Chapter 2

The Roles which the Information and Communications Took and Challenges

Section 1 Information gathering and dissemination related to the disaster

1. How the information was gathered and collected related to the disaster

(1) Information gathering related to evacuation center

In the Noto Peninsula Earthquake, the access routes to remote areas of Okunoto were partially cut off due to road disruptions, leading to numerous instances of voluntary evacuations and isolated communities. Additionally, municipal employees were also affected by the disaster, making it difficult to accurately assess the situation at evacuation shelters. In response, Ishikawa Prefecture established a platform to consolidate evacuation shelter information collected by municipalities, the Self-Defense Forces, and the Disaster Medical Assistance Teams (DMAT). This platform commenced operations on January 14 and began full-scale operation on January 17, assigning IDs to each evacuation shelter to facilitate integration with other systems (Figure 1-2-1-1). This allowed for the accurate assessment of evacuation shelter information and facilitated a transition to demand-driven support for the procurement of supplies.



Figure 1-2-1-1 Image of a shelter data aggregation and visualization application

(Source) Material of Ishikawa Prefecture Governor's press conference (January 13, 2024)

(2) Utilization of Suica for evacuee information management

Ishikawa Prefecture distributed Suica cards with unique IDs to evacuees at primary evacuation shelters, linking personal information such as name, address, date of birth, and contact details to the system. When evacuees visited shelters or received supplies, they could use the distributed Suica cards with card readers installed at the shelters to provide accurate information on their needs and facilitate demand-driven supply support (Figure 1-2-1-2). While the Digital Agency had been promoting the use of My Number cards for evacuee information management, the unavailability of card readers prevented their use in the aftermath of the earthquake¹.

Figure 1-2-1-2 Obtaining evacuee information with the use of Suica



(Source) Digital Agency "Initiatives to obtain information on victims by utilizing digital technology in the 2024 Noto Peninsula Earthquake"

(3) Establishment of a database for disaster victims

On February 19, Governor HATA Hiroshi of Ishikawa Prefecture announced the establishment of a disaster victim database for approximately 120,000 residents across the six municipalities in the Noto region. Given the extensive damage and the potential for displaced victims to move across municipalities, the database, containing information on the whereabouts of victims and their specific care needs, is being utilized to provide oversight and support for victims across municipal boundaries.

¹ Summary of Press Conference by Minister for Digital Transformation KONO (January 26, 2024) Digital Agency https://www.digital.go.jp/speech/minister-240126-01

(4) Visualization of damage using various data

A Remote sensing

Data observed by satellites is one of the crucial pieces of information for early confirmation and analysis of the disaster-affected areas. Various private companies, including space venture companies, are advancing the publication, provision, and analysis of satellite information. For instance, Axelspace published data observed by its Earth observation platform "AxelGlobe," which is developed and operated using a constellation of small optical satellites, on a special page². They also announced the provision of this data free of charge to government agencies, local governments, and media organizations. Similarly, QPS Research Institute announced that it will provide observation data from its small SAR satellite "QPS-SAR" to government agencies and media organizations, and sequentially provided images for disaster response upon request³. Data from both companies is also included in the "Disaster Cross-View of the 2024 Noto Peninsula Earthquake" by the National Research Institute for Earth Science and Disaster Resilience (NIED)⁴.

Figure 1-2-1-3 Analysis image of crustal movement with data observed by satellites

解析結果【速報】

2.5次元解析結果 NEW



観測毎の2.5次元解析結果:<u>1月1日及び2日観測、1月9日及び12日観測、1月3日及び15日観測</u>

(Source) Geospatial Information Authority of Japan⁵

² Axel Globe "The 2024 Noto Peninsula Earthquake Special Page" https://www.axelglobe.com/ja/the-noto-hanto-earthquake-in-2024

- ³ QPS Research Institute "Providing Satellite Images of the 2024 Noto Peninsula Earthquake Area" https://i-qps.net/news/1614/
- ⁴ National Research Institute for Earth Science and Disaster Prevention "Disaster Prevention Cross-view on the 2024 Noto Peninsula Earthquake" https://xview.bosai.go.jp/view/index.html?appid=41a77b3dcf3846029206b86107877780

⁵ Geospatial Information Authority of Japan "Crustal movement accompanied with the 2024 Noto Peninsula Earthquake by analyzing observed data of "Daichi 2" (updated on January 19, 2024)" https://www.gsi.go.jp/uchusokuchi/20240101noto.html

B Visualization of damages using geospatial data

Efforts were also made to visualize the damage situation of the earthquake using geospatial data such as point cloud data and slope collapse/deposition distribution data. In February, the Tokyo Metropolitan Government published geospatial data related to the damage situation of the Noto Peninsula Earthquake on the Tokyo Digital Twin 3D Viewer (Figure 1-2-1-4). This Tokyo Digital Twin 3D Viewer can be viewed on a web browser without any special software, allowing users to see pre- and post-disaster terrain data and damage-related data in three dimensions, and to overlay them for comparison.

