

**TELECOM REGULATORY AUTHORITY OF INDIA**

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**For Immediate Release**

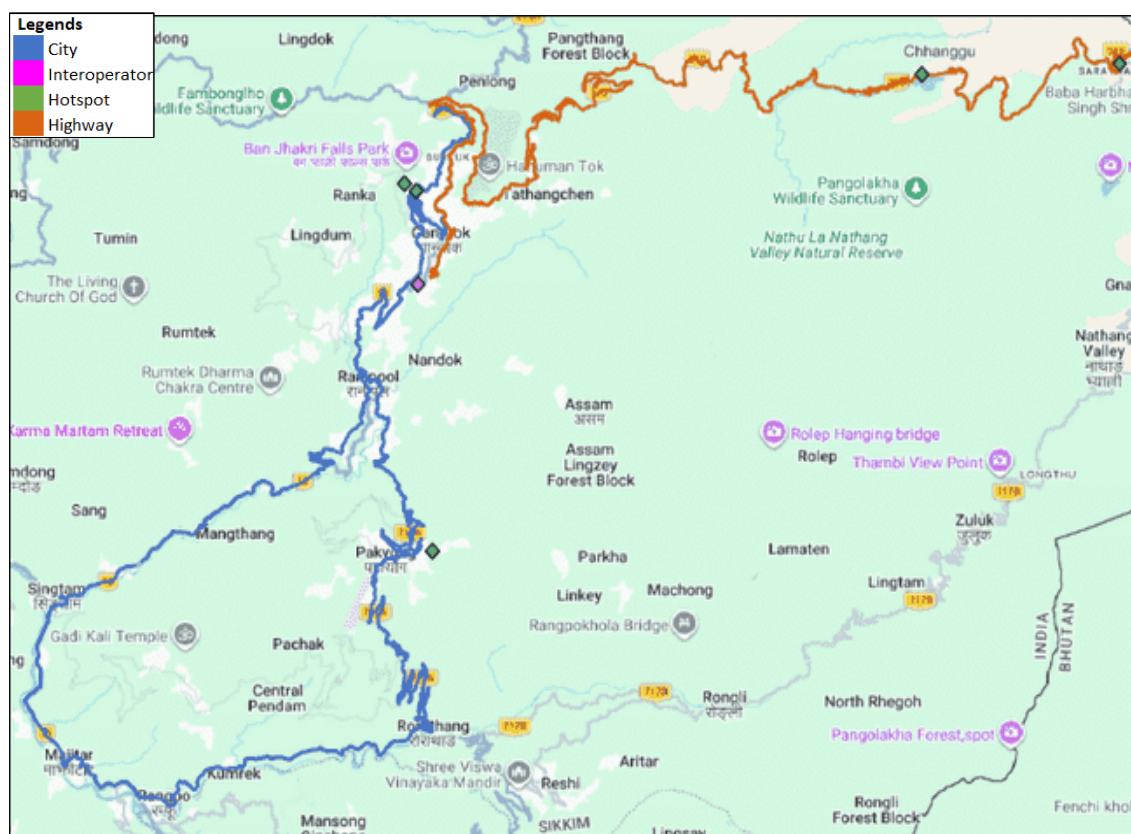
**TRAI Assesses Mobile Network Quality Across** Gangtok and Pakyong Districts and from Deorali Bazar, Gangtok to Nathu La Pass along NH 310 in the State of Sikkim under West Bengal LSA.

The Telecom Regulatory Authority of India (TRAI) has released findings of Independent Drive Test (IDT) conducted across Gangtok and Pakyong Districts and from Deorali Bazar, Gangtok to Nathu La Pass along NH 310 in the State of Sikkim under West Bengal LSA, during the month of May- 2026, for information of general telecom consumers. The purpose of this drive test is to assess and verify real time quality of mobile network services (both voice & data) provided by Telecom Service Providers (TSPs). During the IDT, TRAI captures performance of TSPs for key Quality of Service (QoS) parameters like Coverage, Call Drop Rate (CDR), Call Setup Success Rate (CSSR), data Download (DL) and Upload (UL) throughput etc., which are then published to inform Consumers and encourage TSPs to improve their services.

2. These IDTs have been designed to capture on ground mobile network performance of all TSPs across diverse usages environment like cities, hotspots, public transport hubs, etc. In this type of drive testing, live data and voice sessions are established using SIM cards from all TSPs over 2G, 3G, 4G, and 5G networks. Multiple advanced test handsets are used, and the sessions are monitored and analysed in real-time using advanced Software Systems.

3. TRAI, through its appointed agency, conducted drive tests across City drive – 102.8 KMs, Highway drive- 66.5 KMs, Hotspot locations - 5, in Sikkim State during 8<sup>th</sup> May’ 2026 to 9<sup>th</sup> May’ 2026 in West Bengal LSA. These tests were conducted under the supervision of the TRAI Regional Office Kolkata. The observations presented in drive test reports represent the performance of the TSPs on the area/ route under test on the day/ time of conducting the drive test.

4. **Drive Test Route Map:** The following map provides overview of drive test routes indicating City drive, Inter-operator calling, Hotspots and Walk tests, as per the legends shown on the map: -



## 5. Key Parameters Assessed

- a) **Coverage Gap:** Percentage of samples, for which signal strength observed less than the minimum prescribed signal strength for respective technology (2G/ 3G/ 4G/ 5G).
- b) **Voice Services:** Call Setup Success Rate (CSSR), Drop Call Rate (DCR), Call Setup Time, Call Silence Rate, Speech Quality (MOS).
- c) **Call Silence Instance:** Number of call silence instance occurred during the calls.
- d) **Data Services:** Download/ Upload Throughput, Latency, Jitter, Packet Drop Rate

6. The overall mobile network performance in Gangtok and Pakyong Districts and from Deorali Bazar, Gangtok to Nathu La Pass along NH 310 for the key parameters has been summarised below: -

