# Section 2 Status of communication, broadcasting and postal services etc.

# 1. Damages to communication infrastructure

## (1) Fixed communications

Regarding fixed-line communications, services were unavailable mainly in Wajima City, Suzu City, and Shika Town in Ishikawa Prefecture. According to NTT West, this earthquake caused power outages at communication buildings, and landslides and other factors damaged relay transmission routes and cables, resulting in largescale service disruptions. This affected up to 7,860 fixed telephone lines and approximately 1,500 fixed internet lines.<sup>1</sup> ply vehicles and generators, repair damaged cables, install new cables in severed sections, and restore core facilities by rerouting through unaffected relay transmission routes. Additionally, satellite phones and portable satellite phones were deployed to ensure communication for the affected people.<sup>2</sup> As of the end of May, restoration has progressed, leaving only a part of Wajima City in Ishikawa Prefecture (approximately 180 analog telephone lines and 40 Hikari (fiber-optic) telephone lines) still in need of recovery.<sup>3</sup>

To resume services, efforts were made to supply power to communication buildings using mobile power sup-





<sup>&</sup>lt;sup>1</sup> Damages to the communications buildings. In addition, 149 SoftBank landline telephone lines were affected.

<sup>&</sup>lt;sup>2</sup> NTT West "Support and Guidance for Customers Affected and Evacuated due to the Effects of the 2024 Noto Peninsula Earthquake" <a href="https://www.ntt-west.co.jp/share/shien.html">https://www.ntt-west.co.jp/share/shien.html</a> (accessed April 30, 2024)

Up to 8 satellite mobile phones and portable satellite phones were deployed and operated at a total of 25 locations, but the deployment was discontinued due to the restoration of communication services at the locations. (As of 8:00 p.m., March 22, 2024)

<sup>&</sup>lt;sup>3</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (104th report) (May 28, 2024)



## (Source) NTT West

In addition, the CATV access service, which holds approximately 17% of the fixed ultra-high-speed broadband market in Ishikawa Prefecture<sup>4</sup>, had significant damage occurred to the center facilities and transmission lines<sup>5</sup>. As of April 12, partial restoration of the main lines has

been achieved in some areas of Suzu City (Noetsu Cable Net) and Wajima City (Wajima City Cable Television), but the situation continues to be characterized by ongoing transmission line disruptions.

#### (2) Mobile communications (mobile phone etc.)

Mobile phone services were also affected by prolonged power outages and transmission route disruptions caused by landslides. A total of 839 mobile phone base stations (799 in Ishikawa Prefecture) operated by NTT DOCOMO, KDDI, SoftBank, and Rakuten Mobile was reported outages (as of January 3)<sup>6</sup> (Figure 1-1-2-3, 1-1-2-4).

Despite challenges such as road disruptions due to landslides and liquefaction, and traffic congestion on main roads leading to the affected areas (Figure 1-1-2-5), mobile phone operators deployed mobile base station vehicles, portable satellite antennas, and portable generators. KDDI, SoftBank, and Rakuten Mobile completed emergency restoration by January 15, and NTT DOCOMO by January 17, except for areas inaccessible due to landslides (For these inaccessible areas, emergency restoration was carried out within a few days after access became possible, and as of the end of March, NTT DOCOMO and KDDI had completed restoration except for some areas in Wajima City in Ishikawa Prefecture (Hegurajima).).

