



Mount Agung; The Beauty and The Mighty

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ABSTRACT

Mount Agung is the highest mountain in Bali. Located on Karangasem regency, this most elevated point in the island of Gods is sacred by the Balinese and becomes center of spiritual activities on the island. Mount Agung is an active stratovolcano. Some local volcanic and tectonic earthquakes have been reported on August 10th, 2017. as a result, The locals who live within 9 - 12 km zone from the crater have been secured. Mount Agung's condition is fluctuate, after BNPB lowered its status from level IV to III, and the refugee went home, the volcano experienced phreatic eruption then

followed by magmatic eruption on late November 2017. the news about mount Agung's activities made tourists afraid to visit Bali. It is proved by declining number of tourist visit Bali. The government through related agencies explain that it is still possible to visit Bali. However, they should avoid any activities in the disaster-prone area. Besides, it is being discussed about plans to make the eruption as a tourist attraction. The program aims to offer new tourism potentials. Thus it may elevate the number of tourist visits to Bali as well as provide employment opportunities for the refugees.

Keyword: Mount Agung, Eruption, Tourist Visit

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BACKGROUND

Mount Agung is the highest mountain in Bali. Located on Karangasem regency, this most elevated point in the island of Gods is sacred by the Balinese. They believed that deities reside on the mountain. Besakih Temple which is located on the mountain's slope is proof that the mountain becomes center of spiritual activities on the island. Besides being sacred, the mountain also offers beautiful scenery. With a peak of 3,031 above sea level, many people have climbed it to witness the beauty of Bali from its summit.

INITIAL SIGN

As one of tourist destination in Bali, quite few people aware that Mount Agung is an active volcano. It is categorized as stratovolcano. A Stratovolcano, also known as a composite volcano, is a conical volcano built up by many layers or strata of hardened lava, tephra, pumice, and volcanic ash.¹

In history, it is known that the mountain had erupted on some occasions. Some historical records mentioned that the volcano had erupted in 1808, 1821, 1843 and 1963. The eruption in 1963 caused severe damage to rice fields, sacred places, and various vital building with casualties approximately 1,148 dead and 296 wounded.²

Moreover, the explosion left a crater with 500 meters in diameter and 200 meters in depth.³

It has been 54 years passed. Now, the volcano is in its turmoil.

Some local volcanic and tectonic earthquakes have been reported on August 10th 2017, then, on September 13th, 2017 accompanied by *solfatara*; sulfur oxide gas vapor (such as SO₂ and SO₃), carbon dioxide (CO₂) and water vapor (H₂O) emerged. The *solfatara* blow then made the status of Mount Agung raised on September 14th, 2017, from Level I (*Normal*) to Level II (*Waspada*) based on Indonesia's volcano alert system⁵ by The Center for Volcanology and Geological Hazard Mitigation (PVMBG). Highly intensive volcanic earthquakes have also been reported dramatically increased on September 14th, 2017, followed by water emerged to the surface which indicated hydrological disturbances occurred, which often caused by the movement of magma.

On September 18th, 2017, the status of Mount Agung was raised from Level II (*Waspada*) to Level III (*Siaga*) at 21.00 WITA, continued from Level III (*Siaga*) to Level IV (*Awat*) on September 22nd, 2017 at 20.30 WITA due to the intensity of the earthquake continually increasing.³

THE REFUGEE

The locals who live within 9 - 12 km zone from the crater have been secured. The refugee is estimated to reach 57,428 people, spread across 357 points on nine regencies in Bali.

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Figure 1 It has been 54 years passed. Now, the volcano is in its turmoil ⁴



Figure 2 The locals who live within 9 - 12 km zone from the crater have been secured. The refugee is estimated to reach 57,428 people, spread across 357 points on nine regencies in Bali ¹⁰

The distribution of refugees was respectively in Badung regency, 328 people, Bangli Regency 4,690 people, Buleleng Regency 8,518 people, Denpasar City 2,212 people. 137 people on Gianyar Regency, Jembrana Regency, 82 people, Karangasem regency 21,280 people, Klungkung regency 19,456 people, and Tabanan regency, 715 people.⁶

Besides transferring people, the process of transporting livestock that belongs to the refugee also brings its own story. The refugee was anxious, and that made them decide to sell their livestock at a low price. The people flocked to sell their livestock such as cattle, chicken, and duck cheaply due to reason that they fear the animals might die in vain since no one takes care of them during their refuge.⁷

The Animal Husbandry and Animal Health Office of Bali noted there are about 20,000 cattle

in the prone area of Mount Agung, and only about 5600 calves have been evacuated to the shelter.⁸

