

TELECOM REGULATORY AUTHORITY OF INDIA

www.trai.gov.in

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For Immediate Release

TRAI Assesses Mobile Network Quality Across Lakjung, Tsati, Yurtung, Kushok Bakula Rimpoochee Airport, Leh Palace, Sankar Gompa, Leh, Choglamsar and Spituk etc. under Leh (Ladakh) and nearby areas.

The Telecom Regulatory Authority of India (TRAI) has released findings of Independent Drive Test (IDT) conducted across Leh and nearby areas route under J&K LSA, during the month of Aug 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 analyzed in real-time using advanced Software Systems.

3. TRAI, through its appointed agency, conducted drive tests across City drive – 62.6 Km, Hotspot locations - 07, Walk Test - 1.1 Km, Inter Operator Calling at 01 location and on Highway drive - 396.3 Km during 17th Aug 2026 to 21st Aug 2026 in J&K LSA. These tests were conducted under the supervision of the TRAI Regional Office Delhi. 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, Walk test & Highways drive as per the legends shown on the map: -

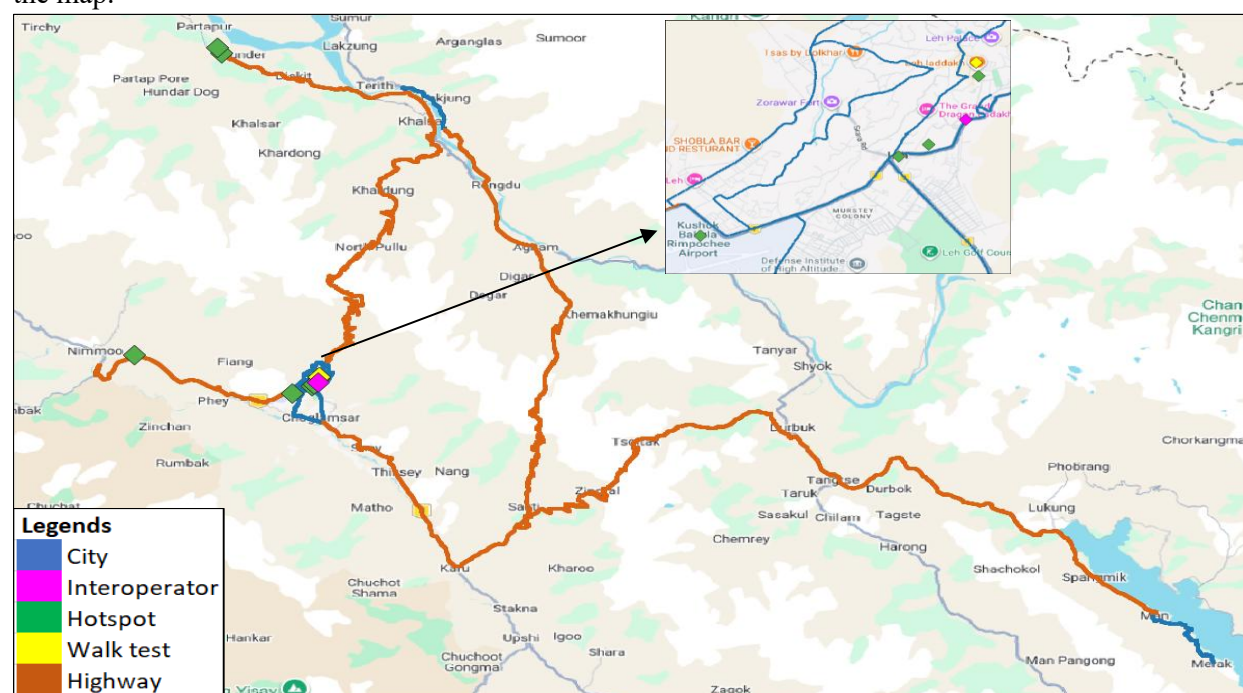


Figure-1: Drive test routes

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 instances occurred during the calls.
- d) **Data Services:** Download / Upload Throughput, Latency, Jitter, Packet Drop Rate.