<sup>&</sup>lt;sup>4</sup> MIC (August 2023), "FY2022 Annual Report on Market Verification in the Telecommunications Business Field", <a href="https://www.soumu.go.jp/main\_content/000900509.pdf">https://www.soumu.go.jp/main\_content/000900509.pdf</a>>

<sup>&</sup>lt;sup>5</sup> For details on the damage to cable television, see 2. Damage to broadcast networks in Section 2, Chapter 1. <sup>6</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (13th report) (January 3, 2024)

# **Chapter 1**









(Source) Prepared based on press releases of each companies

6

Figure 1-1-2-5 Damage to the communication infrastructure (mobile phones) (damage or replacement of optical fibers)





(Source) NTT West7

Efforts are being steadily made to achieve full recovery of the base stations, alongside emergency restoration. As of the end of May, 97% of the base stations in the six cities and towns in the northern part of the Noto Peninsula have returned to their original functionality. Efforts for comprehensive recovery across the disasteraffected areas are ongoing (Figure 1-1-2-6).







Figure (related data) Changes in the number of outages and restoration rates of mobile phone base stations (Kumamoto Earthquake and Noto Peninsula Earthquake) URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/ja/r06/html/datashu.html#f00008 (Data collection)

#### (3) Others

#### A Disaster prevention administrative radio

Regarding the disaster prevention administrative radio, it was reported that damage occurred in the municipalities of Suzu City, Anamizu Town, and Shika Town in Ishikawa Prefecture. In Suzu City, which suffered significant damage, some of the sound amplification substations were lost due to the tsunami, and multiple incidents of substation stoppage occurred due to the outage of the mountaintop relay station. As of May 8, the mountaintop relay station on Mt. Nekogatake is still out of operation<sup>8</sup>.

<sup>7</sup> Cabinet Office, Recovery and Reconstruction Support Headquarters (2nd meeting) (February 16, 2024) NTT West handout <a href="https://www.bousai.go.jp/updates/r60101notojishin/pdf/r60101notojishin\_hukkyuhonbu02.pdf">https://www.bousai.go.jp/updates/r60101notojishin/pdf/r60101notojishin\_hukkyuhonbu02.pdf</a>>

<sup>&</sup>lt;sup>8</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (101th report) (May 8, 2024)

## B Private communication system (MCA radio)

As for MCA radio used by government agencies as a resilient communication method, no abnormalities were observed in the domestic service area. However, two of the

# 2. Damages to broadcasting network

#### (1) Terrestrial broadcasting

The terrestrial television broadcasting was affected by widespread and prolonged power outages, resulting in continuous service disruptions. Following the disaster, each station operated on emergency power sources, but except for relay stations where fuel was delivered by Self-Defense Force helicopters, due to fuel depletion, there were service disruptions for NHK and four private broadcasters (Hokuriku Broadcasting, Ishikawa TV, TV Kanazawa, and Hokuriku Asahi Broadcasting) in some areas of Wajima City in Ishikawa Prefecture, impacting approximately 2,130 households.

Subsequently, some relay stations that secured access routes were restored. However, in areas where access to relay stations was difficult due to road damage and land-

#### (2) Radio broadcasting

Radio broadcasts also experienced prolonged outages due to equipment damage and power outages. On the day of the disaster, NHK and FM Ishikawa's Hakui FM station in Hakui City, Ishikawa Prefecture, went off the air due to damage to the transmission antenna, affecting about 20,000 households. However, it was restored by January 2 with the installation of a temporary antenna. In some areas of Wajima City, Ishikawa Prefecture, battery depletion of emergency power sources led to outages, affecting approximately 14,000 households for Hokuriku Broadcasting's Wajima AM station, 6,000 households for the Wajima FM supplementary station, and 700 households for NHK's Wajima Town FM station<sup>12,13</sup>.

All stations reported that outages were resolved when

#### (3) Cable broadcasting

As for cable broadcasting, Wajima City, Nanao City and Noto Town which are directly managed by local governments, Suzu City, and Anamizu Town which falls within the service area of Nouetsu Cablenet, and as well Shika Town which falls within the service area of Kanazawa Cable, there were instances of transmission disruption due to power outages, depletion of backup power, and the collapse of utility poles due to landslides.

While emergency restoration was generally complet-

emergency broadcast substations installed in Nakanoto Town, Ishikawa Prefecture, were initially reported to have stopped, but subsequent recovery has been confirmed.

slides, continuous fuel supply was challenging, leading to prolonged service disruptions in certain regions.

