



LIVING WITH A VOLCANO IN YOUR BACKYARD

Stories from the Volcanic Communities
on Building Resilience

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REMARKS



All our praise and gratitude to Allah SWT, God Almighty for the blessings bestowed upon us, so that we are still blessed with good health and with the ability to continue our good work and contribute to the nation in the field of humanity, particularly in the field of disaster management in Indonesia.

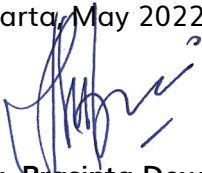
The Indonesian government declared April 26 as National Disaster Preparedness Day (HKB). HKB is a day initiated by BNPB to raise public awareness of the importance of knowledge and comprehension of risks in disaster, foster a disaster-aware culture, and practice skills in various ways on how to rescue themselves.

It is my greatest hope, that through this book, stories about the resilience of the community, especially in the volcanic region, can inspire many parties, especially families and communities in various disaster-prone areas. The preparedness of the community to face the threat determines the magnitude of the risk and impact of the disaster that they will face.

I would like to express my appreciation to the Australian Government through the Australia-Indonesia Partnership Program SIAP SIAGA, for the support in facilitating the development of this book. I hope this book can be beneficial for all of us in our efforts to build the resilience of communities in disaster-prone areas.

Salam Tangguh, Salam Kemanusiaan!

Jakarta, May 2022

A handwritten signature in blue ink, appearing to read 'Prasinta Dewi', with a stylized flourish at the end.

Dra. Prasinta Dewi, M.A.P
Deputy for Prevention, BNPB

REMARKS



It is the pleasure and honour of the Australian Government to partner with Badan Nasional Penanggulangan Bencana (BNPB) in the development of this important publication, “Living with a Volcano in Your Backyard - Stories from the Volcanic Communities on Building Resilience”. The book captures the wisdom and good practices of communities living in the surrounding areas of several active volcanoes in Indonesia, which enable them to live safely with the volcanic hazards. This publication is evidence of the Government of Indonesia’s success in promoting and facilitating community-driven disaster preparedness initiatives. It was launched on National Disaster Preparedness Day 26 April 2022, in which the Australian Government was honoured to participate.

I would like to congratulate BNPB for their work with communities to co-curate and share knowledge and good practice, which recognises the wisdom and agency of at-risk communities themselves, and in turn, demonstrates the importance of localisation. The lessons shared by the seven communities also clearly demonstrate how community preparedness and resilience through livelihood approaches are key to the sustainability of community-based disaster risk management in active volcano areas. I commend BNPB’s drive to document and disseminate good practice as an important step in accelerating the movement to strengthen community preparedness and resilience in volcanic and other disaster-prone areas. It is my hope that this book will serve as a useful reference for disaster management practitioners in the country, especially those that are actively involved in community-based disaster risk management.

Through the Australia-Indonesia Partnership in Disaster Risk Management (or SIAP SIAGA program), the Government of Australia is pleased to support the Government of Indonesia in its many initiatives, including this book, to strengthen community resilience to disasters. I would also like to use this opportunity to reiterate Australia's ongoing commitment to partner with Indonesia in addressing the significant disaster risks affecting our region, and whose lessons and experience will in turn also benefit the Government of Australia in tackling similar challenges.



Stephen Scott

Deputy Ambassador, Australian Embassy Jakarta

REMARKS



Indonesia is one of the countries most at-risk from disasters, including floods, landslides, extreme weather events, volcanic eruptions, earthquakes, and tsunamis. The 2021 *Disaster Risk Index (IRBI)* shows that of the 514 regencies and cities in Indonesia, there are a total of 293 with Moderate Risk Index values, and 221 with a High-Risk Index values. According to *The World Risk Index 2021* Indonesia is ranked 38th out of 181 countries most vulnerable to disasters.

Data collected from all Regional Disaster Management Agencies (BPBD) in Indonesia showed that there was a total of 5,402 disaster events during 2021. 99.5% of these events were hydrometeorological in nature. This represents a 16.2% increase compared to the previous year (2020) which saw 4,649 disaster events.