Figure 1-2-1-4 Data published in the Tokyo Digital Twin 3D Viewer

Published data



Displaying the pre-disaster highresolution terrain in point data

(Source) Tokyo Metropolitan Government⁶

Chapter 2

C Data held by postal offices

Efforts were also made using data held by post offices.

Japan Post, based on a request for cooperation from Ishikawa Prefecture, matched the list of missing persons with the resident data held by post offices, contributing to the refinement of the missing persons list. Additionally, at the request of Ishikawa Prefecture, Japan Post sent direct mail to those who had moved out of the disaster-affected areas based on the change of address notifications submitted to post offices, encouraging them to register their information with the disaster-affected municipalities (Figure 1-2-1-5).

Figure 1-2-1-5 Initiatives to utilize data etc. held by postal offices

[Reference] Cooperation with Disaster-Affected Municipalities Utilizing Data Held by the Post Office



municipalities, with the aim of providing various support information, such as the issuance of disaster certificates. To promote information registration, Ishikawa Prefecture has requested cooperation from Japan Post.

• At Japan Post, in addition to posting flyers related to information registration at post office counters, direct mail is created and sent to those who have submitted a change of address form to the post office and have moved out of the affected areas after



(Source) Japan Post Press Release (March 4, 2024)

2. How the information was disseminated related to the disaster

(1) Information dissemination during disasters

A Earthquake Early Warning

On January 1 at 4:10 p.m., the earthquake occurred, prompting the Japan Meteorological Agency to issue an Earthquake Early Warning (EEW) for 21 prefectures ranging from the Tohoku region to the Kinki region. Including this instance, the total number of EEWs issued in January was 20. According to a survey by the Japan Meteorological Agency, 78% of people who received the EEW did so via area mail or emergency alert mail on their mobile phones or smartphones⁷ (Figure 1-2-1-6).

Figure 1-2-1-6 Ways to obtain the EEW

Q5. How did you obtain the Earthquake Early Warning. (multiple answer is allowed.)



(Source) Japan Meteorological Agency "Preliminary survey on emergency earthquake early warning for the earthquake in the Noto region of Ishikawa Prefecture that observed a maximum seismic intensity of 7 at around 16:10 on January 1, 2024 - Breaking version –" (March 28, 2024)

Additionally, 61% of those who saw or heard the EEW took some form of action. The actions taken included "bracing themselves on the spot," "trying to get earth-

B Evacuation calls during the disasters (television)

During the disaster, especially when a major tsunami warning was issued, NHK implemented the "calls to protect lives" that have been developed and trained since the Great East Japan Earthquake. This was the first fullscale operation of these calls. Immediately after the major tsunami warning was issued, NHK continuously called out in strong tones using various expressions and phrases that appealed to the emotions of viewers, such as "Protect Your Life," "Remember the Great East Japan Earthquake," and "Call Out to Those Around You, 'a quake information via TV, radio, or mobile phone," and "being cautious of falling objects around them."

Tsunami is Coming, Flee to Higher Ground."

Additionally, Sun TV broadcasted pre-recorded multilingual evacuation calls when a tsunami warning was issued for the northern part of Hyogo Prefecture. The content included messages in Japanese and sign language, as well as English, Korean, Chinese, Vietnamese, Nepali, Tagalog, and Portuguese. Speakers of each language appeared in turn, repeatedly urging viewers with both voice and handwritten signs to "escape immediately to protect your life from the coming tsunami."

