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SITUATION UPDATE

MASSIVE FLOODS IN GREATER JAKARTA AREA INDONESIA

No. **3**

Friday, 10 January 2020, 16:00 hrs (UTC+7)

This Situation Update is provided by the AHA Centre for use by the ASEAN Member States and relevant stakeholders. The information presented is collected from various sources, including but not limited to, ASEAN Member States' government agencies, UN, IFRC, NGOs, and news agencies.

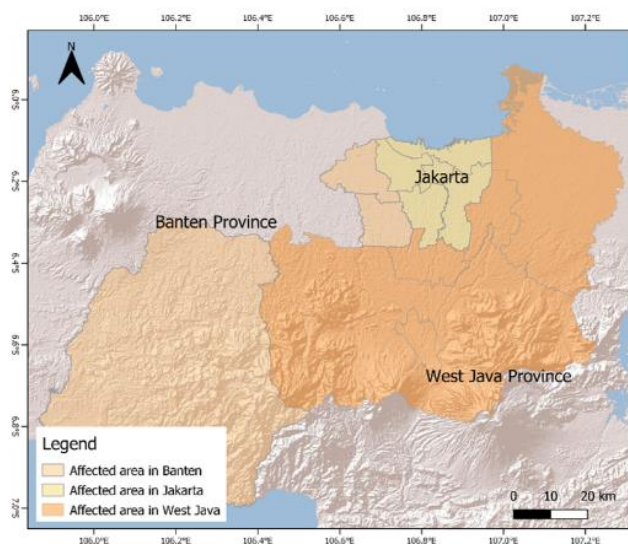
SITUATION UPDATE NO.3 MASSIVE FLOODS IN GREATER JAKARTA AREA INDONESIA

Latest update by AHA Centre as per 10 January 2020



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MAP OF THE AFFECTED AREAS IN GREATER JAKARTA AND LEBAK REGENCY



KEY FIGURES



Updated figures as of 09 January 2020 (PMT)

INDONESIAN GOVERNMENT ASSISTANCE



**Estimations are based on data reported/confirmed by National Disaster Management Authority of Indonesia (BNPB) and other verified sources.*



SITUATION UPDATE

1. HIGHLIGHTS

- a. Due to the monsoon season and heavy rainfall since 31 December 2019, the Greater Jakarta area and Lebak Regency were affected by massive floods and localised landslides reported. As of **09 January 2020 evening**, a total of **13 cities or regencies** of 3 provinces, i.e. Jakarta, West Java, and Banten, are flooded as from 1 January 2020.
- b. BNPB has been leading national coordination with other national agencies to support the local disaster management authority (BPBD). BNPB has mobilised support to the affected people by dispatching relief items, deploying personnel, disseminating information, and establishing evacuation centres.
- c. On 8 January 2020 at 12:00 there are no more reports of inundated area in Jakarta and its surrounding. As the situation improves, the number of displaced people in the three affected provinces are generally decreased over time. While in Bogor, about 14,000 people are still displaced due to the landslides.
- d. In-country ASEAN Emergency Response and Assessment Team (ASEAN-ERAT) Indonesia was mobilised to reinforce BNPB in providing technical assistance in the management of evacuation site and provision of minimum services at the Jati Asih evacuation site of BNPB.
- e. The AHA Centre has issued Flash and Situation Updates for this event, which available here ([Flash Update No.1](#), [Flash Update No.2](#), [Flash Update No.3](#), [Situation Update No.1](#), [Situation Update No.2](#)).

2. SUMMARY OF EVENTS, FORECAST AND ANTICIPATED RISK

Summary of events

- a. The occurrence of the Northeast Monsoon has brought a continuous heavy rain in Jakarta and its surrounding area, known as the Greater Jakarta (JABODETABEK: Jakarta, Bogor, Depok, Tangerang, and Bekasi), which consists of three provinces namely Banten, Jakarta, and West Java. The floods started in the early morning of 1 January 2020, and have spread throughout the day. In Banten and West Java Provinces, several localised rain-induced landslides have also been reported.
- b. The Meteorological, Climatological, and Geophysical Agency (BMKG) reported that the recorded rainfall intensity during 1 January 2020 at Halim Perdanakusuma Air Force Base in East Jakarta reached up to 377mm/day. This number is the highest compared to the rainfall intensities that also caused massive flooding in Jakarta a few years back, such as 2007 (340 mm/day) flooding event. In addition, BMKG also reported that the rain may still continue until 12 January 2020.
- c. Generally, most of the displaced people have returned to their home, yet there are still more than 19,000 people displaced across Jakarta, Banten, and West Java Provinces, as of 9 January 2020 evening.