With the increasing frequency and intensity of disasters there is an urgent need to increase, people's knowledge and awareness of risks and how to prepare from them effectively. Socialization, education, and preparedness are key to the reduction of the future impact of disasters on lives and livelihoods. The *Sendai Framework for Disaster Risk Reduction (SFDRR 2015-2030)* reminds us that the mainstreaming of Disaster Risk Reduction (DRR) across all sectors should not only aim to reduce casualties, damage and economic losses, but also to increase investment to strengthen resilience to future disaster threats.

The 2022 National Disaster Preparedness Day (HKB) highlighted Indonesia's continued efforts and commitment to the national development agenda whilst achieving the targets of the Sendai Framework to significantly reduce the impact of disasters through strengthening the understanding and management of risks, increasing investment, and improving preparedness for better emergency response.

Community participation is a very important part of disaster management. Communities in disaster-prone areas, together with various parties, can become “subjects” or actors. At its lowest level, this includes individuals and families, and in the wider environment includes communities and community groups.

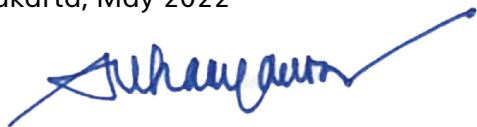
The aim of this book is to share stories, experiences, and best practices of volcanic communities about their efforts to live harmoniously and side by side with the ongoing threat and risk of disaster. Furthermore, it is hoped that stakeholders, especially disaster management actors, can learn from these lessons and experiences and that they can serve as inspiration for other communities in their efforts to increase resilience and reduce disaster risk in the future.

I would like to thank the many individuals and institutions throughout the country involved in supporting Indonesia’s National Disaster Preparedness Day 2022, including the BPBDs, local governments, academics, business institutions, mass media, humanitarian and development organisations, and disaster management volunteers. Furthermore, I would like to convey my appreciation to the team of constituents, contributors and supporters who have been involved in the preparation of this book. I sincerely hope that this book can serve as a useful reference for all parties in disaster management efforts in Indonesia.

May our efforts to protect communities and reduce losses due to disasters, result in optimum outputs, and always be guided by Allah SWT.

*Salam Tangguh, Salam Kemanusiaan
Siap Untuk Selamat*

Jakarta, May 2022



Letjen TNI Suharyanto, S.Sos., M.M
Head of the National Disaster Management Agency

“Come quick! Look
at that beautiful fire
from the mountain!”



PREFACE

“Come quick! Look at that beautiful fire from the mountain!” Rulianto, North Sumatra Regional Disaster Management Authority (BPBD) village facilitator imitated how the elderly in Gung Pinto Village in North Sumatra reacted when they saw thick lava flowing from Mount Sinabung in 2004. “Instead of evacuating themselves, they were calling their children and family as if to watch a spectacle,” the 39-year-old recalled.

Despite its status as an active volcano, Mount Sinabung had never erupted in the past 500 years. As such, people living in Mount Sinabung surroundings had no evacuation skills or emergency initiatives. “People were used to small earthquakes caused by volcanic activity, so they didn’t see the volcano as a danger,” said Rulianto.

As a result, when an eruption happened, evacuation could not be done properly. “We were quick but wrong. There were a lot of fatalities because people were in a panic. People suffered broken limbs because of a crash or even fell into a cliff when rushing,” Rulianto explained.



Rulianto,
North Sumatra BPBD
village facilitator

A similar false sense of security, despite living side by side with a volcano, was also shared by the people living in Sumber Mujur Village, Candipuro Subdistrict, Lumajang District, East Java. Although their village was situated within a 7 km radius of Semeru crater, the citizens believed they would never be affected by a volcanic eruption. “Our ancestors had lived here for the longest time, but nothing had happened before,” Agus Wijaya, the head of Sumber Mujur Disaster Alert Team (TSD) imitated what the people were saying.

Gung Pinto and Sumber Mujur villages are two of around 53,000 disaster-prone villages in Indonesia, prompting the necessity to foster a culture of disaster awareness and mitigation efforts. With the scale and geographic complexity of the Indonesian archipelago, enhancing community resilience in a rural setting is critical in reducing death and economic losses as a result of disasters.

As one of the efforts to build stronger resilience, the Indonesia National Disaster Management Agency (BNPB) initiated the Welfare-Based Disaster Resilience Village model (also known as *Destana/Desa Tangguh Bencana*), as a part of the Community-based Disaster Risk Management (CBDRM), including for the volcanic communities in Indonesia.