In response to the inability to receive terrestrial television broadcasts in some areas, NHK initiated temporary measures from January 9, utilizing the BS103 channel of satellite broadcasting (BS) to air local and national news from the Kanazawa Broadcasting Station as part of large-scale disaster response<sup>9,10</sup>.

The service disruptions for NHK and the four private broadcasters were resolved on January 24, when commercial power was restored (although some stations continued to operate on emergency power)<sup>11</sup>. As of March 22, all areas have fully recovered.

commercial power was restored on January 24 (although some continued to operate on emergency power).

As of March 22, all stations had been fully restored.

For community broadcasting, which provides services in all or part of the city, word, town or village, "Radio Nanao" in Nanao City, Ishikawa Prefecture, experienced outages due to power outages and depletion of emergency power immediately after the earthquake, affecting about 23,000 households. However, broadcasting resumed on January 2. "Radio Nanao" has a disaster agreement with Nanao City, and the city used an emergency interrupt broadcasting system to provide disaster victim support information through radio broadcasts<sup>14,15</sup>.

ed by the end of March, some areas, particularly in Wajima City and Suzu City, required further response and recovery efforts following road damage, which were addressed from April onwards.

The northern part of the Noto Peninsula faces challenges due to its unique topography, making it difficult for terrestrial television broadcasting waves to reach, thus increasing its reliance on cable television which posed the issue of early recovery of cable TV. In re-

<sup>&</sup>lt;sup>9</sup> Temporary response to the use of satellite broadcasting following the Noto Peninsula earthquake (January 9, 2024) <a href="https://www.nhk.or.jp/info/otherpress/pdf/2023/20240109.pdf">https://www.nhk.or.jp/info/otherpress/pdf/2023/20240109.pdf</a>>

<sup>&</sup>lt;sup>10</sup> Regarding the expansion of emergency use of satellite broadcasting following the Noto Peninsula earthquake (January 11, 2024) <a href="https://www.nhk.orjp/info/otherpress/pdf/2023/20240111.pdf">https://www.nhk.orjp/info/otherpress/pdf/2023/20240111.pdf</a>>

<sup>&</sup>lt;sup>11</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (55th Report) (January 24, 2024)

 <sup>&</sup>lt;sup>12</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (1st report to 90th report) (January 1 to March 22, 2024)
 <sup>13</sup> "Ishikawa Prefecture's Commercial Broadcasters and NHK: Relay Station Affected by Noto Peninsula Earthquake," Visual Communications Journal, January 22, 2024

<sup>&</sup>lt;sup>14</sup> MIC, Regarding the damage situation in the 2024 Noto Peninsula Earthquake (17th Report) (January 4, 2024)

<sup>&</sup>lt;sup>15</sup> "Noto Peninsula Earthquake: What is the Situation of Local Media? ~ "Radio Nanao", Ishikawa Prefecture ~ [Researcher's Perspective] #527," NHK Bunken Blog, February 22, 2024, NHK Broadcasting Culture Research Institute. <a href="https://www.nhk.or.jp/bunken-blog/100/491948">https://www.nhk.or.jp/bunken-blog/100/491948</a>. html>

sponse to this situation, the MIC has increased the subsidy rate for restoration projects, expanded local financial measures, and significantly reduced the burden on local governments and operators. Additionally, support has been provided based on the damage situation, including making the installation of transmission lines to temporary housing eligible for subsidies.