Forecast and anticipated risk

- a. Potential rainy weather may still occur in the Greater Jakarta, as the wet air from Pacific Ocean transverse to the southern part of ASEAN region due to the Northeast Monsoon season until February 2020.
- b. BMKG has released severe weather advisory in Greater Jakarta Area until 12 January 2020. In addition, BMKG also reported that from 11 to 15 January 2020 wet atmospheric conditions from African Region may land in Indonesia, which includes Greater Jakarta, middle part of Sumatra, Java, South Kalimantan, and South Sulawesi. These areas will potentially experience extreme heavy rains and may recur at the end of January and the end of February.

3. ASSESSMENT OF DAMAGE, IMPACT, AND HUMANITARIAN NEEDS

- a. Based on the latest update from BNPB (9 January 2020 at 18:00-UTC+7), the total affected people in the Greater Jakarta and Lebak Regency, has reached up to **511,471** people. The figure covers the total affected people in East Jakarta (5,126 people) and does not represent the whole DKI Jakarta province. According to PUSDALOPS BNPB, this number is accumulated since the beginning of the event, and is not including the total of displaced people.
- b. The AHA Centre refers to the latest update of the daily figures as per daily update of BNPB. For the total displaced people, there has not been a confirmation of total accumulative value since the assessment on the ground is still ongoing. In some area, several people went back to their home during evening and return to the evacuation centre on the mid-day. This challenge may create some discrepancy on the data.
- c. In this reporting period, this impact figures includes the affected people in Lebak Regency.
- d. The Figure 1 shows that most of the affected people from this event is dominated from Bekasi City, West Java Province. This could be due to the severely inundated area in Bekasi which has inundation depth up to 6 meters, different with other areas which has maximum inundation depth about 0.2 to 3 meters.
- e. From Figure 2, most of the people displaced are reported on the 1st and 2nd January 2020. Generally, as the water recedes through time, number of displaced people also decreasing as all figures are showing the negative trends. South Jakarta having the highest number of evacuees on 2 January 2020, although the water recedes faster compare to East and West Jakarta, and both of these areas still have evacuees as per today which can be seen on the Figure 2.
- f. In Figure 3, Bogor City is not taken as an account as the area has been inundated but no reports on the displaced persons. Referring to the value, Bekasi City has the highest number of total displaced people. As mentioned in point d above, this may due to the severely inundated areas



