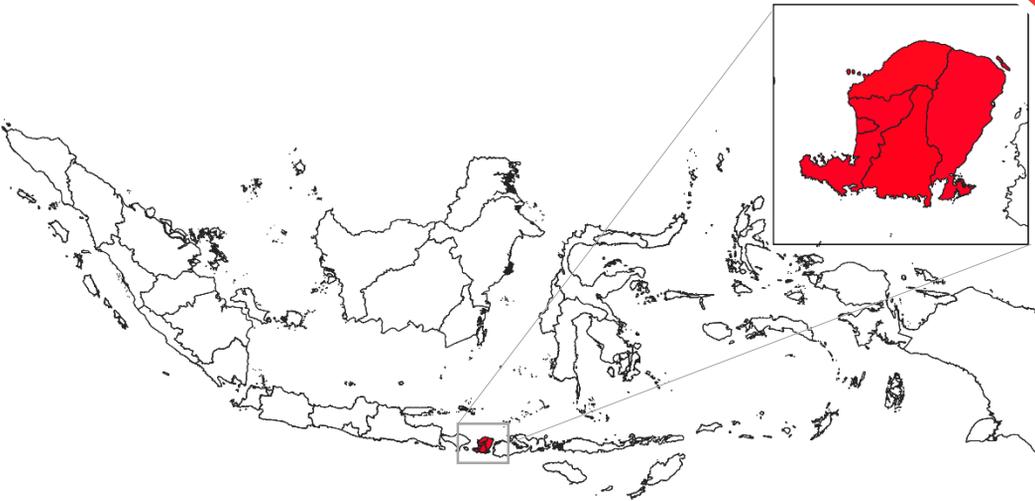


EARTHQUAKE IN LOMBOK, INDONESIA



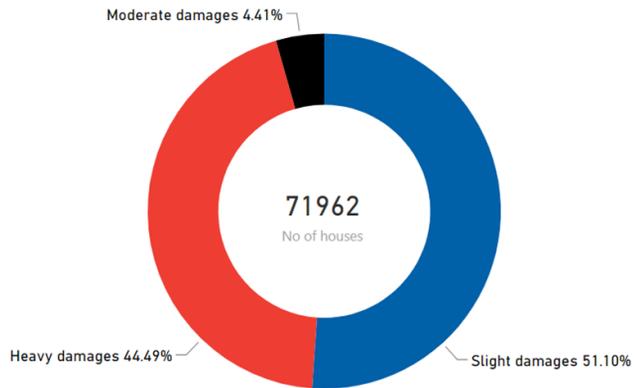
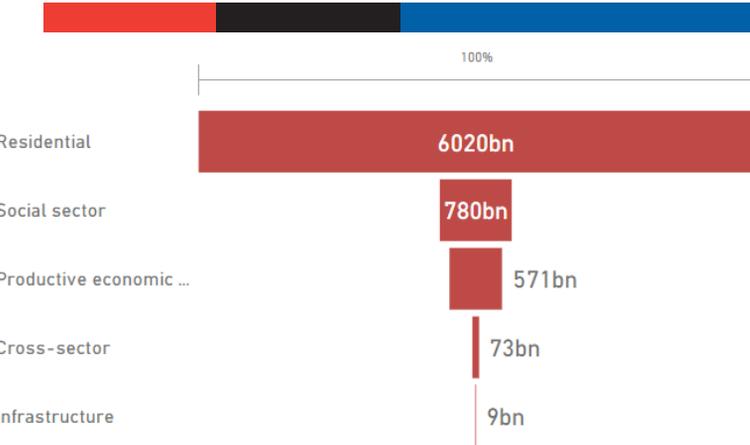
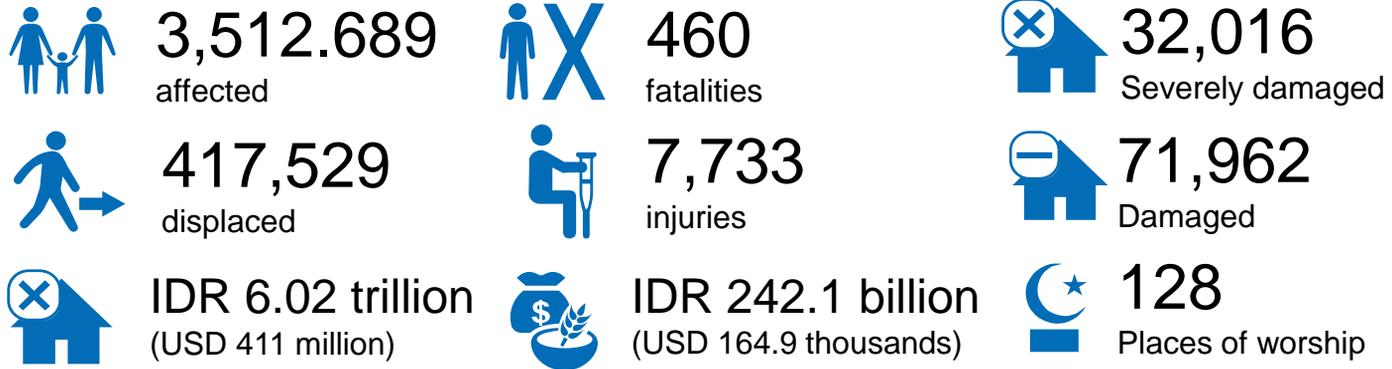
ONE ASEAN
ONE RESPONSE

