Athan

CIVICUS

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PROGRESSIVE GRASSROOTS INITIATIVE

Digital Democracy Initiative

# DEAD AIR

## A Study of Communication Shutdowns in Conflict-Affected Areas of Sagaing Region and Northern Mandalay Region



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# Background of Athan – Freedom of Expression Activist Organization

Athan, the Freedom of Expression Activist Organization, was founded on 15 January 2018 by a group of young people committed to ensuring freedom of expression throughout society. The organization was formed by merging the Research Team for Telecommunications Law and We Support Journalists, with the aim of advancing freedom of expression in a more systematic and far-reaching way.

Athan is a research-based activist organization that promotes freedom of expression through three core areas of work: research, advocacy, and education. As a research-driven organization, Athan continuously studies, documents, and exposes the laws, customs, practices, and incidents that obstruct freedom of expression. Based on its research findings, the organization advocates for legal reforms aligned with democratic standards and conducts broad-based advocacy and dialogue at every level and across all sectors to ensure the full realization of freedom of expression.

In December 2018, Athan and its founder, Maung Saungkha, received the Human Rights Tulip Award from the Netherlands. Athan envisions a society in which freedom of expression — a fundamental democratic standard — is fully realized.

# 1. Executive Summary

Communication shutdowns have consequences that extend far beyond the inability to make phone calls or access the internet. When people cannot obtain warnings about airstrikes and military movements, medical assistance, information about the safety of family members, or information about evacuation routes, their daily decisions, lives and safety are directly affected.

This report combines survey responses from (130) respondents, covering (24) principal townships in Sagaing Region and northern Mandalay Region, with a separate interview with an official from a local education organization, case studies and external data. It examines how people living in areas affected by communication shutdowns obtain information, the risks they encounter and which groups are more likely to be left behind.

Among the respondents, (92.3) percent could not reliably access conventional communication networks. Some communities have therefore established alternative systems using ICOM radios, satellite internet, loudspeakers and person-to-person information networks. However, these alternatives are neither accessible to everyone nor consistently reliable. They may be disrupted or rendered unusable by attacks and restrictions imposed by the Myanmar military, controls over access exercised by resistance forces in some areas, decisions made by service providers and local security conditions.

Fewer than half of the respondents reported receiving emergency warnings in time. To access communication services, some people must spend more money, travel for hours and pass through checkpoints or areas near active fighting. Civilians therefore bear the costs and risks created by both the shutdowns and the instability of alternative communication systems at the expense of their time, finances and personal safety.

Communication shutdowns restrict not only access to information but also the ability to verify news, document casualties, communicate the need for assistance to the outside world and obtain necessary assistance. The divide between those who have access to communication and those who do not has consequently become more than an information gap. It is now a divide in safety, health and the ability to survive.

Respondents identified ICOM radios and satellite internet as key communication needs during emergencies. The report therefore recommends prioritizing communities that remain completely disconnected and expanding the alternative communication networks currently used by local communities so that they become safer and accessible to more people. Achieving this will require coordinated action by resistance forces, including the National Unity Government, Myanmar civil society organizations, non-governmental organizations, news media and the international community.

## 2. Background

Since the military coup on 1 February 2021, access to reliable information has become a critical issue directly affecting the safety and survival of people in Myanmar. Following the coup, the military authorities shut down mobile data and telephone services, blocked social media platforms and news websites, and restricted Virtual Private Networks (VPNs) and other means of online communication, both nationwide and in specific areas. These measures gradually expanded into a system of digital repression encompassing strategic communication shutdowns, information censorship, surveillance, and the blocking of methods used to circumvent internet restrictions. According to the Office of the United Nations High Commissioner for Human Rights (OHCHR), internet and telephone shutdowns, online censorship, and surveillance continued to restrict freedom of expression and the right to access information throughout 2024.[1]

The Myanmar military has increasingly targeted strong armed resistance areas with communication restrictions and shutdowns. Access Now verified and documented 85 communication shutdowns in Myanmar in 2024, the highest number recorded in any country that year. Of these documented incidents, 74 were imposed by the Myanmar military, making it the principal perpetrator of communication shutdowns. Thirty-one shutdowns coincided with documented serious human rights violations, and at least 17 of the military-imposed shutdowns were associated with airstrikes targeting villages inhabited by civilians. Restrictions on satellite internet services such as Starlink and IPSTAR, which communities increasingly used as alternatives when regular communication networks were disrupted, were also documented in 2024.[2]

[1] Office of the United Nations High Commissioner for Human Rights. (2025). Annual update on the human rights situation in Myanmar in 2024.

[2] Access Now and the #KeepItOn Coalition. (2025). Emboldened offenders, endangered communities: Internet shutdowns in 2024. Access Now.

Athan's monitoring and documentation identify three patterns of communication restrictions in Myanmar: nationwide shutdowns, targeted shutdowns in specific areas or individual townships, and shutdowns imposed at particular times.[3] These restrictions do not result solely from the direct cutting of communication lines. They are also associated with damage to communication infrastructure, power outages, restrictions imposed on telecommunications providers, confiscation of communication equipment, blocking of online platforms and circumvention technologies, and security conditions that prevent technical repairs to damaged networks. Consequently, communities face complete communication outages, intermittent access, weak signals, and dependence on alternatives that are insecure, costly, and potentially dangerous. Although people in areas affected by communication shutdowns have increasingly turned to alternatives, including Starlink and other satellite internet services, these services remain subject to constraints involving cost, security, and accessibility.

The effects of these restrictions extend far beyond the loss of conventional telephone and internet services. According to analyses by United Nations human rights experts, communication shutdowns not only make it difficult for people to communicate with one another and request assistance, but also obstruct humanitarian organizations' relief operations and the flow of information to news media and human rights monitors. In situations of armed conflict, communication shutdowns may also intensify violence and security risks and adversely affect other rights, including access to healthcare, education and livelihoods.[4] Against this background, this study examines how communication shutdowns affect access to warnings about airstrikes and military movements, information about the safety of travel routes, communication with family members, access to medical and emergency assistance, and decisions about whether to remain at home or relocate to a safer place.

These risks are particularly severe in central Myanmar, including Sagaing Region and northern Mandalay Region. According to a March 2025 report by the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), fighting, airstrikes, landmine attacks, raids and arson continued across northwestern Myanmar, which includes Chin, Magway, Mandalay and Sagaing, making it one of the areas with the highest levels of internal displacement. The Office of the United

[3] Athan. (2025). Only in Myanmar—Made by Junta: Consequences of the Telecommunication Blackouts.

[4] OHCHR, 2021; United Nations human rights experts, 2019, p. 2

Nations High Commissioner for Human Rights (OHCHR) also identified Sagaing and Mandalay among the areas most severely affected by conflict in its report covering 2024.[5] In March 2025, the United Nations reported that approximately half of all internally displaced people in Myanmar were located in the northwestern region. Fighting and airstrikes in Madaya and Thabeikkyin townships also displaced thousands of people, while communication restrictions made it difficult to verify population movements and humanitarian needs.[6]

Following the major earthquake that struck central Myanmar on (28) March 2025, the humanitarian importance of communication systems became even more evident. The earthquake caused extensive damage to buildings and infrastructure across central Myanmar, including Sagaing and Mandalay. Even before the earthquake, these areas had already been affected by conflict, displacement and inadequate basic services. Blocked roads and communication disruptions made it difficult during the initial response to determine and verify the scale of casualties, displacement and emergency assistance needs. The disaster demonstrated that the effects of communication shutdowns are not confined to situations of armed conflict. During natural disasters, they can also impede early warnings, efforts to locate and contact family members, emergency response operations and access to assistance.[7]

During communication shutdowns, communities have adopted various alternative methods to obtain and share information. These include Starlink and other satellite internet services, two-way radios, community-level early warning networks, loudspeaker announcements, radio and television programmes, trusted local leaders, person-to-person information sharing and travelling to locations where communication networks are available. However, these alternatives are not equally accessible to everyone. Satellite internet services can be expensive, may need to be shared among many users, can be difficult to reach and carry the risk of being prohibited or having the equipment confiscated. Travelling to locations with network access can also expose people to checkpoints, armed clashes, airstrikes, landmines and other security threats. Information shared through informal networks may arrive late, be incomplete or be difficult to verify.

[5] Office of the United Nations High Commissioner for Human Rights. (2025).Update on the human rights situation in Myanmar: Developments in 2024.
[6] United Nations Office for the Coordination of Humanitarian Affairs. (2025, March 28). Myanmar humanitarian update No. 45.
[7] United Nations in Myanmar. (2025, March 28). Initial situation report: Earthquake in central Myanmar 28 March 2025.

However, reliance on Starlink satellite internet as an alternative means of communication makes local organizations dependent on SpaceX's policies and decisions, which remain beyond the control of Myanmar organizations. A coalition of (317) Myanmar civil society organizations has expressed concern that SpaceX's efforts to disable Starlink terminals in order to combat cyber-scam operations prevalent in Myanmar's conflict-affected areas could also cause widespread disruption to satellite internet services used by civilians, thereby affecting a critical communication channel in areas where the military has shut down internet access.[8]

Reports and monitoring studies published by civil society organizations and international organizations have primarily documented the frequency, location and duration of communication shutdowns, together with their effects on digital rights and human rights. Although these records are essential for understanding the scale of communication restrictions, further research is needed to develop a deeper understanding of how affected communities obtain information in their daily lives and the alternative communication methods they use in practice. In particular, systematic examination is needed of the information channels available during communication shutdowns, the people who manage those channels, the costs of using them, the speed at which emergency warnings are received, the methods used to verify information and the groups that experience the greatest difficulties in accessing information.

This study seeks to address this evidence gap by examining access to information in conflict-affected townships in Sagaing Region and northern Mandalay Region. It considers communication shutdowns not only as restrictions on digital communication and freedom of expression, but also as threats to civilian safety, the ability to contact family members, access to basic and emergency services and community resilience. By documenting the effects of communication shutdowns and how communities respond to them, the study aims to provide useful evidence for civil society programmes, humanitarian communication initiatives, community-based early warning systems and advocacy for communication rights in Myanmar.

[8] Myanmar Internet Project et al. *"မြန်မာနိုင်ငံအတွင်း စတားလင့်ခ် (Starlink) ဝန်ဆောင်မှုများ ပိတ်သိမ်းမှုကြောင့် မရည်ရွယ်ဘဲ ဖြစ်ပေါ်လာသော ဘေးထွက်ဆိုးကျိုးများ ခံစားရမှုအပေါ် အရပ်ဘက်လူမှုအဖွဲ့အစည်းများ၏ ပူးတွဲထုတ်ပြန်ချက်."* July 17, 2026.

## 3. Research Methodology and Limitations

This study employed a mixed-methods approach combining quantitative and qualitative methods. Between (30) August and (12) September 2026, a survey consisting of (43) questions was administered to (130) respondents from (24) purposively selected townships in Sagaing Region and northern Mandalay Region. Three data collectors familiar with the local context collected the data in person, by telephone, through the internet and through trusted local communication networks.

In addition to the survey responses, a separate key-informant interview was conducted with an official from a local education organization to develop a deeper understanding of communication shutdowns, the use of ICOM radios and Starlink, community warning networks and the practical experiences of local people. Responses to closed-ended questions were analysed using frequencies and percentages, while responses to open-ended questions and the key-informant interview were analysed thematically. Participants' consent was obtained, and directly identifying personal information was not recorded for security reasons.

Because the townships and respondents were not randomly selected, the findings cannot be generalized to represent the experiences of everyone living in the study area. Other major limitations include difficulties in reaching areas experiencing the most severe communication conditions, reliance on self-reported information and the rapidly changing conflict environment.

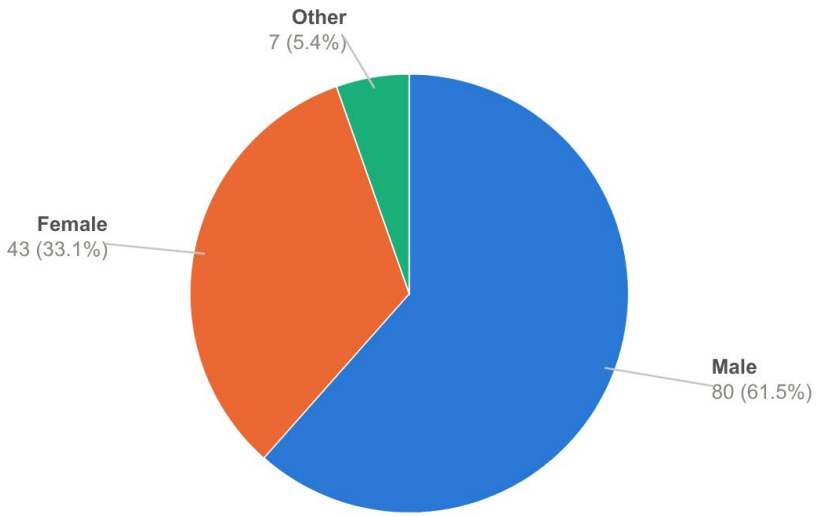
# 4. Research Findings

## 4.1 Realities under Communication Shutdowns

### 4.1.1 Respondent Background and Analytical Notes

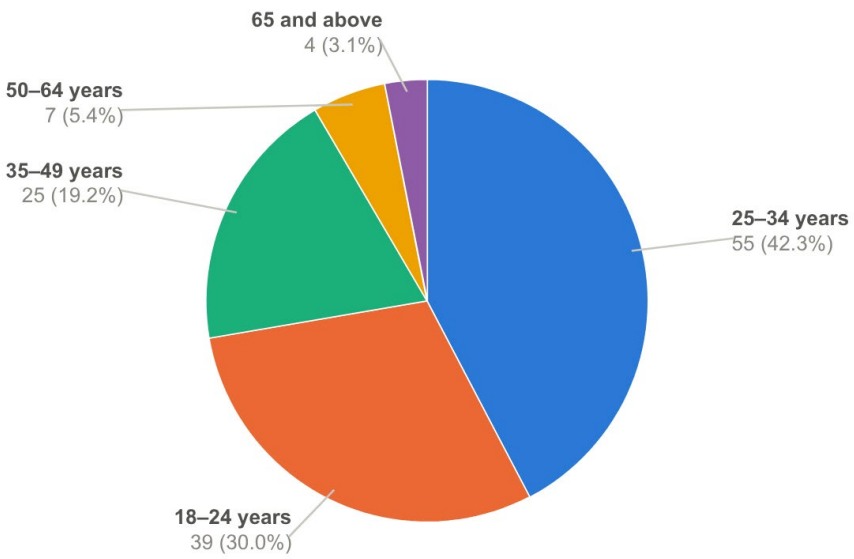
Data for this study were collected by (3) local data collectors between (30) August and (12) September 2026. The survey was conducted in conflict-affected areas spanning central and northwestern Myanmar, primarily covering (21) townships in Sagaing Region and (3) townships in northern Mandalay Region. It also included responses from (1) respondent from Pauk Township in Magway Region and (2) respondents whose townships were not disclosed for security reasons. Data were collected by telephone, in person and through trusted local networks, producing a total of (130) responses. The proportions of respondents by self-identified gender are presented in Table (4.1), while their distribution by age is presented in Table (4.2).

Figure 4.1. Gender Distribution of Survey Respondents




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

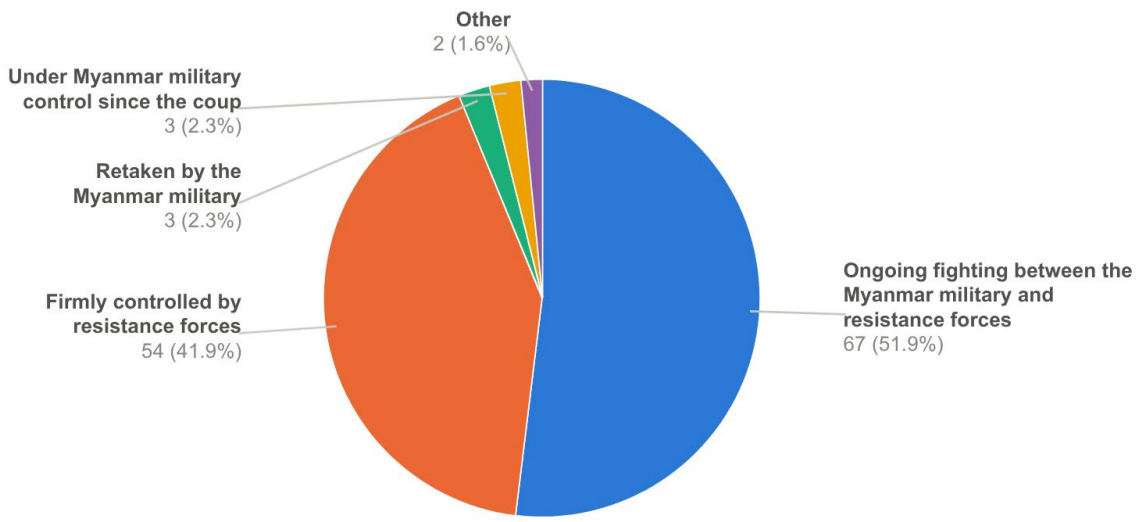
Figure 4.2. Age Distribution of Survey Respondents




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

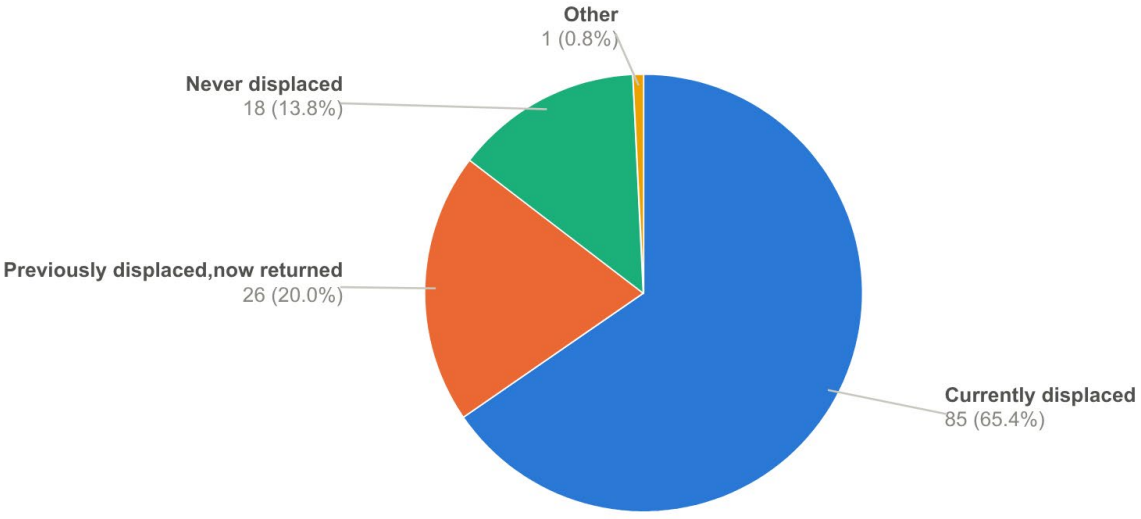
Among the respondents, (85) were displaced from their places of residence at the time of the survey, while (67) were living in areas where fighting was taking place between the Myanmar military and resistance forces. Although all (130) respondents came from areas of central and northwestern Myanmar affected by armed conflict, a minority of (18) respondents, or (13.8) percent, had never been displaced. Another (26) respondents, or (20) percent, had previously been displaced but had returned to their original communities by the time of the survey. The conflict conditions in the respondents' areas of residence and their displacement status are presented in Tables (4.3) and (4.4).