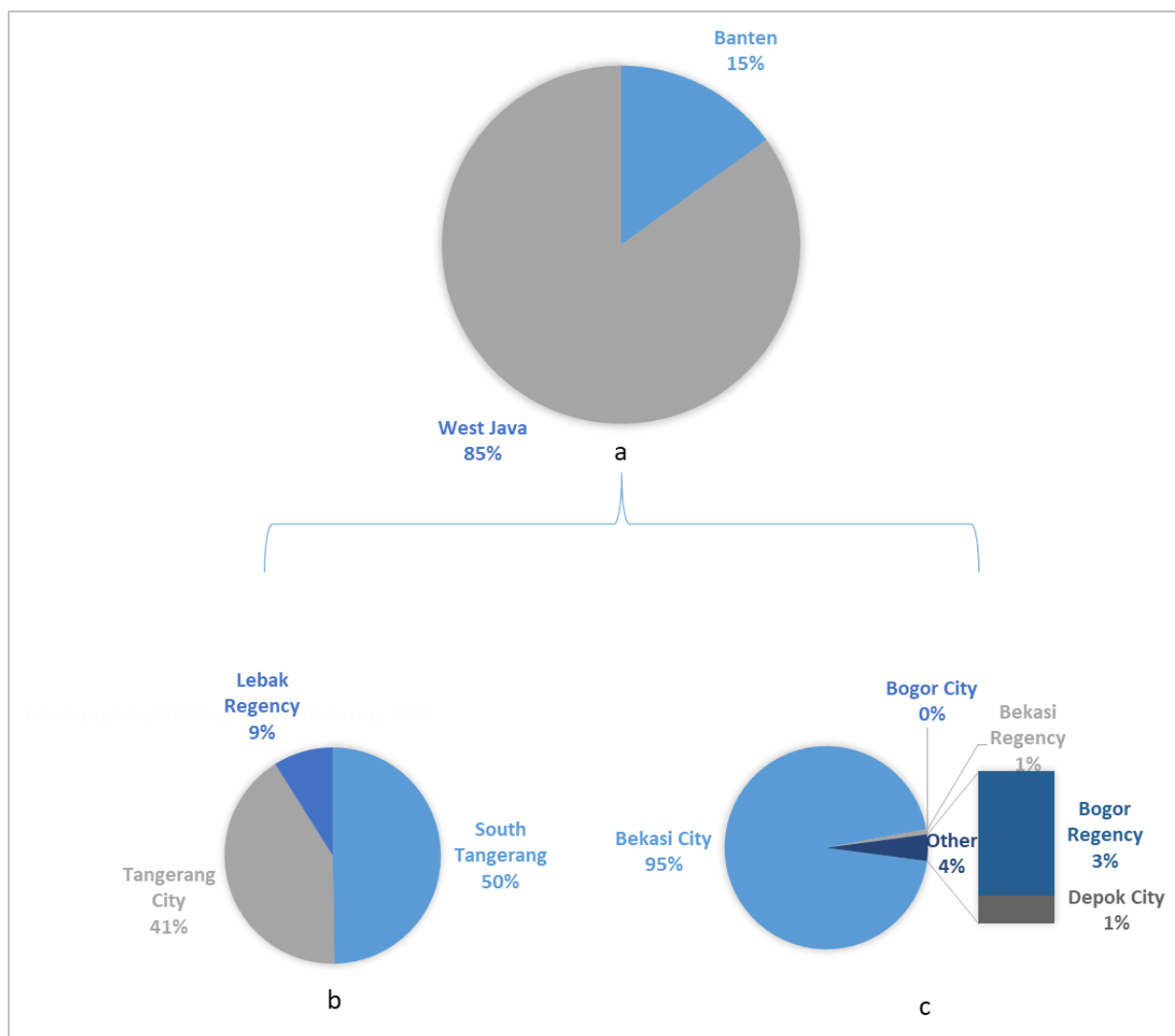


Figure 1: Pie charts of affected people as per this reporting period. (a) Percentage of affected people (total of **506,345**) in Banten and West Java Provinces. About more than 430,000 affected people are located in West Java Province. (b) Percentage of affected people in Banten Province (total of **75,951**); (c) Percentage of affected people in West Java Province (total of **430,393**);