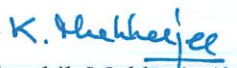
- a) **Coverage Gap** - The signal strength observed during voice testing on the city drive test route and highway drive test route in auto-selection mode (5G/4G/3G/2G), measured as the number of samples having poor signal strength out of the total samples collected, was **1348/ 18887** for **Airtel**, **6388/ 16333** for **BSNL**, **476/ 18790** for **RJIL** and **3504/ 18653** for **VIL** in the **City drive** test and was **4584/ 13089** for **Airtel**, **6087/ 14797** for **BSNL**, **1711/ 8802** for **RJIL** and **3597/ 7563** for **VIL** in **Highway drive** test. Details of the coverage gaps have been provided in the map **Annexed**.
- b) **Dropped Calls** - Dropped calls, measured as the number of dropped calls out of the number of successfully established calls, were **0/ 131** for **Airtel**, **18/ 117** for **BSNL**, **3/ 134** for **RJIL** and **0/ 130** for **VIL** in **City drive** test and was **3/ 66** for **Airtel**, **14/ 72** for **BSNL**, **11/ 49** for **RJIL** and **4/ 36** for **VIL** in **Highway drive** test. Details of the dropped call locations have been provided in the map **Annexed**.
- c) **Call Silence Instance** - Call silence instances, measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were **8/ 129** for **Airtel**, **5/ 104** for **BSNL**, **4/ 125** for **RJIL** and **7/ 122** for **VIL** in **City drive** test and were **9/ 48** for **Airtel**, **7/ 63** for **BSNL**, **5/ 36** for **RJIL** and **7/ 31** for **VIL** in **Highway drive** test. Details of the dropped call locations have been provided in the map **Annexed**.
- d) **Data Download and Upload Throughput:**
  - i) **Data Download performance (Overall):** Average download speed was observed as **50.93 Mbps** for **Airtel (5G/4G)**, **10.88 Mbps** for **BSNL (2G/4G)**, **63.89 Mbps** for **RJIL (5G/4G)** and **22.12 Mbps** for **VIL (5G/4G/2G)** in the **City drive** test and **41.60 Mbps** for **Airtel (5G/4G)**, **6.68 Mbps** for **BSNL (2G/4G)**, **60.26 Mbps** for **RJIL (5G/4G)** and **13.79 Mbps** for **VIL (5G/4G/2G)** in the **Highway drive** test. Detail of Download throughput has been provided in the map **Annexed**.
  - ii) **Data Upload performance (Overall):** Average upload speed was observed as **13.29 Mbps** for **Airtel (5G/4G)**, **4.10 Mbps** for **BSNL (2G/4G)**, **13.80 Mbps** for **RJIL (5G/4G)** and **10.47 Mbps** for **VIL (5G/4G/2G)** in the **City drive** test and **7.51 Mbps** for **Airtel (5G/4G)**, **3.34 Mbps** for **BSNL (2G/4G)**, **7.50 Mbps** for **RJIL (5G/4G)** and **4.86 Mbps** for **VIL (5G/4G/2G)** in the **Highway drive** test. Detail of Upload throughput has been provided in the map **Annexed**.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map **Annexed**.

7. Details of drive test route and area covered during the IDT is as under: -

- a) **City** - The areas covered in the city drive are Gangtok, Ranipool, Pakyong, Rorathang, Kumrek, Rangpo, Majitar, Singtam, and Mangthang etc etc.
- b) **Highway**- The areas covered in the HW drive are Deorali Bazar to Nathula Pass via NH 310 passing through Gangtok, Tathangchen, Hanuman Tok, Rongyek, Tsomgo Lake and Sherathang etc.
- c) **Hotspot** - The hot spot locations, capturing stationary user experience, are (i) District Court Near Suhim Colony District Court Gangtok Sikkim; (ii) Nathula Pass View Point Kupup Sikkim; (iii) SDM Office Pakyong East Sikkim; (iv) STNM Hospital Sochakgang Sichey Gangtok Sikkim; (v) TSOMGO Lake View Point Jawaharlal Nehru Rd. Sikkim

8. The findings of this IDT report have been shared with respective TSPs for taking further necessary action at their end. Detailed reports of IDT are made available on the TRAI website at [www.traigov.in](http://www.traigov.in). For any clarification or additional information, an email can be sent to [adv.kolkata@traigov.in](mailto:adv.kolkata@traigov.in) or Regional Office of TRAI at Kolkata RO can be contacted on telephone no. +91-33-22361401.