M 6.4 Lombok Earthquake (29 July 2018) &
M 7.0 Lombok Earthquake (5 August 2018)

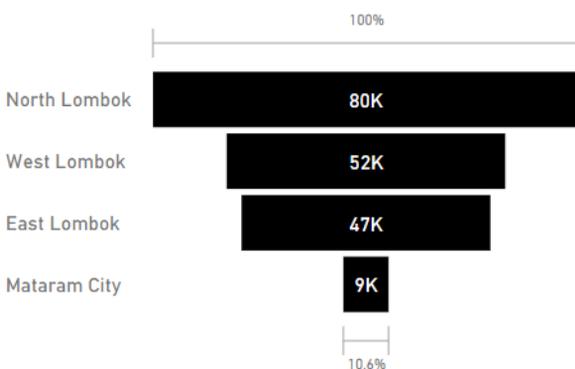


Affected areas:

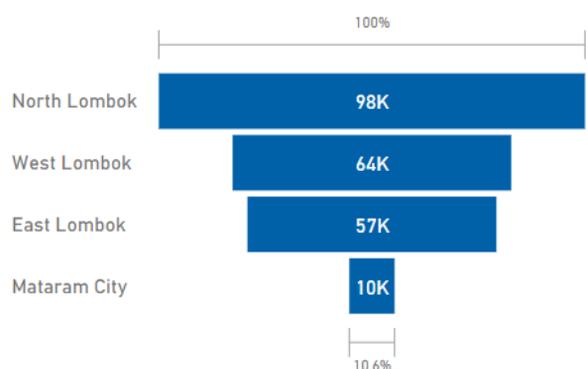
- Central Lombok
- East Lombok
- Mataram City
- North Lombok
- West Lombok



Breakdown of Males



Breakdown of Females



 <p>ONE ASEAN ONE RESPONSE</p>	<p>SITUATION UPDATE No. 7 M 6.4 Lombok Earthquake (29 Jul 2018) & M 7.0 Lombok Earthquake (5 Aug 2018), INDONESIA <small>adinet.ahacentre.org/reports/view/1249 https://reliefweb.int/disaster/eq-2018-000122-idn</small> Thursday, 16 August 2018, 11:00 hrs (UTC+7)</p>	<p>No. 7</p>
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This situation update is provided by AHA Centre for the use of ASEAN Member States and relevant parties among ASEAN Member States. The information presented is collected from various sources including but not limited to ASEAN Member States, UN, IFRC, INGOs, & News Agencies.

1. HIGHLIGHTS

- a. Series of moderate and strong earthquakes have rocked cities and regencies in Lombok Island, West Nusa Tenggara (NTB) since 29 July 2018; i.e. with the strongest shocks recorded M 7.0 (5 Aug), M 6.4 (29 Jul), and M 6.2 (9 Aug). Although the tremors were also felt in neighbouring province of Bali, only NTB Province declared emergency response status.
- b. NTB Governor has extended the emergency response period, effectively from 12 to 25 August 2018. The purpose of this extension is to further evacuate affected people from hazardous areas at risk and prevent collateral disasters, as well as to ensure access to national government supports and resources.
- c. As of 13 August 2018 (13.30 hrs UTC+7), National Disaster Management Authority ([BNPB](#)) has verified an overall fatalities of 436, 1,353 people injured (all levels of injuries), and 352,793 people displaced. An updated assessment has been conducted and identified around IDR 5.4 billion (\pm USD 368 million) in economic damage and loss. See Section 3 for breakdown information on disaster impact.
- d. **The Government of Indonesia through the BNPB maintains the position that that international assistance is not required.** BNPB has also encouraged all agencies and organizations based in Indonesia not to invite their international partners. Individuals who are keen to offer assistance are advised only to travel should official permission be granted, the Government of Indonesia maintains the right to refuse entry for individuals into disaster-stricken areas.
- e. [President Joko Widodo visited the affected areas](#), command post, and national assisting post (*Pospenas*) in North Lombok Regency on 13 August 2018. Section 4 describes the commitment of Government of Indonesia following the visit.
- f. A handover for the second sortie was done on 15 August 2018 with additional family tents (178), family kits (192), and personal hygiene kits (420). The second sortie which arrived on 14 August complemented the first sortie that arrived on 13 August comprising of a Mobile Storage Unit and family tents (172). Deployment for a third sortie to deliver the remaining items is currently being arranged. This include hygiene kits (380) and family kits (108).
- g. The AHA Centre In-Country Liaison Team (ICLT) and ASEAN-ERAT have facilitated the reception to incoming ASEAN relief items. In addition, they have supported the establishment of the MSU at Selaparang Airport (AMI), as the primary entry of domestic relief items from various locations in Indonesia.
- h. Please refer to our previous flash updates on this disaster at <https://ahacentre.org/flash-updates/>, and series of situation updates at <https://ahacentre.org/situation-updates/>