## Figure 4.3. Conflict Conditions and Territorial Control in Respondents' Townships




Source: Dead Air survey (30 Aug–12 Sep 2026; 129 respondents answered this question).

## Figure 4.4. Displacement Status of Survey Respondents

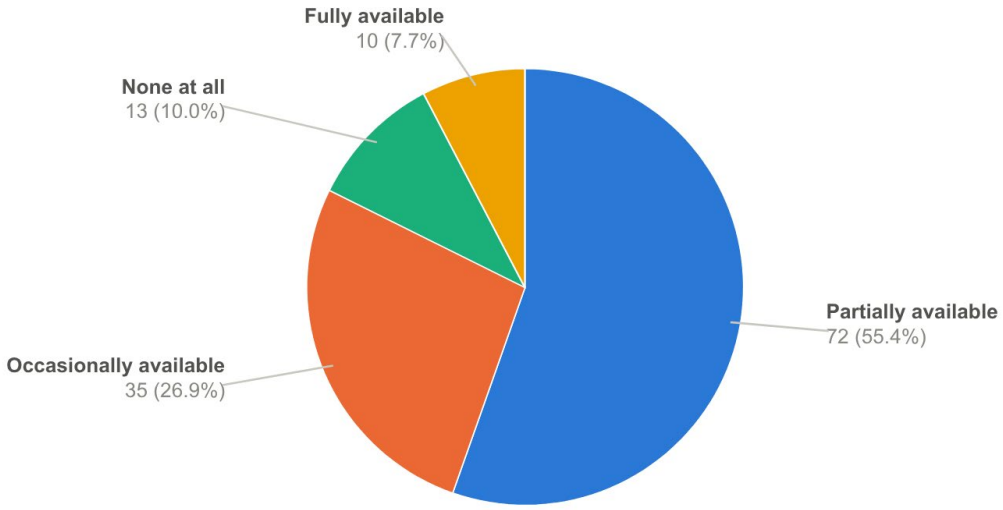



Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

### 4.1.2 Access to and limitations of conventional communication services

One of the study's main findings is that most respondents in the conflict–affected survey areas did not have full access to conventional mobile and internet services. When asked about the availability of mobile network or internet services, only (10) of the (130) respondents, or (7.7) percent, reported having full access at their current place of residence. A further (72) respondents, or (55.4) percent, reported having only partial access; (35), or (26.9) percent, had access only occasionally; and (13), or (10.0) percent, had no access at all. Overall, (92.3) percent of respondents did not have full access to mobile network or internet services.

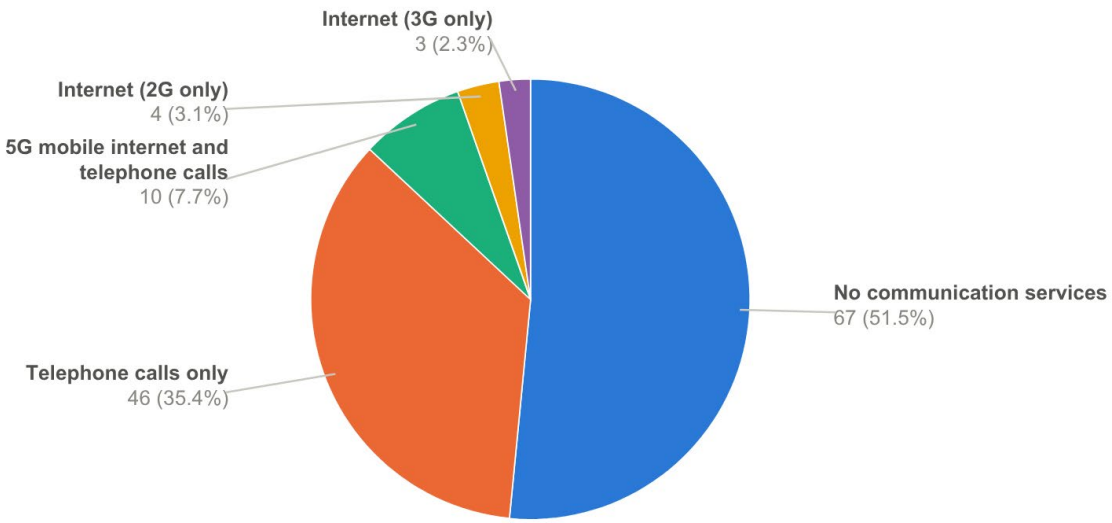
Figure 4.5. Availability of Mobile Network or Internet Services at Respondents' Current Locations




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

When asked separately about the types of communication services currently available where they lived, (67) respondents, or (51.5) percent, reported having no service at all, while (46), or (35.4) percent, had access only to telephone calls. Only (17) respondents, or (13.1) percent, reported having access to some form of mobile internet service. Of these, (10) had access to 5G and telephone calls, (4) to 2G internet and (3) to 3G internet. These results show that most respondents were unable to access mobile internet and either had to rely solely on telephone calls or had no access to conventional communication services at all.

Figure 4.6. Types of Communication Services Available in Respondents' Areas




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

The (13) respondents who reported having no mobile network or internet access were concentrated mainly in a small number of townships. Of these, (4) respondents each were from Thabeik-kyin and Madaya townships, (3) were from Kanbalu Township, and (1) each was from Monywa and Htigyaing townships. A review of the (10) respondents who reported having full access also revealed geographical differences. They included (3) respondents from Monywa Township, (2) from Singu Township, (1) each from Shwebo, Budalin, Salingyi and Wuntho townships, and (1) respondent whose township was withheld. Most respondents reporting full access lived in urban areas where some network services remained available or in locations connected to those areas.

Access to communication services therefore varied not only between townships but also within individual townships. This reflects the divide between urban areas where some internet services remained available and rural areas subjected to communication shutdowns. In Monywa Township, for example, (1) respondent reported having no communication service at all, while (3) others reported having full access.

This variation within individual townships was also supported by the account of an official from a local education organization. According to the official, "SIM card–based mobile internet services have been completely shut down since 2022 and remain unavailable today. Only fiber Wi–Fi internet services continue to operate in the urban areas of some townships controlled by the Myanmar military."

United Nations reports published in 2023 and 2024 indicate that armed conflict and civilian displacement occurred in several of these townships.[9] The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) documented that fighting intensified in Madaya, Singu and Thabeikkyin townships from late June 2024, with artillery shelling and airstrikes forcing civilians to flee their homes. Similarly, more than (20,000) people from (16) villages in Kanbalu Township were reportedly displaced following airstrikes in April 2023.[10] The Office of the United Nations High Commissioner for Human Rights (OHCHR) also documented airstrikes and artillery shelling in Htigyaing Township, which damaged a large proportion of the town's buildings.[11]

The external evidence cited above indicates a geographical overlap between some of the locations where respondents reported having no communication services and areas that experienced intense conflict. According to Athan's monitoring records, mobile data services were shut down in (26) townships in Sagaing Region, including Kanbalu and Monywa. The records also show that internet access may remain available in certain locations within a township while being restricted or entirely unavailable elsewhere in the same township.[12] Another Athan report published in 2025 document–ed that the military junta had shut down internet and telephone services in Thabeikkyin Township. Communication services were also disrupted while fighting intensified in the neighboring townships of Singu, Mogok and Htigyaing.[13]

[9] United Nations Office for the Coordination of Humanitarian Affairs. (2024, August 16). Myanmar Humanitarian Update No. 40 (p. 3)
[10] United Nations Office for the Coordination of Humanitarian Affairs. (2023, May 6). Myanmar Humanitarian Update No. 29 (p. 4)
[11] Office of the United Nations High Commissioner for Human Rights. (2024, May 22). Situation of human rights of Rohingya Muslims and other minorities in Myanmar: Report of the United Nations High Commissioner for Human Rights (A/HRC/56/23, para. 16, pp. 4–5)
[12] Athan – Freedom of Expression Activist Organization. (2023). Disconnections and Vanishing Rights (p. 6)
[13] Athan – Freedom of Expression Activist Organization. (2025). Repression of Communication and Digital Rights Situation in Myanmar (p. 7)

According to an OHCHR report published in May 2024, internet shutdowns had occurred in at least (150) townships across Myanmar since 1 February 2021. These restrictions affected civilians' ability to access and share life–saving information and receive timely warnings.[14] The figure refers to the number of townships that experienced at least one internet shutdown after 2021.

According to Athan's latest monitoring records, as of 15 October 2026, (140) townships across Myanmar were experiencing an ongoing disruption to at least one form of telephone or internet service.[15] Communication shutdowns and controls continued to intensify, particularly in areas of active fighting.[16] This indicates that the lack of full access to communication services identified in this survey is not an isolated condition affecting only a few townships, but a widespread and continuing problem across conflict–affected areas nationwide.

The available evidence also indicates that communication disruptions in these areas should not be understood merely as technical failures. Rather, they result from a combination of restrictions and controls imposed by the Myanmar military, armed conflict, the loss of electricity supply, fuel shortages and damage to communication infrastructure.

### 4.1.3 Prolonged and persistent communication shutdowns

Respondents were asked how long their areas had experienced either a complete communication shutdown or services so poor that they were effectively unusable. Of the (130) respondents, (125) answered the question and (5) did not. A total of (52) respondents, or (40.0) percent of all survey participants, reported experiencing these conditions for (4) years or more. A further (20), or (15.4) percent, had experienced them for between (2) and (4) years; another (20), or (15.4) percent, for between (1) and (2) years; and (24), or (18.5) percent, for less than (1) year. The remaining (9) respondents, or (6.9) percent, reported that reliable communication services had never been available where they lived.

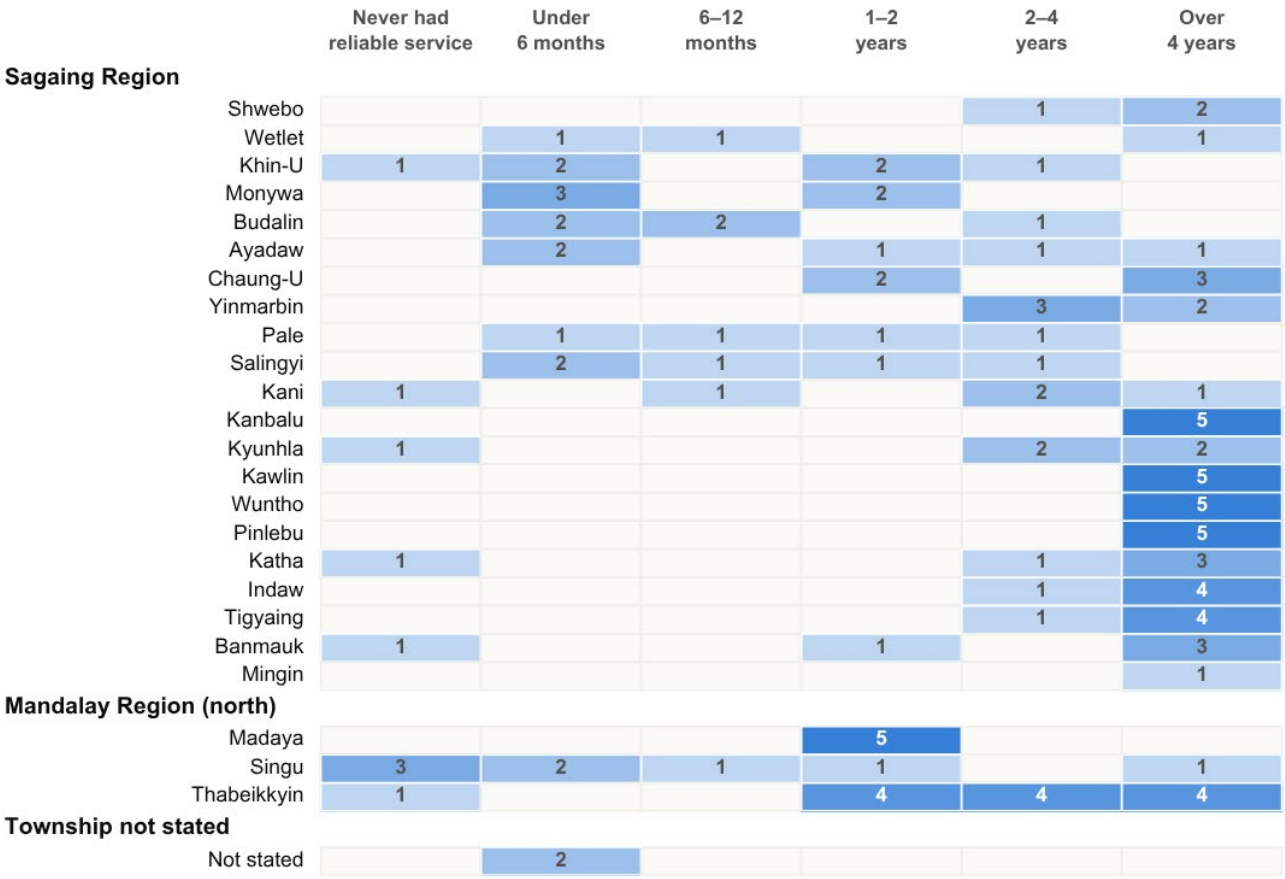
[14] Office of the United Nations High Commissioner for Human Rights. (2024, May 22). Situation of human rights of Rohingya Muslims and other minorities in Myanmar (A/HRC/56/23, para. 22)

[15] Athan – Freedom of Expression Activist Organization. (2026). Myanmar Communication Blackout Monitor: 2021–Present. Retrieved October 15, 2026

[16] Athan – Freedom of Expression Activist Organization. (2026, April 11). Status of Freedom of Expression in Myanmar (March 2026)

These findings show that more than half of all survey participants, or (55.4) percent, had been without usable communication services for at least (2) years. Communication shutdowns in the surveyed areas were therefore not temporary conditions lasting only days or months, but persistent problems continuing for years.

Figure 4.7. Duration of Communication Shutdowns by Township (Respondent Counts)



| | Never had reliable service | Under 6 months | 6–12 months | 1–2 years | 2–4 years | Over 4 years |
|---|---|---|---|---|---|---|
| **Sagaing Region** | | | | | | |
| Shwebo | | | | | 1 | 2 |
| Wetlet | | 1 | 1 | | | 1 |
| Khin-U | 1 | 2 | | 2 | 1 | |
| Monywa | | 3 | | 2 | | |
| Budalin | | 2 | 2 | | 1 | |
| Ayadaw | | 2 | | 1 | 1 | 1 |
| Chaung-U | | | | 2 | | 3 |
| Yinmarbin | | | | | 3 | 2 |
| Pale | | 1 | 1 | 1 | 1 | |
| Salingyi | | 2 | 1 | 1 | 1 | |
| Kani | 1 | | 1 | | 2 | 1 |
| Kanbalu | | | | | | 5 |
| Kyunhla | 1 | | | | 2 | 2 |
| Kawlin | | | | | | 5 |
| Wuntho | | | | | | 5 |
| Pinlebu | | | | | | 5 |
| Katha | 1 | | | | 1 | 3 |
| Indaw | | | | | 1 | 4 |
| Tigyaing | | | | | 1 | 4 |
| Banmauk | 1 | | | 1 | | 3 |
| Mingin | | | | | | 1 |
| **Mandalay Region (north)** | | | | | | |
| Madaya | | | | 5 | | |
| Singu | 3 | 2 | 1 | 1 | | 1 |
| Thabeikkyin | 1 | | | 4 | 4 | 4 |
| **Township not stated** | | | | | | |
| Not stated | | 2 | | | | |

Source: Dead Air survey (30 Aug–12 Sep 2026; 125 respondents answered this question).

*Note: This question was answered by (125) respondents; the remaining (5) did not respond.*

A review of responses by township shows that prolonged communication shutdowns were particularly concentrated in parts of northern Sagaing Region. All (20) respondents from Kanbalu, Kawlin, Wuntho and Pinlebu townships reported having no usable communication services for (4) years or more. The same was reported by (4) of the (5) respondents in each of Indaw and Htigyaing townships, and by (3) of the (5) respondents in each of Katha and Banmauk townships.

Most of these townships are located within or connected to Kanbalu, Kawlin and Katha districts in northern Sagaing Region, an area locally known as the “Three K Districts” (Ka Thone Lone). Armed conflict and military operations have continued across these areas since the 2021 coup, while territorial control has repeatedly shifted. The survey findings indicate that this cluster of townships experiencing intense conflict geographically overlaps with the area where prolonged communication shutdowns were most prevalent.

According to RFA’s records, internet shutdowns began on 15 September 2021 in Salingyi, Pale, Ayadaw, Budalin, Wuntho, Pinlebu and Kawlin townships in Sagaing Region. On 3 March 2022, internet services were shut down in additional townships, including Chaung–U, Myaung, Depayin, Wetlet, Ye–U, Myinmu, Banmauk, Katha, Htigyaing, Kanbalu, Taze, Mingin, Kalewa, Tamu, Mawlaik, Indaw, Homalin, Paungbyin, Kyunhla and Khin–U.[17] RFA separately documented that on 24 May 2022, telephone services were cut for several hours during fighting in parts of Sagaing Region, including Monywa, Pale, Khin–U, Ye–U, Kanbalu, Kyunhla and Kani townships.[18]

A 2023 report by Athan also stated that mobile data services had been shut down in (26) townships in Sagaing Region, including Kanbalu, Katha, Indaw, Monywa, Budalin and Salingyi, while only 2G services were available in several other townships, including Wuntho. Athan further noted that internet access could remain available in certain locations within a township while being restricted or entirely unavailable elsewhere in the same township.[19] These records support the survey’s findings that geographical differences and prolonged shutdowns were not isolated experiences of individual respondents, but part of a regional condition that had persisted for years.