Figure 1-1-2-7 Restoration and efforts status of cable television (as of April 23)

# 3. Damages to postal offices etc.

Due to the effects of the earthquake, including the collapse of postal facilities, water supply disruptions, and equipment failures, up to 117 post offices (including temporary post offices) in Ishikawa and Niigata prefectures suspended counter services. Additionally, delays and suspensions in postal and logistics operations occurred in these regions. Subsequently, through the shared use of facilities from other companies and the

utilization of mobile postal offices, services such as receiving mail at some counters, using financial services, and delivering mail to individual households have gradually resumed. As of May 28, counter services have resumed at 85 post offices, and ATM services have resumed at 25 offices in the Okunoto region, with 20 of them also reopening savings and insurance counters, and one reopening only the savings counter.

## 4. Initiatives to ensure communication tools

Since the Great East Japan Earthquake in 2011, telecommunication companies have been implementing various measures to ensure communication in the event of a disaster, such as strengthening measures against power outages and transmission line disruptions. In response to the Noto Peninsula Earthquake, efforts to secure communication channels were taken. Here are some of the measures that were implemented.

## (1) Operation of mobile and portable base stations, mobile power supply vehicles, and generators

To address disruptions caused by landslides and prolonged power outages immediately after the disaster, each mobile phone service provider operated maximum approximately 100 mobile and portable base stations and utilized a total of maximum approximately 200 mobile power supply vehicles and generators in collaboration with the government and private sector.

Figure 1-1-2-8 Number of operational mobile and portable base stations, mobile power supply vehicles, and generators etc. (at maximum capacity)

Operator	Mobile power	Portable	Mobile base	Portable base	Portable satellite
	supply vehicles	generators	stations	stations	antenna
NTT West NTT docomo KDDI (au) Softbank Rakuten Mobile	25 cars	177 units	70 units	34 units	112 units

## (2) Utilization of mobile base stations

NTT DOCOMO and KDDI jointly operated a shipbased mobile base station to provide coverage to coastal areas in part of Wajima City, where restoration via land routes was challenging. This involved installing mobile phone base station equipment on a vessel, utilizing the "Kizuna," a submarine cable laying ship owned by the NTT DOCOMO Group<sup>16</sup>. Additionally, SoftBank deployed a drone-based wireless base station capable of long-duration flights by providing wired power from ground-based power supply equipment. Equipped with a wireless relay device, the drone delivers signals to devices from the air, effectively complementing the communication coverage area<sup>17</sup> (Figure 1-1-2-9).

#### Figure 1-1-2-9<sup>18</sup> Ship-based base stations and drone base stations



(Source) NTT DOCOMO, Softbank<sup>18</sup>

#### (3) Utilization of satellite communication services

Related to the Noto Peninsula Earthquake, many areas experienced a loss of communication services due to transmission line disruptions and power outages at mobile phone base stations. To address this issue and facilitate emergency restoration, SpaceX's low Earth orbit satellite communication service, Starlink, was widely utilized. KDDI, in particular, used Starlink antennas to connect to mobile phone base stations as a substitute for fiber optic and other communication cables that were severed by landslides. This allowed the restoration of communication by using satellite links as backhaul lines (Figure 1-1-2-10).

In addition to KDDI, NTT DOCOMO and SoftBank also provided Starlink equipments to evacuation centers and Disaster Medical Assistance Teams (DMAT), enabling internet communication via Wi-Fi<sup>19</sup>. A total of 660 Starlink units were provided to evacuation centers and other locations by KDDI, SoftBank, and NTT DOCOMO.



Figure 1-1-2-10<sup>20</sup> Image of utilization of Starlink's backhaul link for emergency restoration (KDDI)

