

The Importance of Disaster Resilience Education and Awareness in Indonesia

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Abstract

Geographically placed across the Ring of Fire, Indonesia is one of the nations within the global that's at risk of catastrophe. In fact, in much less than 3 months of time Indonesia became hit through primary screw ups in exclusive places, specifically Lombok and Palu. And on December twenty third 2018 Indonesia became hit through a volcano tsunami in Pandeglang Regency, Serang, and South Lampung. Bearing this in mind, catastrophe mitigation is taken into consideration necessary. The key to lessen lack of existence and harm from herbal screw ups is considerable public focus and training. Therefore, constructing resiliency via catastrophe training needs to be accomplished. This studies examines the significance of catastrophe training and focus in Indonesia. The studies objectives to locate out and examine approximately: first, what efforts had been made through Indonesia in constructing catastrophe resilience. Second, the significance of constructing a subculture of catastrophe resilience and presenting catastrophe training for the humans of Indonesia. The end result from this studies isn't always equipped to stand catastrophe due to the dearth of training and focus concerning screw ups. The aim to be accomplished via training and catastrophe schooling is to decrease the danger of catastrophe impacts.

Keywords: catastrophe danger reduction, catastrophe training, resiliency, mitigation

Introduction

In his speech in Lombok on the occasion of the awarding of scholarships for college students affected by the catastrophe on October 18th, 2018, President Joko Widodo reminded Indonesian humans needs to be aware about herbal danger. According to him, the Indonesian vicinity that's geographically positioned across the Ring of Fire makes Indonesia as one of the nations withinside the global that is vulnerable to screw ups. Scientists themselves agree that the Ring of Fire is the most important and maximum lively fault line withinside the global [1]. This fault triggered greater than ninety percentage of earthquakes, volcanic eruptions, or even tsunamis at some stage in the global [2]. Indonesia, along with Chile, Japan, Solomon Island, Papua New Guinea, Mexico, Peru, Taiwan, The Philippines, and Guatemala are indexed into the maximum susceptible nations to herbal danger worldwide [3].

The screw ups that had simply occurred in much less than 3 months in Indonesia are concrete examples of the value of screw ups which could arise at any time in Indonesia. First, the Lombok earthquake with a electricity of 6.4 value that came about on July twenty ninth 2018 and claimed the lives of as many as 564 humans and injured as many as 1,584 humans [4]. Meanwhile 445,343 humans have been displaced and 149,715 homes have been reportedly damaged [5]. Then, earlier than the coping with of the Lombok catastrophe became absolutely finished, Indonesia became once more hit through an earthquake measuring 7.7 value and observed through a tsunami with waves as much as 6m excessive in Palu and Donggala that came about on September 28th, 2018. Disaster that came about in Palu and Donggala claimed as many as 2,113 deaths and four,216 humans have been injured [6]. The earthquake additionally triggered a phenomenon referred to as liquefaction, undermining and destroying as a minimum 1,747 homes in Balaroa and 744 homes have been destroyed in Petobo [7]. And then, three months later on December 2nd, 2018 Indonesia was hit by volcano tsunami in Pandeglang Regency, Serang, and South Lampung. According to Indonesia's Disaster Management Agency (BNPB) the demise toll reached 437, 14,059 humans have been injured, and sixteen humans have been missing [8]. The volcano tsunami damaged or destroyed 2,752 homes, ninety two villas and small shops, 510 boats, 147 vehicles, and one port [9].

The huge range of sufferers and losses is a trademark of the dearth of public and authorities preparedness in dealing with screw ups. This is exacerbated through the vulnerable coordination among establishments in catastrophe reaction, and the attitudes and behavior of the affected humans, which makes the catastrophe control method run very slowly. Therefore, similarly, to have an application for catastrophe control, Indonesia as a rustic with very excessive capacity for screw ups ought to additionally have an application for catastrophe training as an anticipatory degree. By presenting catastrophe training, it's far predicted that network preparedness in dealing with screw ups will increase. Disaster resilience might be acquired via training with the intention to form the mentality of a relaxed and orderly society all through a catastrophe. Through training there can also be an knowledge of the way to act correctly and now no longer endanger yourself or others. With this, it's far predicted that the lack of existence, non-public injuries, and harm shape screw ups may be decreased.