According to an official from a local education organization operating in Kanbalu District, the area experienced intermittent internet shutdowns after February 2021, including restrictions imposed from midnight until morning during the protest period. The official explained that from 2022 onward, SIM card–based mobile internet services became almost entirely unavailable in the area. This account

[17] Radio Free Asia. (2022a, September 28). *အင်တာနက်အဖြတ်ခံထားရတဲ့တစ်နှစ်အတွင်း စစ်ကိုင်းနဲ့မကွေးတိုင်းမှာ (၉၀၀) နီးပါး သေဆုံး*

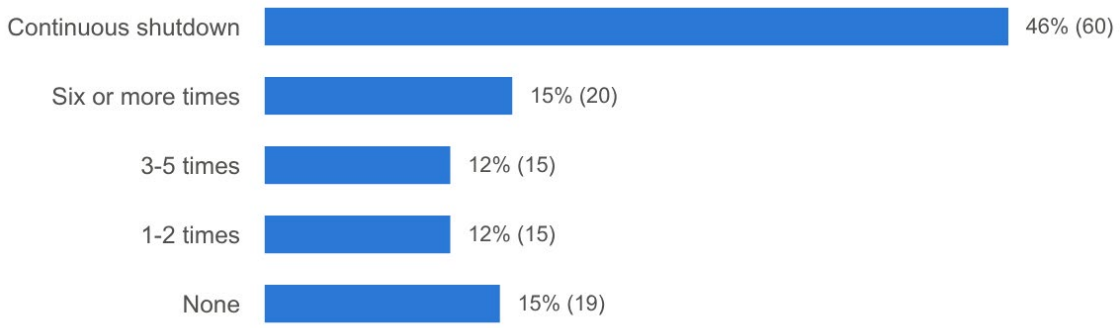
[18] Radio Free Asia. (2022b, May 24). Mobile phone service cut amid heavy fighting in Myanmar’s Sagaing.

[19] Athan – Freedom of Expression Activist Organization. (2023). Disconnections and Vanishing Rights (p. 6)

illustrates how communication restrictions shifted from temporary shutdowns during the earlier period to a prolonged and routinely recurring condition.

The duration of these shutdowns, however, was not uniform across all townships covered by the survey. Most respondents from Monywa, Budalin and Salingyi townships reported experiencing shutdowns lasting either less than (1) year or between (1) and (2) years, while some continued to have partial access to communication services. These differences further demonstrate that communication conditions may vary not only between townships but also between urban and rural areas and among individual locations within the same township.

Figure 4.8. Frequency of Communication Shutdowns in the Past 12 Months




Source: Dead Air survey (30 Aug–12 Sep 2026; 129 respondents answered this question).

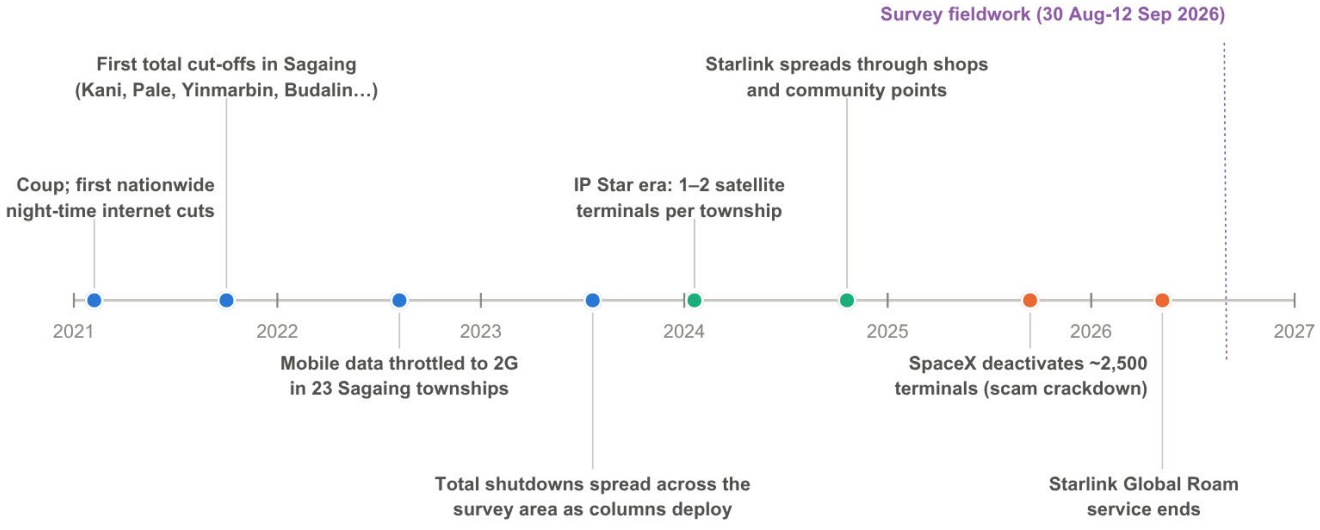
*Note: This question was answered by (129) respondents; the remaining (1) did not respond. The percentages shown in the figure are calculated using all (130) survey participants as the denominator.*

To further examine the current pattern of communication shutdowns, respondents were asked how many times they had experienced a shutdown during the previous (12) months. Of the (130) respondents, (60), or (46.2) percent, did not provide a number and instead reported that "the shutdown is continuous." A further (20) respondents, or (15.4) percent, experienced shutdowns on (6) or more occasions; (15), or (11.5) percent, experienced them between (3) and (5) times; and another (15), or (11.5) percent, experienced them between (1) and (2) times. A total of (19) respondents, or (14.6) per-

cent, reported experiencing no communication shutdown during the previous (12) months, while the remaining (1) respondent did not answer the question.

Reports that communication shutdowns were continuous were also heavily concentrated in several townships in northern Sagaing Region. In Katha, Indaw and Kyunhla townships, all (5) respondents from each township reported continuous shutdowns. The same response was given by (4) of the (5) respondents in each of Kanbalu, Kawlin and Banmauk townships, and by (3) of the (5) respondents in Wuntho Township. For these respondents, communication shutdowns could no longer be counted as separate incidents. Shutdowns had ceased to be occasional disruptions and had instead become a normal condition of daily life, while access to communication services had become only an occasional privilege.

Figure 4.9. Timeline of Communication Restrictions in the Surveyed Areas (2021–2026)




Sources: Athan; RFA; Myanmar Now; FULCRUM/ISEAS.

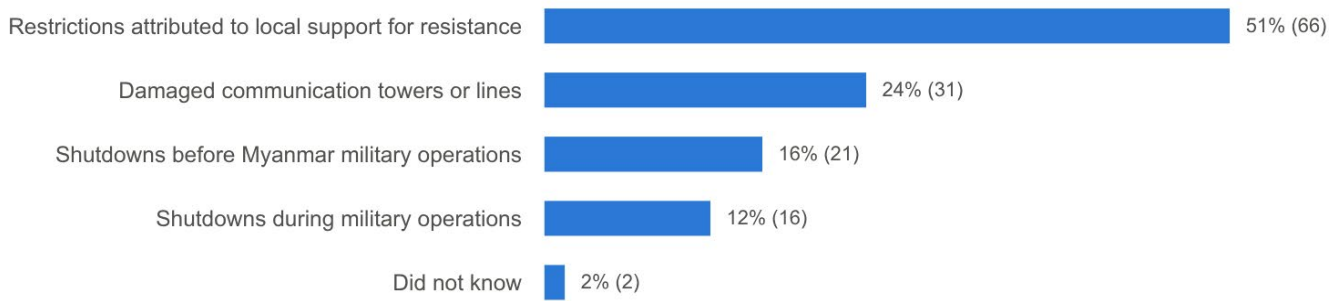
Taken together, the duration of the shutdowns, their geographical concentration, their continuous nature and the external monitoring records indicate that communication disruptions in the surveyed areas were not merely temporary technical failures. Particularly in townships experiencing

intense conflict, these shutdowns had persisted for years, shifting from temporary restrictions to a condition of prolonged communication blackout.

### 4.1.4 Respondents' perceptions of the causes of communication shutdowns

When asked why they believed communication services had been shut down in their areas, respondents were allowed to select more than one answer. Of the (130) respondents, (66), or (50.8) percent, believed that communication services had been cut because local communities supported the resistance movement. This was the most frequently selected reason. Damage to communication towers and lines was selected by (31) respondents, or (23.8) percent. A further (21), or (16.2) percent, selected deliberate shutdowns imposed in advance of military operations, while (16), or (12.3) percent, selected shutdowns occurring during military operations. Only (2) respondents, or (1.5) percent, reported that they did not know the reason.

Figure 4.10. Respondents' Perceptions of the Causes of Communication Shutdowns




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

These results indicate that more than half of respondents understood communication shutdowns as a punitive measure imposed because of local communities' political positions and support for the resistance movement. At the same time, some respondents selected damage to communication towers and lines, showing that they did not view the shutdowns as a problem caused

by a single factor. In their view, communication shutdowns resulted from a combination of deliberate restrictions, military operational considerations and conflict-related damage to communication infrastructure.

As described in the previous section, other studies and reports indicate that communication shutdowns frequently occur before or during military operations. According to RFA's records, internet services were shut down in several townships in Sagaing Region beginning in September 2021, and military operations subsequently took place in those areas. RFA also documented that telephone services were cut in several Sagaing townships during military activities in May 2022.[20] These records partially correspond with the experiences of survey respondents who viewed communication shutdowns as a measure used before or during military operations.

Athan has also documented short- and long-term shutdowns of mobile and internet networks for political and military purposes. For example, mobile data and communication networks in Mindat Township were reportedly shut down for approximately (20) days before an airstrike in January 2023. Villages in Kawkareik Township also experienced communication shutdowns while airstrikes were taking place.[21] However, this survey does not establish a direct connection between these incidents and the experiences of individual respondents. Rather, these examples are presented to compare similar patterns documented across different locations.

The account of an official from a local education organization indicates that respondents' perceptions were not based on a single incident, but developed through repeated experiences over several years. The official stated: "As the repression intensified, we knew they would cut the internet. But there was nothing we could do to prepare."[22] This account illustrates how repeated experiences led local communities to anticipate a connection between communication shutdowns and military repression. However, recognizing that a shutdown was likely did not mean that they had the ability or resources to prepare for it.

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[20] Radio Free Asia. (2022b, May 24). Mobile phone service cut amid heavy fighting in Myanmar's Sagaing.

[21] Athan – Freedom of Expression Activist Organization. (2023). Disconnections and Vanishing Rights (pp. 1–2)

[22] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ ၁ အောက်တိုဘာ ၂၀၂၆

Some respondents also reported that during 2025 and 2026, the Myanmar military was no longer the only actor imposing communication restrictions. In certain areas, local administrative bodies reportedly instructed publicly accessible Starlink satellite internet locations to close temporarily to prevent the disclosure of operational information concerning resistance forces. These incidents indicate that different parties to the armed conflict may use communication restrictions as an operational-security measure. The accessibility, control and other limitations affecting alternative communication methods, including Starlink, are examined further in Sections 4.2 and 4.4.

Overall, respondents clearly did not view communication shutdowns merely as technical failures. In the view of most respondents, the shutdowns resulted from a combination of punitive restrictions imposed because of local communities' political positions, limits on information flows before military operations, control over communications during operations and conflict-related damage to communication infrastructure. These findings are based on respondents' experiences and understanding. They have not been independently verified through technical investigations identifying who ordered each shutdown or establishing its method and intended purpose.

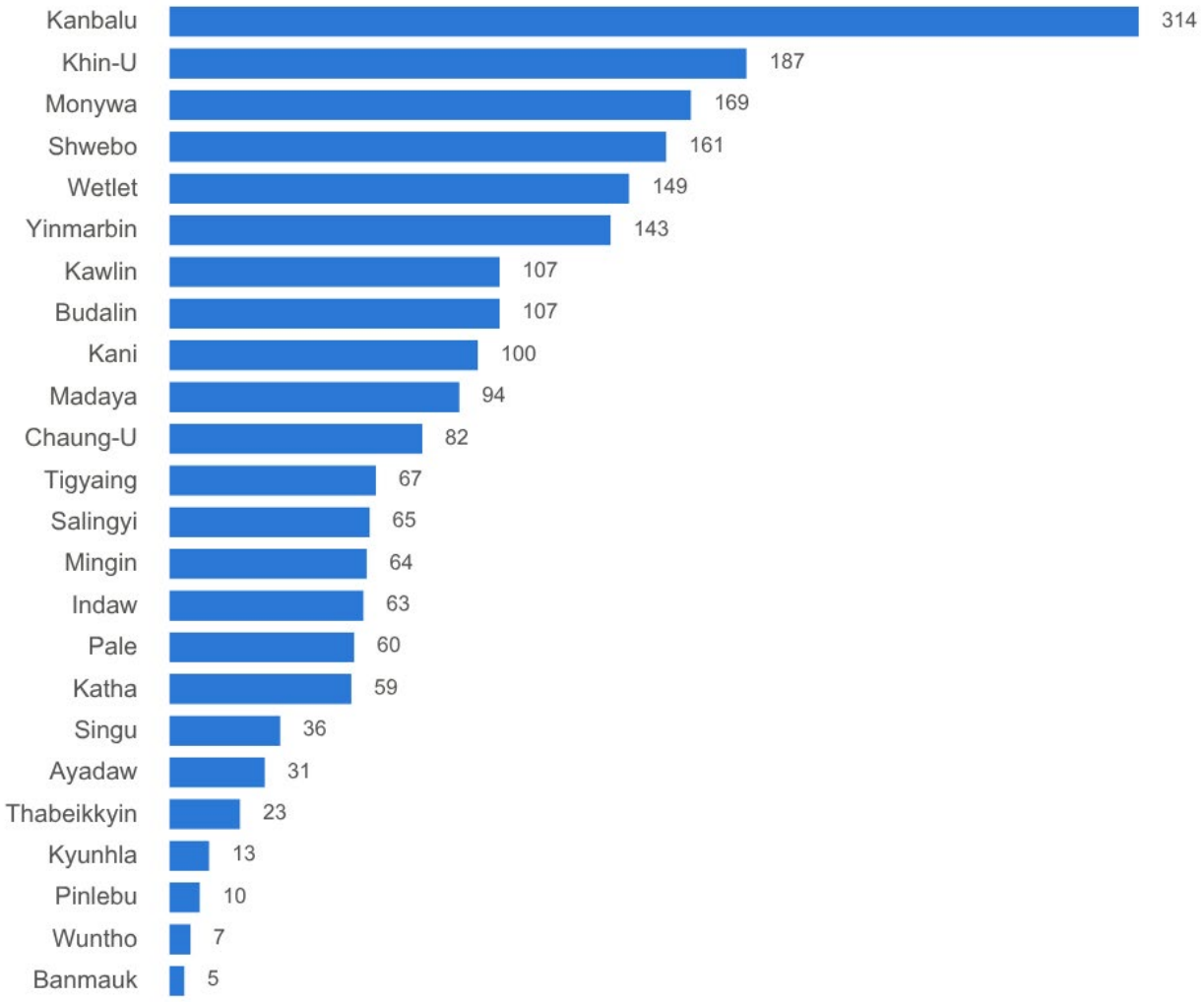
### 4.1.5 Conflict and civilian harm in areas experiencing communication shutdowns

Understanding the impact of communication shutdowns requires examining them alongside the armed conflict and civilian harm occurring in the surveyed areas. These areas are not only experiencing weak or unavailable communication services; they are also affected by widespread ground fighting, air and drone attacks, artillery shelling, the burning of villages and civilian deaths. Communication shutdowns therefore involve more than the loss of a routine service. In a life-threatening conflict environment, they also remove access to emergency warnings, safety information and channels for requesting assistance.

As of 15 October 2026, the Assistance Association for Political Prisoners (AAPP) had verified and documented by name (8,551) pro-democracy activists and civilians killed nationwide by the military and pro-military groups. Of these, (2,116), or (24.7) percent, were from the (24) principal townships covered by this study. Kanbalu Township recorded the highest number, with (314) deaths,

followed by Khin–U with (187), Monywa with (169), Shwebo with (161) and Wetlet with (149). These figures represent only the minimum number of deaths for which AAPP was able to verify names, incidents and locations. The actual number of people killed on the ground may be higher.[23]

Figure 4.11. AAPP–Verified Deaths in the 24 Principal Survey Townships (Feb 2021–Oct 2026)



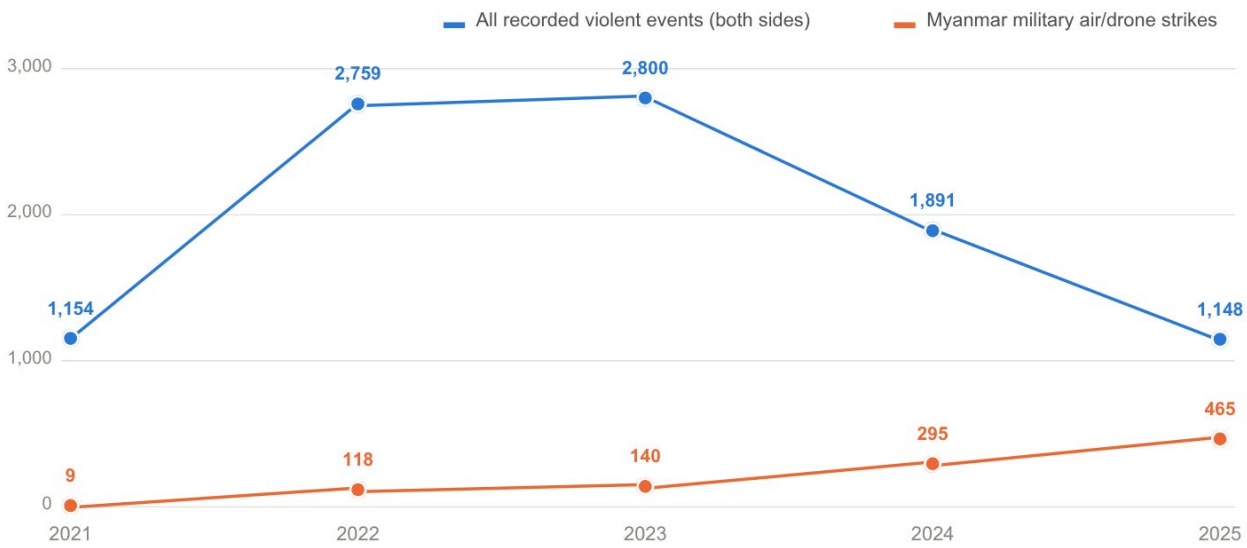

Source: AAPP, Data Explorer (as of 15 Oct 2026).