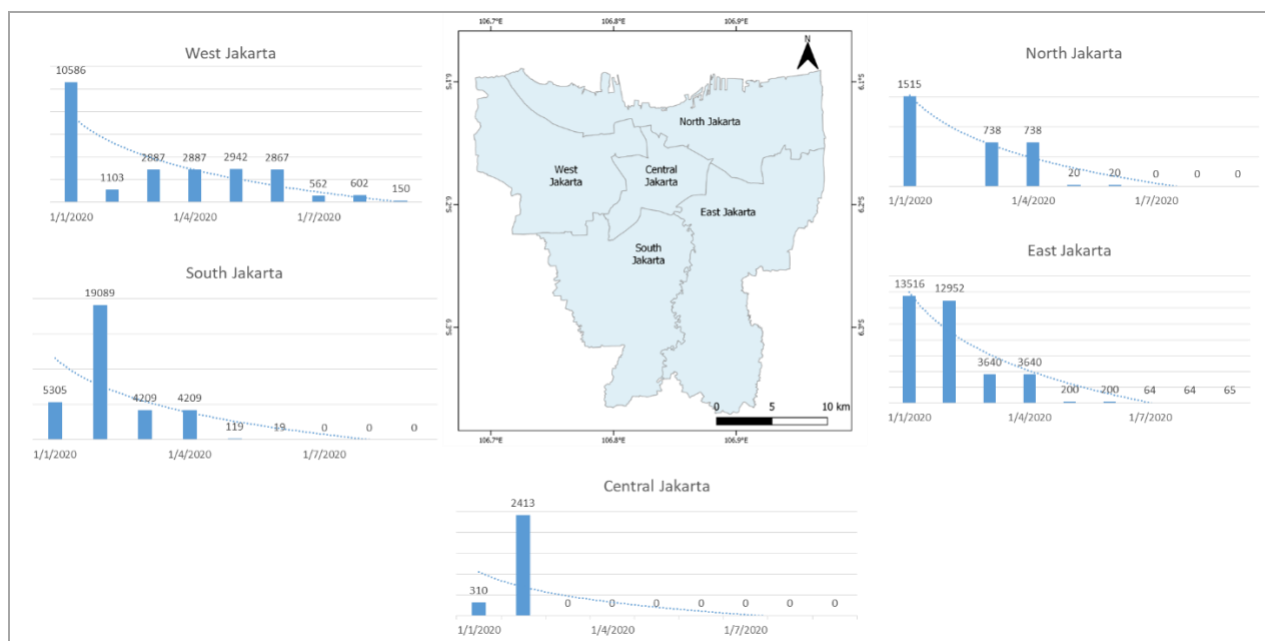


Figure 2: Trend analysis for displaced people over time in Jakarta Province. Blue dash line is showing the displacement trend over time. Source: BNPB

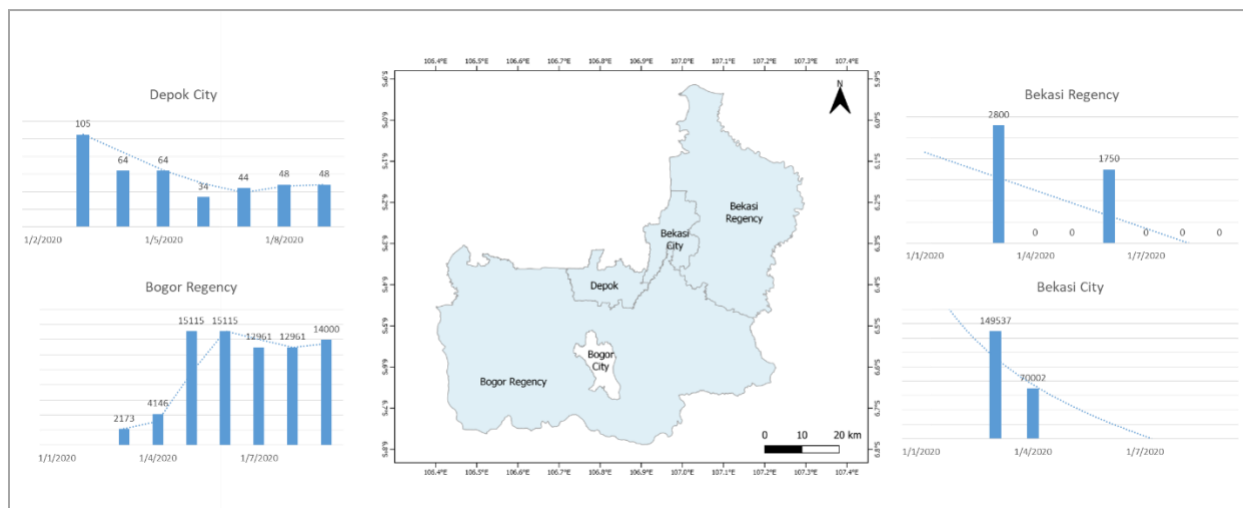


Figure 3: Trend analysis for displaced people over time in West Java Province. Blue dash line is showing the displacement trend over time. Source: BNPB