This initiative is also supported by the Australian Government through the SIAP SIAGA program, an Australia-Indonesia partnership on disaster risk management that aims to improve the ability to prevent, prepare for, respond to, and recover from disasters in Indonesia.

During the 2022 National Disaster Preparedness Day (HKB), BNPB further reiterated the importance of this initiative by showcasing an integrated and inclusive systems-based approach that enables better harmonisation of CBDRM and ensures support to areas with the highest risk and the most vulnerable populations.

The integrated element of this approach brings together disaster risk reduction efforts, climate change adaptation, and social protection – three key elements of disaster risk management which are all too frequently poorly integrated.

With this aim in mind, BNPB has invited representatives from seven volcanic communities in Indonesia, namely Mount Sinabung (North Sumatra), Mount Merapi (Central Java and Yogyakarta), Mount Rinjani (West Nusa Tenggara or NTB), Mount Agung (Bali), Mount Ile Ape (East Nusa Tenggara or NTT), Mount Kelud and Mount Semeru (East Java).

The seven communities shared their stories on how they build disaster awareness among their community, training citizens to mitigate disaster, all the way through to rebuilding their economies and livelihoods in order to become a resilient village, with a focus on vulnerable members of the community such as the disabled, the elderlies, women, and children.

Through *Destana*, BNPB is also providing support to the nation's community-based disaster voluntary groups led by concerned citizens such as Rulianto and Agus. *Destana* encourages greater and more active community involvement in planning, implementing, and utilizing disaster risk reduction measures and activities, especially in disaster-prone areas.

“I was born on
the slope of
Mount Agung,
but just like
everyone else,
I had never
learnt about
the volcano,”



HAND-IN-HAND IN BUILDING RESILIENCE

I Gede Pawana was restless. The 52-year-old chief of Dude Timur Village on the slope of Mount Agung, in Karangasem Regency, Bali Province sensed that the volcano would erupt soon in 2017. Yet, there was no clear evacuation or mitigation system available among his citizens.

"I was born on the slopes of Mount Agung, but just like everyone else, I had never learnt about the volcano," Gede said. He then decided to take the matter on, on his own. He formed a volunteer organization and signed an MoU with supporting villages in the case of a volcanic disaster. He named the community 'Volunteer without Direction' or 'Relawan Tanpa Arah'.



I Gede Pawana.
Pasebaya Gunung Agung, Bali

Soon after, his nightmare came to a realization. "It was a mess. The evacuation route was unclear. There were traffic jams everywhere, that could have been fatal," he shared. Thanks to his preparation prior to the disaster, he could facilitate his village citizens to evacuate to the sister villages soon after. In two days, he managed to set up the evacuation camp so people could cook and conduct basic activities.

But the problem persisted in the neighboring villages. "Some villagers couldn't eat anything three days after the disaster," he recalled. Gede then continued to create voluntary posts to help other villages affected by the eruption.

A week later, the BNPB team passed by one of the voluntary posts. Bernardus Wisnu Widjaja, the former BNPB chief noticed the activity and stopped by to give appreciation for the volunteer. "It was a good initiative, it must be supported," Gede imitated Wisnu.

Initially, Gede was hesitant as he was disappointed with the government's slow response to the disaster. However, Wisnu managed to convince him that collaboration with a government body could help voluntary-based activism give a better and wider impact. As such, 'Volunteer without Direction' morphed into Pasemetonan Jaga Baya (Pasebaya) Agung or Comradery for Protection of Mount Agung, inaugurated by Dr. Raditya Jati, BNPB's current Strategy and System Deputy.



Through the collaboration, Pasebaya Agung managed to expand its community to 28 villages. They also collaborated with the Indonesian Amateur Radio Organization (ORARI). "There should not be any box and label separating voluntary groups," Gede committed.

BNPB through the Regional Disaster Management Authority (BPBD) also strengthened Pasebaya Agung by providing disaster mitigation skills, such as evacuation training, search and rescue training, and physical training. "Before the BNPB training, we only rely on our bravery, risking ourselves by trying to undertake rescues without any proper gear," Gede admitted.

Nowadays, the 52 groups of Pasebaya Agung continue to run their posts, reporting and coordinating on any disaster incidents from power failure to missing hikers, through WhatsApp group, amateur radio, and local media.