Regarding Education, the Bali Provincial Government made some anticipatory efforts thus the children who take refuge may continue their study. Head of Public Relations and Protocol Bureau of Bali Province, Dewa Gede Mahendra Putra said that Bali Provincial Government through Education Office of Bali Province issued Circular Letter addressed to the headmaster at the disaster-prone area, principal outside the zone, Education Office and *UPT Disdik* in district /city.⁹

Residents of Karangasem located in disaster-prone areas were also requested to save sacred objects and ancient manuscripts such as *lontar* and other historical documents. The provincial government of Bali through the cultural office of the province of Bali has opened access for residents of Karangasem who have *lontar* as well as records with historical value for temporary leave in the Cultural Office of Bali Province.¹¹

In refugee camps, the evacuees performed various activities to repel their sense of saturation. Activities undertaken include selling fried foods, making handicrafts and gardening tools. Also, the arrival of volunteers to the refugee camp who provide assistance or entertainment helped them to ease the burden.

IMPACT ON TOURISM

The government of Bali, tourism industry, and Balinese continue to promote the condition of Bali. They encouraged that it is safe to visit Bali despite the volcano's status since there was not any threatening eruption occurred. Also, the hazard-prone areas are only 9-12 kilometers from the crater, which means, other areas outside the disaster-prone zone are safe.¹²

The National Disaster Management Agency (BNPB) even planned to design a concept of 'Beauty of eruption Mount Agung' for the sake of Bali tourism. The new tourism concept offers the beauty of Mount Agung eruption. It is intended to be offered to tourists who visit the Island of the Gods. Deputy of Prevention and Preparedness of BNPB, Wisnu Widjaja, explained that the beauty of eruption was initiated to restore the condition of tourism in Bali which is decreasing due to Mount Agung activity.

"The beauty of the mountain when the eruption is incredible, and it has a high selling value for tourism," said Wisnu on Wednesday, October 10th 2017. according to Wisnu, the eruption of Mount Agung has selling value to be a tourist attraction.

"Of course, tourists should watch the eruption

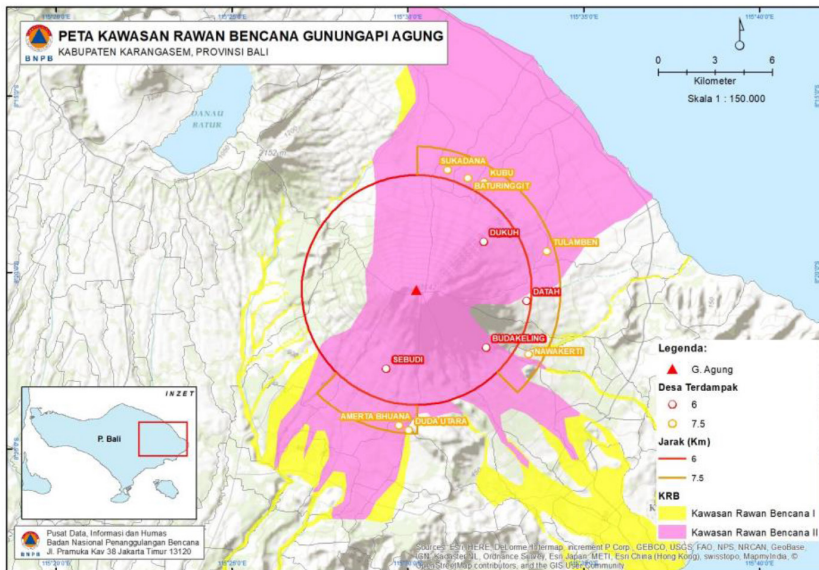


Figure 3 all areas within a six-kilometer radius from the crater of Mount Agung with sectoral expansion to the north-northeast and southeast-south-southwest as far as 7.5 km, there should be no community activity.¹⁵

from the safe zone,” said Wisnu Widjaja. He explained that the eruption of Mount Agung might be seen from various points. First from Kubu and Amed in Karangasem with distance 25 kilometers from the summit of Mount Agung. From there, tourists would be able to see throwing volcanic material that spewed from the crater of Mount Agung. The sight of volcanic material launched from Mount Agung could be a decent photography object.

Second place which is considered suitable to see the eruption from a radius of 35 kilometers is Batur. Batur would look beautiful against the background of Mount Agung eruption. According to Vishnu, this is great for photography or visual documentation. Third, the eruption of Mount Agung may be seen from Pura Lempuyang. The distance is about 16.5 kilometers from the crater of Mount Agung. “If you watch the eruptions from the safe zone, it will be safe; many safe areas may be used as a place to see the eruption,” he said.

According to him, the concept has been socialized to the Ministry of Tourism, Bali Tourism Office, and Association of Indonesian Hotel and Restaurant or PHRI Bali. They are very enthusiast about the concept. Wisnu mentioned that Deputy Marketing of tourism ministry willing to market the idea. Related to the idea. Wisnu, on Tuesday, October 17th, 2017 through BNPB invited the College of Tourism (STP) in Bali to propose it. According to him, the eruption may provide blessings for the tourism sector and mining.