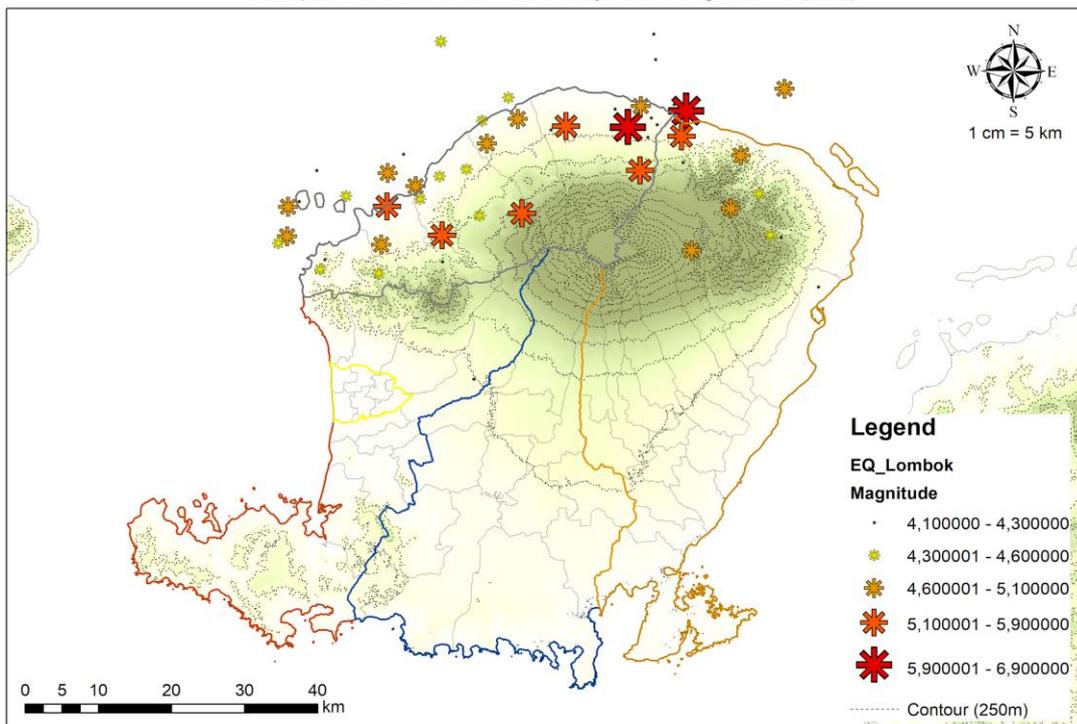
2. SUMMARY OF EVENTS, FORECAST, AND ANTICIPATED RISK

- a. Geological Analysis of Lombok Earthquakes have been conducted by KESDM (Ministry of Energy and Mineral Resources). The series of earthquakes is caused by subduction of the Indo-Australian plate which causes activity to rise behind the fault lines of Flores. The 3 strong earthquakes recorded between 29 Jul and 9 Aug 2018, were due to release of stress resulting in a major thrust along the fault lines. BMKG has also released the [results of survey and field mapping](#) using temporary data between 29 Jul and 13 Aug 2018.

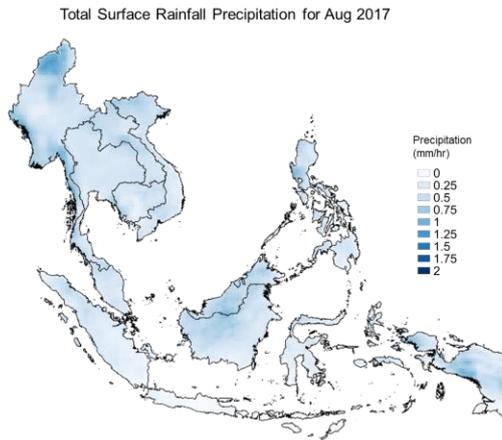


- b. BNPB in collaboration with Qlue, a social media application, which allows emergency responders (volunteers, Government Officials, NGOs) to upload the data and the location directly to the application. Qlue is also partnering with Indonesian Armed Forces Cyber Unit, Indonesian Amateur Radio Organisation (ORARI), Islamic University of Mataram, Humanitarian Forum Indonesia, Catholic Relief Services (CRS), Indonesian Search and Rescue (BASARNAS) and BNPB Social Service. As of 14 August 2018, it was recorded that 366 locations, 238 volunteers, 9.854 displaced and 52 active volunteers are reported through Qlue.
- c. There has been 50 shocks reported of M4.1 and above between 1 Jul and 14 Aug 2018. Most of the shocks were experienced in North Lombok Regency and East Lombok Regency with 17 districts directly experiencing the stronger shocks. These reported shocks were scattered with some recorded in higher altitudes. Further shocks may increase the risk of landslides which could affect logistical access.