  
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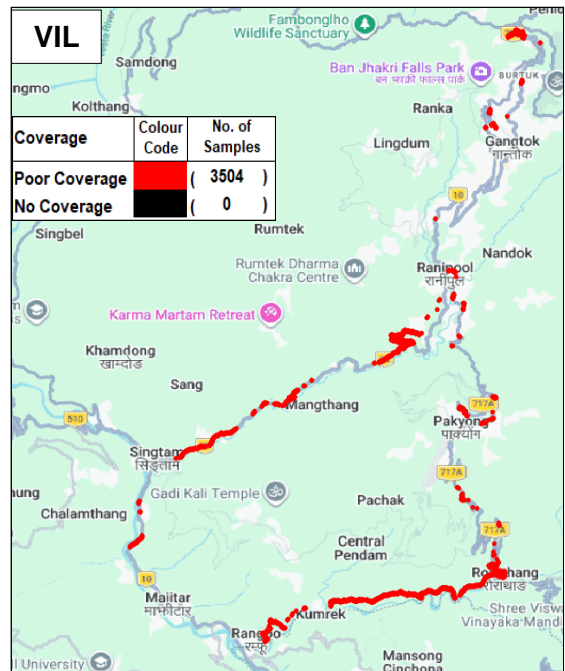
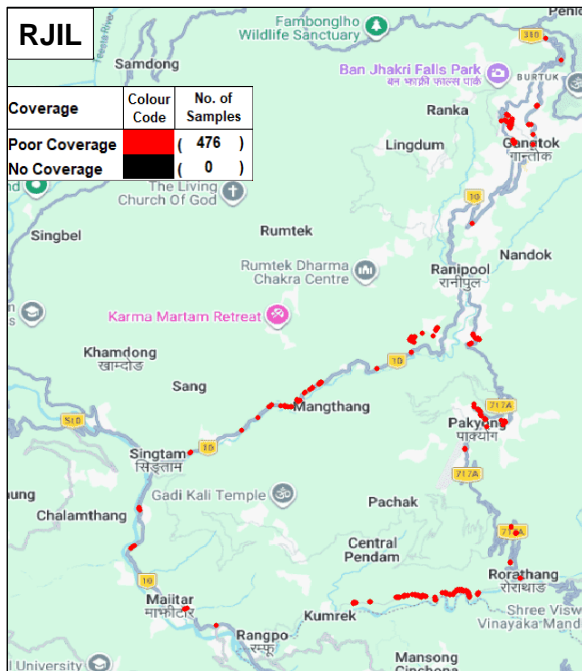
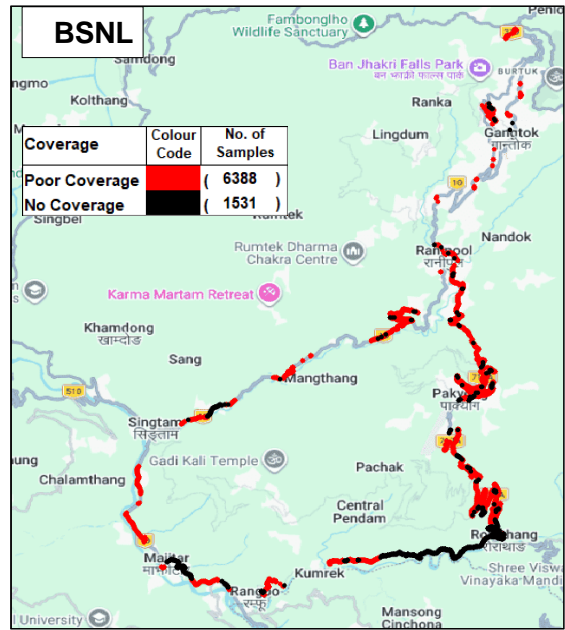
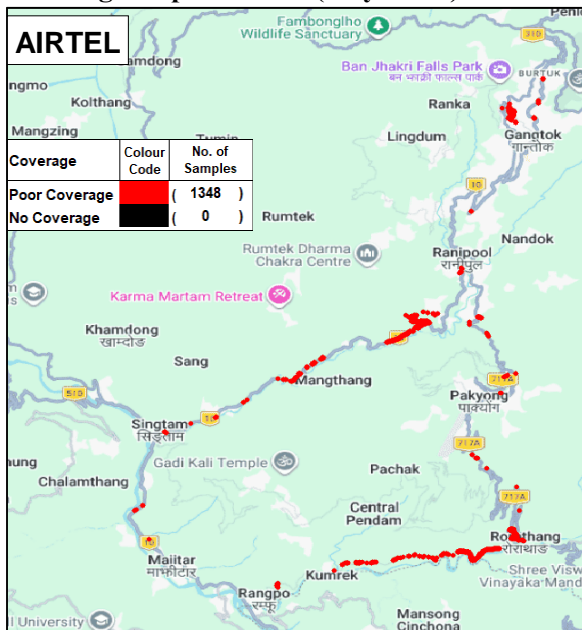
1. Gangtok and Pakyong Districts (City drive)

**Coverage Gap** – The coverage distribution found less than the minimum specified signal strength for the drive test route in auto-selection mode (5G/4G/3G/2G) during voice testing, is as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Total Number of Samples captured on Drive test route	18887	16333	18790	18653
Number of Samples having poor signal strength	1348	6388	476	3504
Number of Samples having no coverage	0	1531	0	0

**Note:** Signal strength has been considered poor if it falls below -110 dBm for 5G & 4G, -90 dBm for 3G, and -85 dBm for 2G.

Coverage Gap observed (City drive)

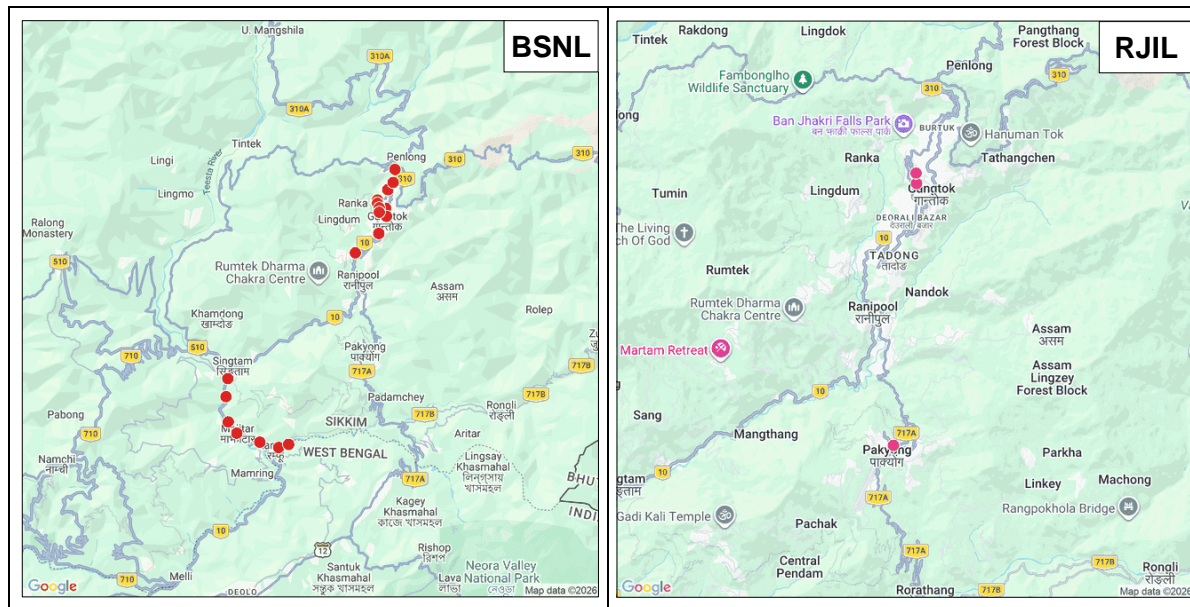


**Note:** Plot is based on Dynamic Drive Test results only.

**b) Dropped Calls -** The TSP-wise details of dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G) are as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Number of successful Calls Established	131	117	134	130
Number of dropped Calls	0	18	3	0