⁷ Preliminary survey on emergency earthquake early warning for the earthquake in the Noto region of Ishikawa Prefecture that observed a maximum seismic intensity of 7 at around 16:10 on January 1, 2024 - Breaking version -2024.3.28 Announcement (Japan Meteorological Agency) https://www.data.jma.go.jp/eew/data/nc/shiryo/pre-survey/2024/2024/011-ishikawa-brief.pdf

(2) Information gathering and dissemination after disasters

A Disaster Cross-View

The National Research Institute for Earth Science and Disaster Resilience (NIED) launched the "Disaster Cross-View for the 2024 Noto Peninsula Earthquake" on January 1. This platform aggregates and disseminates essential disaster response information shared through networks like SIP4D (Shared Information Platform for Disaster Management). The Cross-View provides integrated information on road conditions, life support locations, activities of NPOs, and the communication status of various mobile phone carriers.

Figure 1-2-1-7 Information sharing related to disasters via SIP4D Flow of information sharing via SIP4D at disasters



(Source) National Research Institute for Earth Science and Disaster Resilience "2023 4th Disaster Resilience Co-creation Research Meeting "2024 Noto Peninsula Earthquake" Reporting meeting (March 5, 2024)"⁸

B Information gathering and dissemination by media (disaster situation map)

During the earthquake, newspapers collected photos and information and linked them to maps for public dissemination.

On January 1, Yomiuri Shimbun published the initial version of the "Disaster Situation Map for the 2024 Noto Peninsula Earthquake" on its website. The "Damage Captured by Reporters" section allows users to view photos and descriptions of the disaster areas taken by reporters, linked to a 3D map showing the locations where the photos were taken. The "Damage Classified by Aerial Photos" section visualizes the damage to over 300 buildings, landslides, and fires based on aerial photos taken on January 2, focusing on the coastal areas of Wajima City and Suzu City in Ishikawa Prefecture. The map was updated continuously until January 8, summarizing the first week after the earthquake.

C Information gathering and dissemination by private companies (Noto Peninsula Earthquake Connect Map)

Since the spread of COVID-19, private companies and civic tech organizations have increasingly engaged in information collection and dissemination. This trend continued related to the earthquake, with efforts to aggregate and disseminate information for disaster victims. Code for Kanazawa, a general incorporated association, published the "Noto Peninsula Earthquake Connect Map" as open data on January 7. This map compiled information on "Places with Internet Connectivity" provided by citizens. The registration of new data was halted on February 2 as the internet connection environment improved.

⁸ USUDA Yuichiro (Disaster Prevention Information Center/Disaster Prevention Information Research Division, National Research Institute for Earth Science and Disaster Prevention) Material "About ISUT's efforts – Information sharing via SIP4D, bosaiXview, ISUTSITE

Figure 1-2-1-8 Noto Peninsula Earthquake Connect Map



(Source) General incorporated association Code for Kanazawa

3. How the citizens gathered the information related to the disaster

To investigate how people utilized information and communication tools to obtain earthquake-related infor-(1) Actions for confirming safety

First, when asked how they confirmed the safety of family, friends, and acquaintances at the time when the Noto Peninsula Earthquake occured, the most common response was LINE (67.1%), followed by mobile phones (40.1%) and X (formerly Twitter) (19.0%). In a survey

mation, a nationwide survey was conducted targeting the citizens.

conducted by the MIC regarding the Kumamoto Earthquake on "methods used for confirming safety," 37.9% of respondents mentioned LINE, indicating that LINE has become a well-established communication tool.



Figure 1-2-1-9 How to confirm the safety of family, friends and acquaintances etc.

*Among all respondents, the methods used by those who answered "conducted safety confirmation" (n=604) were aggregated. (Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development,

as well as digital utilization, both domestically and internationally

MIC(2017) "Survey on the status of ICT utilization during the Kumamoto Earthquake"

(2) Information gathering actions immediately after the earthquake

Next, when asked which media they first accessed after noticing the earthquake, 64.2% of respondents mentioned television broadcasts (NHK and commercial channels combined), which was higher than other options.



Disaster prevention app(NERV Desaster Prevention etc.) Searching sites (Google, Yahoo! Etc.)

Figure 1-2-1-10 Media firstly accessed after noticing the earthquake

⁽Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development, as well as digital utilization, both domestically and internationally"



SNS

Others

Figure (related data) Media firstly accessed after noticing the earthquake (by detailed media) URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r06/html/datashu.html#f00025 (Data collection)

Not remember

Looking at the data by age group, television broadcasts were the most accessed across all age groups, with the percentage increasing with age. Among those in their 20s, a high percentage also mentioned SNS (30.5%), with X (formerly Twitter) being the most common.