6. The overall mobile network performance in Leh, Nubra Valley and Pangong areas route for the key parameters has been summarized below: -

- a) Coverage Gap - The signal strength observed during voice testing on the 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 583/9318 for Airtel, 966/8977 for BSNL & 770/8371 for RJIL. Details of the coverage gaps have been provided in the map of Annexure-I.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 0/83 for Airtel, 5/77 for BSNL & 1/76 for RJIL. Details of the dropped call locations have been provided in the map of Annexure-I.
- c) Call Silence Instance - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 2/75 for Airtel, 2/75 for BSNL & 1/72 for RJIL. Details of the call silence instance locations have been provided in the map of Annexure-I.
- d) Data Download and Upload Throughput:
 - i) Data Download performance (Overall): Average download speed was observed as 121.65 Mbps for Airtel (5G), 8.00 Mbps for BSNL (4G) & 267.13 Mbps for RJIL (5G). Detail of Download throughput has been provided in the map of Annexure-I.
 - ii) Data Upload performance (Overall): Average upload speed was observed as 22.13 Mbps for Airtel (5G), 4.87 Mbps for BSNL (4G) & 21.20 Mbps for RJIL (5G). Details of Upload throughput have been provided in the map of Annexure-I.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map of Annexure-I.

7. The overall mobile network performance on Leh to Nubra Valley highway route for the key parameters has been summarized below: -

- a) Coverage Gap - The signal strength observed during voice testing on the 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 4040/11146 for Airtel, 3361/11313 for BSNL & 3530/9209 for RJIL. Details of the coverage gaps have been provided in the map of Annexure-II.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 12/108 for Airtel, 13/95 for BSNL & 4/85 for RJIL. Details of the dropped call locations have been provided in the map of Annexure-II.
- c) Call Silence Instance - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 14/91 for Airtel, 6/71 for BSNL & 16/78 for RJIL. Details of the call silence instance locations have been provided in the map of Annexure-II.

- d) Data Download and Upload Throughput:
- i) Data Download performance (Overall): Average download speed was observed as 109.57 Mbps for Airtel (5G), 16.39 Mbps for BSNL (4G) & 122.16 Mbps for RJIL (5G). Detail of Download throughput has been provided in the map of Annexure-II.
- ii) Data Upload performance (Overall): Average upload speed was observed as 14.21 Mbps for Airtel (5G), 7.81 Mbps for BSNL (4G) & 12.02 Mbps for RJIL (5G). Details of Upload throughput have been provided in the map of Annexure-II.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map of Annexure-II.

8. The overall mobile network performance on Nubra Valley to Pangong highway route for the key parameters has been summarized below: -

- a) Coverage Gap - The signal strength observed during voice testing on the 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 4950/12272 for Airtel, 3203/12041 for BSNL & 5105/9930 for RJIL. Details of the coverage gaps have been provided in the map of Annexure-III.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 11/67 for Airtel, 17/64 for BSNL & 16/60 for RJIL. Details of the dropped call locations have been provided in the map of Annexure-III.
- c) Call Silence Instance - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 18/66 for Airtel, 16/59 for BSNL & 24/52 for RJIL. Details of the call silence instance locations have been provided in the map of Annexure-III.
- d) Data Download and Upload Throughput:
- i) Data Download performance (Overall): Average download speed was observed as 80.59 Mbps for Airtel (5G), 8.86 Mbps for BSNL (4G) & 44.48 Mbps for RJIL (5G). Detail of Download throughput has been provided in the map of Annexure-III.
- ii) Data Upload performance (Overall): Average upload speed was observed as 14.69 Mbps for Airtel (5G), 3.51 Mbps for BSNL (4G) & 3.94 Mbps for RJIL (5G). Details of Upload throughput have been provided in the map of Annexure-III.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map of Annexure-III.

9. The overall mobile network performance on Sakti to Sangam highway for the key parameters has been summarized below: -

- a) Coverage Gap - The signal strength observed during voice testing on the 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 800/6295 for Airtel, 2140/6252 for BSNL & 893/5597 for RJIL. Details of the coverage gaps have been provided in the map of Annexure-IV.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 1/32 for Airtel, 5/27 for BSNL & 2/30 for RJIL. Details of the dropped call locations have been provided in the map of Annexure-IV.