**Locations of Dropped Calls (City drive)**

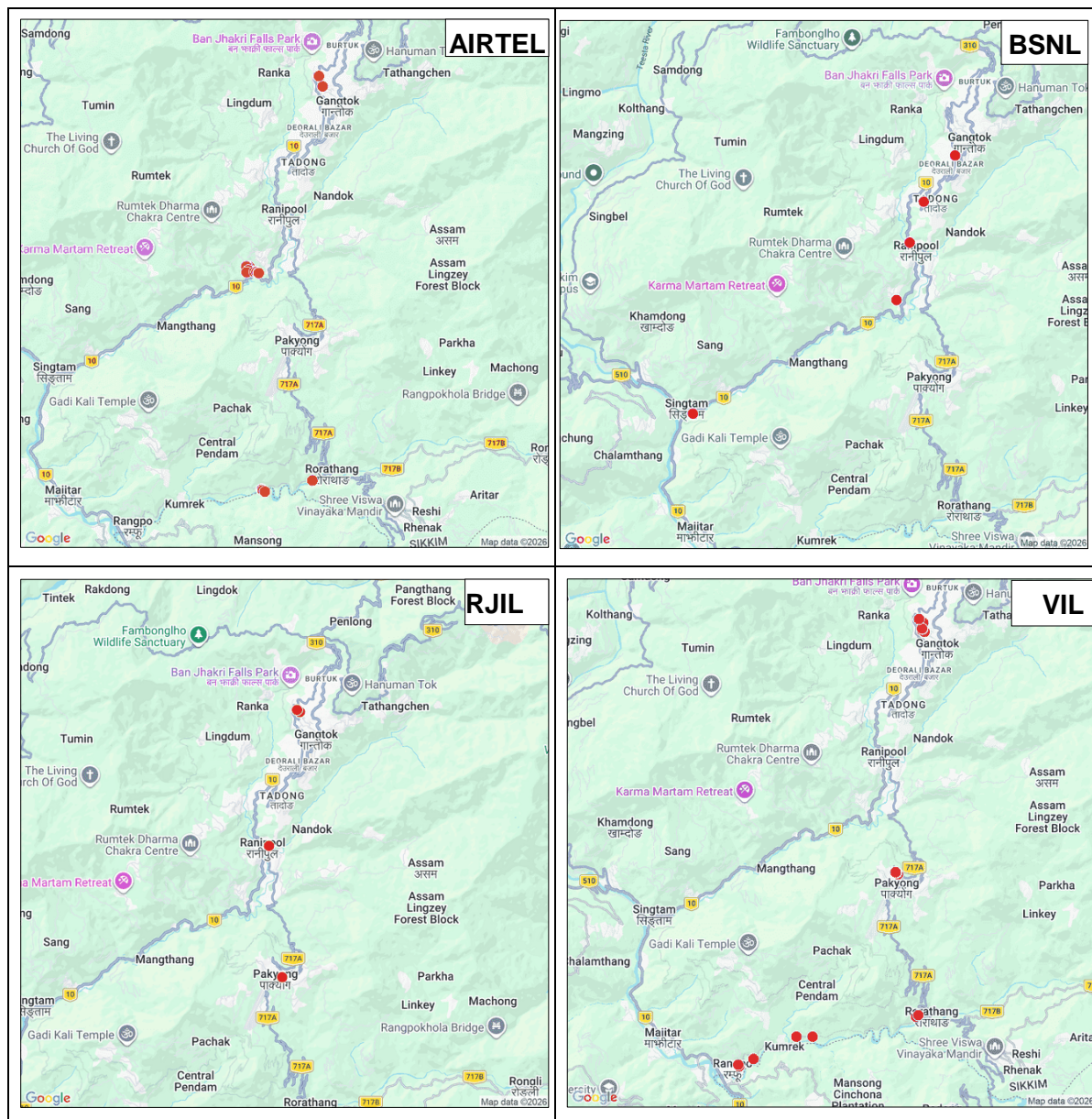


**Note:** Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

c) **Call Silence Instance** - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G) are as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Call Established (within service provider network)	129	104	125	122
Number of silences calls for >3 Sec	8	5	4	7
Total number of silence instances for >3 Sec	17	5	5	17