Figure 1-2-1-11 Media firstly accessed after noticing the earthquake by age

(Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development, as well as digital utilization, both domestically and internationally"



Figure (related data) Utilized source of information (by purpose, select three options in the order of usefulness) URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r06/html/datashu.html#f00027 (Data collection)

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Figure (related data) Utilized source of information (by purpose, whether to feel the earthquake) URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r06/html/datashu.html#f00028 (Data collection)

(3) Encountering unverified information

While SNS such as X (formerly Twitter) contributed to safety confirmation and information collection, especially among younger people, these platforms also saw the spread of unverified information, causing confusion. The percentage of respondents who encountered at least one piece of unverified information on SNS was 42.7%, with X (formerly Twitter) having the highest percentage.





(Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development, as well as digital utilization, both domestically and internationally"



Figure 1-2-1-13 Unverified information to encounter by SNS

(Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development, as well as digital utilization, both domestically and internationally"

> the authenticity of the information were asked about their methods, the highest percentage (37.6%) said they "checked the source of the information (organization or individual)." About 30% confirmed the information through official sources or news organizations.

Next, when asked how they felt about the reliability of the information they encountered, approximately 65% of respondents across various categories answered that they "could not determine its authenticity." Among them, about 30-40% attempted to verify the information.

Furthermore, when those who actually tried to verify



Figure 1-2-1-14 How to check unverified information

(Source) MIC(2024) "Research and study on the latest trends in information and communication technology research and development, as well as digital utilization, both domestically and internationally"

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Among those who encountered such information, 25.5% admitted to sharing it with acquaintances or disseminating it to a broader audience. The reasons given for this included "believing the information would be useful to others," "finding the information interesting," and "wanting to alert others to the possibility that the information might be incorrect."



Figure (related data) Reasons why to disseminate the unverified information URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r06/html/datashu.html#f00032 (Data collection)

4. Other examples to utilize information and communications

(1) Utilization of drones and robots

In the earthquakes, drones and robots were utilized for assessing damage, conducting rescue operations, and transporting supplies.

NiX JAPAN and KDDI Smart Drone, upon request from Hakui City in Ishikawa Prefecture, conducted an

emergency inspection of bridge damage using drones on January 17. The use of drones allowed for comprehensive imaging even in narrow spaces, enabling immediate confirmation of damage to components such as bearings, piers, and abutments.



Staffs of KDDI SmartDrone controlling drones



Skydio 2+ flying to inspect A part of abutment shot by



Staffs of NiX JAPAN checking real-time video shot by drone



A machine to control drone (screen for checking the spots of inspection)



A part of abutment and bearing shot by drone



A part of abutment shot by drone

(Source) NiX JAPAN

Additionally, the Japan UAS Industrial Development Association (JUIDA), upon request from Wajima City on January 4, collaborated with five companies including Blue Innovation to conduct initial disaster support activities such as search and damage assessment and supply transportation using drones within the city9. For instance, starting January 8, with the cooperation of Aeronext and ACSL, drones were used to deliver medical supplies to shelters in isolated areas. These efforts confirmed the usefulness of drones in rapid initial re-

sponse at actual disaster sites. However, challenges for future rapid deployment were identified, including issues with obtaining flight permits in designated emergency airspace, functional challenges such as difficulties with weather and long-duration flights, and personnel shortages.

Furthermore, in the disaster area, robot dogs were introduced by the Japan Ground Self-Defense Force to assist in reconnaissance of evacuation routes and guiding evacuees to secondary shelters.

⁹ News release by Blue Innovation and others "Regarding the initial disaster support activities of five drone-related companies related to the 2024 Noto Peninsula Earthquake" https://www.blue-i.co.jp/news/release/pdf/20240208release_bi.pdf



(Source) Official account in X of Japan Ground Self-Defense Force (January 17, 2024)

(2) Online provision of public services

A Remote services for disaster victims

As an online service for disaster victims, various municipalities provided online applications for disaster certificates, with 5,575 applications submitted by January 21.

Additionally, online medical consultations were offered to connect evacuees in shelters with their primary care physicians. NTT DOCOMO, in cooperation with Ishikawa Prefecture, the Ishikawa Medical Association,

B Remote support for affected municipalities

Remote support initiatives were also conducted for affected municipalities by other municipalities. As part of damage assessment support, Kumamoto City, Hamamatsu City, the NTT East Japan Group, ESRI Japan, and the NTT West Japan Group collaborated to conduct housing damage assessment surveys using drones and 360-degree cameras in Suzu City, Ishikawa Prefecture. the Ishikawa Pharmacists Association, the Ministry of Health, Labour and Welfare, and the MIC, implemented online medical consultations and prescription systems to maintain the community between evacuees and their local doctors in Noto, ensuring the continuation of regional healthcare even in environments away from their homes.