One factor contributing to Kanbalu Township's high death toll was the airstrike on Pa Zi Gyi Village in Kanbalu Township, Sagaing Region, on 11 April 2023. According to a 2025 statement by the United Nations' Independent Investigative Mechanism for Myanmar (IIMM), the attack killed at least

[23] Assistance Association for Political Prisoners (AAPP), "Data Explorer," What's Happening in Myanmar, accessed October 15, 2026

(155) people, including children, and was one of the deadliest attacks since the 2021 coup.[24] The impact of the conflict is also evident in the destruction of civilian infrastructure and homes. According to data published by Data for Myanmar in April 2026, (125,328) homes were burned and destroyed nationwide between the 2021 coup and the end of February 2026. Of these, (78,896), or more than (63) percent, were in Sagaing Region. The report attributed the destruction of (121,485) of the total number of homes to the military and military–affiliated groups [25]

Figure 4.12. ACLED–Recorded Violent Events and Myanmar Military Air/Drone Strikes (2021–2025)




Source: ACLED (acleddata.com).

*Note: ACLED may group multiple strikes at one location on one day into a single event.*

Data compiled by the Armed Conflict Location & Event Data (ACLED) for the (24) principal survey townships also reveal a shift in the pattern of conflict. The total number of recorded violent events involving both sides increased from (1,154) in 2021 to (2,759) in 2022 and (2,800) in 2023, before

[24] Independent Investigative Mechanism for Myanmar (IIMM), "Two Years since the Deadly Air Attack on Pa Zi Gyi Village, Myanmar, and Air Strikes Continue Unabated," April 11, 2025

[25] Data for Myanmar, "Documenting the Monthly Impact No. 1 of Arson Attacks on Civilian Homes" (April 2026)," April 4, 2026, hosted by Progressive Voice

declining to (1,891) in 2024 and (1,148) in 2025. Air and drone strike events, however, increased from only (11) in 2021 to (225) in 2022, (379) in 2023, (503) in 2024 and (504) in 2025. This represents an increase of nearly (46) times compared with 2021.[26] Because ACLED records multiple air or drone strikes occurring at the same location on the same day as a single event, these figures should not be interpreted as the number of individual strike.[27]

When the above data are considered alongside the survey findings on access to communication services, the areas with the greatest need for safety warnings are also among those facing the greatest difficulty receiving them. Communication shutdowns may also cause delays or information gaps in reporting deaths and other human rights violations, verifying names and incident details, and producing confirmed records. A low number of verified deaths in Figure 4.11 therefore should not be interpreted as direct evidence that a township experienced less conflict or civilian harm. The following section examines how local communities seek life-saving information under these conditions and the alternative communication methods they use.

## 4.2 Surviving communication shutdowns

### 4.2.1 Changing information channels and alternative methods

Before experiencing communication shutdowns, respondents relied primarily on mobile internet and social media to obtain information. In this multiple-response question, (74) respondents, or (56.9) percent, reported using mobile internet, while (65), or (50.0) percent, obtained information through social media. Television and word of mouth were each selected by (40) respondents, or (30.8) percent, while (34), or (26.2) percent, selected telephone calls or SMS. In addition, (27) respondents, or (20.8) percent, used handheld two-way radios, and (21), or (16.2) percent, obtained information from neighbors.

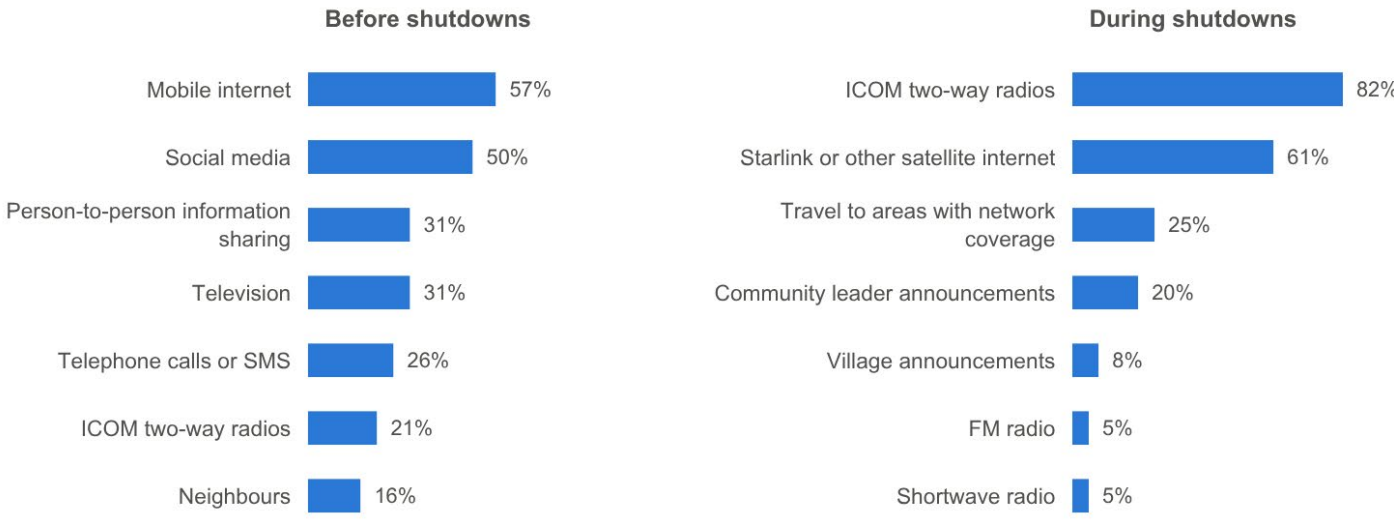
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26 Armed Conflict Location & Event Data (ACLED), "Data Export Tool," Myanmar data filtered for the study's (24) principal townships, covering 2021–2025 and the event types "Battles," "Explosions/Remote violence," and "Violence against civilians," including the sub-event type "Air/drone strike," accessed October 4, 2026.

27 Su Mon, "The War from the Sky: How Drone Warfare Is Shaping the Conflict in Myanmar," Armed Conflict Location & Event Data (ACLED), July 1, 2025.

The methods used during communication shutdowns changed significantly. A total of (106) respondents, or (81.5) percent, reported using handheld two-way radios, commonly referred to as ICOM radios, while (79), or (60.8) percent, used Starlink or another satellite internet service. A further (33) respondents, or (25.4) percent, traveled to locations with network coverage, and (26), or (20.0) percent, relied on announcements by community leaders. Village announcements were used by (10) respondents, or (7.7) percent, while FM radio and shortwave radio were each used by (6), or (4.6) percent. The survey also recorded (5) respondents, or (3.8) percent, who received information through loudspeakers.

Figure 4.13. Information Channels Used Before and During Communication Shutdowns




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

Because the response options for these two questions were not identical, increases and decreases across all methods cannot be compared directly. However, ICOM two-way radios were included in both questions, and the number of respondents selecting them increased from (27) before communication shutdowns to (106) during shutdowns. The findings also show that a majority of respondents used satellite internet as a principal alternative while communications were shut down. Overall, the findings indicate a shift from direct, individual access through mobile internet and social media toward a more collective system involving two-way radios, satellite internet, community leaders and person-to-person information sharing.

According to a document released in March 2021 by the United Nations Special Rapporteur on the situation of human rights in Myanmar, the Myanmar military ordered telecommunications companies to block services and social media platforms and imposed nationwide internet shutdowns.[28] A 2025 report by Athan found that digital restrictions, including the blocking of websites and VPNs, continued even in areas where some connectivity remained available.[29] The ICOM two-way radios, satellite internet and community-based information-sharing systems adopted by respondents therefore provide alternatives that reduce their dependence on conventional mobile and internet networks that the military can control or shut down. However, these alternatives are not free from constraints related to cost, equipment availability, access to electricity and fuel, security risks, or the policies and decisions of service providers.[30]

When asked how quickly they could obtain important information during communication shut-downs, (56) of the (130) respondents, or (43.1) percent, reported that they could not obtain information independently and had to rely on other people. A further (28), or (21.5) percent, could obtain informa-tion within several hours; (23), or (17.7) percent, within one day; and (20), or (15.4) percent, only after several days. The remaining (3) respondents did not answer the question. These findings indicate that timely access to important information increasingly depends on social networks connected to people who can use ICOM two-way radios, satellite internet and other communication equipment.

Regarding internet quality, an official from a local education organization described Starlink as follows: "It's fast, it runs smoothly, and there's no VPN blocking."[31] This statement reflects the interviewee's experience in a particular area; it does not mean that Starlink is consistently stable, secure or available everywhere. The survey's central finding is not that alternative methods are universally superior to conventional communication networks. Rather, an information system that

[28] Andrews, Thomas H. "Report of the Special Rapporteur on the Situation of Human Rights in Myanmar." UN Doc. A/HRC/46/56, March 4, 2021.

[29] Athan – Freedom of Expression Activist Organization. "ONLY IN MYANMAR – Made by Junta: Consequences of the Telecommunication Blackouts." November 4, 2025.

[30] Access Now and the #KeepItOn Coalition. "One Region, Half the World's Shutdowns: Internet Shutdowns in the Asia Pacific in 2025." March 31, 2026.

[31] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

individuals could previously access directly has shifted toward a collective and mediated system dependent on people with communication equipment and services, community leaders and information messengers.

### 4.2.2 ICOM two-way radios and local early-warning networks

Among the alternative methods used to obtain information after communication services were shut down, handheld two-way radios, commonly referred to as ICOM radios, were the most frequently selected. Of the (130) respondents, (106), or (81.5) percent, reported using ICOM radios to obtain information during communication shutdowns. This finding indicates that ICOM radios have become a principal alternative communication tool in rural areas subjected to shutdowns.[32]

In a multiple-response question about how respondents learned of emergency threats, including conflict-related and natural hazards, (81) respondents, or (62.3) percent, selected person-to-person information sharing. A further (61), or (46.9) percent, received information through community early-warning networks; (51), or (39.2) percent, learned of threats by hearing aircraft or gunfire; and (27), or (20.8) percent, received information from designated sentries. A total of (10) respondents, or (7.7) percent, reported having no reliable early-warning method. Although ICOM radios were not listed as a separate response option for this question, the open-ended survey responses and the interview indicate that they are a principal tool connecting community early-warning networks.[33]

According to an official from a local education organization, ICOM radios are used to relay warnings about airstrikes, drone flights and Myanmar military column movements. Village news and other important information are also shared through these radio networks. In some areas, the alert "Attention, members of the public—this is an emergency," heard over an ICOM radio, has become a signal for local residents to prepare to avoid danger.[34]

[32] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆။
[33] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆။
[34] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

Regarding the threat posed by fighter jets, the official stated: “Fighter jets give us almost no time to react. They are constantly circling overhead, so we cannot tell whether they are coming toward us or simply passing by.” However, the official explained that when drones locally described as “suicide drones” pass through townships and villages, ICOM users can relay their flight paths from one location to another. These reports allow villages along the drones’ routes to take cover before the threat arrives. The official added: “Once we heard that it had passed through [name withheld for security reasons] and was heading north, we knew it was coming toward us, so we took cover in advance.”[35]

The official explained that in several townships in Sagaing Region, ICOM radios are systematically incorporated into village-level early-warning networks. In some villages, warnings received through ICOM radios are broadcast over village loudspeakers, allowing information to be rapidly disseminated throughout the community, including to households that do not own a radio.

Cost, however, remains a major obstacle to establishing these systems. According to the official’s estimate, installing a village-level system comprising an ICOM radio, loudspeakers, wiring and a power supply can cost approximately MMK (4–5) million. A household ICOM radio may cost between approximately MMK (280,000) and MMK (400,000). These amounts are unaffordable for low-income households and most conflict-displaced families. The official therefore observed that ICOM networks and early-warning systems are more developed in villages receiving support from organizations or donors, while access to information remains weaker in areas without such support.[36]

The official reported incidents in which people grazing cattle or drying sesame in open fields were placed at risk because no nearby ICOM radio or early-warning network provided timely information about military-column movements. The official also described incidents in which groups of people harvesting rice were arrested because they had not received warning that a military column was entering the area. Although this survey was unable to verify these incidents independently, they illustrate how information gaps in areas beyond the reach of community early-warning networks can directly

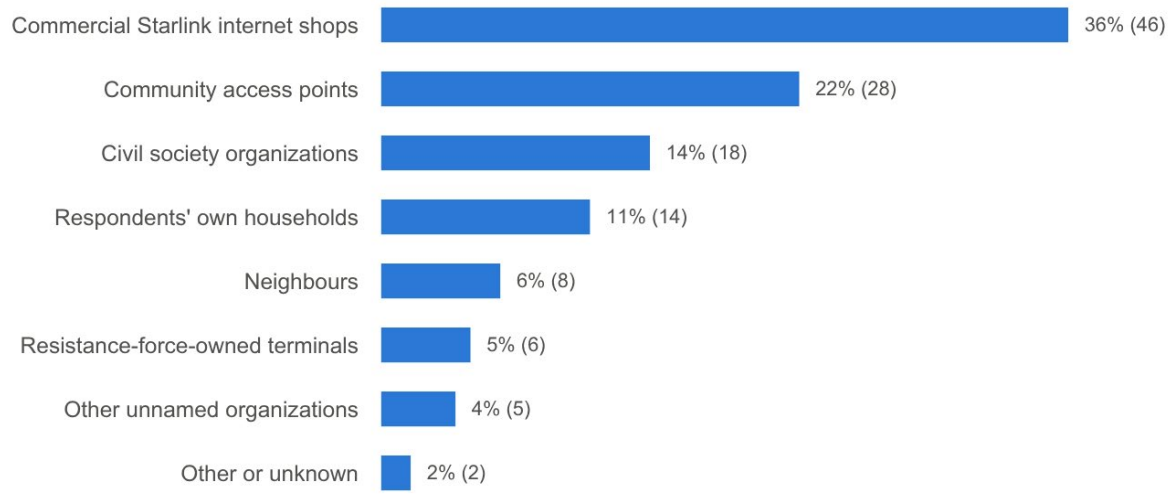
[35] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။
[36] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

affect people's lives and safety. Section 4.3 examines these gaps and their security implications using quantitative survey data.

### 4.2.3 Growing reliance on Starlink satellite internet and uncertainty of service

According to an official from a local education organization, satellite internet technologies reached the surveyed areas in stages. IPSTAR terminals began arriving in 2023, but only approximately one or two were available in each township. These terminals were primarily controlled by the administrative departments of resistance organizations, required prior authorization for use, and could serve only around (5) or (6) people at a time at very slow speeds. From early 2024, Starlink terminals became more widely available through commercial internet shops and community access points.[37]

**Figure 4.14. Ownership and Provision of Starlink and Other Satellite Internet Services**




Source: Dead Air survey (30 Aug–12 Sep 2026; 127 respondents answered this question).

According to a joint statement issued by civil society organizations in July 2026, millions of residents across approximately (80) townships in Myanmar had completely lost access to conventional

[37] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

communication services, leaving Starlink satellite internet as their principal communications lifeline. This does not, however, mean that all residents can access Starlink freely.[38]

When asked who owned or provided the Starlink or other satellite internet service they used, only (14) of the (127) respondents who answered the question, or (11.0) percent, reported using a terminal owned by their household. The largest group, comprising (46) respondents, or (36.2) percent, accessed the internet through commercial Starlink shops, while (28), or (22.0) percent, used community access points. A further (18) respondents, or (14.2) percent, used terminals owned by civil society organizations; (8), or (6.3) percent, used a neighbor's terminal; (6), or (4.7) percent, used terminals owned by resistance forces; and (5), or (3.9) percent, used terminals owned by unnamed organizations. The remaining (2) responses, or (1.6) percent, were categorized as "other" or "unknown."[39]

These findings show that most respondents could not use a privately owned Starlink terminal and instead depended on commercial shops, community access points, civil society organizations and terminals owned by other people. According to an official from a local education organization, Starlink access in some surveyed areas cost approximately MMK (500–2,000) per hour in early 2026.[40] Other studies have reported charges of MMK (1,000–5,000) per hour in other conflict-affected and hard-to-reach areas.[41] The presence of a Starlink terminal therefore does not guarantee internet access for everyone. Access continues to depend on who owns the terminal, the location of the access point, usage fees and whether people can safely travel to it.

Because Starlink is not officially licensed or sold as an authorized service in Myanmar, terminal owners and service providers face legal and security risks. The Myanmar Internet Project documented that on 12 May 2025, the Myanmar military raided a Starlink internet shop in Khin Mon Village, Chaung-U Township, Sagaing Region, and arrested a total of (27) men and women.[42]

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38 Myanmar Internet Project et al. *"မြန်မာနိုင်ငံအတွင်း စတားလင့်ခ် (Starlink) ဝန်ဆောင်မှုများ ပိတ်သိမ်းမှုကြောင့် မရည်ရွယ်ဘဲ ဖြစ်ပေါ်လာသော ဘေးထွက်ဆိုးကျိုးများ ခံစားရမှုအပေါ် အရပ်ဘက်လူမှုအဖွဲ့အစည်းများ၏ ပူးတွဲထုတ်ပြန်ချက်"* July 17, 2026.