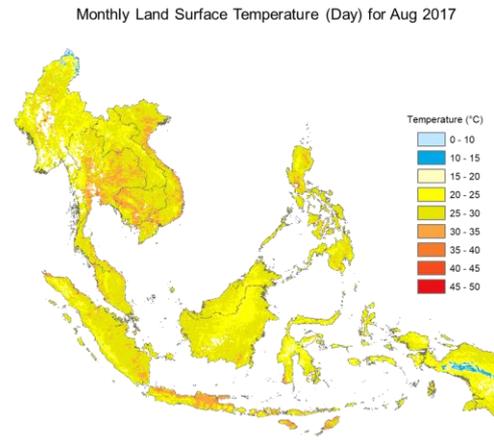
Earthquakes in Lombok between 1 July and 14 August 2018 (UTC)



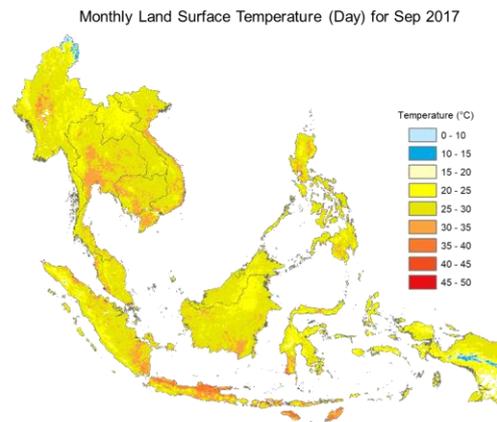
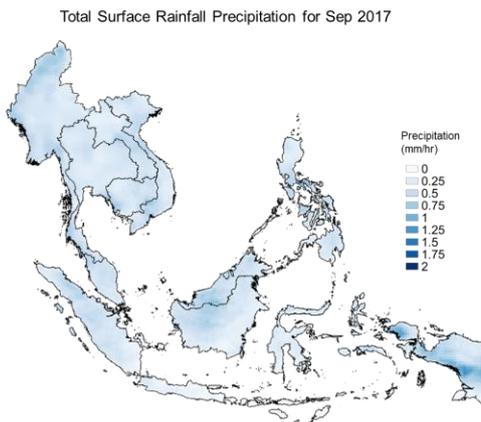
- d. It is currently hot and dry in Lombok, Bali and Sumba islands. A drought occurrence was identified in Lombok and Sumbawa islands of West Nusa Tenggara (NTB) Province since rainfall record is only around 0-20 mm. The total clean water needs for affected population has to be projected through consideration of the rainfall pattern within the region.
- e. Based on remotely sensed data from 2017 of the region obtained from NASA Sensing Mission, the dry and hot weather is likely to continue through to September. However, caution has to be taken when interpreting trends from such data as it has to be triangulated with physical weather data collected on the ground. Nonetheless, understanding this trend allows responders to exercise better water management throughout this emergency to ensure that relief efforts can ensue.



Data Source: TRMM 3A26 Monthly Total Surface Rainfall



Data Source: MODIS MOD11C3 Land Surface Temperature/Emissivity Monthly



- f. Based on the field call with responders and with the number of houses damaged, there is a potential risk of exposure to **asbestos**. Damage to material containing asbestos can result in the release of small asbestos fibres that become airborne and are readily inhaled. Although asbestos is not acutely hazardous to health, the asbestos fibres can remain in the lungs for a long period of time causing diseases such as asbestosis and lung cancer.
- g. The national health cluster reported cases of diarrhoea and chicken-pox in North Lombok Regency. Humanitarian workers on the ground would have to take note of these infectious diseases to break the chain of transmission.

3. ASSESSMENT OF DAMAGE, IMPACT, AND HUMANITARIAN NEEDS

- a. As of 15 August 2018 (1845 hrs UTC+7), National Disaster Management Authority ([BNPB](#)) has verified an overall fatalities number of 460. 7,733 people reported injuries (959 seriously injured and hospitalized, 6,774 slightly injured or received outpatient treatment). A total of 417,529 people displaced were displaced in evacuation points. Out of the total affected people that exposed to strong tremor V-VIII MMI (3,512,689 persons) in Lombok Island, around 11.9% were still displaced (417,529 persons) displaced. The number of displaced people decreased as some had decided to return to their houses during daytime and return at night time to evacuation sites ([BNPB](#)).

An updated assessment was conducted and identified around IDR 7.45 trillion (\pm USD 510 million) in economic damages and loss. BNPB estimated this amount based on damage and loss data verified on 13 August 2018. The actual economic damages and losses is expected to be potentially greater than the current estimated amount ([BNPB](#)). The majority of economic loss recorded is due to housing damages, i.e. around IDR 6.02 trillion (USD 411 million) followed by infrastructure sector of IDR 9.1 billion (USD 622,531). Economic loss in productive sectors are around IDR 570.55 billion (USD 39 million), while social and cultural is estimated around IDR 779.82 billion (USD 53 million), and cross-sectorial around IDR 72.7 billion (USD 4 million). Regarding loss to productive sectors, potentially it is still estimated direct loss, while indirect and opportunity losses have yet to be calculated. The housing sector is the biggest contributor to the damage and losses due to disasters which reached 81 percent.