**Locations of Call Silence Instance (City drive)**

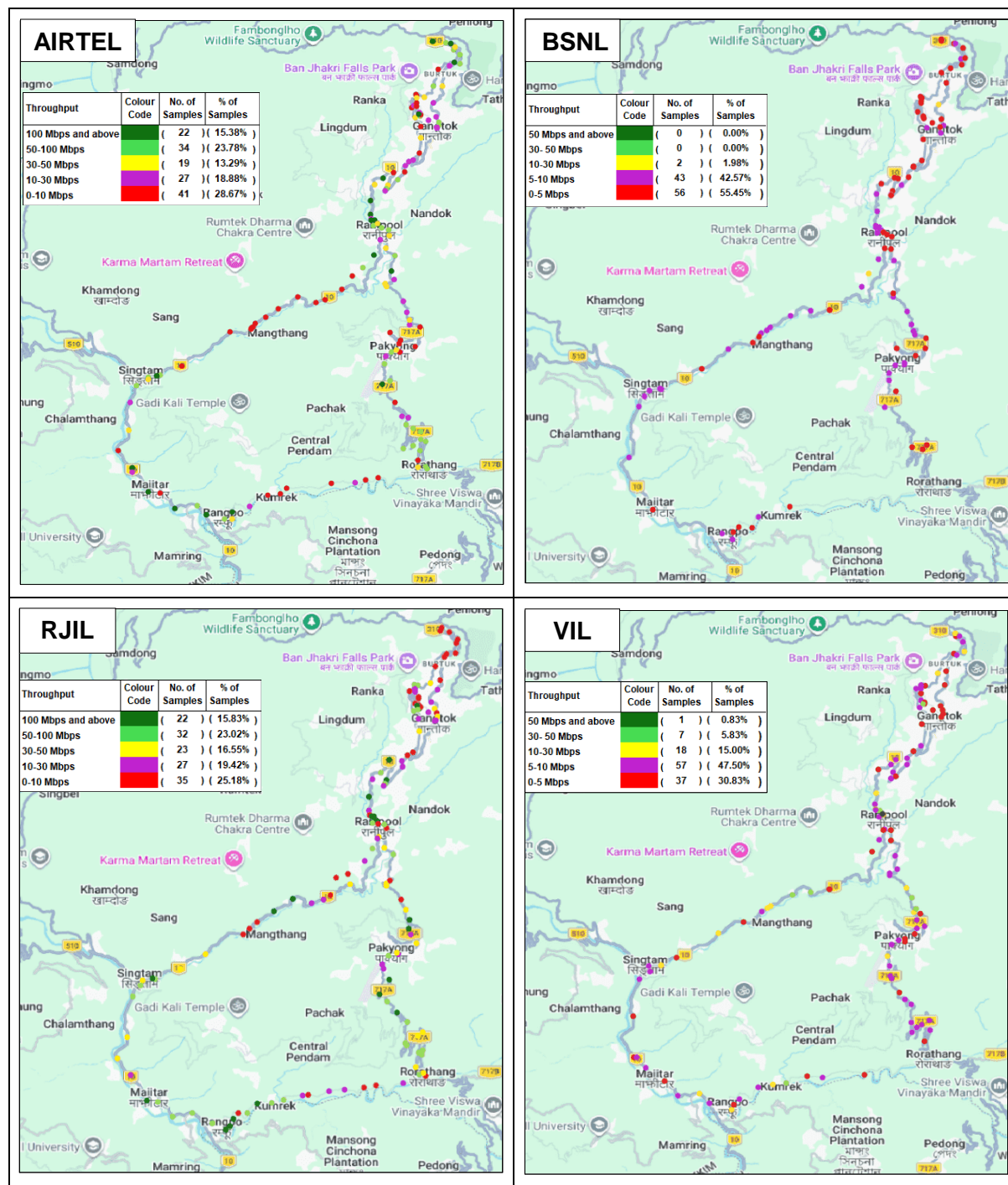


**Note:** Call silence instances are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

**d) Data Download and Upload throughput:** The TSP-wise details of **Average Download (DL)** and **Upload (UL) throughput** against declared typical DL/UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G) are as below:

**(i) Download Throughput**

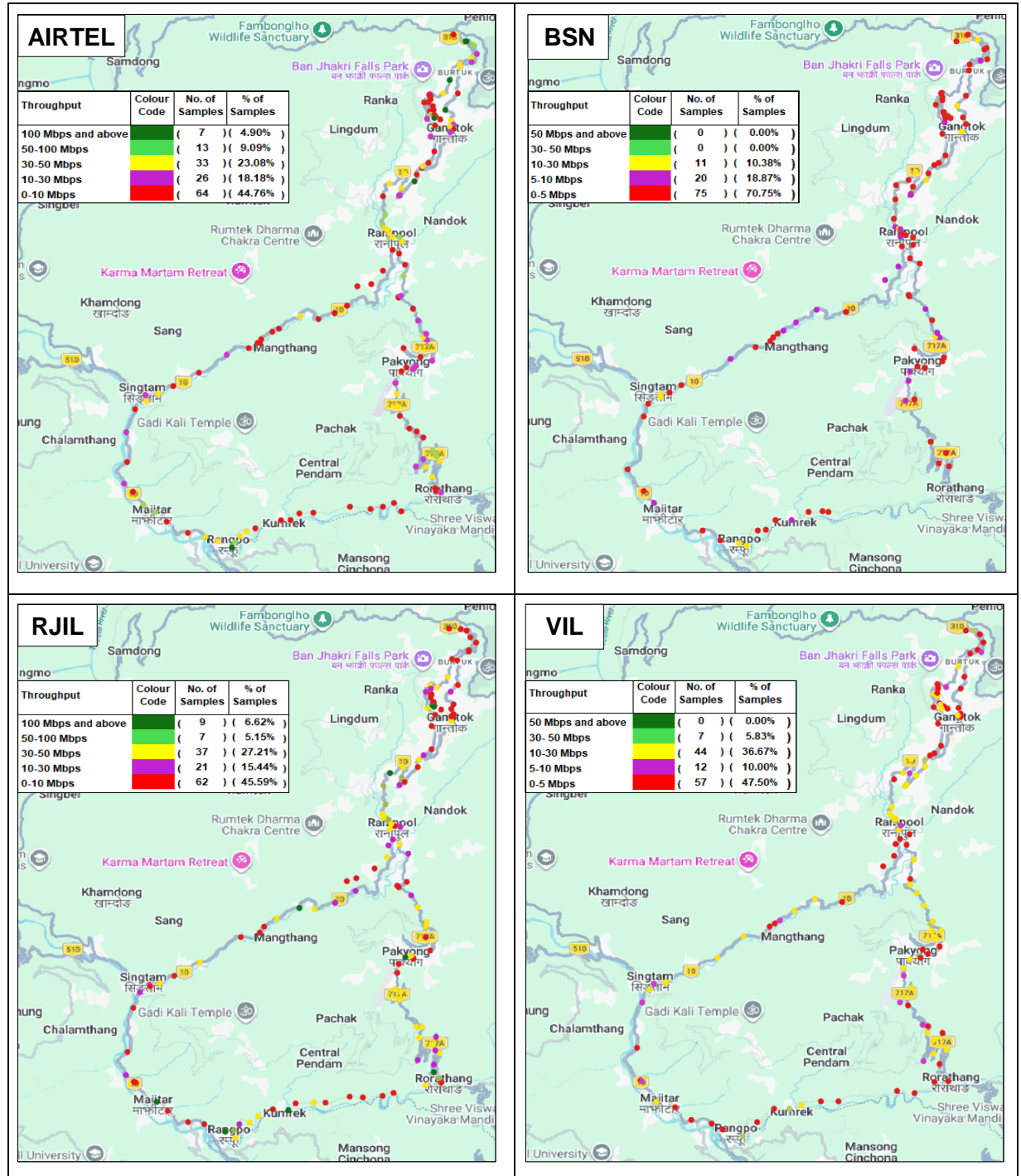
Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical Download throughput declared by TSP	(Mbits/s)	5.04	5.00	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	50.93	10.88	63.89	22.12



**Note:** Plot is based on Dynamic Drive Test results only.

**(ii) Upload Throughput**

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical upload throughput declared by TSP	(Mbits/s)	3.77	3.00	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	13.29	4.10	13.80	10.47