- c) **Call Silence Instance** - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 2/31 for Airtel, 15/26 for BSNL & 5/30 for RJIL. Details of the call silence instance locations have been provided in the map of Annexure-IV.
- d) **Data Download and Upload Throughput:**
- i) **Data Download performance (Overall):** Average download speed was observed as 96.97 Mbps for Airtel (5G), 6.00 Mbps for BSNL (4G), and 203.25 Mbps for RJIL (5G). Detail of Download throughput has been provided in the map of Annexure-IV.
- ii) **Data Upload performance (Overall):** Average upload speed was observed as 14.67 Mbps for Airtel (5G), 4.14 Mbps for BSNL (4G) & 18.84 Mbps for RJIL (5G). Details of Upload throughput have been provided in the map of Annexure-IV.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map of Annexure-IV.

13. Details of drive test route and area covered during the IDT are as below: -

- a) **City** - The areas covered in the city drive are Lakjung, Tsati, Yurtung, Kushok Bakula Rimpochee Airport, Leh Palace, Sankar Gompa, Leh, Choglamsar and Spituk etc. under Leh and nearby areas.
- b) **Highway** - The area covered in the highway route are Leh to Nubra Valley via Power House, View Point Khadungla road, South Pullu, Shiv Shankar Temple, North Pullu, Khardung Viewpoint, Khalsar and Diskit etc., Nubra Valley to Pangong via Tsati, Agham, Sakti, Zingral, Tsoltak, Tangtse, Muglib, Spangmik and Pangong beach etc. & Sakti to Sangam via Chemrey, Karu, Thiksey, Shey, Kushok Bakula Rimpochee Airport, Indus Viewpoint and Sangam Point Leh Ladakh etc.
- c) **Hotspot** - The hotspot locations, capturing stationary user experience are Army Hospital Hundar, Artisan Bazaar, EJM College, Gurudwara Sri Pathar Sahib, Leh Airport, Leh Market & SNM Hospital.
- d) **Walk Test** - The walk test conducted on 17th Aug 2026, covered Leh Market capturing mobile network behaviors in crowded pedestrian environments.

14. 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.trai.gov.in. For any clarification or additional information, an email can be sent to adv.ca@trai.gov.in or Regional Office of TRAI at Delhi RO can be contacted on Telephone No. +91-11-20907772.