Hence, this studies will examine: first, what efforts had been made through Indonesia in constructing catastrophe resilience? Second, the significance of constructing a subculture of catastrophe resilience and presenting catastrophe training for the humans of Indonesia?

Research Methodology

This studies is using qualitative method. By definition, qualitative method is a studies method to locate an knowledge primarily based totally on particular studies techniques exploring the that means of human beings or social organizations on current problems [10]. Literature studies are the main source for collecting data and conclusions drawing on this studies. The method used consists of the theoretical method, the regulation method, and the conceptual method concerning the troubles discussed. This studies will use Disaster Management Theory and Mitigation Theory to examine the difficulty matters.

According to the regulation of The Republic of Indonesia Number 24 of 2007 regarding Disaster Management, catastrophe shall suggest an occasion or a sequence of activities threatening and demanding the network existence and livelihood, as a result of herbal and/or non-herbal in addition to human elements ensuing in human fatalities, environmental harm, lack of cloth possessions, and mental effect [11]. Therefore, disaster management is needed to response disaster ini Indonesia. Disaster management itself is a dynamic, continuous, and included method to enhance the best of steps associated with catastrophe statement and evaluation in addition to prevention, mitigation, early caution, emergency reaction, rehabilitation, and catastrophe reconstruction [12].

Disaster mitigation itself is a part of catastrophe control achieved earlier than a catastrophe takes place due to the fact the principle function of catastrophe mitigation is to lessen catastrophe danger, as may be visible withinside the following figure:

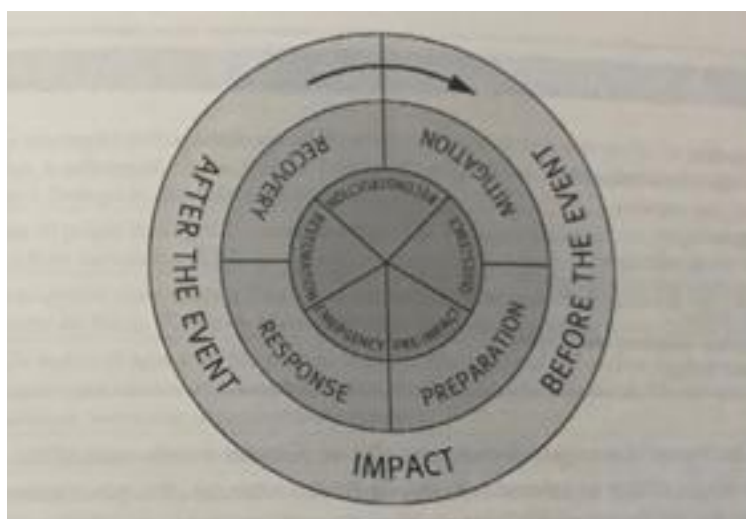


Figure 1. *Disaster Management Cycle [13]*

According to Law 24/2007, mitigation is described as a series of efforts to lessen catastrophe danger, via bodily improvement in addition to focus and progressed functionality to stand catastrophe threat. Departing from this definition, catastrophe mitigation is split into specifically: structural and non-structural mitigation. Structural mitigation is described as the bodily modifications or act of safety from screw ups [14]. In general, structural mitigation is the direct actions that people take, construct, or flow as a way to higher keep their existence and or property, for instance developing a sandbag barrier across the domestic whilst a flood would possibly arise.