The images obtained were used to support damage assessment from remote locations.

Additionally, a system called "Proxy Donations," where other municipalities accept donations on behalf of the affected municipalities through hometown tax intermediary sites, was widely utilized.

Section 2 Highlighted issues and responses in the future

1. Communication

(1) Strengthening mobile base stations and optical fiber

In the Noto Peninsula Earthquake, power outages and transmission line disruptions caused mobile base stations to be non-functional for extended periods. To fortify mobile base stations against future disasters, it is necessary to consider measures such as extending the lifespan of the batteries installed in these stations, in-

(2) Achieving intercarrier roaming in emergencies

"Intercarrier Roaming," which allows mobile phone users to temporarily use another mobile carrier's network, is one strategy to ensure continuous communication services related to natural disasters or communication failures.

The MIC has been holding the "Study Group on Intercarrier Roaming in Emergency Situations" since September 2022. The working group has reported that in areas where only some mobile carriers experienced serstalling solar panels, and utilizing satellite connections.

Additionally, the disruption of transmission lines also rendered fixed internet services unusable. To prevent future disruptions caused by the collapse of utility poles and the severing of optical fibers, it is essential to promote the underground installation of these fibers.

vice disruptions related to the earthquake, intercarrier roaming could provide a complementary solution (Figure 1-2-2-1). The study group is also conducting technical examinations and verifications with the aim of introducing Full Intercarrier Roaming, which allows general calls, data communication, and callbacks from emergency respond agencies, as well as a roaming method that temporarily enables only emergency calls in case of core network failures, by the end of FY2025.



Figure 1-2-2-1 Image of achieving intercarrier roaming in emergencies

(Source) Study Group on Intercarrier Roaming in Emergency Situation (11th meeting) Excerpt material 11-3

(3) Expanding the use of satellite communications

Satellite communications, which can efficiently cover remote islands, maritime areas, and mountainous regions, are considered useful as a means of communication during emergencies, including natural disasters. In the Noto Peninsula Earthquake, SpaceX's low Earth orbit satellite communication service "Starlink" was widely utilized for emergency restoration. Additionally, there are plans to provide satellite direct communication services that enable the use of satellite communications from mobile phones (smartphones). To further expand the use of satellite communications, efforts are being made to examine technical conditions related to the frequencies used and to secure the necessary frequencies.

2. Broadcasting

In response to the recent Noto Peninsula Earthquake, broadcasters played a crucial role in delivering accurate information to the affected individuals. However, challenges such as power outages and transmission line disruptions leading to service interruptions also became apparent. In preparation for future events, it is necessary to strengthen broadcast networks by implementing measures such as power outage countermeasures for center facilities, enhancing monitoring capabilities for transmission lines, and promoting the shared use and common facilities of relay stations. Additionally, measures such as optical and multiple-wire conversion of cable networks should be implemented to enhance the resilience of broadcast networks. The MIC is conducting discussions on challenges in relay station shared use involving terrestrial broadcasters and considering the institutional arrangement of broadcasting in the digital era by further examining the significance and role of broadcasting.

3. Postal services

Efforts are being considered to utilize data held by the post office, such as by installing drive recorders on delivery vehicles to selectively collect and analyze information on the road conditions in the Okunoto region. This information would be used to aid in the post office's delivery planning. If requested by local governments or other entities, the road condition data obtained through this initiative may also be provided to contribute to the region's reconstruction, with necessary measures such as anonymization being taken into consideration.

4. Response to dis-/mis-information

In the Noto Peninsula Earthquake, the circulation and spread of dis-/mis-information on the Internet became a significant issue, exacerbated by the increased use of social media by the public. The MIC issued a warning about dis-/mis-information on the Internet through social media on January 2, the day after the disaster. Additionally, the MIC requested major social media platform operators to take appropriate actions based on their terms of use¹.

Furthermore, to ensure the healthiness of information circulation in the digital space, the MIC has been holding a "Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space" since November 2023. The group is considering comprehensive measures, including institutional aspects, to address the circulation and spread of dis-/mis-information, with plans to publish a summary of their findings by the summer of 2024².