(Vivek Khare)
Advisor, RO Delhi, TRAI

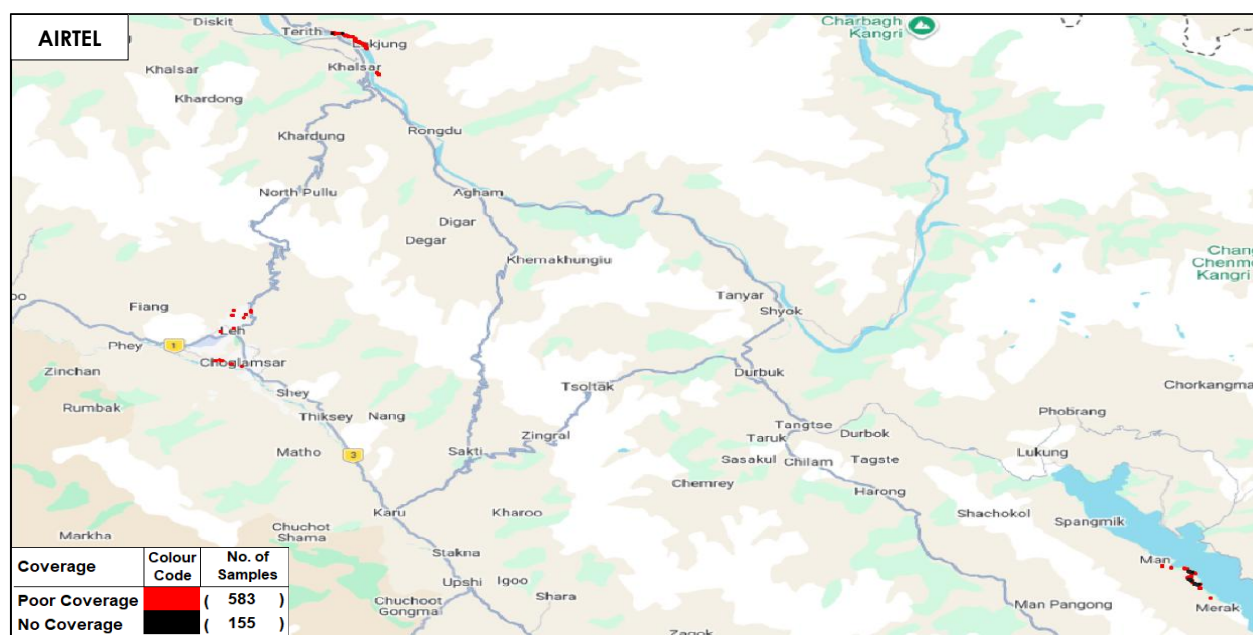
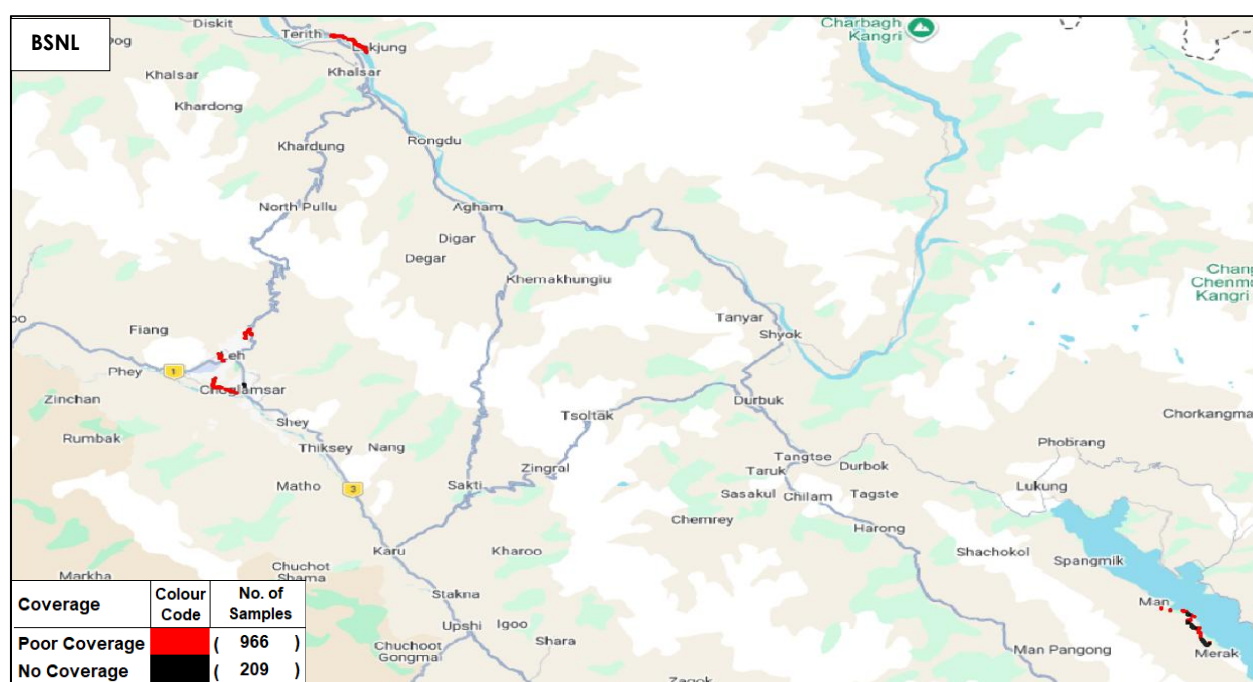
Annexure-I