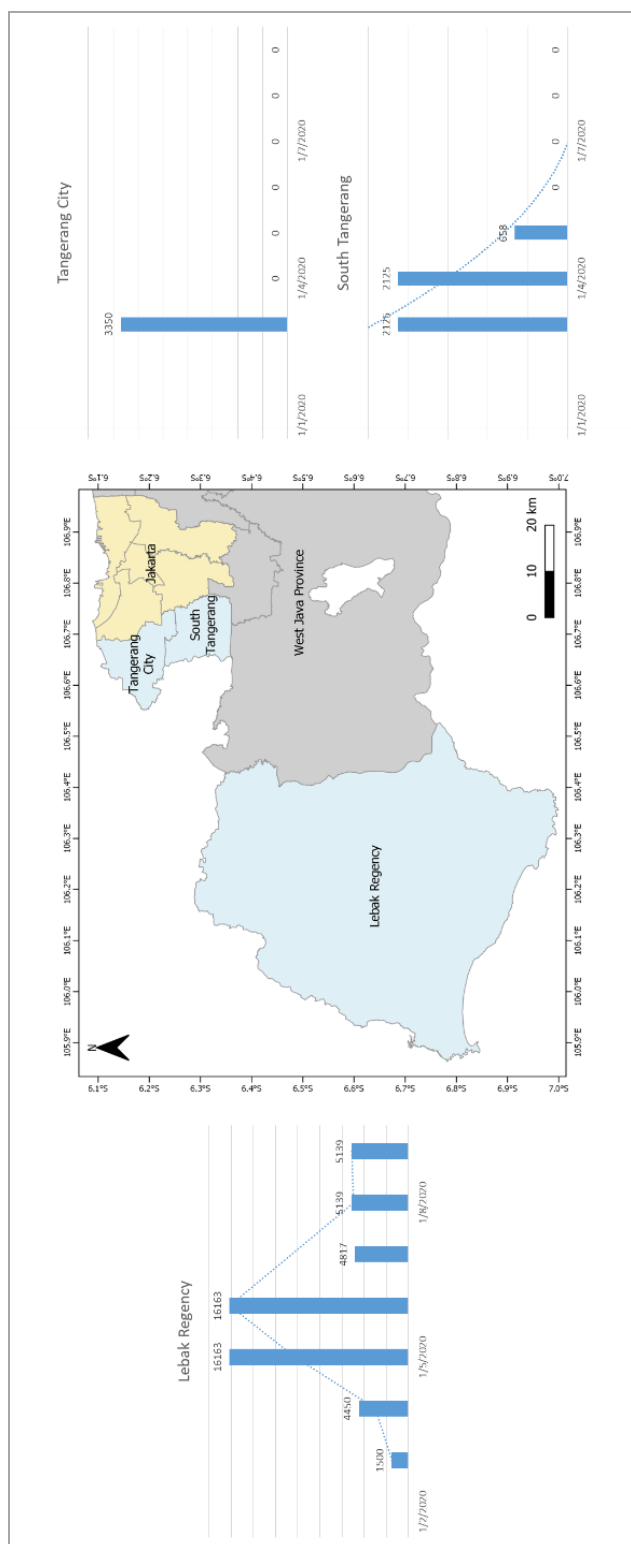


Figure 4: Trend analysis for displaced people over time in Banten Province. Blue dash line is showing the displacement trend over time. Source: BNPB

- g. Figure 3 and 4 show that thousands of people are still displaced in Bogor and Lebak Regencies and the trend over time also does not show a significant decrement compare to other time series trends in other affected area. This may be due to the local flash floods and landslides events that make people hardly return back as their houses are partially or severely damaged.
- h. The increment of total displaced people in Bogor Regency occurred due to the ongoing process of data collection from BNPB.
- i. Based on the rapid assessment by Ministry of Public Works and Public Housing of the Republic of Indonesia (PUPR), several findings on the cause of massive floods in Greater Jakarta are as follows:
 - i. the dam breaks (44 points),
 - ii. accumulated wastes (17 points),
 - iii. dysfunctional water pump (2),
 - iv. broken water gate (11 points),
 - v. overflowing river (62 points), etc.
- j. Meanwhile, in Lebak Regency, number of displaced reaches its peak on 5 to 6 January 2020 when BPBD has established several evacuation centres. Before staying in the evacuation centres, some people were evacuating to the woods during floods since 1 January 2020 and therefore they have not been registered during that time.
- k. Although the situation has generally improved across the Greater Jakarta area, several essential needs are still necessary. With more than tens of thousands of people are still in the evacuation centres, assessment of needs and gaps may help to improve the current situation. As per the latest report the needs for the evacuees are listed as follows:
 - Essentials: Food, drinking water, clean water, latrines, clothes, and blankets.
 - Health: Rescue teams, paramedics, medicine, and trauma healing.
 - Others: Heavy equipment.
- l. Based on the analysis of the AHA Centre, the displaced population as of 9 January 2020, will need more than 15,6 tons of rice (with the assumption per person will need around 0.8kg of rice per day) and 292 thousands litres of water per day (following the [sphere standards](#) of 15 litres of water consumption per person per day). Direct observation will be required to confirm this analysis.

4. ACTIONS TAKEN AND RESOURCES MOBILISED

Response by the Government of Indonesia

- a. The National Disaster Management Authority (BNPB) held a flood response coordination meeting at BNPB Headquarters in East Jakarta on 2 January 2020. Various agencies attended the meeting from government, non-government, volunteers, and media. The Meteorology, Climatology, and Geophysics Agency of Indonesia (BMKG) foresees that the likelihood of heavy rainfall that caused floods in the Greater Jakarta may be recurring until February 2020. The following week, the Emergency Operations Centre (PUSDALOPS) of National Disaster Management Authority of Indonesia (BNPB) held a floods response coordination meeting in BNPB Headquarters, led by Chief of PUSDALOPS BNPB.