BNPB also supported other pre-existing volcano communities such as Sumber Mujur Village community in East Java. "After the Semeru eruption in 2021, the village government proposed a Destana formation, which was approved by the BPBD soon after," said Agus Wijaya, the head of Sumber Mujur Disaster Alert Team (TSD).

30 people, including the village government, members of the youth organization (Karang Taruna), and small-medium business (UMKM) groups were given various trainings for a week. "We received training on emergency first aid, designing disaster maps, evacuation routes, and evacuation points," Agus explained.

All training and programs are developed by considering local culture, such as in Glagaharjo Village, Jogjakarta, where BPBD provided Disaster Risk Reduction (PRB) training. "The three villages here, Kali Tengah Kidul, Srunen, and Kali Tengah Lor were considered too near to Merapi. However, they refused to be relocated. Therefore, the program is focusing on increasing people's readiness to face disaster," explained Suroto, Glagaharjo village chief.

He gave an example of how the PRB team operated during an eruption on 9 March 2022. "Instead of encouraging people to evacuate, they urged people to go out of the house to check Merapi's condition and to be prepared if they have to leave the mountain," Suroto explained.

**“There should not
be any box and
label separating
voluntary groups”**

INCORPORATING LOCAL WISDOM

Indeed, understanding local wisdom and culture are critical in improving grassroots disaster resilience. Andres Yohannes Gregorius Solang Koban, from East Nusa Tenggara (NTT) Disaster Risk Mitigation (PRB) Forum, shared how he observed the local culture before setting up a Disaster Alert Team (TSB) in Lamagute Village, Lembata Island, NTT Province, where Mount Ile Ape stands.

“Lamagute Village upholds a verbal story-telling culture. Therefore, slowly but surely, stories about eruption from surrounding mountain disappeared, and people started to believe that disaster would not happen,” shared Andres. This is despite the village being surrounded by around 50 volcanoes, both on land and in the sea.

To build trust among Ile Ape people, Andres followed the Community-Based Disaster Mitigation Approach (PRBBK). “First, we need to understand the community history, their religiosity, their spirituality, and their belief system,” the 48-year-old explained, “for example, the people of Ile Ape believe that stone landslide never kill. This is something we cannot argue about,” he continued.

He spent a lot of time with the community, joining their ceremony to figure out how to bring the disaster alertness message. He understood that the people were stubborn, but they were dutiful towards their village leaders. As such, he worked together with village key opinion leaders such as Rufus Sira Watun and focused his efforts on the youth who had higher respect for the village government.



Andres Yohannes Gregorius Solang Koban
Disaster Risk Mitigation Forum
Nusa Tenggara Timur (NTT)

From Rufus, Andres also learnt how to persuade the villagers. "If we argue directly, people will just head straight back to their orchards. We need to know the actual problem first. Then we have to discuss with them, offer different solutions, and reach an agreement," Rufus explained. Rufus currently leads the TSB in Lamagute Village.

Andres also tried to incorporate local lingo, such as the one used in the folk song Wua Matan Pito. "There is a lyric about seven betel eye and five betel nut stems, so I used the term Team Five comprising of seven people," Andres gave example.

As a result, Lamagute citizens were among the most improved in terms of disaster resilience programs in NTT, and even agreed to relocation. "Initially, people were hesitant to relocate because they believed that we could not leave our ancestor's land," Rufus explained.

However, Rufus managed to convince them that relocation did not mean they were deserting their ancestor's land. "The land will still be ours. We can return and work there during the dry season," he told the citizens.

He also reminded the people that the relocation decision was more for the future generations. "We may feel safe now, just as we never thought there could be any more volcanic eruption. But what happened within one or two generations? What if they have to move but have nowhere to go? We must seize the chance while we can," he argued.

The practices of utilizing local practices to raise awareness of disaster mitigation can also be found in Semeru, East Java. Agus Wijaya, the head of the Sumber Mujur Disaster Alert Team (TSD), utilized Grebek Suro rituals to stress the importance of disaster mitigation.

"Our society is familiar with grebek suro; a ritual to ask for blessing and protection so that nature won't cause disaster, conducted every first day of the month Suro," he explained on the ritual where a cow head was planted in a water spring inside the bamboo forest. Agus "The ritual is an indication that even our ancestors were aware that they live in a disaster-prone area," he said.