As of 15 Aug 2018 1845hrs (UTC+7), initial damage assessment reported were 32,016 houses were severely damaged, 3,173 houses were moderately damaged and 36,773 houses were slightly damaged. There were also damage to 52 health facilities (1 hospital, 11 health centres, 35 auxiliary health centres, 4 village maternity huts, 1 pharmacy building), 128 religious facilities (115 mosques, 10 temples, 3 pelinggih), 20 office units, 6 bridge units and roads - the road was damaged and collapsed due to the earthquake. The table below provides recent information on affected population in each regency/city, which have been verified by Command Post for Lombok Earthquake.

Table 1. Casualties due to Lombok Earthquake*
(Correct as of 15 Aug 2018, 1845 UTC+7)**

Location	East Lombok Regency	North Lombok Regency	West Lombok Regency	Central Lombok Regency	Mataram city
Parameter					
Affected population (exposed to earthquake intensity V-VIII MMI)	1,192,110	218,533	685,161	939,409	477,476
Population displaced (BNPB)	104,060 (8.73%)	178,122 (81.5%)	116,453 (17.0%)	<i>Data collection in progress</i>	18,894 (3%)
<i>Male (to be updated)</i>	<i>46,827 (48.3%)</i>	<i>80,155 (54.2%)</i>	<i>52,404 (50.3%)</i>		<i>8,505 (41.6%)</i>
<i>Female (to be updated)</i>	<i>57,233 (51.7%)</i>	<i>97,967 (45.8%)</i>	<i>64,049 (49.7%)</i>		<i>10,391 (58.4%)</i>
Families displaced <small>(estimated based on average family size in each city/regency of NTB, BPS)</small>	22,981 <small>(avg family member: 3.41)</small>	38,106 <small>(avg family member: 3.60)</small>	33,375 <small>(avg family member: 3.56)</small>	<i>N/A</i>	5,018 <small>(avg family member: 3.66)</small>
Fatalities	12	396	39	2	9
Serious injuries	47	248	210	2	63
Light injuries	95	392	189	18	89
Damaged buildings					
Heavy damage	2,938	12,546	11,925	9	110
Moderate damage	0	0	0	722	25
Light damage	2,853	5,328	11,701	4,036	619
Initial estimation of economic damage &	IDR 417.3 billion /	IDR 2.7 trillion /	IDR 1.5 trillion /	IDR 174.4 billion /	IDR 242.1 billion /

loss (BNPB)	USD 284.5 thousands	USD 184 million	USD 102 million	USD 118.9 thousands	USD 165 thousands
Severely damaged houses	4,772	14,841	12,193	9	110
Moderately damaged house	0	1,841	547	722	25
Lightly damaged house	10,912	8,307	12,806	4,036	619

* Consolidated from most recent release from [BNPB](#) and Lombok Earthquake Command Post

**Assessment and verification processes are still ongoing

Current need for protection and immediate access to proper temporary shelter is high for North Lombok Regency, followed by West Lombok Regency, East Lombok Regency, and Mataram city. Initial recovery needs are also indicating a similar pattern.

- b. Based on the latest update from the Health Crisis Centre of the Ministry of Health (MoH) issued on 14 August 2018, vulnerable populations include 59,603 pregnant women, 72,582 infants, 213,724 toddlers and 304,526 elderly. For patients seen as inpatient and outpatient in 6 out of the 18 functional hospitals, these account for 959 and 6,774 persons, respectively. The common diseases and health conditions seen in East and North Lombok include skin disease, acute respiratory tract infection, wounds, fractures, joint pain, hypertension, fever, body malaise, diarrhoea, influenza and dysentery. Other growing concerns include the increasing need to ensure the proper nutrition of infants and children, health workforce fatigue and aftershock-related anxiety and fear.
- c. The Government of Indonesia has **urged the need to avoid donating formula milk** for new-borns and children under 2. Providing formula milk to toddlers and children will increase the likelihood of diarrhoea and adversely affecting the health outcome of the individual. General public/institutions/volunteers that are working in the emergency response **are advised not to distribute any formula milk donation and other baby products**, such as baby bottles, pacifier, without approval from the local health agency. Breastfeeding mothers should be given support and practical assistance so that they are able to continue giving breast milk. Should there be exceptions, the feeding of these children would have to done under tight supervision of the doctors.
- d. Following the activation of Sentinel Asia platform and Disaster Charter, until 11 August 2018, five remote damage assessment activities through aerial survey and satellite observation have been completed: 1) by Indonesian agencies (BNPB, BIG, BPPT, and PVMBG); 2) by UNITAR-UNOSAT following the M 7.0 earthquake; 3) Regional Service of Image Processing and Remote Sensing (SERTIT), Government of France; 4) various observations made by data provider nodes and data analysis nodes of Sentinel Asia; and 5) DigitalGlobe. All observations identified at this point are of various locations, and thus can be complementing each other. Images available for Lombok are available in AHA Centre's [Situation Update #2](#), [Situation Update #3](#), [Situation Update #4](#), and [Situation Update #5](#). There were no additional observations published as of 13 August 2018, although the AHA Centre took note

that at least seven UAV teams from various national government agencies and organizations are planning to conduct aerial surveillance starting in this week.