(Source) KDDI<sup>20</sup>

- <sup>16</sup> NTT DOCOMO, KDDI, Regarding the Implementation of "Shipboard Base Station" Operations in Response to the 2024 Noto Peninsula Earthquake (January 6, 2024)
- <https://www.docomo.ne.jp/info/news\_release/detail/20240106\_00\_m.html?icid=CRP\_INFO\_news\_release\_2024\_01\_17\_00\_to\_CRP\_INFO\_news\_release\_detail\_20240106\_00\_m>
- <sup>17</sup> Softbank, We Want to Quickly Deliver Peace of Mind to Disaster-stricken Areas. The Current Situation in Noto and the Path to Early Recovery of the Communication Network as Seen by the Person in Charge (January 12, 2024) <a href="https://www.softbank.jp/sbnews/entry/20240112\_02?page=02#page=02#page=02">https://www.softbank.jp/sbnews/entry/20240112\_02?p age=02#page=02</a>>
- <sup>18</sup> Cabinet Office, Recovery and Reconstruction Support Headquarters (3rd meeting) (March 1, 2024) Materials distributed by NTT DOCOMO and Softbank <a href="https://www.bousai.go.jp/updates/r60101notojishin/pdf/r60101notojishin\_hukkyuhonbu03.pdf">https://www.bousai.go.jp/updates/r60101notojishin/pdf/r60101notojishin\_hukkyuhonbu03.pdf</a>>
- <sup>19</sup> Four Carriers Explained the Status of Area Restoration After the Noto Peninsula Earthquake: What Are the Factors that Are Making "Full-scale Restoration" Difficult? ITmedia Mobile (January 19, 2024) <a href="https://www.itmedia.co.jp/mobile/articles/2401/19/news120.html">https://www.itmedia.co.jp/mobile/articles/2401/19/news120.html</a>>
- <sup>20</sup> MIC, Roundtable on Information and Communications Infrastructure and its Utilization for the Realization of Vibrant Local Communities, Working Group on the Usage Environment of Digital Infrastructure to Support the Utilization of Digital Technology in Local Communities (2nd Meeting) (March 11, 2024), "Examples of Utilization of Satellite Broadband "Starlink" for Local Communities, Industry, and Disaster Prevention (KDDI)", <a href="https://www.soumu.go.jp/main\_content/000934326.pdf">https://www.soumu.go.jp/main\_content/000934326.pdf</a>>

## (4) Lending of communication devices

The Noto Peninsula Earthquake significantly impacted communication services such as telephone and internet services, and in mainly severely affected areas, satellite mobile phone was utilized. The MIC lent up to 102 satellite phones, which were stockpiled for disaster response,

#### (5) Public Safety Mobile System (Formerly: Public Safety LTE)

Since FY2019, the MIC has been working on the realization of Public Safety Mobile System, as a wireless system utilizing mobile phone technology for joint use by public safety agencies at disaster sites. During the demonstration period in FY2023, the Public Safety Mobile to affected local governments and other entities free of charge. Mobile phone operators also lent devices and satellite equipment free of charge, with NTT DOCOMO providing a total of 1,520 mobile devices and KDDI and Soft-Bank lending approximately 660 satellite devices.

System's demonstration terminals were utilized in the earthquake.

Specifically, demonstration terminals were lent to all 11 fire departments in Ishikawa Prefecture and used in emergency activities (Figure 1-1-2-11).

#### Figure 1-1-2-11 Utilization in emergency activities



On-site rescue Headquarter

In addition, the demonstration terminals were also provided to the Self-Defense Forces (SDF) that were engaged in activities in the disaster-affected areas. The deployed units used the terminals for internal communi-

members

cation, information sharing, and coordination during missions such as transportation, water supply, bathing support, and accommodation assistance (on ships) (Figure 1-1-2-12).

Figure 1-1-2-12 Use for command, communication, and information sharing between units



On-site units

# Command headquarter

#### (6) Other initiatives by telecommunication operators

## A Disaster message services

During disasters, NTT East, NTT West, NTT DOCO-MO, KDDI, SoftBank, and Rakuten Mobile provided di-

#### B Provision of free internet connection services

NTT DOCOMO, KDDI, SoftBank, Wire and Wireless, and Rakuten Mobile provided free public wireless LAN<sup>21</sup> using the disaster unified SSID "00000JAPAN" (five zero

#### (7) Dispatch of liaison personnel to the affected areas

Related to the earthquake, various ministries, local public organizations, and others dispatched their staffs to the affected municipalities.