Figure 5: Left-Coordination Meeting with Other Relevant Agencies at Graha BNPB on 2 January 2020; Right- PUSDALOPS BNPB coordination meeting on 6 January 2020.

Source: BNPB and the AHA Centre.

- b. BNPB has sent support to the floods victims in the form of dispatching relief items, deploying personnel, disseminating information, and establishing evacuation centres. The Head of BNPB and the Coordinating Minister for Human Development and Cultural Affairs visited this evacuation site in Jati Asih, Bekasi on 4 January 2020 afternoon. The High-level Officials met the BPBD Bekasi and inform that the national on-call budget amounting 1 Billion IDR (approx. 72,000 USD) is made available for BPBD Bekasi for the operationalisation of emergency response including clearing the roads.



Figure 6: Left-Coordinating Minister for Human Development and Cultural Affairs distributed 1 billion IDR (approx. 72,000 USD) for BPBD Bekasi; Right- Deliverables of logistical items using BNPB helicopters. Source: BNPB.

- c. H.E. President Joko Widodo, visited Lebak Regency on Tuesday, 7 January 2020. The President observed the flash floods and landslides locations, and stated that the disaster may occur due to the illegal gold mining and logging, and therefore will cooperate will local government to stop the illegal activities and plan for relocating the affected people in Sukajaya District, Bogor Regency.



Figure 7: H.E. President Joko Widodo visited Sukajaya District, Bogor Regency.
Source: BNPB.

- d. Twelve affected cities and regencies in Banten and West Java Provinces, have declared their emergency response status for floods and landslides. These emergency response status availabilities, ranging from 1 to 16 January 2020.



 Status Tanggap Darurat 				
No	Jenis Bencana	Lokasi	Waktu Kejadian	Status Keadaan Darurat
1	Banjir dan Tanah Longsor	Kota Bekasi Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (01/01/2020 – 07/01/2020)
2	Banjir, Tanah Longsor dan Angin Kencang	Kota Depok Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)
3	Banjir dan Tanah Longsor	Kab. Bekasi Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (02/01/2020 – 08/01/2020)
4	Banjir dan Tanah Longsor	Kab. Bandung Barat Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (02/01/2020 – 08/01/2020)
5	Banjir dan Tanah Longsor	Kab. Indramayu Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (02/01/2020 – 08/01/2020)
6	Banjir dan Tanah Longsor	Kab. Bogor Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (02/01/2020 – 16/01/2020)
7	Banjir dan Tanah Longsor	Kab. Karawang Prov. Jawa Barat	1 Januari 2020	Tanggap Darurat (02/01/2020 – 08/01/2020)
8	Banjir Bandang dan Tanah Longsor	Kab. Serang Prov. Banten	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)
9	Banjir Bandang dan Tanah Longsor	Kab. Tangerang Prov. Banten	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)
10	Banjir Bandang dan Tanah Longsor	Kota Tangerang Selatan Prov. Banten	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)
11	Banjir Bandang dan Tanah Longsor	Kota Tangerang Prov. Banten	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)
12	Banjir Bandang dan Tanah Longsor	Kab. Lebak Prov. Banten	1 Januari 2020	Tanggap Darurat (01/01/2020 – 14/01/2020)

Figure 8: Emergency response status list by 12 affected cities or regencies. Source: BNPB

- e. Health Crisis Center, Ministry of Health (MoH) in Indonesia, has mobilised Emergency Medical Team (EMT) with priority for life saving, deployed rubber boats for evacuation and medical team transportation, developed medical support point on each location of evacuation centre and provided medical and psychosocial services. The Ministry of Health stands ready to support the health sectors, in regards to the floods victims.
- f. Ministry of Social Welfare has mobilised over 3000 emergency response units (TAGANA) in 23 locations, as well as psychosocial support in 13 locations due to this situation.
- g. The Agency for the Assessment and Application of Technology (BPPT), along with the BNPB and the Indonesian Military (TNI), deployed two types of aircraft for the weather modification mission (Teknologi Modifikasi Cuaca - TMC). This mission aimed to reduce the high rainfall intensity on Greater Jakarta up to 30%. The mission is conducted at least three times as per this reporting period, in which on 3, 6, and 7 January 2020. As BMKG stated heavy rainfall may still potentially occur in Greater Jakarta until 12 January 2020. A total of 6,4 tons of NaCl salt has been poured using CN 295 and Casa 212 aircrafts. (Figure 9)