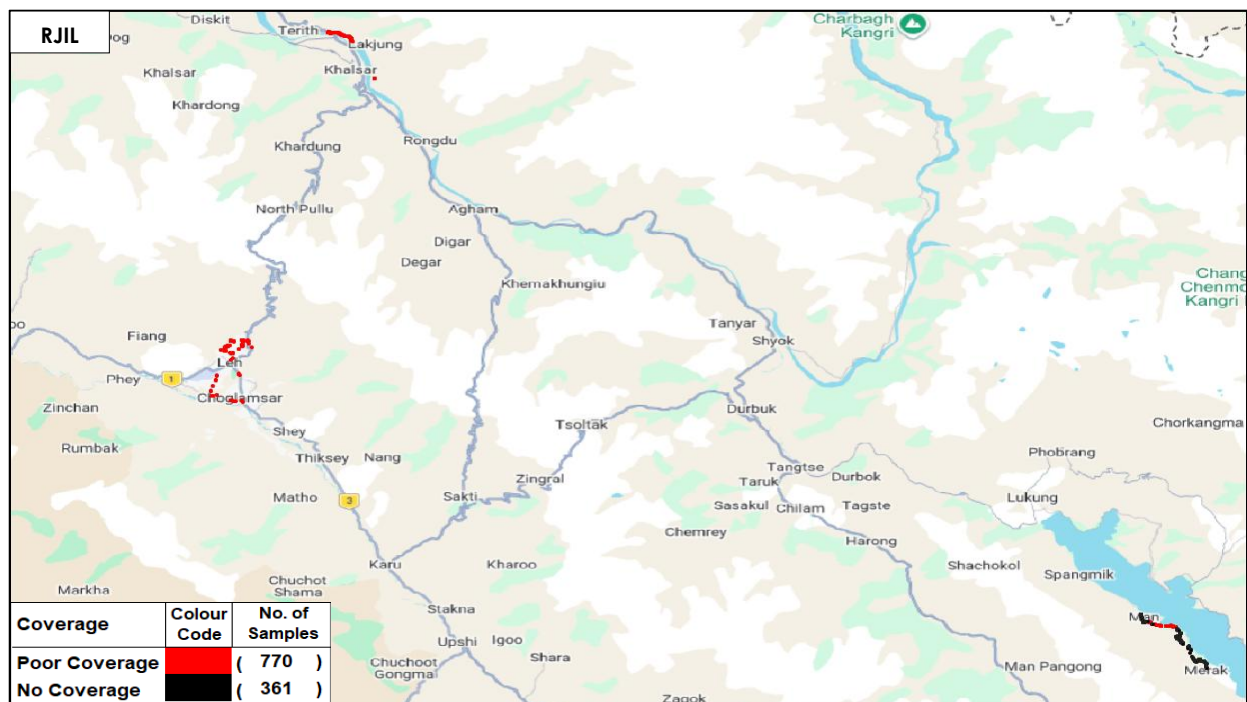
1. City Drive : Leh, Nubra Valley and Pangong areas

(a) Coverage Gap - The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Total Number of Samples captured on Drive test route	9318	8977	8371
Number of Samples having poor signal strength	583	966	770
Number of Samples having limited service (No Coverage)	155	209	361