Agus also actively inserted the message of disaster readiness in every social gathering, such as arisan (local lottery gathering), tahlilan (prayer event for the deceased) and events related to the community environment.

DEALING WITH THE DISASTERS



Rufus Sira Watun
Disaster Alert Team (TSB) Lamagute Village
Lembata, Nusa Tenggara Timur (NTT)

The hard work of community volunteers and BNPB have resulted in better, more adept village communities in facing disaster, as shown in Ile Ape community in Lembata Island, East Nusa Tenggara (NTT).

“Before the 2012 earthquake, we had never received any disaster mitigation training. So, when the earthquake happened, we were clueless. We didn’t know where to go, we didn’t even know what caused the earthquake,” shared Rufus Sira Watun, the Disaster Alert Team (TSB) leader in Lamagute Village. Most of the villagers like himself evacuated to their gardens and tried to find their way and avoid huge stones falling due to the earthquake.

It was a totally different story, when another earthquake, landslide, and volcanic eruption struck in 2017. “We practiced what we’ve learnt and worked with the team we form,” said Rufus proudly. After the 2012 earthquake, the Disaster Risk Mitigation (PRB) Forum, led by Andres, educated the Lamagute village on earthquake and volcanic eruption mitigation, especially on evacuation training.

The move was followed by TSB formation with six separate teams handling different tasks. The Assessment team focuses on judging the vulnerability of the area such as land cracks. The Early Warning System (EWS) team seeks any information related to the volcano and alerts the society of any disaster indications by using bells and radio.

The evacuation team trains the community to be able to identify the evacuation point and route whereas the Emergency First Aid (PPGD) team handles any first aid needs before receiving medical treatment. The shelter team is tasked to build emergency tents for the evacuees and the public kitchen team prepares all the necessities before the evacuees arrive, such as hot water.

The team even conducted an evacuation drill which proved to be highly useful when an actual disaster occurred. "Everything was managed by the TSB team and village government. There was just one commando for evacuation and people understood well which neighbourhood association (RT) to evacuate first and to where," explained Rufus on the 2017 disaster evacuation process.

"Had they simply escaped the house, a lot of fatalities would have occurred due to the stone landslide," said Rufus. Once the people reached the evacuees camp in the regency, the TSB quickly settled themselves, although the regency team was not prepared. They also conducted evacuee registration.

The coordination improved even more during the 2020 eruption of Mount Ile Ape. "People have internalized the standard operational procedure for evacuation," praised Andres. "No one was left behind. All evacuation vehicles were ready. The assessment team has ensured that the road condition was passable as to minimize the risk of being trapped," he added.

Lamagute Village even helped the neighbouring village affected by tropical cyclone Seroja in 2021. "Our village was already alerted of the disaster possibility, so we monitor any news from BPBD, BMKG, and the internet for any change of weather or wave," Rufus shared. Every family was required to have at least one flashlight that they often played at night, like a light spectacle.

As such, when the flood hits, the Lamagute Village TSB was quick to support the affected village. "We had our own shelter tent, so we quickly built an emergency post on a hill, as the evacuation route to the regency was still not passable," said Rufus. Meanwhile, each house brought hot water and rice to the emergency post.

Similar readiness was also displayed by the community in Mount Kelud, East Java. After volcanic activity in 2007, fellow volcano communities came to provide Emergency First Aid Training (PPGD). "We then selected 6 people from 10 villages to join the Training of Trainers program," Mamik Sulastri from Jangkar Kelud community shared. There, the community received various disaster-related knowledge, including on the Early Warning System.

"We spread the knowledge to people so that they become more aware on how to live harmoniously with a volcano; how to evacuate themselves, their assets and even their cattle," Mamik explained. The socialization was conducted in areas surrounding Mount Kelud, including Kediri, Malang, and Blitar.

"It is safe to say that when Mount Kelud erupted on 14 February 2014, villages surrounding Mount Kelud were well prepared," said Mamik. "All coordination between the villagers and the village government up to district level was done. We had also mapped primary and secondary evacuation points, evacuee data gathering, and prioritisation for vulnerable members of the community," she added.