The MIC has established the "MIC/Disaster Telecom Support Team (MIC-TEAM)<sup>24</sup>" to provide support for disaster response in the field of information and communication, aiming to ensure communication means in the event of a large-scale natural disaster or potential occurrence by gaining the detailed status of disaster damages, providing technical supports for early recovery saster message services.

Japan)<sup>22</sup> in Ishikawa, Niigata, Toyama, and Fukui Prefectures from January 1<sup>23</sup>.

and disaster responses, and smoothing communication between related government agencies and operators. In response to the Noto Peninsula Earthquake, the staffs in the MIC and the Regional Bureau of Telecommunications etc. were dispatched to the Ishikawa Prefecture Disaster Response Headquarters from January 1 to the end of May, with a total of approximately 133 personnel dispatched, to provide detailed support activities for ensuring and early restoring communication services.

# 5. Supports etc. for necessary initiatives for recovery activities

The government has compiled an emergency response package called the "Support Package for the Lives and Livelihoods of Disaster Victims" (Decision by the 2024 Noto Peninsula Earthquake Emergency Disaster Response Headquarters. Hereinafter referred as to Support Package.) to address the necessary measures for "Rebuilding Lives," "Rebuilding Livelihoods," and "Disaster Recovery," which were in January 25. The Support Package includes measures related to information and communication, such as "Countermeasures against Dis-/mis-information on the Internet" and "Restoration of Broadcasting and Communication Facilities." Based on the Support Package, the use of the reserve budget for FY2023 was approved by the Cabinet<sup>25</sup>. As a result, the disaster response support project for the provision and expansion of satellite mobile phones to six municipalities severely affected by the disaster and satellite internet equipments to evacuation centers was implemented by the MIC and the Regional Bureau of Tele-

communications etc. As part of the "Countermeasures against Dis-/mis-information on the Internet," (1) activities to strengthen public awareness to prevent disaster victims from being deceived by dis-/mis-information, (2) promotion of measures to facilitate the response to dis-/mis-information by platform operators, and (3) follow-up on appropriate response requests to platform operators based on terms of use and other regulations have been implemented. Additionally, under the "Restoration of Broadcasting and Communication Facilities" projects such as disaster-resistant reinforcement through the optical conversion of cable television networks, promotion of high-quality wireless environment development, support for the relocation of transmission stations, disaster recovery projects for ground-based broadcasting, and the temporary lending of equipment for emergency broadcasting stations have been carried out.

<sup>22</sup> This is an initiative to make public wireless LAN services, which are normally provided by telecommunications companies for a fee, available free of charge in the event of a disaster. The providers are companies certified by the Wireless LAN Business Promotion Association (Wi-Biz).
<sup>23</sup> NTT DOCOMO started opening the service from 8pm on January 1, KDDI/Wire & Wireless and Softbank did it from 9pm on the same day,

<sup>&</sup>lt;sup>21</sup> "Free access to 00000JAPAN following the 2024 Noto Peninsula Earthquake" (Wireless LAN Business Promotion Association) <a href="https://www.wlan-business.org/archives/43065">https://www.wlan-business.org/archives/43065</a>> The service ended on April 23rd.

and Rakuten Mobile did it from 10am on January 2.

<sup>&</sup>lt;sup>24</sup> MIC-Telecom Emergency Assistance Members

<sup>&</sup>lt;sup>25</sup> Concerning the Use of Contingency Funds Based on the Package to Support the Lives and Livelihoods of Victims of the 2024 Noto Peninsula Earthquake (Ministry of Finance) <a href="https://www.mof.go.jp/policy/budget/budget\_workflow/budget/fy2023/nt240126.pdf">https://www.mof.go.jp/policy/budget/budget\_workflow/budget/fy2023/nt240126.pdf</a>>