Meanwhile, non-structural mitigation in emergency control includes what humans can do on a non-public degree that is now no longer structurally or bodily glaring as a shielding

defense [15]. Non-structural mitigation in standard could contain things such as insurance, a family emergency plan, any mental preparedness, schooling, insurance, discussion, and making plans. Regarding authorities policies in coping with screw ups, Indonesia has essential policies which are referred to, specifically regulation of The Republic of Indonesia Number 24 of 2007 Concerning Disaster Management and Presidential Decree Number 21 of 2008 on Disaster Management.

Results and Discussion

III.1. Disaster Resilience in Indonesia

In order to deal with catastrophe, network has to recognize the circumstance in their livelihood from herbal risks and danger capacity that surrounding the vicinity they stay in. Disaster resilience is the handiest viable manner for Indonesian humans to cope with, in preference to doing huge migration with the intention to be harming to prosperity, unity, and electricity due to gaps withinside the areas of Indonesia. Substantially, catastrophe resilience may be accomplished through giving the training for network to be aware about herbal risks. In the section of pre-catastrophe, a complete making plans is needed. The Government of Indonesia itself has created Disaster Resilient Village (Desa Tangguh Bencana - Destana) as a non-structural mitigation idea to construct a network that's aware about the screw ups. According to the Regulation of the Head of Indonesia's Disaster Management Agency Number 1 of 2012 regarding General Guidelines of Disaster Resilient Village, catastrophe resilient village is an unbiased village idea, in which the network is capable of use the assets they have, each human assets and herbal assets for use as a way to deal with screw ups of their vicinity. In different words, catastrophe resilient village became fashioned to construct network focus and preparedness associated with herbal screw ups withinside the vicinity they stay in.

To boost public focus, brochures, posters, games, museum exhibits, public provider announcement, and entertainment programming ought to be used [16]. Other than that, community planning and training additionally ought to be endorsed and contain all of the stake holders. Information and schooling ought to be accomplished and allotted to the network. Besides forming catastrophe resilient village and elevating public focus, the viable and strategic manner to construct catastrophe resilience is via training, each formal and casual training. Formal training can offer academic substances approximately preparedness, caution, and self-safety that ought to be allotted to faculties for use, specifically in kindergarten via junior excessive faculty. According to the studies performed through the Ministry of Education and Culture-National Disaster Safe Education Unit, catastrophe training packages have to be targeted on youngsters [17]. Teachers should be given training on integrating the substances into the everyday curricula so that everyone youngsters obtain the records they want to defend themselves from screw ups. Similar schooling tasks ought to be directed to instructors at day-care centres and preschools in addition to to caretakers of the elderly. These steps may also boost the extent of focus and preparedness at domestic.

Disaster education in faculty curricular has to be in line with the topography of every vicinity. Disaster training and schooling furnished have to cowl essential factors round catastrophe, inclusive of an advent to the capacity screw ups withinside the vicinity, the records of screw ups that had came about withinside the past, and the shape of anticipation that have to be given. It is predicted that with this, focus of the symptoms and symptoms of screw ups, the effect of screw ups for individuals, families, and groups, and the way to handle screw ups, and the way to store themselves from screw ups might be fashioned. Schools play a essential function in presenting primary records on herbal screw ups of their

network. Disaster training in faculty curricular may be used as a degree to emphasise the significance of decreasing catastrophe danger. These steps may also boost the extent of catastrophe focus and preparedness at domestic. In addition, a assembly factor whilst a catastrophe takes place have to be made, in order that catastrophe training that has been furnished may be powerful.

As mandated in Law 24/2007 regarding Disaster Management, the significance of catastrophe resilience training may be accomplished via formal and casual training. Informally, it could be accomplished via social establishments, network assembly boards or network organizations facilitated through applicable companies as supervisors or communicators of catastrophe problem. In formal training, faculties can offer extracurricular to train college students associated with catastrophe and what they must do whilst catastrophe strikes. In addition to right catastrophe training and schooling, vulnerability mapping and catastrophe vulnerability have to additionally be furnished. Indeed, via catastrophe training, it does now no longer suggest that the danger of the effect of a catastrophe may be decreased in order that it does now no longer motive an effect at all. However, the aim to be accomplished via training and catastrophe schooling is to decrease the danger of catastrophe impacts. In Indonesia alone, till now catastrophe training has now no longer entered the curriculum, handiest of Aceh and Nias whose faculties keep ordinary catastrophe simulations.