¹ Refer to Column 1 "Response to dis-/mis-information related to the disaster".

² Regarding the study committee on how to ensure the healthiness of information circulation in the digital space also refer to Section 6 "Promotion of ICT utilization" in Chapter 2, Part II.

Column Response to dis-/mis-information related to the disaster

1. The situation of the circulation and spread of dis-/mis-information on the Internet regarding the 2024 Noto Peninsula Earthquake

(1) About dis-/mis-information related to the Noto Peninsula Earthquake

In the Noto Peninsula Earthquake, while SNS contributed as a means of information gathering and safety confirmation, it has been pointed out that dis-/mis-information that could hinder prompt rescue activities and smooth recovery and reconstruction efforts¹ circulated on SNS.

According to X (Twitter Japan), the main posts on X (formerly Twitter) containing dis-/mis-information about the Noto Peninsula Earthquake included approximately 100,000 posts mentioning the earthquake as an "artificial earthquake," about 200 posts regarding "thieves" (appearing in the area), about 350 posts related to "support requests" (soliciting fake donations), and about 21,000 posts related to "rescue requests."²

Additionally, the Japan Fact-Check Center (JFC) has been continuously verifying and fact-checking the large amount of dis-/mis-information spread regarding the Noto Peninsula Earthquake. On January 27, 2024, they organized and published trends on what becomes a topic at each stage from disaster occurrence to recovery and reconstruction³. They classified five types of disinformation that spread during disasters and published fact-check articles such as "The claim that '19,800 liters of oil started leaking from the Shika Nuclear Power Plant into the sea' is false" and "The site calling for donations in cryptocurrency is false."

According to the analysis of posts on X (formerly Twitter)⁴ by the disaster situation summary system D-SUMM⁵ (developed and trial-released by the National Institute of Information and Communications Technology, hereinafter referred as to NICT), the number of reports seeking rescue within 24 hours after the Noto Peninsula Earthquake (1,091 out of a total of 16,739 reports) doubled compared to the number of reports related to the 2016 Kumamoto Earthquake (573 out of a total of 19,095 reports). Among these 1,091 posts, 254 posts were detected with contradictory reports, and 104 were estimated to be disinformation⁶. The system analyzes 10% of Japanese posts on X, but related to the Kumamoto Earthquake, only one post out of 573 rescue requests was considered disinformation, indicating that more disinformation was posted on SNS related to the Noto Peninsula Earthquake7.

During disasters, it is crucial to reliably obtain disaster and evacuation information. To obtain accurate information, it is useful to refer to government and municipal websites, broadcasts backed by reporting and editing, and information from fact-checking organizations.

(2) Characteristics of dis-/mis-information related to the Noto Peninsula Earthquake

Associate Professor SHIBUYA of the Graduate School of Information Science and Technology at the University

A X (formerly Twitter)

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While there were posts made with good intentions, there were also duplicate posts related to requests for rescue, which were believed to be for the purpose of increasing views, as well as false requests for rescue and posts of Tokyo has pointed out the following characteristics of dis-/mis-information d the Noto Peninsula Earthquake.

requesting money transfers for fraudulent purposes.

Furthermore, it was characteristic that about 90% of the users who made duplicate posts were estimated to be non-Japanese language users.

¹ NHK ""Unscrupulous and annoying" What is the reality of the series of fake rescue requests after the Noto Peninsula earthquake?", March 12, 2024, https://www3.nhk.or.jp/news/html/20240312/k10014383261000.html

² X, "About X's efforts against dis-/mis-information" (Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space (15th Meeting) Material 15-2-3), March 28, 2024, https://www.soumu.go.jp/main_content/000938666.pdf>

³ Japan Fact Check Center, "Noto Peninsula Earthquake, disinformation that changes immediately after the occurrence [Fact Check Summary]", January 27, 2024, https://www.factcheckcenter.jp/fact-check/disasters/earthquake-factcheck-list/

⁴ It is a summary system in which AI is used to automatically extract, organize, and present reports related to disasters for each municipality (such as "fires are occurring") from posts on X (formerly Twitter). It was open for testing from 2016 until the end of FY2023. If there is a post that contradicts the report, it will be automatically flagged as a possible false news. Posts on X (formerly Twitter) to be analyzed accounts amounts to 10% of Japanese posts.