In parallel, 14 out of total 52 villages affected have been assessed remotely / with around 3,081 buildings potentially damaged. Those villages (except for Gili Indah) were also identified by BNPB as isolated areas requiring immediate assistance. Damages identified through aerial surveillance and satellite observation are largely targeted at **a total collapse** where destruction to roof and structure of buildings are clearly identified from satellite images and/or captured aerial imagery. Based on the field call with ASEAN-ERAT and BNPB team on the ground, some of the damages identified and verified on the ground include those light damages; i.e. where the roof of the building remains, but with structural damages. Therefore, potentially the number of collapsed houses/buildings, at this point, is assessed to be more than 3,000 whereas the total damaged buildings (all level of severity) is more than 67,000 (BNPB). The most recent consolidated information matrix on remote assessment activities (aerial surveillance and satellite observations) following the M 6.4 and M 7.0 Lombok Earthquake can be retrieved from [the AHA Centre' Situation Update #5](#).

4. ACTIONS TAKEN AND RESOURCES MOBILISED

Response by Government of Indonesia

- a. [President Joko Widodo](#) visited the affected areas of Tanjung District in North Lombok Regency as well as the Command Post and National Assisting Post near the regent office on 13 August 2018. The President was accompanied by NTB Governor and Ministry of Public Works and Housing.
- b. Stimulation funds to rebuild houses will be disbursed to BNPB by the Bank Rayat Indonesia (BRI) for 1,191 beneficiaries. The total assistance provided is worth IDR 59.5 billion (USD 4.1 million). Data collection and verification of the damage assessment will be carried out jointly by the Ministry of Public Works and Housing with the local BPBD of the regency or city ([BNPB](#)).

- c. For the initial stage of early recovery, the Government is committed to rehabilitate houses of around 1,000 families. Government through Ministry of Public Works and Housing will provide reconstruction fund of around IDR 50 million per family for those who sustained heavy housing damages; IDR 25 million per families for those who sustained moderate housing damages; and IDR 10 million per families for those who sustained light housing damages. Government will also ensure the availability of essential building materials while monitoring the market price.



- d. Meanwhile, rehabilitation and reconstruction of public facilities, e.g. hospitals and schools, will be carried out by the government with initial starting time within the next two weeks ([BNPB](#)). This initiative ensures that the affected population return to normalcy which will raise overall community resiliency.
- e. National government agencies are committed in fully supporting the efforts of NTB Provincial Government in both emergency response and recovery, which includes resource mobilisation, logistics, funding, equipment, management, and personnel support ([BNPB](#)).
- f. The Government has also been tasked to help the community in rebuilding their homes using a Simple Healthy Instant House (RISHA) developed by the Research and Development of Ministry of Public Works and Housing. This technology uses a modular system which is easy to install and takes a shorter time to construct compared to conventional methods ([BNPB](#)).
- g. Emergency class tents / emergency schools will be built soon for resumption of classes. This initiative allows students to return to school and disaster education will also be added as an added subject to their curriculum in order to raise awareness.
- h. Ministry of Education and Culture has updated the statistics of the damaged education infrastructures as follows: (i) nursery and kindergarten (124 units); (ii) elementary school (341 units); (iii) junior high school (95 units); (iv) senior high school (55 units); (v) vocational school (50 units) and (vi) special education school (6 units). Based on the need assessments, 278 emergency school tents and 278 school kits are needed for the affected population.

The most affected Regency for the education sector was Northern Lombok Regency with 221 schools were affected, followed by Central Lombok Regency (141 units); Western Lombok Regency (140 units); Eastern Lombok Regency (77 units) and City of Mataram (75 units). The education infrastructure in some areas outside Lombok were also affected by the earthquake, namely: Denpasar (9 units). Karangasem (5 units) and Western Sumbawa (3 units).

Emergency response priorities for the education sectors are: (i) distribution and establishment of emergency class tents; (ii) distribution of school kits; (iii) psychosocial support and Aryo Belajar Campaign; (iv) Emergency School support and (v) Education post management for Multi-stakeholders coordination.

Based on Suara NTB newspaper on 11 August 2018, President Joko Widodo has instructed the Government Officials to build emergency school. The Ministry of Education and Culture will also provide assistance amounting to IDR 229 billion.

- i. Redevelopment will be carried out across 5 sectors, namely the 1) housing sector, 2) infrastructure, 3) productive economy, 4) social and 5) cross-sectoral which requires trillions of rupiah. Therefore it would be impossible to charge it to the local government. Most of the funding will be allocated by the central government. Assistance from the business community and society is also very much needed for this recovery and returning to normalcy. The rehabilitation and reconstruction process is planned and will be carried out over 2 years.
- j. Given that tourism is a mainstay for the affected region, it is imperative to equip tourists with the necessary knowledge and understanding of the hazards and potential risk of disaster. Reconstruction efforts would also require buildings to be built in accordance to the earthquake resistant construction standards. Tourism

facilities will also have to be equipped with disaster mitigation strategies, procedures, infrastructure and education for visitors. Hotel and lodging facilities which are reinforced to be earthquake resistant could serve as evacuation shelters should tsunami warnings be activated.

- k. Following this disaster, the Lombok community must be continuously educated on the potential threat and risks of disaster in their region. This would also have to be done in conjunction with readjustment of hazard maps to strengthen the disaster education for the community.