39 ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

40 ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

41 Data Center Dynamics. "A Light Through the Blackout: Connectivity in Myanmar's Military Coup." March 10, 2026.

In October 2025, SpaceX announced that it had disabled more than (2,500) Starlink terminals operating near suspected online scam compounds in Myanmar.[43] From June through July 2026, Starlink terminals were progressively taken offline with messages stating "Region Restricted" or "Country Restricted." The disruptions affected Sagaing, Mandalay, Magway, Rakhine, Karenni and other conflict-affected areas.[44] One external study reported that service had been suspended for more than (20) percent of the Starlink terminals that had remained active in Myanmar.[45]

SpaceX also introduced a new policy for Starlink Roam terminals used internationally, effective from 17 August 2026. Under the policy, a terminal could no longer be used outside its country of registration for more than (30) consecutive days. Continued use required either re-registering the terminal in the country where it was being used or switching to a Global Priority plan.[46] Because Starlink cannot be officially registered in Myanmar, this rule created particular difficulties for people using terminals registered in other countries.

The Global Priority plan is substantially more expensive than the previous Roam plan. Under Starlink's currently published rates, the Global Priority (500) GB plan costs USD (650) per month. Studies conducted in Myanmar have estimated that the plan change could increase the monthly operating cost of a Starlink terminal from approximately MMK (500,000) to MMK (3,000,000).[47] However, the actual amount paid may vary depending on the terminal's country of registration, account type and data allowance.[48]

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42 Myanmar Internet Project. "Myanmar Digital Coup Quarterly: May 2025–July 2025."

43 Brodkin, Jon. "SpaceX Disables 2,500 Starlink Terminals Allegedly Used by Asian Scam Centers." Ars Technica. October 22, 2025.

44 Athan. "State of Freedom of Expression in Myanmar (July 2026)." August 17, 2026.

45 Eu SEE. "SpaceX Enforces Stricter Starlink Roam Policies, Triggering Widespread Internet Disruptions and Civil Society Pushback." July 29, 2026.

46 Starlink. "Traveling with Starlink Roam." 2026a.

47 Su Mon Thazin Aung. "The Humanitarian Costs of Starlink's Policy." FULCRUM / ISEAS. August 19, 2026. https://fulcrum.sg/the-humanitarian-costs-of-starlinks-policy/ ; MoeMaKa. "Starlink to Increase Fees for Users Operating Outside Their Authorized Country or Region." July 18, 2026. https://moemaka.net/eng/2026/07/starlink-to-increase-fees-for-users-operating-outside-their-authorized-country-or-region/

48 Starlink. "Service Plans." 2026b.

Starlink supports services that ICOM radios cannot provide, including money transfers, online education, coordination of medical and humanitarian activities, access to news and the transmission of information to the outside world. However, this communications lifeline remains vulnerable to rising usage costs, unequal ownership, restrictions and threats imposed by the military and other armed groups, and policy changes made by its foreign operator, SpaceX. A respondent from Chaung-U Township expressed this concern: "If Starlink bills continue to rise, it will no longer be easy to use the internet as we do now. Even now, some people cannot afford the cost, so they no longer switch on terminals they already own. Money is the main issue."[49]

### 4.2.4 Travel required to obtain network access and related safety risks

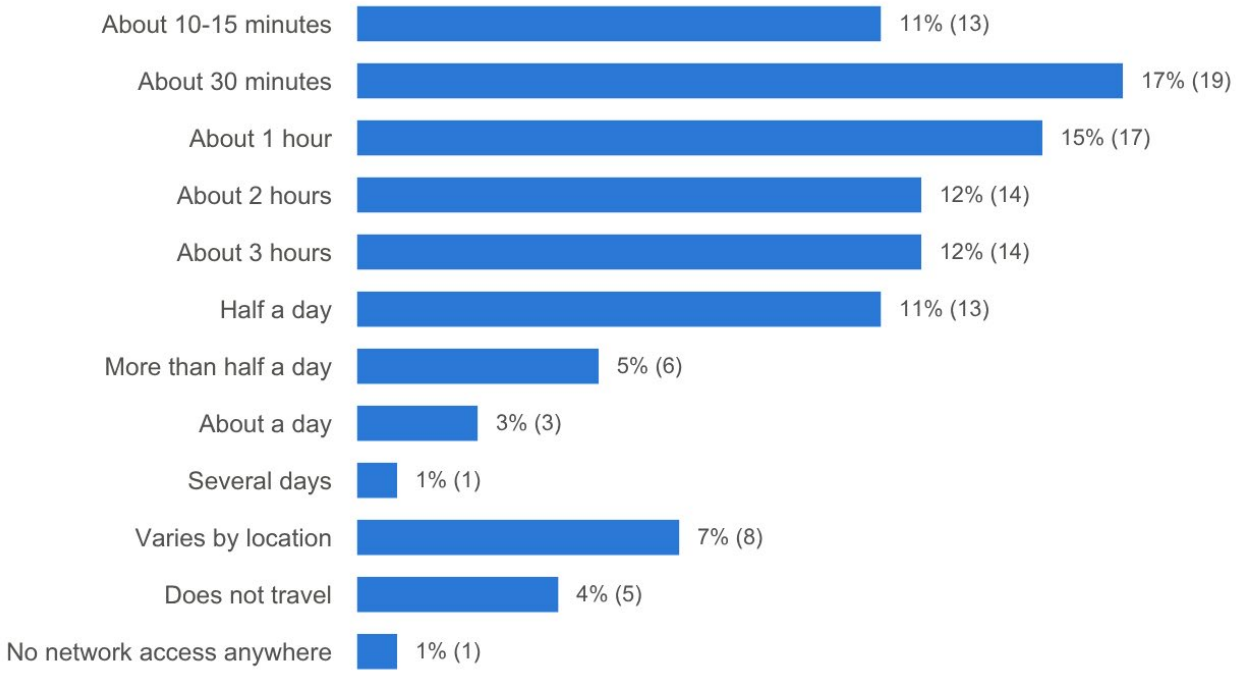
Access to communication services was directly linked to the need to travel. Of the (114) respondents who answered how long it took to reach a location with internet connectivity, (51), or (44.7) percent, reported traveling for at least (2) hours. Of these, (13) traveled for approximately half a day, (6) for more than half a day, and (4) for one day or longer. By contrast, only (32) respondents, or (28.1) percent, could reach a location with network access within (30) minutes.

Before satellite internet services such as Starlink became widespread, local residents had to search for and travel to places with mobile internet coverage, according to an official from a local education organization. Examples included a location near a tamarind tree outside a village where 3G was available, a mobile phone suspended from a pole to share an internet connection with users below, and journeys made at night to reach locations with network coverage.[50]

[49] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

[50] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

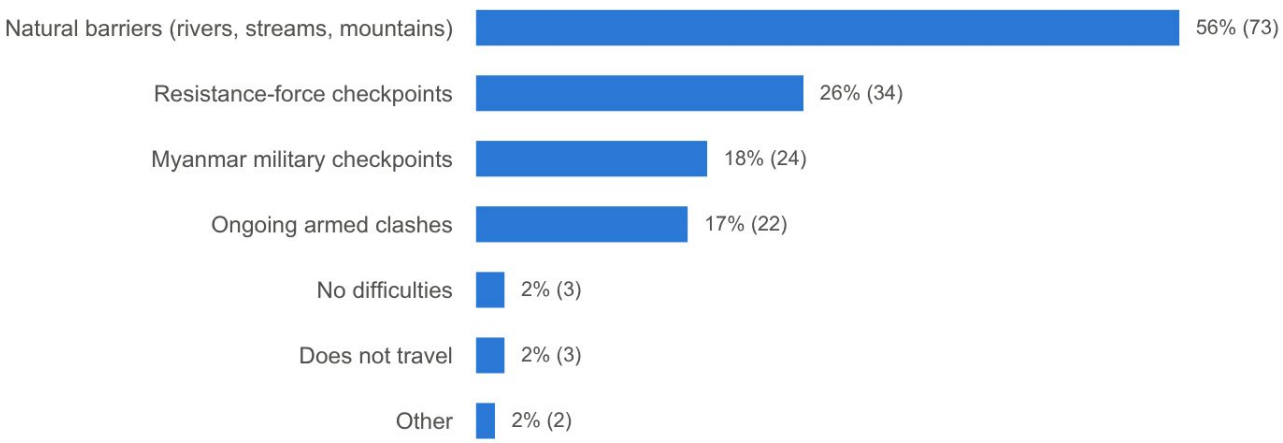
Figure 4.15. Travel Time to Locations with Network Access




Source: Dead Air survey (30 Aug–12 Sep 2026; 114 respondents answered this question).

Traveling to obtain network access involved not only time but also natural barriers and security risks. In this multiple–response question, (73) respondents, or (56.2) percent, selected natural barriers such as rivers, streams and mountains. A further (34), or (26.2) percent, encountered checkpoints operated by resistance forces; (24), or (18.5) percent, encountered Myanmar military checkpoints; and (22), or (16.9) percent, encountered active fighting along their routes. After removing respondents who selected both types of checkpoints, (53), or (40.8) percent of all respondents, had encountered at least one of them. These findings show that some respondents faced not only geographical obstacles but also conflict–related checkpoints and security threats while traveling to obtain connectivity.

Figure 4.16. Obstacles Encountered While Travelling to Obtain Network Access




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

Note: Multiple responses were permitted; percentages may exceed 100% in total.

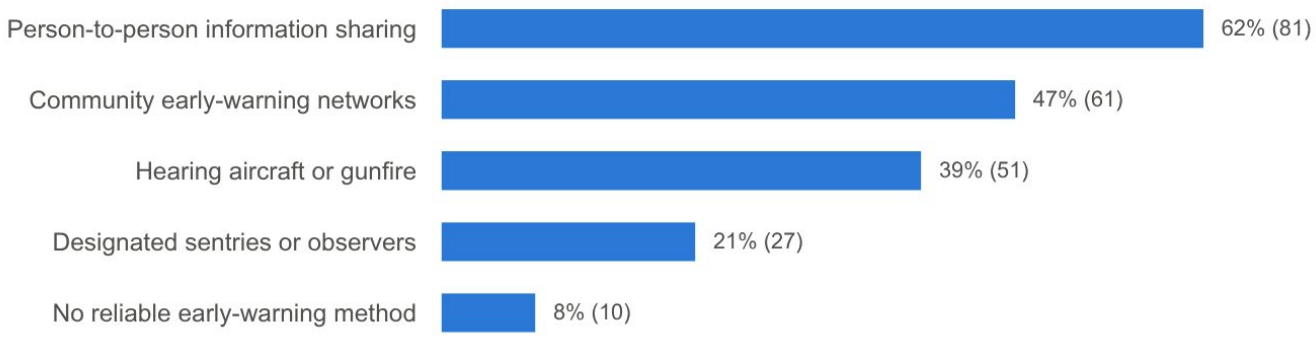
## 4.3 Early warnings and civilian safety

### 4.3.1 Emergency early–warning systems outside conventional communication networks

When asked how they learned of imminent threats such as airstrikes while communication networks were shut down, most respondents' answers showed that they relied primarily on person–to–person information sharing rather than formal, technology–based communication networks. In this multiple–response question, (81) respondents, or (62.3) percent, selected word of mouth, while (61), or (46.9) percent, received information through community warning networks. A further (27), or (20.8) percent, learned of threats through designated sentries or observers.

The third most frequently selected method, however, was personally hearing aircraft or weapons fire, selected by (51) respondents, or (39.2) percent. This was not an advance warning received before an attack, but an indication that danger was already approaching or that an attack had begun. In addition, (10) respondents, or (7.7) percent, reported having no reliable warning method.

Figure 4.17. Methods Used to Learn About Imminent Threats




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

A respondent from Madaya Township stated: “Although we could hear gunfire, we did not know exactly what was happening or how far away it was, so we were unsure whether we needed to flee.” [51] When asked whether they received timely advance warnings about airstrikes, military incursions and other operations, only (60) respondents, or (46.2) percent, reported receiving warnings in time. A further (42), or (32.3) percent, were uncertain, while (26), or (20.0) percent, reported that they did not receive warnings in time. The remaining (2) respondents did not answer the question. Overall, more than half of all respondents—(68), or (52.3) percent—either did not receive timely warnings or were uncertain whether the warnings reached them in time.

According to an official from a local education organization, residents and several organizations in a township that experienced mass-casualty airstrikes during 2024 and 2025 pooled funds and equipment to establish a community-based early-warning system. The system was intended to prevent similar loss of life in the future. In neighboring townships, however, insufficient financial and material resources prevented communities from establishing systems with community-wide coverage, leaving them dependent on household ICOM radios.[52]

[51] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။

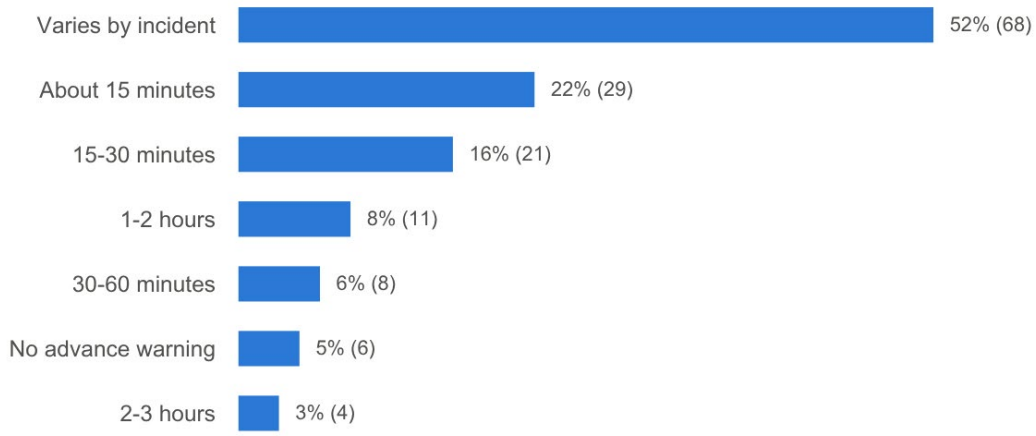
[52] ဒေသခံပညာရေးအဖွဲ့အစည်းမှ တာဝန်ရှိသူနှင့် တွေ့ဆုံမေးမြန်းချက်၊ အောက်တိုဘာ ၂၀၂၆။

### 4.3.2 Inconsistent and limited advance–warning time

When asked whether they received timely advance warnings about airstrikes, military incursions and other operations, (60) respondents, or (46.2) percent, reported receiving warnings in time. A further (42), or (32.3) percent, were uncertain, while (26), or (20.0) percent, reported that they did not receive warnings in time. The remaining (2) respondents did not answer the question. Overall, (68) respondents, or (52.3) percent of all respondents, either did not receive timely warnings or were uncertain whether the warnings reached them in time.

When asked how far in advance they learned of a threat, (68) respondents, or (52.3) percent of all respondents, reported that the warning time varied depending on the circumstances and the particular incident. A further (29), or (22.3) percent, received approximately (15) minutes' warning; (21), or (16.2) percent, received between (15) and (30) minutes; and (8), or (6.2) percent, received between (30) and (60) minutes. Only a small proportion selected warning times of one hour or longer, while (6) respondents, or (4.6) percent, received no advance warning at all. These findings show that warning times were unpredictable and varied by incident, meaning residents could not consistently expect to have enough time to evacuate to safety.

Figure 4.18. Advance Warning Time Before Imminent Threats




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

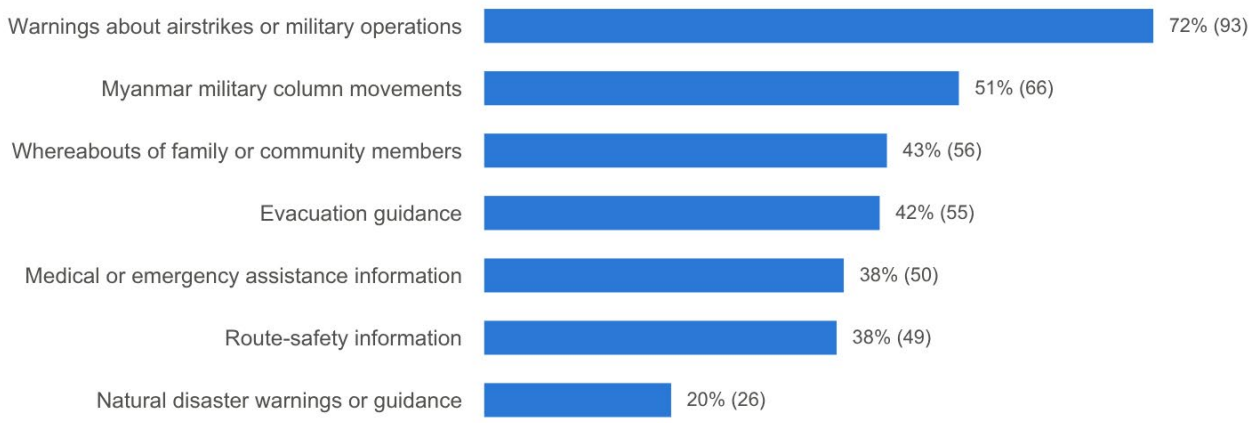
*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

A respondent from Yinmabin Township stated: “There have been incidents in which people were harmed because they did not receive information and could not evacuate in time.”[53]

### 4.3.3 Making decisions about displacement without information

When asked what information became unavailable after communication networks were shut down, (93) respondents, or (71.5) percent, reported losing access to warnings about airstrikes or military operations. A further (66), or (50.8) percent, no longer received warnings about Myanmar military column movements. Other unavailable information included the whereabouts of family or community members, selected by (56) respondents, or (43.1) percent; guidance on evacuation routes, selected by (55), or (42.3) percent; information about medical or emergency assistance, selected by (50), or (38.5) percent; and route-safety information, selected by (49), or (37.7) percent.

Figure 4.19. Information Unavailable During Communication Shutdowns




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

When asked whether the absence of information had affected decisions about leaving their homes, evacuating to safety or remaining in place, (96) respondents, or (73.8) percent, reported that it

[53] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။

had. A further (14), or (10.8) percent, said that it had not affected their decisions, while (17), or (13.1) percent, preferred not to answer. The remaining (3) respondents did not respond to the question.

A respondent from Singu Township stated: “Because we could not obtain information, we were anxious about whether we should stay or leave. Eventually, we established contact through ICOM and had to evacuate quickly.” In response to another question, the same respondent said: “We could flee only when the Myanmar military column was about to arrive, which caused us severe hardship.”[54]

When asked whether security conditions had ever led them to choose not to seek communication services, (92) respondents, or (70.8) percent, reported that they had made this choice. A further (25), or (19.2) percent, had not, while (13), or (10.0) percent, preferred not to answer.