Right before the eruption, Jangkar Kelud received instruction from the district head to begin the evacuation process. Mamik then immediately returned to her village to convey this information so the citizens could prepare themselves. Meanwhile, the team in charge of transportation prepared their vehicles.

"So, when the eruption happened, the citizens were already safe in the evacuation camp," Mamik said. "Even when the blackout happened and we could not use our mobile phone, we have already prepared handy-talkies so that the communication can continue," she added.

PRIORITIZING THE MOST VULNERABLE

During disasters, a voluntary community such as Jangkar Kelud maintain their utmost focus on the most vulnerable members of the society, especially the disabled, the elderly, pregnant women, and children. "Population data becomes critical because based on that data we can put priority on the elderly and small children. So, when the volcano erupts, we can prepare all the necessities for them," said Mamik.

Focus on vulnerable members is indeed important as they deal with different challenges during the disaster often overlooked by most people, as Kasihan, a member of Pasag Merapi community in Central Java observed. On the third day of the Merapi eruption in 2010, he noticed that there were still mentally disabled victims who were left by their families in his village; Ngablak Village in Magelang Regency.



Kasih
Pasag Merapi Community
Central Java



Sarindi (72 yo)
Ngablak Village resident
11 Km from Mount Merapi

Kasih also received reports of elderly people suffering from stroke or cataract who were unable to take care of themselves as their wheelchairs were left in the village. "Simple help such as bringing along their supporting aids would make a huge difference in their ability to take care of themselves in the evacuation center," Kasih explained.

Acknowledging such needs, the TSB in Lamagute Village, NTT, prioritized their most vulnerable community, especially the elderly. "Our village is full of rocks. There aren't many livelihoods available here, pushing most of the younger generation to find work elsewhere after they finish high school. Thus, 60% of our population are elderly," share Rufus, the TSB leader.

"We've trained the 40% of the younger population to be able to take care of their older family members or neighbours during an evacuation" Rufus explained. There is also different treatment for the elderly in the evacuation camp. "We'll find houses willing to take up the elderly evacuees so they can rest well, while the remaining people will stay in the camp," the Lamagute Village's secretary shared.

MOVING FORWARD BY BUILDING ECONOMIC RESILIENCE

The Destana program ensures the volcanic community could thrive, not only during the disaster. It also focuses on livelihood and economic resilience, by optimizing available resources. “Disaster resilience equals economic resilience,” stated Syauen, a member of the Village Disaster Alert Team (TSBD) in Sembalun Bumbung Village on the slopes of Mount Rinjani in West Nusa Tenggara Barat.

“99% of our population are farmers, and they are the most affected by disaster, as either the crops fail, or we have good crops, but we cannot sell them,” Syauen shared about the problem. She gave an example of how the 2004 Rinjani eruption caused the black cloud that impacted the harvest.

The incident was repeated when in 2009, Rinjani’s ash covered the whole land. “We had to sweep the farm as the ash could dry up our crops,” the 56-year-old woman recalled. It took them five years to recover from the disaster.

As such, when TSBD was formed in 2010, the focus was primarily on economic empowerment. “We received training on how to process our harvest to create new products, building small-medium enterprise (IKM) and cooperation,” she shared.

“Disaster
resilience
equals
economic
resilience”

Syauen
Village Disaster Alert Team (TSBD)
Sembalun Bumbung Village
West Nusa Tenggara Barat

The TSBD emphasized the need to work with local potential, such as Sembalun red bean. "We face flash floods every year. And when we couldn't go anywhere, Sembalun red bean has always been our staple. This is our vegetables and protein," shared Syaun. The IKM learnt to dry the bean to extend its shelf life to a full year, so it can also be marketed as souvenirs in the Rinjani Geopark.

Another example of local produce being redeveloped is Sembalun brown rice. "There used to be no diabetic cases in Sembalun because we ate brown rice, but once we switched to white rice, the cases rose" shared Syaun. After learning about its benefit, the village started to replant brown rice. Nowadays, there are 90% brown rice farmers, an increase from a mere 50% in 2015.



TSBD also processes produce from abundant harvests, such as strawberry, beetroot, or carrot stick. "So, when a disaster occurs, the farmers can sell their produce to the cooperation with a stable price, to be processed and kept for a longer shelf life," explained Syaun. The 11 IKM in 2011 has grown to 42 IKM nowadays, handing 32 different types of processed fruits. 10% of the IKMs profit is then saved for disaster mitigation efforts.