“The eruption of Mount Agung may be sold, and could be seen from the sea, and from a safe area, if from the sea, we may use a ship,” said Wisnu. He said the concept of beauty of eruption is strongly related to refugees. This concept would give benefit to the refugee in Karangasem or outside the regency. According to him, if the program approved, it would involve the refugee. The goal is to earn income for them. They may work as a guide for foreign tourists or cook for them. “Before the refugee are involved, they should be trained by officers from tourism agencies,” he explained. Like how to be an excellent guide, or to cook a good meal.

If the concept of beauty of eruption might be realized, then the refugee may obtain benefit from the outbreak. This program continues to be socialized to the relevant agencies. It is expected that tourism of Bali continues to run smoothly despite the eruption of Mount Agung. “The program is profitable, the benefit is for humanity as well,” he explained.¹³

THE STATUS LOWERED

After 37 days, since September 22nd, 2017, on *Awas* Status (level IV) finally, on Sunday evening, October 29th, the situation was lowered to *Siaga* (level III), after a dramatic decrease in the number of earthquakes.³

Head of Volcanology and Geological Hazard Mitigation Center (PVMBG) from Geological Agency of Ministry of Energy and Mineral Resources, Kasbani gave his thought to media. He said that although its status dropped to *Siaga*, all areas within a six-kilometer radius from the crater of Mount Agung with sectoral expansion to the north-northeast and southeast-south-southwest as far as 7.5 km, there should be no community activity. According to him, although the status of Mount Agung’s activity has been lowered to level III, it should be considered together that the highest volcanic activity on the has not subsided completely and still has potential to erupt.¹⁴

Head of Information Data Center and Public Relations of the National Disaster Management Agency Sutopo Purwo Nugroho explained that during Mount Agung’s status, it is estimated to cause losses about IDR 1.5 trillion to IDR 2 trillion. According to him, huge loss affected the banking sector reached IDR 1, 05 trillion, the loss from tourism sector IDR 264 billion, from refugees’ earning IDR 204, 5 billion. In addition, from agriculture, livestock, and handicrafts are estimated at total IDR 100 billion. due to the idle status of development and mining, those sectors reported had losses up to IDR 200 billion to IDR 500 billion.¹⁶

Start from Monday, October 30th, 2017, the refugee of Mount Agung were repatriated after the decline of Mount Agung status from *Awas* to *Siaga*. Vehicles were set up to transport the refugee. The Regional Disaster Management Agency (BPBD) of Klungkung Regency revealed that the repatriation uses eight vehicles, consisting of five buses and three trucks.

Residents who are allowed to go home are those who live outside the Disaster-Prone Area. Meanwhile, as many as 3758 people stay in the camp due to their residences included on six disaster-prone villages. The six villages are Buwana Giri, Sebudi, Besakih, Jungutan, Dukuh, and Ban.¹⁷

AND THE ERUPTION CONTINUES

No one could predict the nature. Mount Agung experienced phreatic eruption on Tuesday, November 21st, 2017. Phreatic eruptions are steam-driven explosions that occur when water is heated by magma, lava, hot rocks, or new volcanic deposits.¹⁸, then followed by second phreatic eruption with thick smoke that soared approximately 1500 meters from its peak.¹⁹ Rock barrage was also reported on the north side of Mount Agung by locals. The distance reached 4 kilometers from the crater with possibly 500 degrees Celsius in heat. Stone size varies, from gravel-sized to adult hands.²⁰

The Center for Volcanology and Geological Hazard Mitigation (PVMBG) announced the status of Mount Agung, from level three (*Siaga*) raised to level four (*Awas*) on Monday, November 27th, 2017 at 06.00 AM. "We raised this status due to the eruption level of Mount Agung shifting from phreatic to magmatic eruption. it was based on observation of red rays that appeared at the top of the mountain on Sunday, November 26th, 2017, at 09.00 PM," said Head of Mitigation PVMBG, I Gede Suantika. He explained the eruption from the phreatic phase to the magmatic is proved by a thick cloud of ashes that continues to soar up to 2,000-3,400 meters from the summit of Mount Agung. Suantika also pointed out increase activity of magma and lava. Also, this continuous smoke accompanied by an explosion as well as weak rumbling that could be heard up to a radius of 12 kilometers from the top of the mountain, indicate more massive eruption might occur soon.

Suantika recommends no activity in the disaster-prone area. The prone area radius from six-kilometer increased to eight kilometers from the mountain's summit. Also, the sectoral expansion from previously 7.5-kilometer radius raised to ten kilometers to the north, northeast, southeast, south, and southwest.