### 4.3.4 Family safety, medical assistance and psychological stress

When asked whether communication shutdowns had made it difficult to contact family members or check on their safety, (125) of the (130) respondents, or (96.2) percent, reported experiencing such difficulties. A further (3) respondents reported no difficulty, while (2) preferred not to answer.

When asked whether they had experienced difficulty obtaining medical or emergency assistance, (109) respondents, or (83.8) percent of all respondents, reported that they had. A further (14) reported no difficulty, (4) preferred not to answer, and the remaining (3) did not respond to the question.

A respondent from Singu Township described one consequence experienced during a communication shutdown as “delayed medical treatment following an airstrike.”[55]

[54] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။
[55] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။

Figure 4.20. Impacts of Communication Shutdowns Reported by Respondents




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

When asked about the level of stress caused by lack of information or loss of communication, (82) respondents, or (63.1) percent, reported severe stress, while (39), or (30.0) percent, reported some stress. In total, (121) respondents, or (93.1) percent, experienced some degree of stress. A further (6) respondents reported no stress, (1) preferred not to answer, and the remaining (2) did not respond to the question.

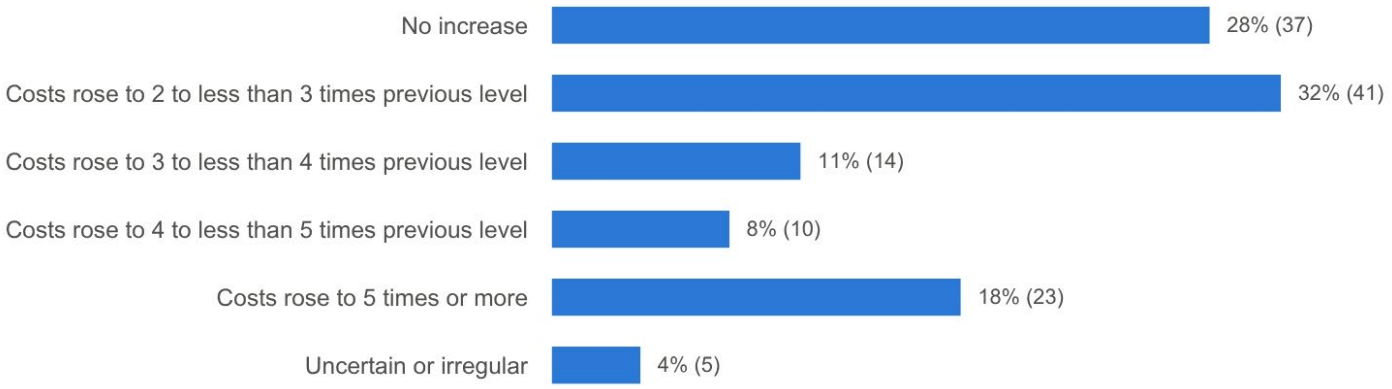
## 4.4 Communication costs and unequal access

### 4.4.1 Rising communication costs after shutdowns

When asked how their costs had changed after communication services were shut down, (88) of the (130) respondents, or (67.7) percent, reported spending more than before. Specifically, (41) respondents, or (31.5) percent, reported costs rising to between approximately two and less than three times their previous level; (14), or (10.8) percent, to between three and less than four times; (10), or (7.7) percent, to between four and less than five times; and (23), or (17.7) percent, to five times or more. A further (37) respondents, or (28.5) percent, reported no increase, while (5), or (3.8) percent, were uncertain or preferred not to answer.

When asked about costs before and after communication shutdowns, respondents reported their expenses using different units, including monthly costs, fees per session, hourly charges, daily charges, weekly charges and costs per GB of data. These amounts therefore cannot be directly calculated or compared as an average without first converting them into a common monthly unit. This section consequently uses each respondent's reported level of cost increase, based on their comparison of previous and current expenses, as the principal measure.

Figure 4.21. Changes in Communication Costs Following Shutdowns




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

A total of (6) respondents reported having no direct costs because they received free access or did not personally pay for the service. Their responses included access to free Wi-Fi, permission to use services provided by others and not being required to pay. These responses indicate only that the individual respondent did not bear a direct personal cost.[56]

Because of disparities in cost and accessibility, some residents were not only paying more for communication but had stopped trying to access the internet altogether. A respondent from Kyunhla Township stated: "People do not go through the effort required to access the internet, so they receive no information." The connectivity available to the (6) respondents who reported paying no direct costs

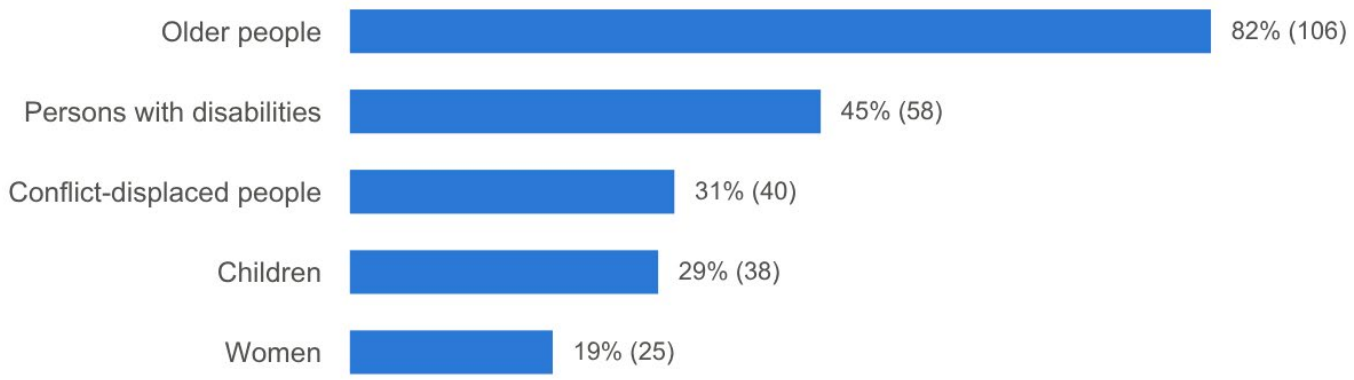
[56] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။

or receiving free access was also dependent on support from neighbors, commercial shops, terminals owned by resistance forces or community access points rather than on equipment they owned themselves.[57]

### 4.4.2 Groups facing greater barriers to accessing information

When asked whether they experienced greater difficulty than others in their communities in obtaining information through alternative methods, (79) of the (129) respondents who answered the question, or (61.2) percent, reported that they did. When asked what made access more difficult, financial cost was the most frequently selected factor, chosen by (69) respondents, or (53.1) percent. This was followed by travel-related difficulties, selected by (31), or (23.8) percent, and lack of equipment, selected by (14), or (10.8) percent. A further (5) respondents selected literacy or language barriers, while (3) selected social or gender-related restrictions.

Figure 4.22. Groups Facing the Greatest Barriers to Accessing Information




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

When asked which groups in their communities faced the greatest difficulties obtaining information, older people were selected most frequently, by (106) respondents, or (81.5) percent. They were

[57] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆။

followed by persons with disabilities, selected by (58), or (44.6) percent; conflict-displaced people, selected by (40), or (30.8) percent; children, selected by (38), or (29.2) percent; and women, selected by (25), or (19.2) percent.

A respondent from Kawlin Township explained that older people faced difficulty obtaining information "because they are not familiar with technology." A respondent from Indaw Township stated: "People displaced by the conflict are unfamiliar with the area, so obtaining information is more difficult for them than for others. They also frequently hear false information."

The age composition of the survey sample must be considered when interpreting these findings. Of the (130) respondents, (94), or (72.3) percent, were under the age of (35). The findings concerning older people and persons with disabilities therefore primarily reflect the observations of other community members rather than direct responses from members of those groups themselves.[58]

## 4.5 Information quality: rumors and verification

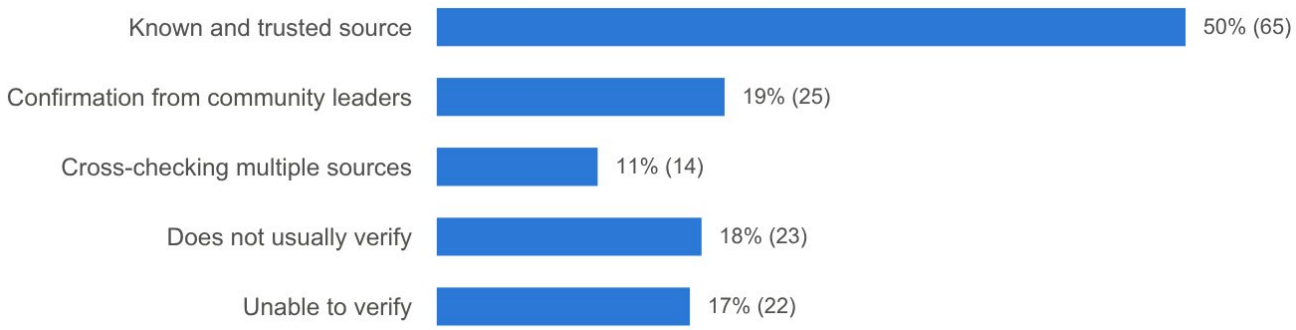
### 4.5.1 Methods used to verify information

As described in Section 4.2, people in areas where conventional communication networks have been shut down obtain and share information through ICOM radios, locations with internet connectivity and person-to-person relays. When asked how they verified information received through these methods, (65) respondents, or (50.0) percent, reported relying on whether they knew and trusted the source. A further (25), or (19.2) percent, sought confirmation from community leaders, while (14), or (10.8) percent, cross-checked information from multiple sources. In contrast, (23) respondents, or (17.7) percent, reported that they did not usually verify information, while (22), or (16.9) percent, were unable to verify it.

[58] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆။

A total of (43) respondents, or (33.1) percent, selected at least one of the following responses: that they did not usually verify information or that they were unable to verify it. Of these, (2) respondents selected both options. The combined figure therefore removes the overlapping responses rather than directly adding the totals for the two options.

Figure 4.23. Methods Used to Verify Information from Alternative Channels




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

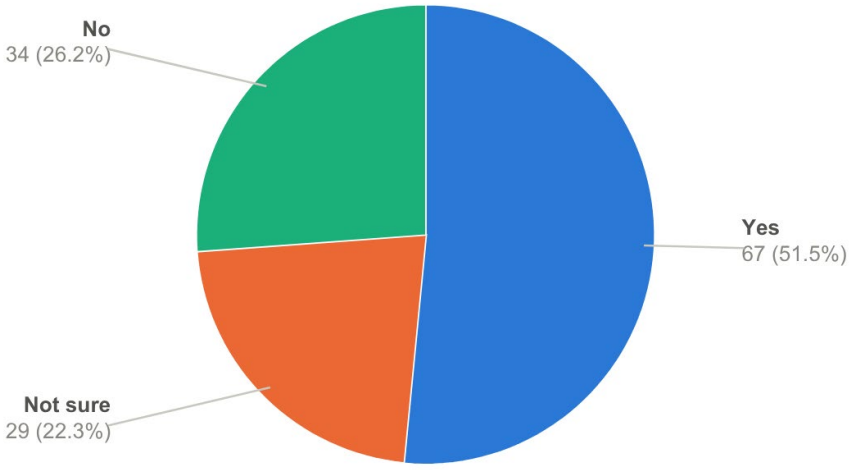
## 4.5.2 Believing or acting on false information

When asked whether they had believed false information, accepted it as accurate or acted on it during communication shutdowns, (67) of the (130) respondents, or (51.5) percent, reported that they had experienced this. A further (29), or (22.3) percent, were uncertain, while (34), or (26.2) percent, reported that they had not experienced it.

Describing the consequences of lacking information, a respondent from Pauk Township stated: “Fake news and misinformation became mixed together, leaving people frightened and panicked. In some villages, people did not even know that a military column had entered.” This response does not directly state that the respondent acted on false information. Rather, it describes an environment in which information was unavailable and fake or inaccurate reports circulated alongside it.[59]

[59] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်–စက်တင်ဘာ ၂၀၂၆။

Figure 4.24. Experience of Believing or Acting on False Information During Shutdowns




Source: Dead Air survey (30 Aug–12 Sep 2026; 130 respondents).

## 4.6 Community–based alternative communication networks and needs

### 4.6.1 Local groups and self–organized information–sharing networks

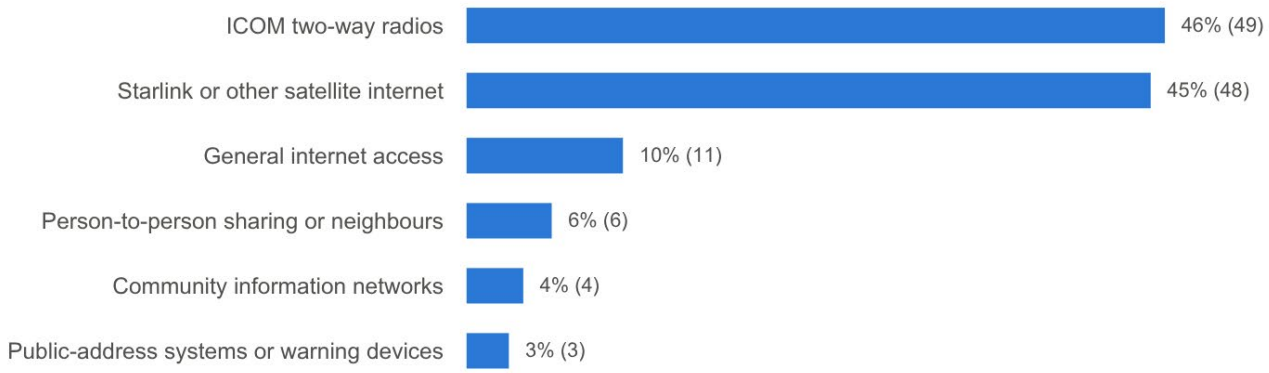
When asked whether they knew of local groups, organizations or informally organized networks that helped share information during communication shutdowns, (86) of the (130) respondents, or (66.2) percent, reported that they did. The remaining (44), or (33.8) percent, were not aware of any such groups or networks.

Responses describing how these groups and networks provided assistance were organized into thematic categories. Of the (86) respondents who knew of such networks, (44) mentioned information sharing and announcements through ICOM radios, base–station radios or other radio–communication equipment. Responses from (23) respondents referred to announcements made while traveling through villages, the use of loudspeakers or other forms of broadcasting. A further (9) mentioned distributing warnings about aircraft and military movements, (9) described assistance in accessing Starlink or other internet services, and (2) referred to support for other services, including health care. Because a single response could mention more than one type of activity, these figures may overlap.

### 4.6.2 Support needed to obtain emergency information

When asked what would be most helpful in enabling them and their communities to obtain emergency information during communication shutdowns, (106) respondents provided answers. After the responses were organized into thematic categories, (49) respondents, or (46.2) percent of those who answered, mentioned ICOM radios, while (48), or (45.3) percent, mentioned Starlink or other satellite internet services. These were the two most frequently identified forms of support.

**Figure 4.25. Support Needed to Obtain Emergency Information**




Source: Dead Air survey (30 Aug–12 Sep 2026; 106 respondents answered this question).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

Other responses included general internet access, mentioned by (11) respondents, or (10.4) percent; person-to-person information sharing or information obtained through neighbors, mentioned by (6), or (5.7) percent; community information networks or loudspeaker announcements, mentioned by (4), or (3.8) percent; and public-address systems or other community warning devices, mentioned by (3), or (2.8) percent. Because a single response could include more than one form of support, these figures and percentages may overlap.

A respondent from Ayadaw Township stated: “Information networks should be established, and every household should have Starlink internet and an ICOM radio.” Other responses also mentioned Starlink, ICOM radios, base-station radios, loudspeakers and community-level information networks, either individually or in combination.[60]

[60] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆။

# 5. Case studies

The purpose of this chapter is not to document violent incidents as isolated events, but to examine how the consequences of communication shutdowns identified in Chapter 4 appeared during conflict incidents. These consequences include warnings that were unavailable or arrived late, insufficient information for deciding whether to flee, decisions made amid false information, and difficulties verifying and documenting casualties. Five case studies connected to the surveyed areas were selected because evidence was available concerning communication conditions, early warnings, displacement or flight, and the ability to document the incidents. These case studies do not seek to establish that communication shutdowns caused the attacks. Rather, they illustrate how absent or delayed information affected people's ability to recognize danger, respond to it and subsequently verify and document what occurred.

## 5.1 Airstrikes on schools and the limitations of early-warning systems: The 2022 Letyetkone and 2025 Oe Htein Twin village attacks

On the afternoon of 16 September 2022, two Myanmar military Mi-35 attack helicopters fired for approximately one hour on a school operating within a monastery compound in Letyetkone village, Depayin Township, Sagaing Region. Ground troops subsequently entered the village. According to an investigation by Myanmar Witness, at least (6) children were killed and (17) people, including children and adults, were injured.[61] UNICEF reported that at least (11) children were killed in the attack.[62]

[61] Myanmar Witness, "The Tabayin School Attack," 2022
[62] UNICEF Myanmar, "At Least 11 Schoolchildren Killed in Myanmar Attack," 2022

Nearly three years later, on the morning of 12 May 2025, a Myanmar military fighter jet bombed a school in Oe Htein Twin village, Depayin Township. According to the Associated Press, (20) students and (2) female teachers were killed, while dozens of students were injured. [63]

According to a Myanmar Witness report published in January 2023, online records relating to the Letyetkone attack show that a local monitoring network reported at approximately 1:06 p.m. that an attack was underway in eastern Depayin.[64] This was almost the same time that the attack began. The available evidence does not establish whether this information reached the school in time. Publicly available records concerning the Oe Htein Twin attack likewise do not indicate whether the school received any advance warning.