Response by the AHA Centre

- a. The AHA Centre is in close coordination with the BNPB of Indonesia, providing support on information management and dissemination of information to regional and international stakeholders both at headquarter and field levels. This includes inclusion of official BNPB products and information into the AHA Centre Situation Update. The AHA Centre ICLT was dispatched by the AHA Centre to Lombok Island on 6 August 2018 for supporting on-site coordination.
- b. All ASEAN-ERAT members commenced their deployment between 8 and 9 August 2018, and concluded their deployment on 15 August 2018. While BNPB had welcomed ASEAN-ERAT, whose primary deployment purpose was to learn from Indonesia's experience in managing the disaster and obtaining exposure on the ongoing emergency response operation. Subsequently, ASEAN-ERAT has completed the task of conducting damage assessment in 17 sites in Gunung Sari and Batu Layar districts, West Lombok Regency, together with local BPBD and BNPB team. Furthermore, ASEAN-ERAT had also provided BPBD of West Lombok Regency and BNPB with an evacuation plan for the evacuation sites in the regency. All data and recommendations from ASEAN-ERAT were submitted to Command Post in West Lombok Regency and National Assisting Post (*Pospenas*) as part of the effort to provide an overall understanding of damages, impact, and humanitarian needs.
- c. A handover for the second sortie was done on 15 August 2018 with additional family tents (178), family kits (192), and personal hygiene kits (420). The second sortie which arrived on 14 August complemented the first sortie that arrived on 13 August comprising of a Mobile Storage Unit and family tents (172). Deployment for a third sortie to deliver the remaining items is currently being arranged. This include hygiene kits (380) and family kits (108).
- d. ASEAN-ERAT together with BNPB and BPBD have completed the establishment of MSU for storing relief items at Selaparang Airport (AMI). The airport is one of the main entry points of domestic assistance.



First Sortie of ASEAN Relief items have reached Lombok



Current situation of an evacuation site in Gunung Sari District, West Lombok Regency, ASEAN-ERAT assessment site #2



Mobile Storage Unit set by ASEAN-ERAT with other responders for emergency logistics storage of ASEAN stockpile



ASEAN-ERAT members with BNPB colleagues on the ground

Response by National and Local Humanitarian Partners

- a. With reference to Press Release from Lombok Earthquake Command Post, there are currently 83 national/local humanitarian partners on the ground, as of 11 August 2018. This is a significant jump from 17 as reported in the previous situation update.
- b. However, complete information of humanitarian activities are still not available at this point, hence only 273 types of humanitarian assistance can be identified in three regencies (North Lombok, East Lombok, and West Lombok) at this point (see attachment). Distribution of NGOs working in each district can be seen below. However, a future analysis may include type and quantity of assistance provided by each organization.
- c. CARE Indonesia is channelling assistance through its local partner Kopernik, who operates in Lombok and provides support to survivors. CARE is also working through local partners to deliver clean water, hygiene and sanitation supplies, shelter kits and other basic items. Women and girls are particularly vulnerable groups following a natural disaster, CARE will also be conducting a gender assessment to ensure response efforts best meet the needs of women, girls, men and boys.
- d. [The Indonesian Red Cross \(PMI\) and IFRC](#) have launched an international emergency appeal for 8.9 million Swiss francs. Through this appeal, Red Cross volunteers and staff will support approximately 80,000 people in in North Lombok, East Lombok and West Lombok. In addition to providing emergency shelter supplies (including tarpaulins and shelter toolkits), the Red Cross will distribute materials for repairing and rebuilding damaged houses and advise on building or rebuilding more safely. Other priorities under the planned 18-month operation include livelihoods; health; water, sanitation and hygiene; protection, gender and inclusion; and disaster risk reduction.

- e. Remote villages are a top priority for the [Indonesian Red Cross](#), which has already assessed many communities where it is providing medical care, food, water, shelter materials and other help. Earthquakes and aftershocks have fractured roads, brought down tonnes of soil on them and damaged bridges, hampering efforts by Indonesian Red Cross teams to reach people in need.
- f. The EU has announced a further €500,000 to step up its emergency response to meet the most pressing needs of those affected by the devastating earthquakes that struck the Indonesian island of Lombok in late July and early August. The EU aid will support the International Federation of Red Cross and Red Crescent Societies (IFRC) and Indonesian Red Cross (PMI) in providing relief assistance and protection to the most vulnerable among the affected population.
- g. In addition, the Netherlands and Spain have provided €500,000 and €100,000 respectively which brings the collective EU support to €1,250,000.
- h. KONSEPSI (Consortium for Study and Development of Participation) is currently being funded by Global Affairs Canada to provide relief and assistance to the affected in Lombok

5. RECOMMENDATIONS AND PLAN OF ACTIONS

Recommendations to be considered by humanitarian partners

- a. Based on a release from [BNPB](#) and agencies at Command Post on 12 August 2018, the most urgent humanitarian needs are **basic relief items for 419,424 IDPs**, i.e. the following items:
 - tents
 - blanket
 - sleeping mats
 - ready-to-eat meal
 - WASH
 - clean water
 - complete resumption of telecommunication
 - trucks for relief items distributions
 - power generator / generator set for lighting