III.2. The Role of Disaster Education in Disaster Mitigation Efforts in Indonesia

“Education is essential and represents a priority, due to the fact if people don’t grow to be aware about catastrophe dangers, acquire the know-how necessary, and expand the perfect behaviour, attitudes and degree of involvement, they may now no longer be capable of save you them. It is essential for training to facilitate and make a contribution to the advent of a subculture of prevention and for the populace and groups to do so to put together for a catastrophe.” Zonia Luz Reyes Flores, Education School, National University of Trujillo La Libertad-Peru.

From diverse reports suggests that Indonesia has now no longer been capable of perform catastrophe control professionally, proportionally and holistically. At gift there may be handiest a sporadic and a second and it's also accomplished if a catastrophe has come about. The coping with is handiest confined to presenting help all through emergency reaction. Disaster training and focus have to grow to be the part of the faculty reports, studies, and projects. This contributes to the advent of a subculture of prevention which could result in decreasing catastrophe dangers and organising an interactive and mutual mastering method among the populace and the establishments [18]. This kind of process also helps recognize and make use of tradvertitional wisdom and local knowledge about safety towards herbal risks.

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As said earlier than, catastrophe training have to be concentrated on youngsters from kindergarten to junior excessive faculty. It is due to the fact faculties have an immediate effect on the more youthful technology and faculties have to instil cultural values and bring know-how to college students. Education takes on a pivotal function in decreasing screw ups and accomplishing human protection withinside the try to attain sustainable improvement. Previous reports have shown positive effects of training in catastrophe danger control. Children who've been taught approximately the phenomenon of screw ups and the way to react to the ones conditions have proved to be able to reply directly and correctly, thereby caution others and defensive themselves all through instances of emergencies. Disaster training in number one and secondary faculties allows youngsters play an essential function in saving lives and defensive network members. Children who're acquainted with herbal screw ups and the way to react in such conditions are successful of directly and well reply as a way to defend themselves and others alerting to capacity dangers. Organizing catastrophe training into the faculty curricular may be very beneficial in constructing focus of the difficulty withinside the network. The teacher's function is in pre-catastrophe, in order that catastrophe training sports may be planned, directed, dependent and measurable. Students may be knowledgeable with the person of catastrophe reaction and the person treats nature nicely and well. The goals of mastering catastrophe training in faculties are [19]:

- a. Form awareness of students on disaster from an early age with awareness of saving the environment and its consequences so that awareness of the environment is built and getting to know natural phenomena that cause potential disasters.
- b. Create a strong and sustainable foundation in disaster risk reduction (DRR), so that disaster resilience can be realized.
- c. Help in rescue and preparedness in facing disasters.
- d. Educate students about psychological impact of people affected by disasters.
- e. Introduce areas that have the potential to be affected by disasters.
- f. Form social bonding and a sense of shared social responsibility.

Other than that, the abilities that should be cultivated in disaster education include [20]:

- a. Ability to learn and act.
- b. Ability to predict and prepare for the future.
- c. Ability to act independently and save one's life.
- d. Ability to use and share information.
- e. Ability to connect and cooperate with others.
- f. Ability to make better proposals.