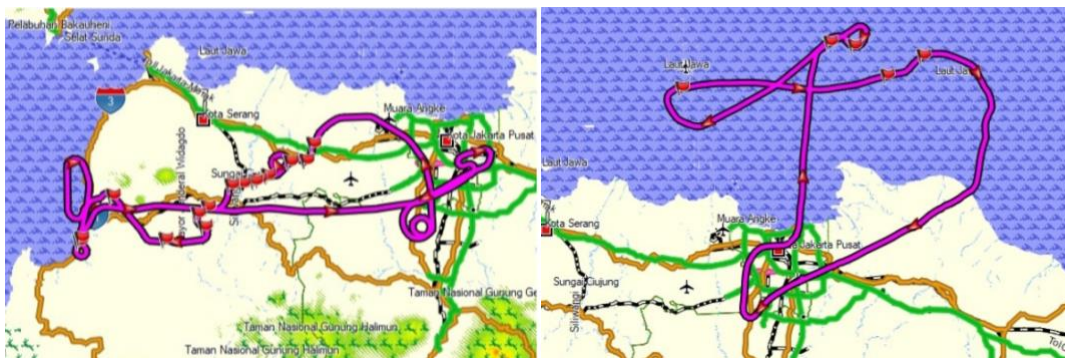


Figure 9: Weather modification technology to decrease rainfall intensities in Jakarta Greater Area. Purple line shows the track of cloud seeding that has been conducted on 3 January 2020. Source: BNPB.

- h. The National Institute of Aeronautics and Space (LAPAN) conducted flood extent and damage analysis for this event to support BNPB in identifying the landslides location using satellite imagery.
- i. BNPB together with several partners have created a joint platform to monitor activities and situation on the ground, such as a joint portal for Greater Jakarta floods response ([link](#)) and Desk Relawan BNPB ([link](#)). Both platforms available in Bahasa Indonesia.

Response by the AHA Centre

- a. The AHA Centre has expressed condolences to Indonesia on 2 January 2020 and offered reinforcements to the EOC of BNPB in the area of information management and other technical assistance due to massive floods in the Greater Jakarta.
- b. The In-country ASEAN Emergency Response and Assessment Team (ASEAN-ERAT) Indonesia is mobilised to reinforce the Government of Indonesia in providing technical assistance in the management of the evacuation site and provision of minimum services at the Jati Asih evacuation site of BNPB.





Figure 10: In-country ASEAN-ERAT Indonesia visited the evacuation site of BNPB in Jati Asih, Bekasi on 4 January 2020. Source: the AHA Centre

- c. The AHA Centre is in close coordination with partners (Sentinel Asia, EOS ARIA-SG, PDC, UNITAR-UNOSAT) for the satellite imagery, and spatial analysis.

Response by ASEAN Member States

- a. A letter of condolence from National Committee for Disaster Management (NCDM), the Kingdom of Cambodia has been transmitted through the AHA Centre to Head of BNPB as a form of solidarity in ASEAN region.

Response by Other Partners

- a. Some local NGOs the Government of Indonesia through the BNPB confirms that national capacity and resources remain sufficient to support emergency response and recovery led by BNPB. Hence, only local NGOs can deploy their personnel to the affected area. Accordingly, the incident is within the national capacity and international assistance is not required.
- b. In-country local NGOs have deployed their personnel to some affected areas. MPBI (Masyarakat Penanggulangan Bencana Indonesia) and Desk Relawan BNPB have developed an online form to collect information on local NGOs deployment activities ([link](#)).



- c. Rumah Zakat, together with joined organisations and Indonesian National Army (TNI) have given support the affected people through evacuation process, and trauma healing in Lebak Regency, Banten Province on 8 January 2020.



Figure 11: Rumah Zakat and other volunteers being deployed to Lebak Regency.
Source: BNPB

- d. Observation Request for Sentinel Asia activated by the AHA Centre through OPTEMIS system. Advanced Rapid Imaging & Analysis team in Earth Observatory Singapore (EOS ARIA-SG) helped to provide flood extent analysis as attached in the previous Situation Updates No.1 and 2.