It is therefore not possible to confirm that "no warning was received" in either attack, nor can it be concluded that communication shutdowns directly caused the deaths. Nevertheless, these incidents illustrate the critical difference between information indicating that an attack is already underway and an advance warning received before the danger arrives. This is consistent with the survey findings that (51) respondents, or (39.2) percent, learned of danger only after personally hearing aircraft or gunfire, while (68) respondents, or (52.3) percent, reported that the amount of advance warning varied from one incident to another.[65]

## 5.2 Limitations of early warning at a public gathering: The 2023 Pa Zi Gyi village attack

At approximately 7:30 a.m. on 11 April 2023, around (300) local residents were attending the opening ceremony of a local administrative office in Pa Zi Gyi village, Kanbalu Township, when a Myanmar military fighter jet bombed the gathering. Within minutes, an Mi–35 attack helicopter arrived and fired on people attempting to flee, according to witnesses interviewed by Human Rights Watch.[66]

63 Associated Press, "An Airstrike in Central Myanmar Kills up to 22 People at a Bombed School," 2025

64 Myanmar Witness. Eyes on the Skies: "An Airstrike in Central Myanmar Kills up to 22 People at a Bombed School," . January 27, 2023, updated January 31, 2023, p. 37

65 Dead Air Survey, 2026

66 Human Rights Watch, Enhanced Blast Strike Likely War Crime," May 9, 2023

A subsequent statement by the IIMM reported that at least (155) people, including children, were killed, making it the deadliest single attack since the 2021 military coup.[67]

Internet shutdowns were already in place in Kanbalu Township before the Pa Zi Gyi attack. In March 2022, mobile internet services were ordered to be shut down indefinitely in (23) townships across Sagaing Region, including Kanbalu Township.[68] According to records compiled by the Myanmar Internet Project, Mytel mobile internet briefly became available for approximately one day in several townships, including Kanbalu, on 4 January 2023, but was shut down again on 5 January. It was not until October 2023 that residents reported being able to access the internet using Atom SIM cards in certain locations, including Kanbalu.[69] These records demonstrate that communication access in the area remained severely restricted around the time of the attack.

According to a witness interviewed by Human Rights Watch, scouts and security monitors were present at the ceremony. However, they were primarily watching for Myanmar military columns approaching by road and were not adequately prepared for an airstrike, leaving those at the gathering caught off guard.[70] The Pa Zi Gyi incident therefore illustrates not the complete absence of an early-warning network, but the inability of an existing ground-focused monitoring system to detect a rapidly approaching aerial threat in time. This is consistent with the survey findings that (51) respondents, or (39.2) percent, learned of danger only after personally hearing aircraft or gunfire, while (68) respondents, or (52.3) percent, reported that the amount of advance warning varied from one incident to another.[71] Nevertheless, the available evidence does not establish that communication shutdowns directly caused either the Pa Zi Gyi attack or the number of resulting deaths.

[67] Independent Investigative Mechanism for Myanmar, "Two Years since the Deadly Air Attack on Pa Zi Gyi Village," April 11, 2025

[68] Independent Investigative Mechanism for Myanmar, "Two Years since the Deadly Air Attack on Pa Zi Gyi Village," April 11, 2025

[69] Myanmar Internet Project, "Digital Coup Quarterly: November 2022 to January 2023," February 15, 2023

[70] Human Rights Watch, "Myanmar: Enhanced Blast Strike Likely War Crime," May 9, 2023

[71] Dead Air Survey, 2026

## 5.3 Communication disruptions that hindered rescue operations: The 2025 Sagaing earthquake

On 28 March 2025, a magnitude (7.7) earthquake struck along the Sagaing Fault. It was the most powerful earthquake to hit Myanmar in more than a century and caused widespread loss of life and structural damage across Sagaing Region, Mandalay Region, Naypyidaw and other areas. Some of the worst-affected locations were already experiencing communication shutdowns, power outages and armed conflict before the earthquake.[72]

The day after the earthquake, the United Nations Office for the Coordination of Humanitarian Affairs reported that communication and internet disruptions were hindering humanitarian communications and emergency-response operations.[73] The International Organization for Migration documented that internet and telephone services remained unavailable in Sagaing and the Mingun area as of 31 March and that rescue operations had yet to begin. The communication disruptions made it more difficult to assess damage and needs promptly, coordinate among rescue teams and enable people requiring emergency assistance to contact the outside world.

Damage to communication towers, fibre-optic cables and electricity infrastructure caused by the earthquake was another factor behind the disruptions. However, the loss of communication was not solely the result of technical damage caused by the disaster. Internet-shutdown orders imposed by the Myanmar military before the earthquake, together with restrictions on websites, social media platforms and other forms of communication, remained in effect after the earthquake. Digital-rights and civil society organizations in Myanmar issued a joint statement noting that these restrictions had not been lifted more than (48) hours after the earthquake and were obstructing the coordination of emergency-response operations.[74]

[72] IOM Myanmar: Earthquake Response Situation Report 01
[73] OCHA Myanmar Earthquake Flash Update #1
[74] Athan et al., Joint Statement on Internet Shutdown Following the Earthquake

The survey findings also demonstrate that the consequences of communication shutdowns are not limited to access to military-related warnings. A total of (26) respondents, or (20.0) percent, reported that communication shutdowns prevented them from receiving guidance concerning natural hazards such as earthquakes and floods. One respondent from Kyunhla Township explained that local networks use "fixed radio sets to provide daily announcements about military developments and air activity, as well as resistance victories and flooding, effectively serving the community as though internet and telephone services were available." In addition, (125) respondents, or (96.2) percent, had experienced difficulties contacting family members or checking on their safety, while (109) respondents, or (83.8) percent, had encountered difficulties obtaining medical or emergency assistance.[75]

The survey responses did not separately measure experiences arising exclusively from the 2025 earthquake. Nevertheless, when considered alongside the earthquake response, they demonstrate that the loss of conventional communication networks affects more than access to information during armed conflict. It can also hinder requests for emergency assistance, efforts to determine whether family members are safe and the coordination of rescue operations during natural disasters.

## 5.4 Fleeing with incomplete information amid shifts in territorial control: Madaya, Singu and Thabeikkyin townships

In late 2025, fighting for territorial control intensified in Madaya, Singu and Thabeikkyin townships. The Irrawaddy reported that more than (100,000) residents from the three townships had been displaced by 14 November as the Myanmar military launched offensives involving artillery, airstrikes, drones and ground forces. Residents fled from numerous villages in Madaya Township, areas of Singu Township affected by fighting and airstrikes, and at least (30) villages in Thabeikkyin Township.[76]

The Myanmar military began its offensive against Singu Township on 26 November and regained control of the township on 19 December. During the offensive, airstrikes, drones and artillery attacks

[75] Dead Air Survey, 2026

[76] The Irrawaddy, *"မတ္တရာ၊ စဉ့်ကူး၊ သပိတ်ကျင်းမှ လူတစ်သိန်းကျော် စစ်ရှောင်နေရ,"* November 14, 2025

were used alongside ground forces, forcing most residents of the town and surrounding areas to flee.[77] After the Myanmar military regained control of areas in Madaya, Singu and Thabeikkyin, reports indicated that at least (40) local residents were detained and that at least (9) of them were killed. People returning home also encountered restrictions preventing them from leaving again without a valid reason, as well as demands for money at checkpoints.[78]

Survey responses from these townships directly illustrate how communication shutdowns affected people's decisions about whether to flee or remain in place while territorial control was changing. One respondent from Singu Township stated: "Because we had no information, we were anxious and did not know whether to stay or leave. Eventually, we communicated through ICOM and had to flee quickly." In response to another question, the same respondent explained: "We faced severe difficulties because we could not flee until the military column was about to arrive."

A respondent from Madaya Township stated: "Although we could hear gunfire, we did not know exactly what was happening or how far away it was, so we were unsure whether we needed to flee." A respondent from Thabeikkyin Township identified "being subjected to airstrikes and being arrested by the military" as consequences of not receiving information. These responses demonstrate the difference between merely knowing that danger exists and having the specific information needed to make a safe decision, including the danger's location, distance, direction of movement and available evacuation routes.[79]

Across the survey, (96) respondents, or (73.8) percent, reported that the absence of information had affected their decisions about whether to flee, relocate or remain in their original location. In addition, (92) respondents, or (70.8) percent, reported that security conditions had at times forced them to abandon attempts to obtain communication access. The experiences documented in Madaya, Singu and Thabeikkyin demonstrate that, during communication shutdowns, civilians face difficulties not only

[77] Myanmar Now, "NUG ထိန်းချုပ်ထားသည့် မန္တလေးတိုင်း စဉ်ကူးမြို့ကို စစ်တပ်ပြန်လည်ထိန်းချုပ်," December 19, 2025
[78] The Irrawaddy, "Myanmar Junta Unleashes Reign of Terror in Recaptured Mandalay Towns," January 16, 2026
[79] Dead Air Survey, 2026

in deciding when to leave their homes, but also in travelling to locations with network access, as the journey itself may expose them to life-threatening danger.[80]

## 5.5 A death toll that was difficult to verify during a communication shutdown: Maha Lay Htat Monastery, Katha

At approximately 11:00 a.m. on 20 March 2026, a Myanmar military fighter jet bombed Maha Lay Htat Monastery in Ward (3) of Katha, where people displaced by conflict had sought shelter. Numerous civilians were killed, including monks, displaced people, children and older persons.[81] Before the incident, Kachin News Group reported on 9 March that only the MEC mobile phone network remained available in Katha and that all other telephone networks had been shut down.[82] The Myanmar Internet Project also documented that the attack occurred while Katha was experiencing communication shutdowns.[83]

Even three days after the attack, the exact death toll remained unknown. DVB reported[84] that at least (17) people had been killed and (20) injured. Myanmar Now initially reported[85] more than (20) deaths, but by 23 March indicated that at least (50) people might have been killed. Narinjara News reported no fewer than (60) deaths, while ACLED recorded at least (50) civilian fatalities.[86] Given these varying figures, the death toll should not be presented as a confirmed total of between (50) and (60). It is more accurate to state that different news sources reported figures ranging from at least (17) to more than (60) deaths.

Ward (3), where the monastery is located, was under Myanmar military control, and most survivors of the attack subsequently fled again. Some bodies were badly burned, while others could not be identified. Residents told Myanmar Now that the Myanmar military had transported some of the bodies

80 Dead Air Survey, 2026

81 Myanmar Now, *"ကသာမြို့ ဘုန်းကြီးကျောင်း ပုံးကြဲခံရမှု သေဆုံးသူ ၅၀ နီးပါး ရှိနိုင်,"* March 23, 2026

82 Kachin News Group, *"ကသာမှာ တိုက်ပွဲငြိမ်သက်နေပေမယ့် လက်နက်ကြီးကျပေါက်ကွဲမှုရှိနေ၊ အရပ်သားတစ်ဦးသေဆုံး,"* March 9, 2026

83 Myanmar Internet Project, "Myanmar Digital Coup Quarterly: February 2026–April 2026," May 23, 2026

84 DVB, "Airstrikes Kill 17 at Monastery in Sagaing Region," March 23, 2026

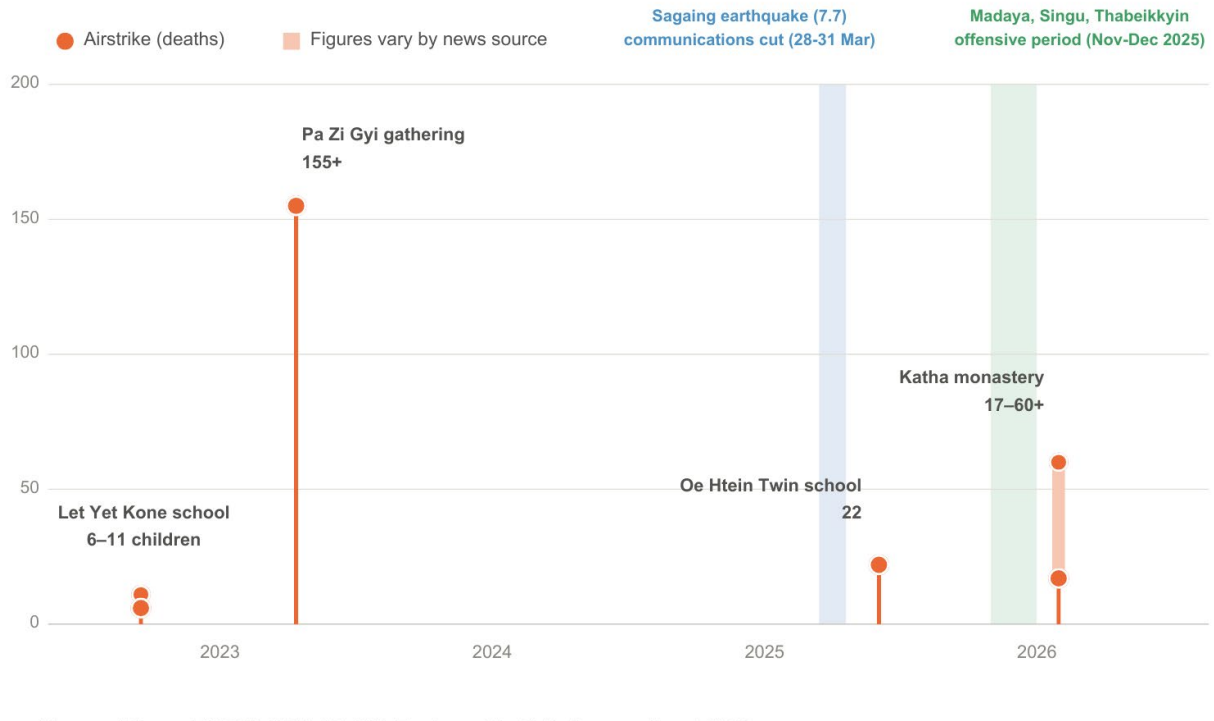
85 *Narinjara, "ကသာမြို့တွင် စစ်ရှောင်များနေသည့် ဘုန်းကြီးကျောင်း ပုံးကြဲခံရ၍ ၆၀ ထက်မနည်းသေဆုံး," 2026*

86 ACLED, "Asia-Pacific Overview: April 2026"

to Kyan Taw Cemetery, although the number of bodies taken there could not be determined. Continuing fighting and airstrikes in the town also made it difficult to conduct an independent investigation and verify the names and number of those killed.

The communication shutdown was not the sole reason the death toll was difficult to verify. Myanmar military control of the area, continuing fighting and airstrikes, the further displacement of survivors and the inability to identify some bodies all obstructed the collection and verification of information. Nevertheless, the shutdown of conventional telephone networks made it even more difficult to contact witnesses, compile the names of those killed and cross-check the reported death toll against independent sources. The Katha incident therefore demonstrates that communication shutdowns affect not only access to warnings before an attack but also the ability to document and verify deaths and other harm after an attack.

Figure 5.1. Timeline of the Chapter 5 Case Studies (2022–2026)




Sources: Myanmar Witness; UNICEF; IIMM; AP; IOM; The Irrawaddy; DVB; Myanmar Now; ACLED.

# 6. Discussion of the research findings

Chapter 4 presented the principal findings from the survey, while Chapter 5 examined those findings in relation to documented incidents. Rather than merely restating the evidence, this chapter discusses how the findings relate to one another and how communication shutdowns affect people's access to information, their ability to receive advance warnings of danger and their daily lives.

Previous research has already categorized communication shutdowns in Myanmar as short-term, long-term and periodic.[87] The principal contribution of this study is therefore not to propose another classification of shutdowns. Instead, it uses survey evidence to demonstrate how local communities experience multiple, overlapping forms of communication disruption and how they have attempted to rebuild access to communication and information under these conditions.

As conventional telephone and internet networks have become unreliable or unavailable, local communities have combined ICOM radios, shared satellite internet services, community warning networks and person-to-person information sharing to establish alternative communication systems. However, these alternatives are also affected by restrictions imposed for military purposes, service suspensions and rising costs. Access consequently depends on the availability of equipment and financial resources, the geographical location of the community, the strength of local networks and the safety of travel routes.

This chapter discusses the multiple layers of communication disruption experienced by local communities, the alternative systems established by communities themselves, the role and limitations of community-based emergency-warning networks, and the financial and security costs that communication shutdowns impose on civilians.

[87] Athan, "Internet Access Amid Darkness and Lives Amid Threats," May 13, 2022

## 6.1 Local communities experiencing multiple and overlapping forms of communication shutdown

Previous research has already categorized communication shutdowns in Myanmar since 2021 as short-term, long-term and periodic.[88] It has also documented internet throttling, the blocking of websites and social media platforms, and increased service charges as methods of restricting access to communication and information.[89] Rather than introducing another classification, this study demonstrates how people in the surveyed areas experience these different forms of communication restriction simultaneously and in overlapping layers.

Of the (130) survey respondents, (120), or (92.3) percent, reported that they could not access reliable conventional communication networks. When asked why communication services had been shut down, respondents were permitted to select more than one answer. A total of (66) respondents, or (50.8) percent, believed that communication services had been cut because local communities supported the resistance. Another (31) respondents, or (23.8) percent, selected damage to communication towers and transmission lines, while (21), or (16.2) percent, attributed the shutdowns to deliberate restrictions imposed before military operations and (16), or (12.3) percent, attributed them to restrictions imposed during military operations.[90]

These responses do not independently establish the cause or responsible actor behind each individual shutdown. They do, however, demonstrate that the loss of communication across the surveyed areas cannot be attributed to a single cause. In some locations, conventional telephone and internet networks operating under Myanmar military control have been shut down, while in others, communication towers and transmission lines have been damaged by fighting. In certain areas, resistance groups have temporarily restricted public access to Starlink services on grounds of operational security. In addition, decisions by the service provider concerning Starlink subscription plans and geographic eligibility have resulted in the suspension of service to devices already in use.[91]

88 Athan, "Internet Access Amid Darkness and Lives Amid Threats," May 13, 2022
89 Athan, "Disconnections and Vanishing Rights," March 28, 2023
90 Dead Air Survey, 2026

The situation confronting local communities therefore extends beyond the shutdown of a single conventional mobile network. When conventional telephone and internet services become unavailable, people turn to satellite internet as an alternative. Yet this replacement service may itself be temporarily restricted for military reasons, suspended by the service provider or made less accessible through price increases. Even when one means of communication becomes available again, people cannot predict how long it will remain usable or when it may be cut off once more.

The principal finding of this study is not simply a further confirmation that both short-term and long-term shutdowns exist. Rather, conventional communication networks, alternative satellite internet services and community information-sharing channels are being restricted in succession for different reasons, with local civilians bearing their cumulative effects. Unable to rely on any single communication channel, communities have been compelled to piece together alternative systems using whatever combination of methods remains available.

## 6.2 The alternative communication system local communities have had to build for themselves

Communities have not responded to the loss of multiple communication channels by relying on a single replacement. Instead, they have been compelled to combine handheld two-way radios, satellite internet, community announcements, loudspeakers and person-to-person information sharing according to local needs. This system does not replace a conventional communication network with a single technology. Different methods are used to obtain information from outside the community, transmit it between communities and distribute it among residents.