TSBD also partnered with the Ministry of Agriculture to build greenhouses to protect crops from volcanic ash and lava heat. "We can also reduce pests thus, reducing the need for pesticides or chemical fertilisers," added Syaun.

As a result, not only has the village become more resilient to disaster, but its citizens could also support other areas affected by a disaster. "During the North Lombok earthquake in 2018, we brought 9 trucks full of vegetables and other crops as we understand that they need a lot of food support," shared Syaun.

A similar approach was also used in the Mount Sinabung community in North Sumatra. "Whenever I conduct a village visit, the people would ask, what do you bring? Are we going to eat? We cannot talk about disaster resilience if there is no harvest or crop. We need to bring economic programs," said Rulianto, the North Sumatra Regional Disaster Management Authority (BPBD) village facilitator.

In three Destana, namely Destana Ujung Payung, Destana Gung Pinto, and Kutambaru, BPBD is bringing farming development programs, such as potatoes, snake fruits, and dates. "Gung Pinto is special because they have managed to develop the program from source to end. The source product is potatoes, and they process them into potato sticks and cake," explained Rulianto. The three villages continue the economic empowerment program by using their village budget.

In Bali, Pasebaya Agung community picked a tourism approach to develop economic resilience. "During Mount Agung eruption in 2017, going uphill is banned, so we found other ways to keep tourism alive such as turning our viewing posts into tourist attractions," I Gede Pawana, the leader of Pasebaya Agung explained. Indeed, viewing post such as the Lempuyangan post has the best view of Mount Agung and has become a popular selfie spot.

Gede also reutilised the Pasebaya Agung mobile application for hikers' guide services once the hiking route is opened. Initially, the application was used to track missing people during disasters by connecting it with Google for a radius of 10 kilometres. "But now we can also use it to track hikers, so we offer 3-4 days local guide trekking packages, in cooperation with BUMDes (Village Corporation)," he explained.

“We cannot talk about disaster resilience if there is no harvest or crop. We need to bring economic programs.”

WOMEN ON TOP

In both disaster recovery efforts and economic resilience, women play a critical part. "In our culture, we are used to gender role sharing. Our men can cook, and our women can take care of our cattle. So, during a disaster, women are involved in every team, including evacuation and emergency first aid rescue," said Rufus Sira Watun from Lamagute Village in NTT. As a matter of fact, there were more women than men in the TSB.

A similar sight was also seen in Sembalun, East Nusa Tenggara. "I figured that women react faster during a disaster. We are also used to a lack of sleep," joked Syaun from TSBD Sembalun Bumbung Village. 50% of the initial TSBD team were women, and they even form a specific community named Resilient Women (Perempuan Tangguh).

Indeed, the gender equality approach was a strategy intended during TSBD formation. "BNPB noticed that women's participation was limited, and we weren't given strategic positions in an organization, so they focused on gender empowerment," Syaun shared.

The approach was responded with controversy among society. "Why do you keep leaving your husband?" Syaun repeated what her neighbours were saying. "Women were supposed to stay at home at all times in our culture," the former leader of Resilient Women explained.



Mamik Sulastr
Jangkar Kelud Community
East Java

But Syauen kept going, with the support from her husband and family, to raise awareness about TSBD and Resilient Women. Through the Family Welfare Empowerment (PKK), she created events such as cooking competitions. "I wanted to prove myself in front of the society," she stated.

Her hard work paid off. "Husband and wives now share their domestic roles. It is no longer a taboo for a man to take care of his children at home," said Syaun. Thanks to the income from the IKM, women could also work and help the family's livelihood.

"We have shown that we could contribute as we can multitask. We can drive trucks to Bima to bring aid, and take care of our household too," she said. Nowadays, 70% of the TSBD members in Sembalun Bumbung Villages are women, mostly in their youth.

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PREPARED FOR THE COVID-19 PANDEMIC

For the volcanic community, disaster resilience means they are also ready to face another disaster: the Covid-19 Pandemic. "Our community remains active to handle any kinds of disaster," said I Gede Pawana, the leader of the Pasebaya Agung community in Bali.