Moreover, the volcanic ashes resulted in various



Figure 4 thick smoke soared approximately 1500 meters from its peak⁴

International Airlines cancel and divert their flights from Bali or to Bali.²² the airport management also decided to temporarily close their services since thick ashes have reached the airport.

PT Angkasa Pura I stated that as many as 445 flights at I Gusti Ngurah Rai Airport, Bali were affected by the temporary closure to anticipate the disruption of flights caused by volcanic ash of Mount Agung. Consequently, flights departing from Bali are canceled or postponed. While the trip to Bali, which has left before 07.15 WITA, were diverted to nearby airports. Namely Juanda Airport Surabaya, Lombok Praya Airport, Sultan Hasanudin Airport Makassar, Sultan Aji Muhammad Sulaiman Sepinggan Balikpapan Airport, Adi Soemarmo Airport Solo, Ahmad Yani Airport Semarang and Adi Sutjipto Airport Yogyakarta. It is estimated that there are 445 flights canceled, namely 196 international routes and 249 domestic routes.

The government maximized the land and sea transportation to transport tourists who wish to leave Bali due to the airport closure. I Gusti Agung Sudarsana, Head of Bali Transportation Agency, said that the action had been done for 24 hours since the airport closed on Monday, November 27th, 2017. Meanwhile, foreigners who are stuck in Bali and their residence permit is exhausted at the same time, would be given an exit pass from immigration valid for seven days as a form of compensation. On the other hand, related to IMF-World Bank's annual meeting plan in Bali in October 2018. Finance Minister Sri Mulyani said she is going to discuss the matters to IMF and World Bank.²³

Various media around the world highlights about the eruption of Mount Agung, one thing that attracted the world attention is the closing of Ngurah Rai International Airport, Bali. With the title “Bali Volcano Alert Raised, International Airport Closed” media from the United States, Bloomberg, said that the closure of the airport made thousands of tourists stranded.

The Telegraph in an article titled “Mount Agung erupts: Bali raises alert to the highest level as the evacuation zone extended and the airport closed” also reported the closure of the international airport in Lombok due to the eruption of Mount Agung. Another media from the United States, SF Gate, also reported similarly to an article entitled “The Latest: Bali volcano alert raised, airport closes.” With the headline “Mount Agung: Bali volcano alert raised to the highest level”. British BBC media highlighted the issue of an eruption that had an impact on the evacuation and closure of the airport. While E-Media from Australia, News.com.au, also stressed about the cancellation of some flights from and to Bali by the airline due to the volcano eruption.²⁴

The Association of Travel Companies (ASITA) mentioned inbound traffics through flights, and tour packages have been reduced by around 50 percent since the eruption. Also, flights and tour packages to West Nusa Tenggara and East Nusa Tenggara also affected by the explosion. Chairman of Asita Bali I Ketut Ardana, on Bali Tourism Hospitality’s meeting, said all stakeholders agreed to work optimally serve tourists to anticipate the impact of the disaster. One of them by providing free overnight lodging services for the tourists who are stranded and faced difficulties to return to their home country. On the second day, the hotel manager was also asked to give a special price.

In general, he mentioned about 3,800 tourists who could not leave Bali due to the Airport closure. Despite the potential losses to be borne by hotel entrepreneurs, it does not make the association worry. According to him, entrepreneurs certainly do not only think about profit, but also a sense of responsibility providing services and security for tourists.²⁵

GOVERNMENT’S REACTION

President Joko Widodo ordered the National Disaster Management Agency, *TNI*, *Polri*, *Basarnas* and other relevant ministries to provide support to the Provincial Government of Bali in context of handling the refugee due to the eruption of Mount Agung.

“Everyone should be assisted; I do not want any victims because of the eruption,” he said.

Jokowi appealed to those in the radius of 8 to 10 kilometers to evacuate for safety. The President also asked the community, especially who live around Mount Agung, to remain calm and follow any suggestions or appeals from the central and regional governments. “I keep myself update about what happens in Bali,” said Jokowi.²⁶

CONCLUSION

The eruption of Mount Agung is a natural phenomenon since it is an active stratovolcano type. Learned from its eruption in 1963, government, and the public responded quickly to take preventive action thus casualties may be reduced to zero. Locals who live in the disaster-prone area take refuge to safer places while Government through PVMBG and BNPB continue to monitor any update regarding the highest volcanoes in Bali status. However, on the other hand, the news about mount Agung’s activities made tourists worry to visit Bali. It is proved by declining number of tourist visit Bali. The government through related agencies explain that it is still possible to visit Bali. However, they should avoid any activities in the disaster-prone area. Besides, it is being discussed about plans to make the eruption as a tourist attraction. The program aims to offer new tourism potentials. Thus it may elevate the number of tourist visits to Bali as well as provide employment opportunities for the refugees.

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