Meanwhile, catastrophe focus is used to attain catastrophe danger reduction. Public focus will assist a network to be resilient of screw ups. Increasing public focus approximately herbal risks and the danger they pose to the network has grow to be one of the 4 key goals of the International Strategy for Disaster Reduction (ISDR). When the network is aware about the herbal screw ups, they're possibly to stand withinside the future, they may realize what to do to put together themselves whilst catastrophe takes place. They ought to realize what arrangements to make earlier than catastrophe takes place, what to do whilst catastrophe strikes, and what moves to soak up its aftermath. Equally essential, public officials, the media, and network have to be completely organized to reply effectively, responsibly, and quickly to large-scale herbal emergencies. They want to be aware, in advance, of methods to observe in a disaster that threatens to paralyze the complete network they serve, and that they want to realize the way to talk correct records to the general public all through a herbal catastrophe. In phrases of catastrophe training in Indonesia, the coordination among network, media, corporate,

authorities, Indonesia Disaster Management Agency, and Indonesian National Armed Forces (TNI) have to be reinforced to offer powerful catastrophe training. Indonesia Disaster Management Agency itself can shape a cellular schooling crew to teach and to present an training for neighborhood authorities along with TNI. Training and simulation that related to all of the additives of the society additionally may be accomplished to present network the records they want concerning catastrophe or capacity danger of their neighbourhood.

Conclusion

Indonesia as one of the catastrophe-inclined nations isn't always equipped to stand screw ups. It is due to the fact mentality and know-how in dealing with screw ups are nevertheless lacking. Thus, catastrophe training may be very essential as a provision for the network in dealing with screw ups withinside the future. Organizing catastrophe training into the faculty curricular may be very beneficial in constructing focus of the trouble withinside the network. Students may be knowledgeable with the person of catastrophe reaction and the person treats nature nicely and well. Disaster resilience training and focus packages must be made as a country wide priority. Even tough via catastrophe training it does now no longer suggest that the danger of the effect of a catastrophe may be decreased in order that it does now no longer motive an effect at all. However, the aim to be accomplished via training and catastrophe schooling is to decrease the danger of catastrophe impacts.

References

- Henden, Amalie, "Ring of Fire Map: Countries in the Ring of Fire - Why So Many Earthquakes Right Now?" *express.co.uk*, 2018.Ibid.
- Ibid.
- Krisna, Nila, "Korban Meninggal Gempa Lombok Terus Bertambah, Kini Jadi 564 Orang," *liputan6.com*, 2018.
- Ibid.
- Hadi, Syaiful, "Jumlah Korban Tewas Terkini Gempa dan Tsunami Palu 2.113 Orang," *nasional.tempo.co*, 2018.
- NY Times, "Indonesia Earthquake Tsunami Liquefaction," *nytimes.com*, 2018.
- Merdeka, "Update Jumlah Korban Tsunami Selat Sunda 437 Meninggal 14059 Luka 16 Hilang," *merdeka.com*, 2018.
- Ibid.
- Creswell, John 2014 *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage Publications Inc.
- Law of The Republic of Indonesia Number 24 of 2007 Concerning Disaster Management, Article 1.
- Khambali 2017 *Manajemen Penanggulangan Bencana*. Yogyakarta: CV Andi Offset.
- Coppola, Damon 2015 *Introduction to International Disaster Management*. Oxford: Elseiver.
- Penn State, "Mitigation Structural and Non-Structural," *sites.psu.edu*, 2015.
- Ibid.
- National Research Council 1991 *A Safer Future: Reducing the Impacts of Natural Disasters*. Washington DC: The National Academies Press.
- Sekretariat Nasional 2017 *Satuan Pendidikan Aman Bencana 2017 Pendidikan Tangguh Bencana: Mewujudkan Satuan Pendidikan Aman Bencana di Indonesia*. Jakarta: Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia.
- Bernal, Lincoln Alayo, "Disaster Education," *preventionweb.net*, 2019.

Honesti, Leli and Nazwar Djali, “Pendidikan Kebencanaan di Sekolah-Sekolah di Indonesia Berdasarkan Beberapa Sudut Pandang Disiplin Ilmu Pengetahuan.” Jurnal Momentum Vol. 12 No. 1 pp 51-56, 2012.

Shirata, Katsumi 2011 The Role of Education for Natural Disasters. Tsukuba: University of Tsukuba.