5. RECOMMENDATIONS AND PLAN OF ACTIONS

Recommendations

- The limited data and gaps for the assessment may be reinforced by participation of humanitarian agencies and other volunteers in BNPB's joint platform, such as Desk Relawan BNPB ([link](#)) and the BNPB's joint portal for the Greater Jakarta floods response ([link](#)). Both of these platforms are available in Bahasa Indonesia.
- As reported by BMKG, the potential recurring massive rains in the Greater Jakarta until February 2020 may need further engagements with several agencies in the form of preparedness and disaster risk reduction. In addition, public education and awareness may need to be taken as considerations to heighten the capacity of the people that is highly exposed to the risk.

The AHA Centre's plans

This will be the final Situation Update for the massive floods in the Greater Jakarta. The AHA Centre will provide updates of the situation either in our Weekly Disaster updates or a separate Situation Brief. In the meantime, do refer to BNPB's website for the official figures.

6. IMAGERY

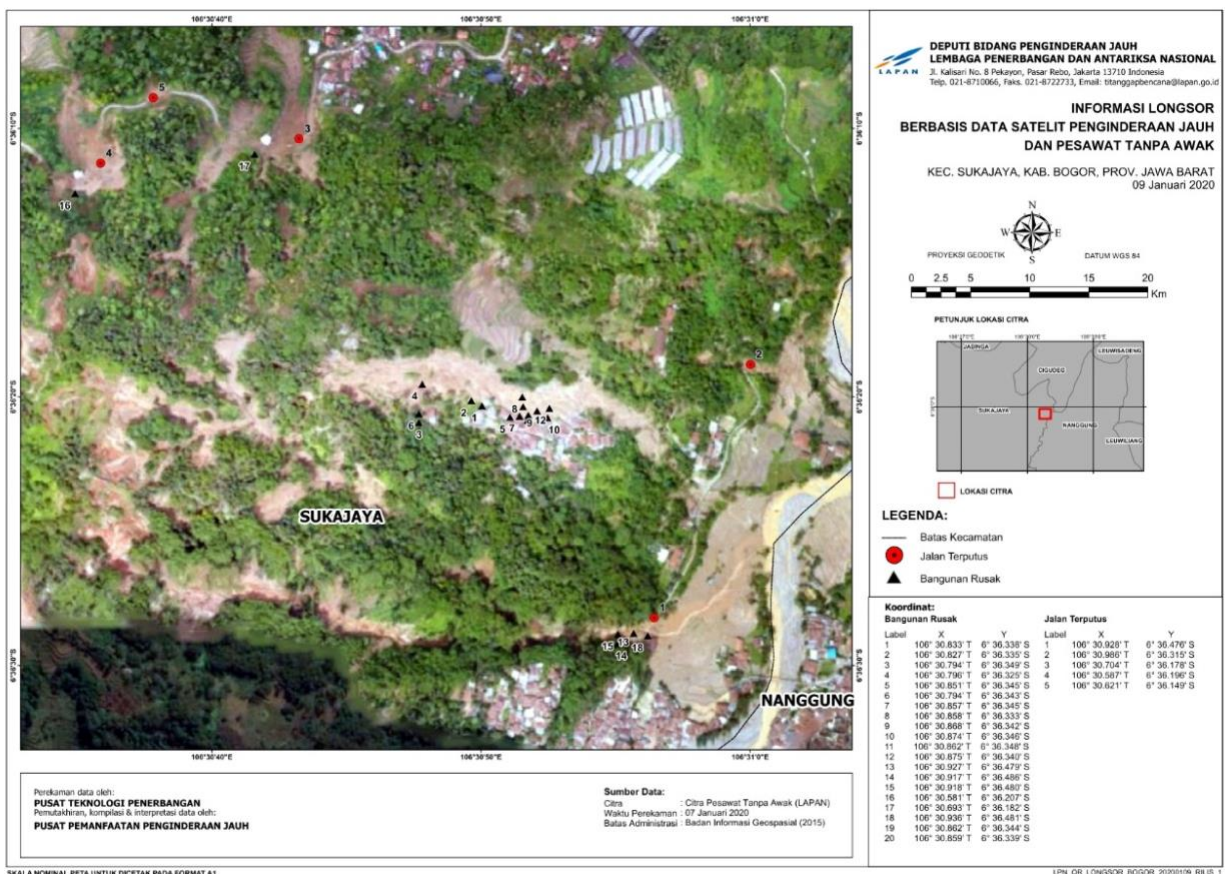


Figure 12: Damage analysis product in Sukajaya, Bogor Regency, West Java Province by National Institute of Aeronautics and Space (LAPAN).

Prepared by:

The AHA Centre - Emergency Operations Centre (EOC)

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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