Gede claimed that all of the Pasebaya Agung volunteers in each village became the COVID-19 task force. Although the volunteers were not encouraged to gather in the post, they continue to monitor and coordinate with others through WhatsApp groups and radio.

Sembalun Bumbung Village TSBD in Mount Rinjani, NTB also took the initiative to handle the COVID-19 situation. "Initially I was worried. I didn't dare to leave the house. I was even scared of opening the door because I was afraid that the handle was already touched by someone with COVID-19," admitted Syauen, the former leader of TSBD Sembalun Bumbung.

However, she decided to act. "I went to Pusuk, which was the entry gate for Sembalun. I stopped everyone who wanted to come, checked their KTP (identity card), and made sure only Sembalun citizens could enter our village," shared Syaeun. There was once that even a visit to support IKM from the Bank of Indonesian People (BRI) was refused. "We had a meeting in Pusuk instead," she said, stressing the importance of following the standard procedure already agreed before.

TSBD also tried to solve the marketing issue caused by the closure of the Sembalun Geopark. "Sales were stopped for a month. But then we find an alternative to sell the products online, through Instagram, WhatApp blast, and Facebook. The demand was good as one of our products, the black garlic could boost immunity," Syauen explained. She attributed the digitalization process to the young members of TSBD.



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YOUTHS' INVOLVEMENT IN PAVING THE FUTURE

Indeed, the future of the Destana and village resilience lies within the hands of the village youth. "They are young, fluent in information technology and social media," praised Syaean. She always tries to involve the young people in TSBD activities, such as during disaster socialization, training, and rescue efforts.

"At first, I was afraid they couldn't stand the pressure, but it was the opposite. They were inspired by our spirit, by how the mothers fought," shared Shaeun on her experience involving the young cadres to Bima during the flash floods. Nowadays, the younger members initiate their own gatherings, while involving the seniors to provide advice.



Pasebaya Agung in Bali also displayed a promising future. Most of their 1200 members are young people, aged between 18 and 20 years old. "I find no difficulties in communicating with the younger generation," said I Gede Pawana, the founder of Pasebaya Agung.

For him, the key in attracting youth involvement is the willingness to communicate in their language. "We cannot be arrogant. We must sincerely want to work with them equally," he stated. Gede also encouraged his three sons, who were in senior high school and university to be volunteers. "Gunung Agung will always be here, so the future generation must learn to live side by side with it," he stated.

Mamik Sulastri from Jangkar Kelud in East Java had a different approach to involving youth. "We talk to the youth association. We shared the voluntary virus by sharing our stories from heart to heart. Apparently once they are triggered, they have very high voluntary spirit," she said. Mamik even spoke until late night during one of the led Al Fitri gatherings.

MOUNTAINOUS HOPES AND WISHES

With the new generation ready to participate, volcanic communities are on their way to be more resilient in facing disasters. There is, however, some room for improvement as wished by the community, such as more economic empowerment program for village citizens who had to be relocated, and digital training.

Kasihani from Pasag Merapi community in Central Java wished for more inclusive training for the disabled. "Right now, the evacuation training is more focused on how to help the disabled. But the main important factor for survival is self-ability, so the disabled must be the subject of disaster mitigation training" he stated.

Relocation is also another point for program improvement, as mentioned by Agus Widjaja from the Semeru community in East Java. "There will be 2,000 families relocating. They need to be given adaptation training and livelihoods. Or else, they'll start to resort to the jungle, resulting in nature's capacity declining and landslide potential," he said.

This was also the hope of the Ile Ape community in Lembata, East Nusa Tenggara (NTT). "Our livelihood is still in the initial village. So, we hope that when we have relocated, we can get training on economic empowerment so we can utilize our new land," said Rufus Sira Watun, the leader of TSBD Lamagute Village. He is planning to create a concept of a sharing vegetable orchard between two houses.





As for TSBD Sembalun Village in West Nusa Tenggara (NTB), digital marketing training is something they need to expand their market online.

Syaeun, the former leader of TSBD Sembalun Bumbung also hopes that BNPB will continue to work hand-in-hand with the community to build their resilience. So that when disaster strikes, all Destanas in Indonesia will be able to continue to live side-by-side with the volcano; looking at the volcano as a beautiful and nurturing wonder, yet, able to react efficiently during an eruption, and to continue to reap from volcano's potential after the disaster.







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Department of Prevention
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