Before communication services were shut down, (74) respondents, or (56.9) percent, primarily used mobile internet, while (65), or (50.0) percent, obtained information through social media. Only (27) respondents, or (20.8) percent, used handheld two-way radios. After the shutdowns, the number using ICOM radios increased to (106), or (81.5) percent, while (79), or (60.8) percent, used satellite internet. In

[91] Athan, "State of Freedom of Expression in Myanmar, July 2026," August 17, 2026

addition, (33) respondents, or (25.4) percent, travelled to locations where network access was available, while (26), or (20.0) percent, obtained information through announcements by community leaders.[92]

These methods do not operate independently of one another. Satellite internet enables communities to obtain information from outside conventional telephone and internet networks, while ICOM radios allow news and emergency warnings to be relayed rapidly from one village to another. Community loudspeakers, designated lookouts and person-to-person communication then help distribute this information to those who cannot directly access ICOM radios or the internet. The effectiveness of the alternative communication system therefore depends not on a single device, but on the ability of technology and local social networks to operate together.

Under conventional mobile networks, individual telephone owners could access information directly. Under the current alternative system, however, most people must depend on equipment owners and service providers. Of the (127) respondents who answered the relevant question, only (14), or (11.0) percent, used their own Starlink device. Others accessed the internet through commercial Starlink shops, shared community access points or devices owned by civil society organizations, neighbours and resistance groups. Communication access has therefore shifted from direct individual access to a mediated system that depends on another person or a community organization.

This situation demonstrates the adaptability of local communities and their capacity for collective action, but it does not mean that the alternative system provides a service equivalent to conventional communication networks. Because people must rely on equipment owners, commercial shops, community organizations and those who relay information, access has become less an individually exercisable right and more dependent on the equipment, financial resources and social networks available within a person's community. Any discussion of the system's life-saving potential must therefore consider both whom it reaches in time and whom it continues to leave without access.

[92] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

## 6.3 Community-based emergency-warning systems and their limitations

In areas where conventional communication networks have been shut down, emergency warnings do not depend on technology alone. Community networks that relay information from one person to another play a central role. When asked how they learned about danger during communication shutdowns, (81) respondents, or (62.3) percent, selected person-to-person information sharing, while (61), or (46.9) percent, reported relying on community warning networks. In addition, (27) respondents, or (20.8) percent, received information from designated lookouts or monitors. These findings indicate that information received through an ICOM radio does not remain with a single recipient but is relayed to others through a broader community warning system.[93]

However, the existence of community-based warning systems does not mean that everyone receives advance warning. A total of (51) respondents, or (39.2) percent, reported that they became aware of danger only after personally hearing aircraft or gunfire, while (10), or (7.7) percent, stated that they had no reliable means of receiving warnings. Hearing the sound of an attack is not an advance warning; it indicates that the danger has already begun. People who remain outside the coverage of emergency-warning networks may therefore have little or no time to seek safety.

When asked directly whether warnings reached them in time, only (60) respondents, or (46.2) percent, said that they received them promptly. Another (42), or (32.3) percent, were uncertain, while (26), or (20.0) percent, reported that warnings did not reach them in time. Together, these two groups comprised (68) respondents, or (52.3) percent, indicating that more than half could not fully rely on receiving warnings promptly. The amount of advance notice was similarly inconsistent: (68) respondents, or (52.3) percent, said it varied from one incident to another; (29), or (22.3) percent, received approximately (15) minutes' warning; and (21), or (16.2) percent, received only between (15) and (30) minutes' warning. A further (6) respondents reported receiving no advance warning at all.[94]

[93] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

[94] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

According to a leader of a local education organization, communities that connect ICOM radios to village loudspeakers can rapidly distribute a single warning throughout an entire village. Similarly, ICOM users in different locations can relay the route of a drone or ground military column, enabling communities along its path to seek safety in advance. For rapidly approaching fighter jets, however, the interval between receiving information and being able to respond may be extremely short. Coverage also remains limited in places without ICOM radios and loudspeakers or without designated lookouts and people responsible for distributing information.[95]

Community-based emergency-warning networks can therefore serve as life-saving alternatives under communication shutdowns, but they are not yet equally accessible to everyone. Access to warnings depends on the availability of ICOM radios and loudspeakers, the presence of lookouts and information relays, the level of coordination within the community and the availability of financial contributions. Although some communities have established systems to protect themselves, gaps in coverage continue to leave some people receiving warnings late or not at all.

## 6.4 The costs and risks imposed on civilians by communication shutdowns

Although conventional services become unavailable when communication networks are shut down, people's need to communicate and obtain information does not disappear. To meet that need, local communities must purchase ICOM radios, pay for satellite internet, travel to locations with network access and support community-based communication networks. The burden of communication shutdowns therefore cannot be measured solely in financial terms; it must also account for the time required, the need to travel and the resulting exposure to security risks.

When asked how their expenses had changed following the shutdown of communication services, (88) of the (130) respondents, or (67.7) percent, reported spending more than before. Of the total sample, (47) respondents, or (36.2) percent, reported that their costs had increased to at least three times their previous level, while (23), or (17.7) percent, reported an increase of fivefold or more.

95 ဒေသခံပညာရေးအဖွဲ့ဦးဆောင်သူနှင့် အင်တာဗျူး, 2026

A further (37) respondents reported no increase in costs, while (5) were uncertain or preferred not to answer.[96]

However, reporting no increase in costs should not be interpreted as evidence of adequate communication access. Some respondents receive free services from organizations or at shared community access points, but their access continues only for as long as those services remain available. For others, an inability to pay does not represent a reduction in expenses; it may mean that they can no longer use communication services at all. A respondent from Kyunhla Township reflected this situation, stating: "No one makes the effort needed to access the internet, so they do not receive any information."[97]

Another cost of obtaining communication access is the time required to travel and the danger encountered along the way. Of the (114) respondents who reported how long it took them to reach a location with network access, (51), or (44.7) percent, said that the one-way journey took at least (2) hours. When asked about obstacles encountered while travelling in search of connectivity, (73) respondents, or (56.2) percent, selected natural barriers such as rivers, streams and mountains. In addition, (34), or (26.2) percent, reported encountering checkpoints operated by resistance forces; (24), or (18.5) percent, encountered Myanmar military checkpoints; and (22), or (16.9) percent, travelled near areas of active fighting. Because respondents could select more than one answer, the percentages for the two types of checkpoints should not be added together and presented as a separate proportion of respondents.[98]

The direct effect of travel-related risks on access to information is demonstrated by the (92) respondents, or (70.8) percent, who reported that security conditions had at some point led them to refrain from seeking communication access. Access is therefore determined not only by a person's ability to pay, but also by whether they can travel safely to a location where connectivity is available. A total of (109) respondents, or (83.8) percent, had experienced difficulties obtaining medical or emergency

[96] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆
[97] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆
[98] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

assistance, while (125), or (96.2) percent, had encountered difficulties contacting family members or checking on their safety. The consequences of being unable or unwilling to travel for communication access therefore extend beyond an inability to obtain news; they also affect health, family safety and emergency decision-making.[99]

These costs and risks are not borne equally. Of the (129) respondents who answered the relevant question, (79), or (61.2) percent, reported facing greater difficulties obtaining information than other people in their communities. Financial cost was the most frequently selected barrier, identified by (69) respondents, or (53.1) percent, followed by the need to travel, selected by (31), or (23.8) percent, and the lack of necessary equipment, selected by (14), or (10.8) percent. In the respondents' view, older persons, persons with disabilities, people displaced by conflict, children and women face the greatest barriers to communication and information. It should be noted, however, that these findings largely reflect the observations of survey respondents, most of whom were under the age of (35), rather than direct responses from members of the identified groups.[100]

Overall, communication shutdowns force civilians to spend money and time to meet their communication needs while also weighing the resulting security risks. Although the alternative systems established by communities can continue delivering critical information, access depends on financial resources, the availability of equipment, a person's location and the safety of travel routes. Communication shutdowns therefore do more than restrict access to information; they also deepen existing social and economic inequalities.

[99] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆
[100] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

# 7. Recommendations

In some areas affected by communication shutdowns, communities have established alternative methods using ICOM radios, satellite internet and community information networks. However, these methods are not accessible to everyone, and many people continue to live without any reliable means of communication. Even where alternatives exist, high costs, equipment shortages and gaps in coverage remain.

The recommendations in this chapter are based on needs directly identified by respondents and on the study's findings. Because the survey did not measure respondents' views on political advocacy or pressure, it does not draw conclusions on those issues. Instead, the recommendations focus on expanding access to existing communication methods, strengthening emergency-warning networks, and reducing the costs and risks civilians face when attempting to obtain communication access.

## 7.1 Communication methods that should be prioritized for emergency support

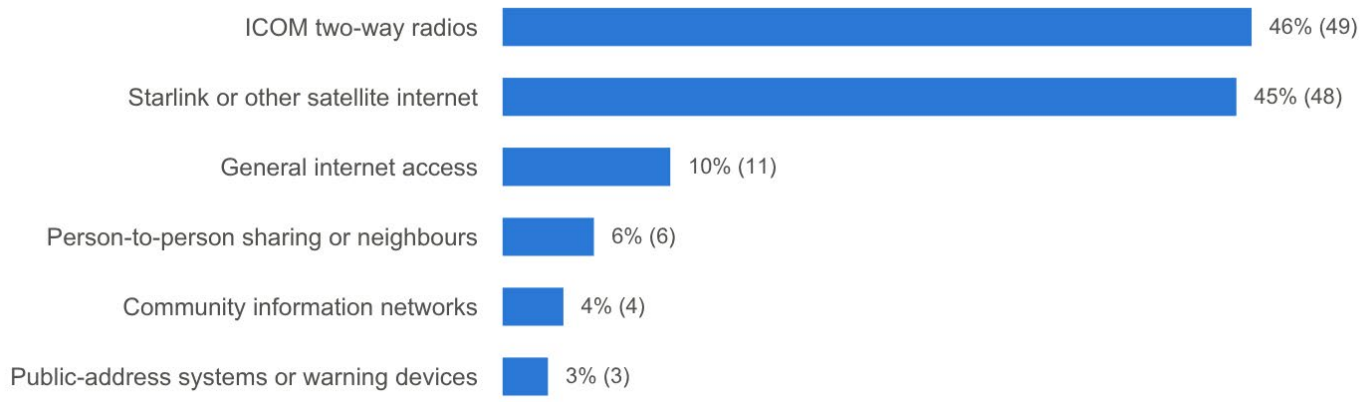
When asked what would be most helpful for obtaining emergency information, (49) of the (106) respondents who answered the question, or (46) percent, identified ICOM radios, while (48), or (45) percent, selected Starlink or other satellite internet services. General internet access was identified by (11) respondents, person-to-person information sharing by (6), community information networks or aircraft-monitoring teams by (4), and loudspeakers or warning bells by (3).[101]

These responses indicate that ICOM radios and satellite internet should receive the highest priority in support for emergency communications. Satellite internet provides access to external information and online services, while ICOM radios allow emergency information to be relayed rapidly between

[101] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

communities. Support should therefore focus on developing communication systems that integrate both methods rather than funding either one in isolation.

Figure 7.1. Support Needed to Obtain Emergency Information




Source: Dead Air survey (30 Aug–12 Sep 2026; 106 respondents answered this question).

*Note: Multiple responses were permitted; percentages may exceed 100% in total.*

Assistance should prioritize communities that still have no reliable means of communication instead of concentrating additional resources in locations where alternative methods are already available. Equipment provision should be accompanied by support for power supplies, monthly service charges, maintenance and user training. Decisions about which methods to support should be made in consultation with local communities and based on the security conditions, geography and existing community networks of each area.

## 7.2 Recommendations to resistance forces, including the National Unity Government

The National Unity Government, local administrative bodies and resistance forces should treat civilian access to communication and emergency warnings as an essential public–safety service in areas under their responsibility. They should prioritize the following actions:

- Identify and prioritize support for villages without any reliable means of communication and areas not yet covered by warning networks. Information that could create security risks, including equipment locations, radio frequencies and user details, should not be made public.
- Establish dedicated funding for ICOM radios, base radio sets, loudspeakers, solar–power systems and spare batteries. Support should cover not only equipment purchases but also maintenance, user training, monthly satellite–internet subscriptions and data charges.
- Establish clear procedures for relaying warnings between township– and village–level networks. Responsibilities should be clearly assigned for receiving information, verifying it, relaying it and announcing it to the community.
- Where restrictions on communication are strictly necessary for operational security, they should be limited to specified locations and periods. Arrangements should preserve access to medical emergency communications, airstrike warnings, humanitarian operations and emergency communication for civilians.
- Issue clear instructions prohibiting the arbitrary confiscation of civilian communication equipment or obstruction of users at checkpoints. Arrangements

- should also be made to ensure safe passage for communication-equipment technicians, healthcare workers and humanitarian responders.

- Incorporate the experiences and needs of local residents, women, persons with disabilities, older persons and people displaced by conflict when designing communication and warning programmes. Communities should also have a mechanism for reporting whether these programmes are functioning effectively.

## 7.3 Recommendations to Myanmar civil society organizations and non-governmental organizations

Civil society organizations and non-governmental organizations should take particular care to ensure that assistance does not become concentrated in communities that already have access to communication methods. Communities with no connectivity may also struggle to contact organizations providing assistance. Such communities should therefore be proactively identified and prioritized.

- Work with local communities to identify villages with no communication access, areas not yet reached by warning networks and groups facing the greatest barriers to access. Assistance should not rely exclusively on online request systems; people should be able to communicate their needs in person or through trusted local networks.

- Provide support for the full operational life of communication equipment instead of making one-time equipment donations. This should include monthly satellite-internet subscriptions, data charges, power supplies, spare batteries, maintenance and the replacement of damaged equipment.

- Support ICOM radios, satellite internet and community loudspeakers as components of an integrated community-based communication system rather than distributing them separately. Provide training on equipment operation, information verification, emergency-information relay procedures and equipment security.

- Incorporate information-sharing methods that do not require smartphones or internet access for older persons, persons with disabilities, people displaced by conflict and others who face difficulties using digital technologies. Loudspeakers, radio, printed materials and in-person communication should be used alongside online channels.

- Protect equipment locations, ICOM frequencies, users' identities and information about local sources to prevent assistance activities from placing communities at risk. Information intended for public release should also be reviewed to ensure that it does not contain details that could endanger local people.

## 7.4 Recommendations to news media

Only (14) respondents, or (10.8) percent, reported being able to cross-check information against multiple sources. A total of (67), or (51.5) percent, said that they had believed, accepted as accurate or acted upon false information, while a further (29), or (22.3) percent, were uncertain. When conventional communication networks are unavailable, news organizations must do more than publish reports; they must also develop distribution methods capable of reaching people without internet access.[102]

- Produce concise text updates, small audio files and low-resolution images that can be opened and shared over slow internet connections. Media organizations should not rely exclusively on social media but should also prepare information in

[102] ဆက်သွယ်ရေးအမှောင်ကျခြင်းစစ်တမ်း၊ ဩဂုတ်-စက်တင်ဘာ ၂၀၂၆

formats suitable for distribution through radio, ICOM networks, loudspeakers and person–to–person relays.

- Established and well–resourced media organizations should maintain regular connections with local and community media, ICOM warning networks and village loudspeaker networks. They should establish two–way information flows through which they can obtain local information and return verified reporting to audiences without internet access.

- Establish in advance the responsible contact persons, distribution schedules and emergency procedures for regularly disseminating natural–disaster alerts, airstrike warnings, urgent health information and other safety–related information.

- Clearly state the location of an incident, the time the information was received, the time of publication and its verification status. Distinguish between confirmed facts, information still being verified and information that remains uncertain. Unverified information should not be presented as confirmed.

- Write emergency updates in short, clear sentences so that their meaning is preserved when relayed through ICOM radios, loudspeakers or from one person to another. Each update should present the essential information, location, time and recommended public action in a clear sequence, while avoiding unnecessary commentary and sensational language.

- Do not disclose sensitive details that could endanger emergency shelters, medical facilities, ICOM frequencies, satellite–internet equipment locations or members of warning networks. The public's need for information should be balanced with the protection of local communities.

## 7.5 Recommendations to the international community and SpaceX

### International community

- Prioritize support for communities with no communication access and locations not yet reached by existing alternative communication networks.
- Provide long-term funding not only for purchasing communication equipment but also for monthly service charges, data costs, maintenance, replacement of damaged equipment and user training.
- Support integrated systems that connect satellite internet, ICOM radios, loud-speakers and community warning networks to avoid dependence on Starlink alone.
- Establish contingency funding and alternative arrangements that allow users to change plans or service providers if Starlink prices increase, subscription plans change or devices are restricted.
- Ensure that applications for assistance and submissions of needs are not limited to online systems. Provide methods for people to apply through trusted local organizations and community networks.
- Protect information concerning the locations of supported equipment, users' identities and communication networks rather than disclosing it publicly.

## SpaceX

- Establish an affordable humanitarian service plan for civilian communication networks, healthcare providers, humanitarian organizations and independent news media operating in conflict–affected areas.
- Provide users with advance notice of changes to prices, data allowances, service eligibility or geographic restrictions, together with sufficient time to transition to a new plan.
- Clearly inform users why a device has been restricted under a “Region Restricted” or “Country Restricted” designation.
- Establish an appeals process through which civilian, humanitarian and media users whose devices have been incorrectly restricted can securely verify ownership and intended use and request restoration of service.
- When restricting devices associated with scam operations or military use, assess the usage of individual devices rather than imposing blanket restrictions on every device within a geographical area.
- Establish a dedicated technical–support and service channel for verified local civil society organizations and international humanitarian organizations.

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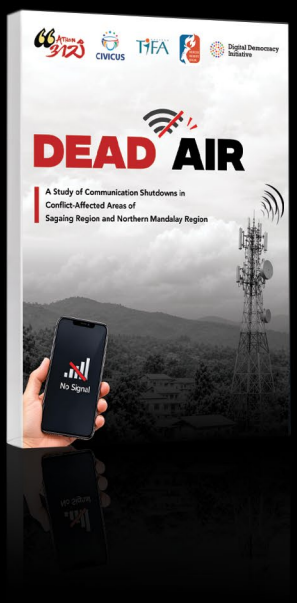
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# DEAD AIR

A Study of Communication Shutdowns in
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