankind. According to one of participants, tsunami was Allah’s warning. They reasoned that people became away from Allah. One of religious leaders said “you can see that mosques now are getting empty because people are reluctance to Sholat Jamaah (performing praying together”).

Interestingly, when both students and residents were asked that natural disasters are God’s punishment, most of them was disagree. They said that God would not allow children killed during tsunami if it was a wrath of God. However, schoolchildren agreed that tsunami was a warning or a test from Allah to humankind not to abandon the Allah messages represented by Qur’an and Hadith.

Other responses are related to the fatalistic view whether participants would prepare for disaster or not. All students and school children agreed that human should prepare for disasters. For example, one of junior school student mentioned that “although Allah will do anything to humankind, we have to make efforts and doa (praying)”. In line with their opinion about the cause of tsunami, most schoolchildren and students gave a list of what can be done to limit loss of live and injuries for tsunami. Some of their answers were not living in the beach areas, planting mangrove, building big dam (seawall), installing early warning system, educating people about tsunami and running to the evacuation route when earthquake occurs. Most of them also mentioned that the importance of preserving natural environment was one of the ways to protect from tsunami. However, some of schoolchildren also said that human should change misbehavior and back to the Allah’s way (religion) to prevent next disaster.

Similarly to school participants, most of the residents interviewed agreed that people should take preparation to prevent the impact of disaster. One of the participants said that in both Qur’an an Hadith mentioning that humankind should work hard and always ask to Allah in order to improve better life (protect for disaster). Only one resident said that “we should depend on God’s will (pasrah)”. However most of the residents did not know exactly what kind of preparation that people should do although some raised the importance of maintaining the natural environment. Several of them gave an opinion mostly from the religion’s point of view such as back to the Allah’s way, obey the command and avoid the forbidden things. They mentioned that tsunami and any natural disasters were Allah’s warning. People should increase their beliefs (Taqwa) to Allah to avoid the next disaster. Several of them, however, interestingly said that government should give the early warning to the people living in the beach areas.
7. Discussion

Students and schoolchildren understanding that tsunami regards as both a natural phenomenon and God’s will seem inconsistent and misunderstood about the relationship between religion and disaster. However, the logic of the way of their thinking should be viewed from the perspective of four typology of religion-science relationship proposed by Barbaour [3]. This way of students and schoolchildren thinking can be categorized as a non “Conflict Type” where religion and science regarded as complement, comparison in approach and integration. In different word, they believe that every phenomenon is God’s will and it can be explained logically by scientific methodology.

In addition, the understanding of students in relation to the cause of tsunami shows that there is an effective school-based disaster education as school A and B are a pilot project of School-based Disaster Preparedness Program adopting disaster theme into curriculum initiated by central government [17]. Promoting disaster knowledge based on scientific findings is important to correct misconception to understand and to respond natural disaster [8].

Findings support that Islamic values are applied to explain the relationship between religion and natural disaster both in school and community despite limited. This is consistent with Kunita’s [15] idea that religion has strategic and important position in some community in relation to understanding of natural disaster. Although the majority of participants do not accept the message as religious leaders echoed, the role of this religious leaders are very important to shape public attitude toward natural disaster. Religious leaders in Indonesia are perceived as educated people who have better knowledge about Islamic teaching [15]. Therefore, community members are dependent on the religious leader in all aspect of their life.

The domination of Islamic teaching in focusing on post-disaster instead of disaster preparedness stage is understandable as religion is a sensitive issue in Indonesia [21]. Another issue is that due to cultural barrier, Indonesians tend to avoid open discussion or debate that perceived to trigger conflict. Therefore open debate academically should be encouraged in the area of interpretation of Qur’an verses-natural disaster relationship.

In addition, mass media also play essential role in transmitting disaster viewed from the Islamic values such as radio and TV addressed by religious leaders. There has been widely acknowledged that mass media now can control our life including behavior [12]. Therefore, policy maker should take into account to involve different mass media in influencing people to take preparedness action.

The belief that natural disaster is caused by God punishment is not completely wrong [25]. There are many stories in Holy Book that tell us how a community was punished by God because they rebelled and be away from God. In Qur’an, for example, how Noah and his followers had been saved by God from flood disaster and destroyed the rest of people did not obey the Noah messages. However, the discussion should be opened to the interpretation behind the stories and connect with the need to encourage people more prepared for disaster.

Another implication of result of this study is that it is necessary to redefine the concept of fatalistic view on natural disaster. As demonstrated in this study, although people believe that natural disaster is caused by God’s will, people perceived necessarily to take preparation action to reduce the impact of disaster. As this study only limited involving participants, future study should be expanded by engaging different background of participants and more religious leaders to investigate their view about natural disaster-religion teaching relationship. Study on the interpretation of Qur’an verses in relation to natural disaster is very important.

8. Conclusion

This study reveals that Islamic views are applied to understand the relationship between religion and natural disaster both in school and community. Religion topic-disaster is taught both in text book and oral
teaching about Islamic values and disaster in school. Schools that have adopted School-based Preparedness Program, Islamic teachings have been integrated into text books despite of limited only in Religion Subject. Other media apply to put Islamic messages in school are school walls and signboards. The content of messages in school are mostly related to tsunami as God’s warning and test, stories of natural disaster and the importance of performing Doa. However, although students and schoolchildren believe that tsunami was God’s will, they argue that it is necessary to take preparation for disaster along with Doa.

Islamic teachings convey in the community are mostly in the form of oral communication instead of written one. Most of the participants receive the explanation of the relationship between tsunami and Islamic values when they attend religious activities such as Friday praying, religious regular meeting and other activities conducted in mosques. They also often receive information about the relationship between Islamic teachings and disaster from radio and TV delivered by religious leaders. However, only few know about signboards, tsunami monuments, graveyard that put Islamic messages related disaster in their areas. The most common messages received by residents are that disaster is God’s wrath, warning and test, human sins, accepting disaster as a fate from Allah and the need for returning to God’s way to avoid next disaster. However they agreed to take any action to cope with natural disaster supported by making doa to Allah.

Research findings show that tsunami disaster in association with God’s will exist in participants beliefs both in school and community although schoolchildren and students know that tsunami is natural phenomenon. However, such belief does not significantly affect people to fail to take appropriate preparedness for disaster. They believe that Islamic values encourage people to make efforts to improve their life including preventing the fatalistic impact of disasters.

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