**Note:** Plot is based on Dynamic Drive Test results only.

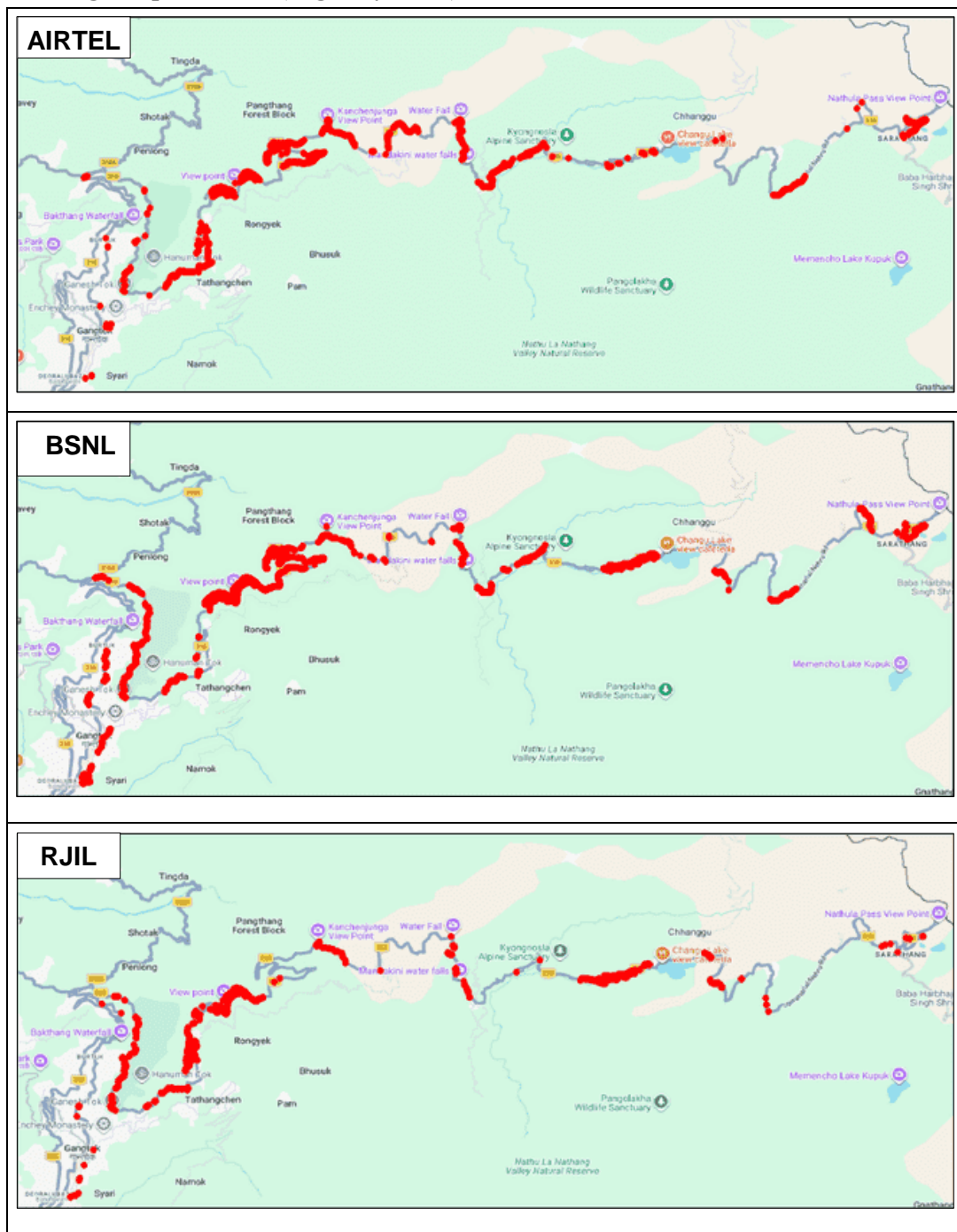
**2. Deorali Bazar, Gangtok to Nathu La Pass via NH 310: -**

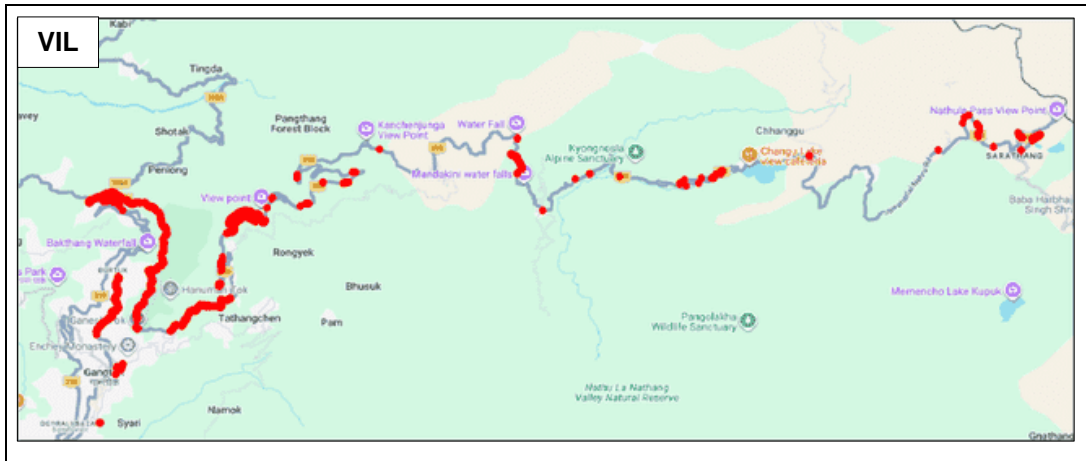
a) **Coverage Gap** – The coverage distribution found less than the minimum specified signal strength for the drive test route in auto-selection mode (5G/4G/3G/2G) during voice testing, is as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Total Number of Samples captured on Drive test route	13089	14797	8802	7563
Number of Samples having poor signal strength	4584	6087	1711	3597

**Note:** Signal strength has been considered poor if it falls below -110 dBm for 5G & 4G, -90 dBm for 3G, and -85 dBm for 2G.