In line with the guidance from the BNPB, AHA Centre recommends those relief items above to be fulfilled from domestic sources.
- b. Due to seismic hazard characteristics in the affected areas, as described in Section 2, humanitarian partners and responders should exercise cautions during their operations, prepare and implement a security plan, and be alerted to potential collateral disasters. Safety of humanitarian workers has to be ensured due to identified security risk of looting on the ground. Disaster responders and humanitarian workers have to ensure safe evacuation sites, preferably outdoor in a solid ground, in anticipation of aftershocks or landslides.
- c. According to the briefing document from Lombok Earthquake Command Post, the challenges on the ground are as follows:
 - l. Lack of heavy equipment to knockdown concrete structures;
 - m. Limited number of qualified personnel in comparison to vast affected areas;
 - n. Resumption of electrical and telecommunication services limited to main line;
 - o. Several access roads have been cut-off due to additional landslides;
 - p. Access to remote villages are disrupted and aid is urgent in these areas;
 - q. Disruption to clean water services
- d. With the current and near-future availability of satellite imageries and aerial survey, it can be used for on the ground validation and assessment of building damages and need of rehabilitation and reconstruction. **A practical suggestion to national/local humanitarian partners** conducting assessment is to use geotagging and/or open

camera, in order for command post (*posko*) and national assisting post (*pospenas*) to retrieve location data and enable quick compilation of observation data. **Pastigana Team of BNPB at Pospenas has released guidance to humanitarian partners conducting assessment for using qlue application to allow geo-tagging.** Please also refer to plan of actions by AHA Centre and ASEAN-ERAT, for reference by other humanitarian partners.

- e. In order to develop a complete gap analysis for all 5 regencies/city affected, more detailed information on quantity of relief items provided and number of evacuees in each site is required.
- f. With the current development of health issues in the second week of disaster following the M 7.0 earthquake, several recommendations are important to be considered by humanitarian partners:
 - Disruption to primary health care, damage to sanitation services, water supply and housing as well as interruption to usual access to safe and sufficient food in the community, may lead to the rapid increase in malnutrition, dehydration and communicable diseases especially among vulnerable groups (infants, toddlers and children under 5, and elderly). Due to the large IDP numbers, there is potential overcrowding in evacuation sites which can exacerbate the health and sanitary conditions.
 - To ensure that the primary health needs of surviving populations are maintained, provision of potable water, food, provision of water and sanitation facilities should be sustained. Sound management and removal of waste (toilets, chemical treatment of sludge and solid waste disposal), can greatly reduce the exposure of the population to diseases such as diarrhoea, hepatitis A, cholera, typhoid, intestinal helminths, malaria and trachoma. Guidance on the development of techniques for proper sanitation and human excreta disposal in emergencies can be found [here](#) (WHO).
 - To conduct a communicable disease risk assessment to anticipate and prevent disease outbreaks (e.g. water-borne diseases, measles, chickenpox, acute respiratory infection, vector-borne due to presence of breeding sites) especially in evacuation sites in order to enhance the existing health surveillance system.
 - To restore at the earliest vaccine-preventable programmes which were disrupted during the emergency to prevent transmission of diseases (such as measles, rubella, polio and mumps etc.) in children.
 - To promote stockpiling and replenishment of medical/ hospital supplies, essential medicines including making relevant vaccines accessible (e.g. anti-tetanus, typhoid, measles) and ensuring the vaccine cold chain is intact.
 - To sustain psychological and mental health support to adequately address the needs of people with stressful and post event traumatic experiences related to, among others, the aftershocks.
 - To promote the deployment of midwives in affected areas to monitor, provide support and ensure that the health needs of pregnant women, postpartum mothers and infants including newborns are met. This is essential to prevent child and mother mortality as primary healthcare is disrupted.
 - To support the proper nutrition of infants and children especially those in evacuation/ relocation sites. Wherever possible, breastfeeding should highly be encouraged.
 - To encourage the rotation of health workforce in their workstations to ensure adequate rest and to promote mental health among the providers of health care.
 - To properly manage the deceased where cultural practices and needs of the family are given priority.

Plan of actions by AHA Centre and ASEAN-ERAT

- a. The AHA Centre has seconded staff to BNPB's Data and Information Centre (*Pusdatin*) to support dissemination of official information to international stakeholders.
- b. The AHA Centre and ASEAN ERAT, in close coordination with BNPB, will continue to facilitate the deployment of ASEAN relief items for the last sortie of family tents to complement current emergency response operations.
- c. The AHA Centre will provide further updates as situation progresses and more information is available.

Prepared by:

AHA Centre - Emergency Operations Centre (EOC) in collaboration with BNPB's Data and Information Centre (*Pusdatin*) and Disaster Preparedness and Analysis (*Pastigana*)

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ABOUT THE AHA CENTRE

The AHA Centre - ASEAN Coordinating Centre for Humanitarian Assistance on disaster management - is an inter-governmental organisation established by 10 ASEAN Member States – Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam - to facilitate the cooperation and coordination among ASEAN Member States and with the United Nations and international organisations for disaster management and emergency response in the region.

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