⁵ TORIZAWA Kentaro, Fellow, the NICT "Introduction to initiatives and studies at the NICT" Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space, Materials presented in the study group (April 15, 2024), https://www.soumu.go.jp/main_content/000942562.pdf>

⁶ According to the NICT, checks such as posting non-existent addresses and matching content mentioned in reports about hoaxes, etc. are conducted to identify false rumors. It is important to note that the estimates may be wrong, as they are not determining whether or not it is a hoax on the spot.

⁷ "Rapid raise of false rumors from 1 to 104...Researchers lament over "fake waves" on SNS about Noto Peninsula Earthquake", February 27, 2024, https://newswitch.jp/p/40645





(Source) SHIBUYA Yuya, NAKAZATO Tomoka "Reports on the situation of circulation of dis-/mis-information in the digital space in the 2024 Noto Peninsula Earthquake"



Figure 2 Characteristics of posts related to the disaster in X: duplicate posts

(Source) SHIBUYA Yuya, NAKAZATO Tomoka "Reports on the situation of circulation of dis-/mis-information in the digital space in the 2024 Noto Peninsula Earthquake"

B X: Community Notes

The Community Notes feature was created in X from 2021 onwards to obtain more accurate information, and it allows users to provide background information to tweets that may cause misunderstandings. It is expected to play a role in fact-checking uncertain information. In

relation to the Noto Peninsula Earthquake, many Community Notes were created, and the number of people who participated for the first time in creating Community Notes reached its highest related to the Noto Peninsula Earthquake.

2. Response by the MIC

In light of the circulation and spread of dis-/mis-information on social media, Prime Minister KISHIDA Fumio, during a press conference on January 2, the day after the earthquake, called for restraint, stating, "The dissemination of malicious dis-/mis-information about the damage situation is absolutely unacceptable. Please refrain from doing so." On the same day, the MIC issued a warning against dis-/mis-information on its social media accounts. Additionally, the MIC shared this warning with major social media platform operators⁸ and requested that they continue to take appropriate actions based on their terms of service.

The warning issued by the MIC on X (formerly Twitter) received approximately 1.8 million views, garnering significant attention compared to other posts⁹. It also received numerous reactions on Facebook and Instagram (Figure 3).

On January 4, during a press conference, the Prime Minister reiterated the request to major social media platform operators to continue taking appropriate actions based on their terms of service. On January 5, the MIC began requesting daily reports from platform operators to monitor their responses to the above requests. The reports were to include: (1) the number of posts deleted and accounts suspended after the earthquake; (2) the main content of the posts targeted in (1); (3) the presence and number of responses to disinformation identified through fact-checking; (4) the response status to external requests for deletion of disinformation; (5) the presence and content of any enhancements to the response system for disinformation, (6) the status of cooperation among platform operators (information sharing, etc.); and (7) the status of cooperation with various government agencies.

Additionally, immediately after the disaster, the MIC requested broadcasters to warn viewers about dis-/misinformation. The MIC also called on social media platform operators and the media to alert information recipients.

Furthermore, on January 15, two weeks after the earthquake, the MIC issued another warning on its social media accounts, introducing examples of uncertain posts on the Internet in addition to warnings about dis-/ mis-information.

Based on the "Package for Supporting the Lives and Livelihoods of Disaster Victims" (decided by the Noto Peninsula Earthquake Emergency Disaster Response Headquarters on January 25, 2024), the MIC, in collaboration with the Government Public Relations Office, published web advertisements to warn the four affected prefectures¹⁰ on January 31. On February 9, the MIC, again in collaboration with the Government Public Relations Office, published newspaper advertisements to issue warnings.

Figure 3 Warning issued by the MIC

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⁸ LINE Yahoo, X (formerly Twitter), Meta, Google

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⁹ As of January 19, 2024. Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space (6th meeting) Material 6-4), January 19, 2024 https://www.soumu.go.jp/main_content/000923727.pdf>

¹⁰ Niigata Prefecture, Toyama Prefecture, Ishikawa Prefecture, Fukui Prefecture

3. Response by platform operators

(1) Platform operators

On January 5, following the request for daily reports on actions taken based on their terms of service, LINE Yahoo strengthened its monitoring efforts, deleting clear disinformation and other violating posts, and issued warnings about dis-/mis-information on social media related to disasters. X (formerly Twitter) labeled unrelated content as spam and suspended accounts for suspicious support requests using QR codes. Meta reported deleting posts in response to reports and sharing information through the "Disaster Support Hub"¹¹ on Facebook. Google reported establishing a system for intensive monitoring on YouTube for a certain period and implementing measures to make reliable information more accessible.