**Coverage Gap observed (Highway drive)**



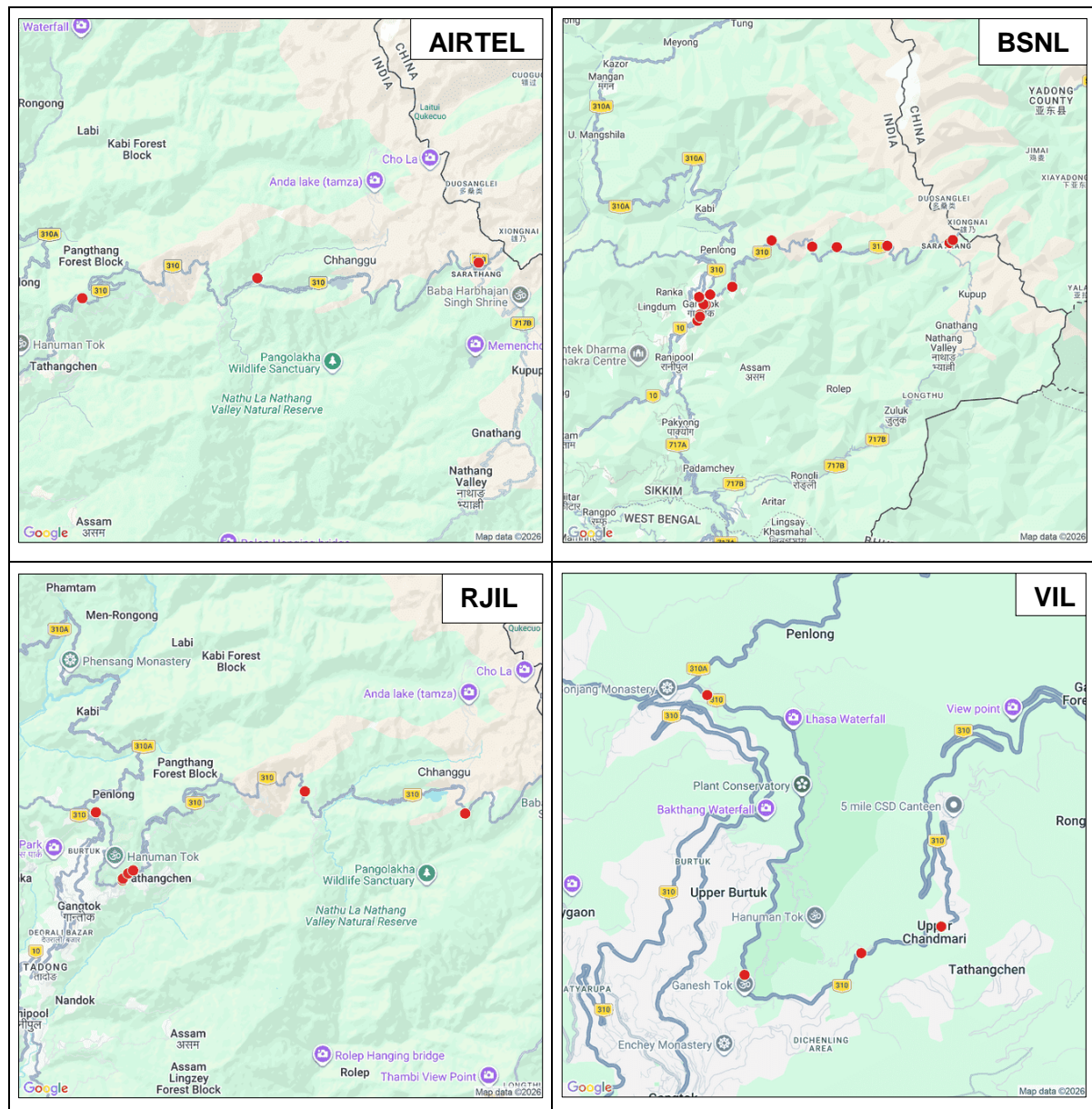


**Note:** Plot is based on Dynamic Drive Test results only.

**b) Dropped Calls -** The TSP-wise details of dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G) are as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Number of successful Calls Established	66	72	49	36
Number of dropped Calls	3	14	11	4