The MIC, through the "Study Group on Ensuring the Healthiness of Information Circulation in the Digital Spaces," confirmed and analyzed the efforts of each operator. To utilize this information for future policies and specific measures to ensure the healthiness of information circulation in digital spaces, the MIC conducted hearings with platform operators from February to March 2024. The following points were raised regarding the response to the spread of dis-/mis-information related to the Noto Peninsula Earthquake¹²:

• While some operators provided responses on the overall number of posts deleted, hidden, or accounts suspended by businesses in Japan, the overall number of moderation actions taken in Japan was unclear for almost all operators.

(2) Broadcasters

In the Noto Peninsula Earthquake, the spread of dis-/ mis-information on social media became a significant issue as stated above.

In response, broadcasters reported that claims about the earthquake being "Artificial" were scientifically baseless disinformation, warned about false rescue requests, and called for calm responses. Broadcasters

- While some operators provided responses on the number of posts deleted based on clear errors identified by fact-checking organizations, the coordination with fact-checking organizations and the number of posts deleted through moderation was unclear for almost all operators.
- There are insufficient transparency and accountability in the efforts of businesses in Japan to address the overall trend of moderation responses, stakeholder collaboration, and coordination with fact-checking organizations and traditional media in terms of assessing and responding to the healthiness of information circulation related to disasters in Japan, as well as the impact and risks on individual decision-making autonomy, rights infringement, social disruption, and other real-world implications.

The spread of dis-/mis-information related to the Noto Peninsula Earthquake hindered swift rescue and recovery efforts, posing a serious problem. With the advancement of AI technology, the generation of sophisticated fake images and the spread of dis-/mis-information are expected to increase significantly. Social media platform operators are expected to fulfill their social responsibility to reduce the spread of dis-/mis-information by implementing content moderation, such as deleting problematic posts, to ensure the proper circulation of information.

have a responsibility to widely report facts including disaster information in accordance with program guidelines stating "to Report Facts Accurately" as stipulated by the Broadcasting Act and played an important role in providing accurate information to disaster victims related to the Noto Peninsula Earthquake.

¹¹ Facebook functions that allow you to report your safety, request support, obtain and share disaster-related information, etc.

¹² MIC, 22nd Meeting of the Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space, Material 22-1-1 "Platform

Operators Hearing Summary (Draft)" June 10, 2024, https://www.soumu.go.jp/main_content/000951295.pdf

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instead of easily spreading emotionally charged information or videos.

(Source) MIC "Study Group on the Future of Broadcasting Systems in the Digital Age"

4. Future response to dis-/mis-information in disasters

For future disaster response, it is suggested that measures should focus on: (1) early warnings and public awareness, as well as response and mitigation of dissemination and impact; (2) tailoring responses based on the characteristics and trends of easily disseminated information; and (3) strengthening and promoting responses and measures according to the roles of various stakeholders¹⁴.

Furthermore, it is important to consider the response of not only platformers to circulate information but also information recipients, as research has shown that 77.5% of individuals who encounter disinformation are unaware of being deceived, particularly among those aged 50s and 60s¹⁵. Initiatives such as promoting fact-checking activities and enhancing digital literacy are crucial. Discussions are ongoing in the "Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space" regarding the fundamental principles in the process of information circulation including information dissemination, information reception, and information transmission, the roles of stakeholders, and specific measures to ensure the healthiness of information circulation in the digital space.

¹³ 24th meeting of the Study Group on the State of the Broadcasting System in the Digital Age, Material 24-2 "Status of the broadcasting field in the 2024 Noto Peninsula Earthquake" (March 5, 2020), https://www.soumu.go.jp/main_content/000931153.pdf>

¹⁴ 17th meeting of the Study Group on Ensuring the Healthiness of Information Circulation in the Digital Space, Material 17-1-2 "Trends in the spread of information and expected responses and countermeasures for each stakeholder," April 17, 2024, https://www.soumu.go.jp/main_content/000946374.pdf>

content/000946374.pdf> ¹⁵ YAMAGUCHI Shinichi, "How to prevent the spread of disinformation related to disasters: Take a breath and check carefully. From the case of the Noto Peninsula Earthquake," March 14, 2024, ">https://www.nippon.com/ja/in-depth/d00987/>