**Locations of Dropped Calls (Highway drive)**

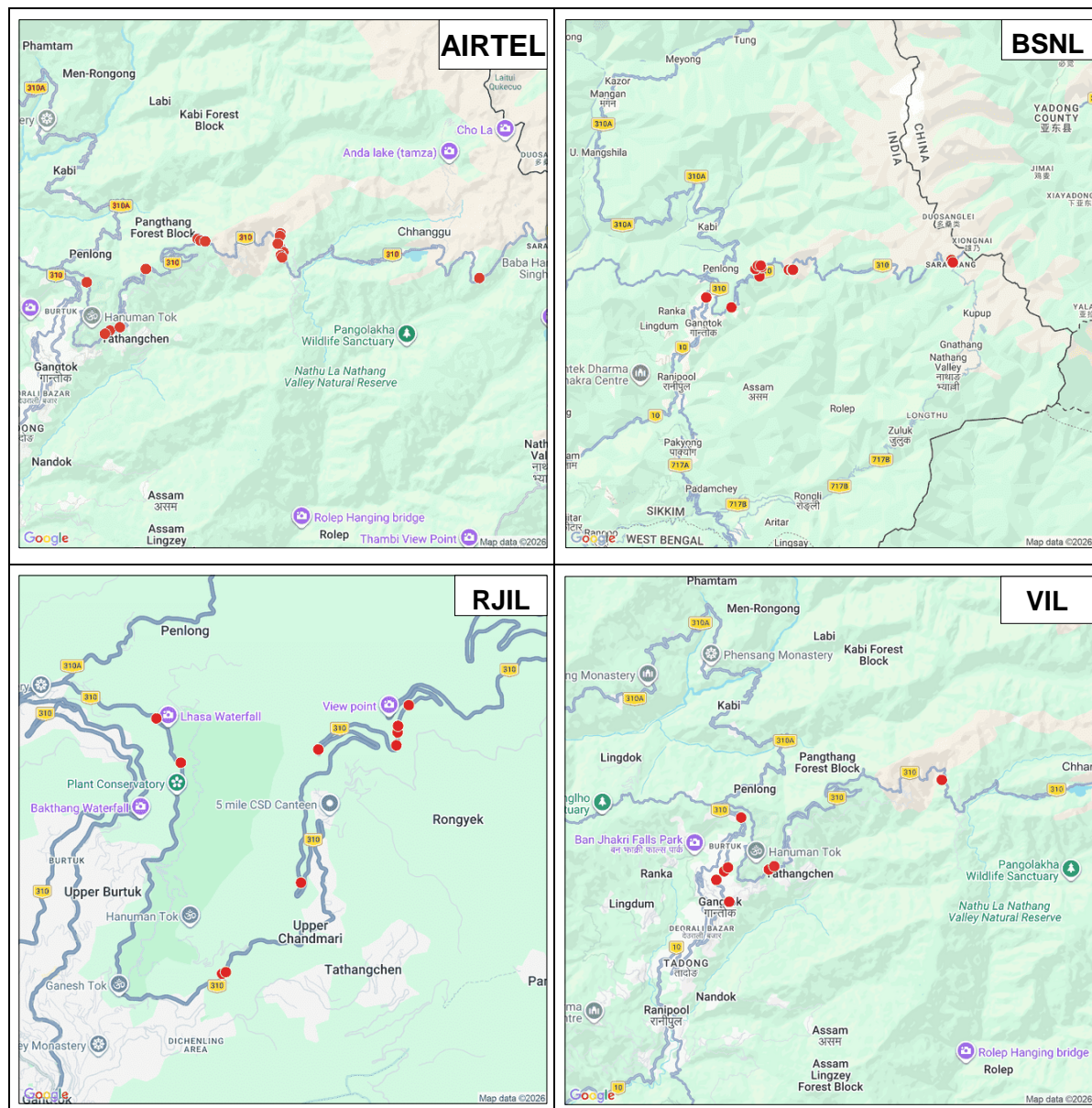


**Note:** Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

c) **Call Silence Instance** - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G) are as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Call Established (within service provider network)	48	63	36	31
Number of silences calls for >3 Sec	9	7	5	7
Total number of silence instances for >3 Sec	17	14	10	13

**Locations of Call Silence Instance (Highway drive)**



**Note:** Call silence instances are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

**d) Data Download and Upload throughput:** The TSP-wise details of **Average Download (DL)** and **Upload (UL) throughput** against declared typical DL/UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G) are as below:

**(i) Download Throughput (Highway drive)**

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical Download throughput declared by TSP	(Mbits/s)	5.04	5.00	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	41.60	6.68	60.26	13.79

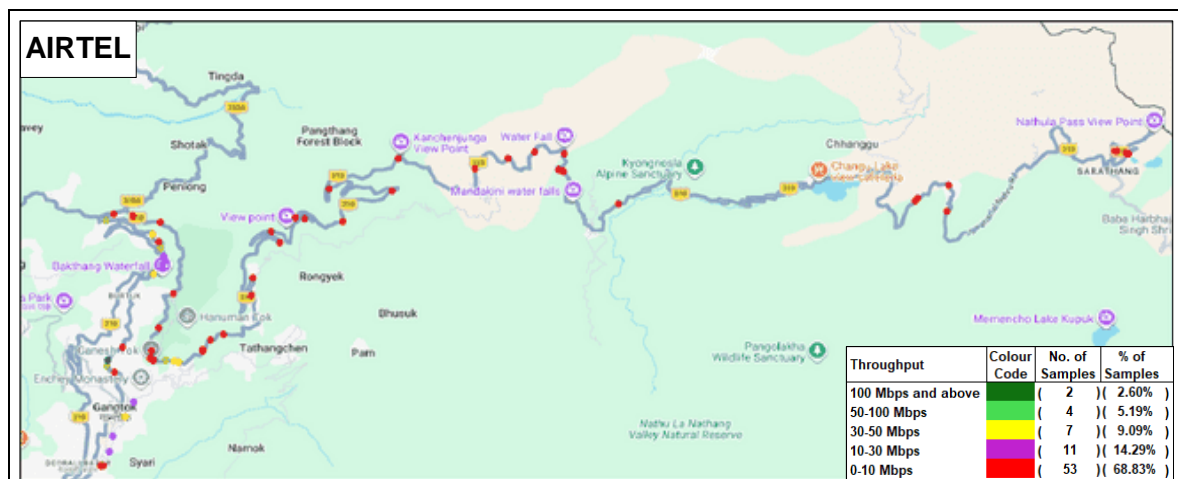


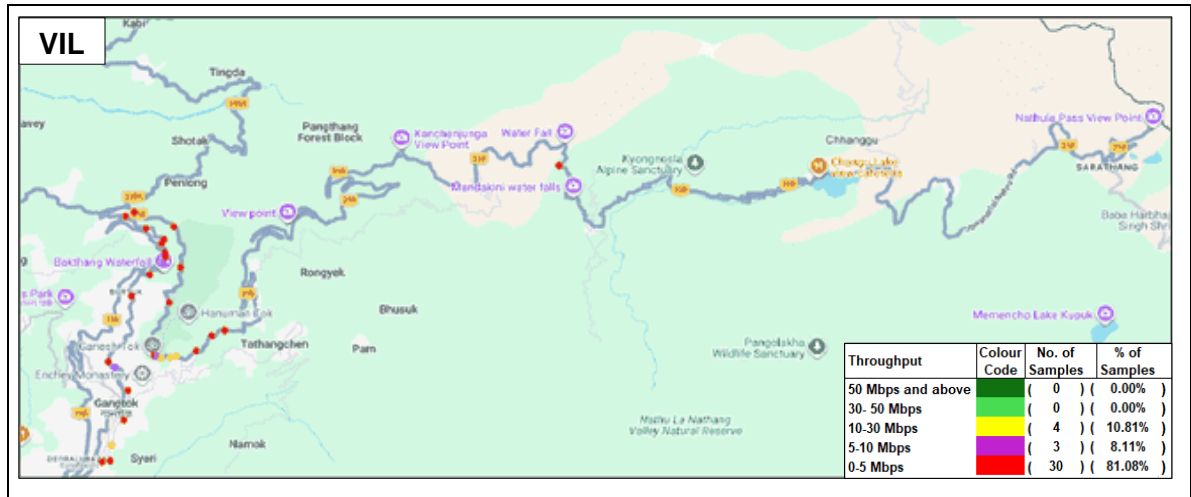


**Note:** Plot is based on Dynamic Drive Test results only.

**(ii) Upload Throughput (Highway drive)**

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical upload throughput declared by TSP	(Mbits/s)	3.77	3.00	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	7.51	3.34	7.50	4.86





**Note:** Plot is based on Dynamic Drive Test results only.