Coverage Gap observed



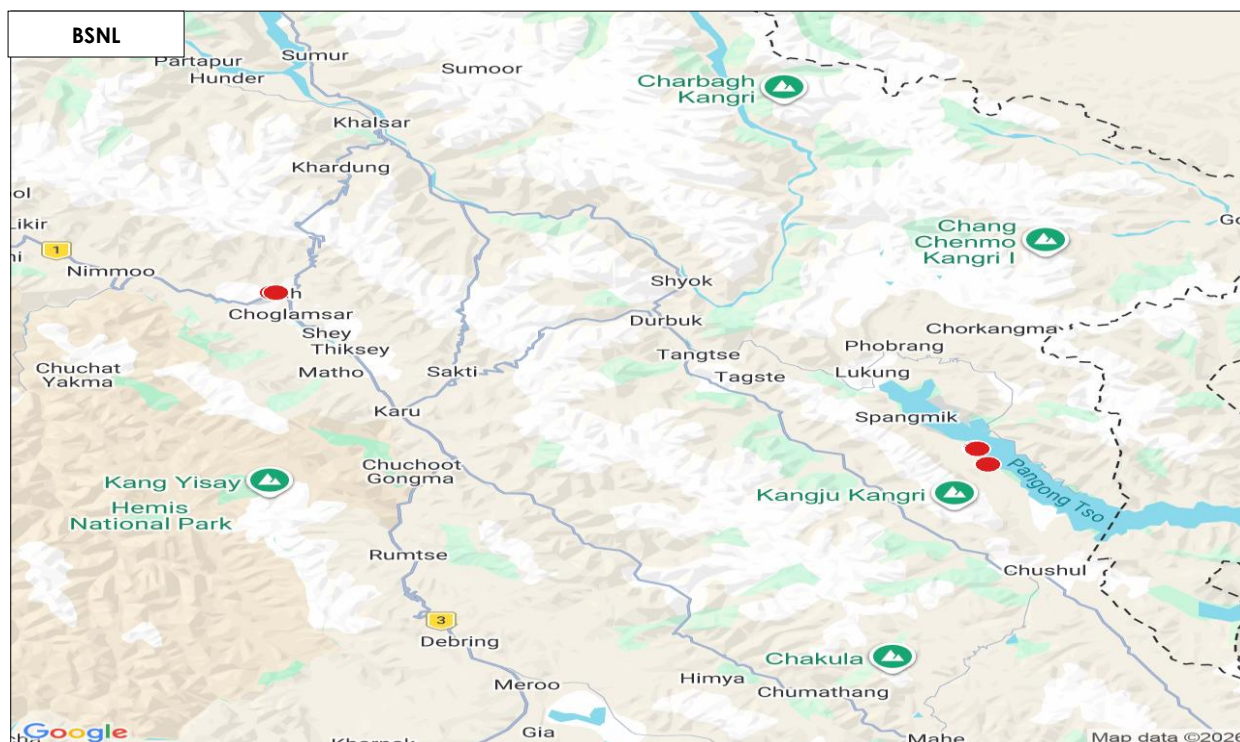
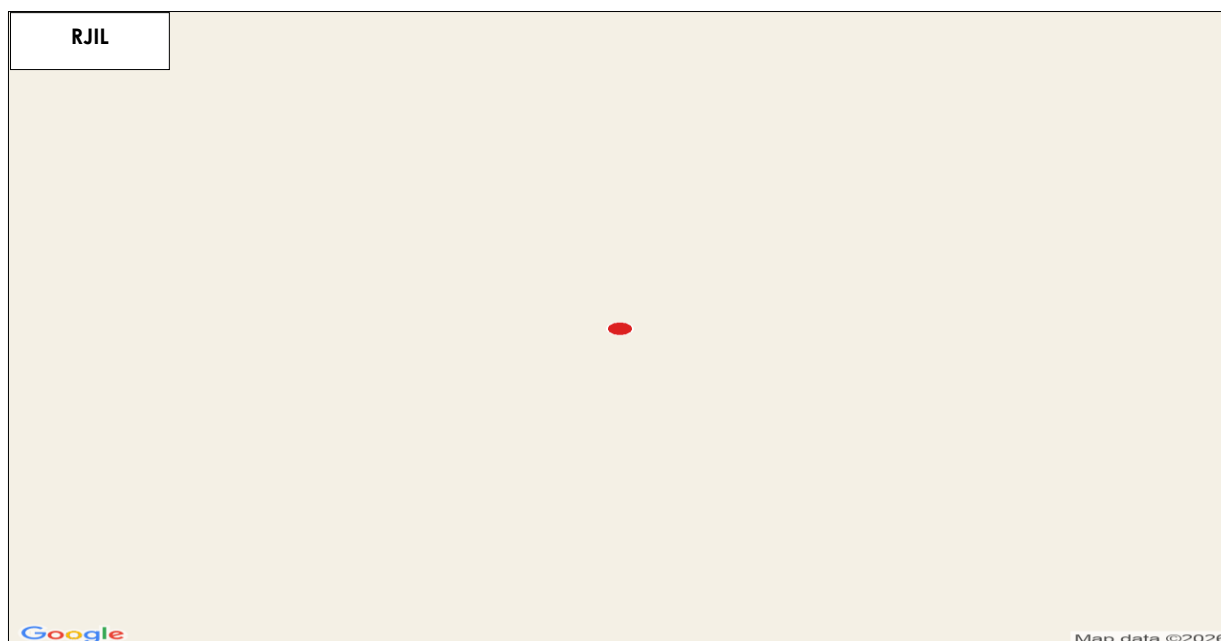


Note: Plot is based on Dynamic Drive Test results only.

(b) Dropped Calls - The TSP-wise details of dropped calls in auto selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Number of successful Calls Established	83	77	76
Number of dropped Calls	0	5	1

Locations of Dropped Calls

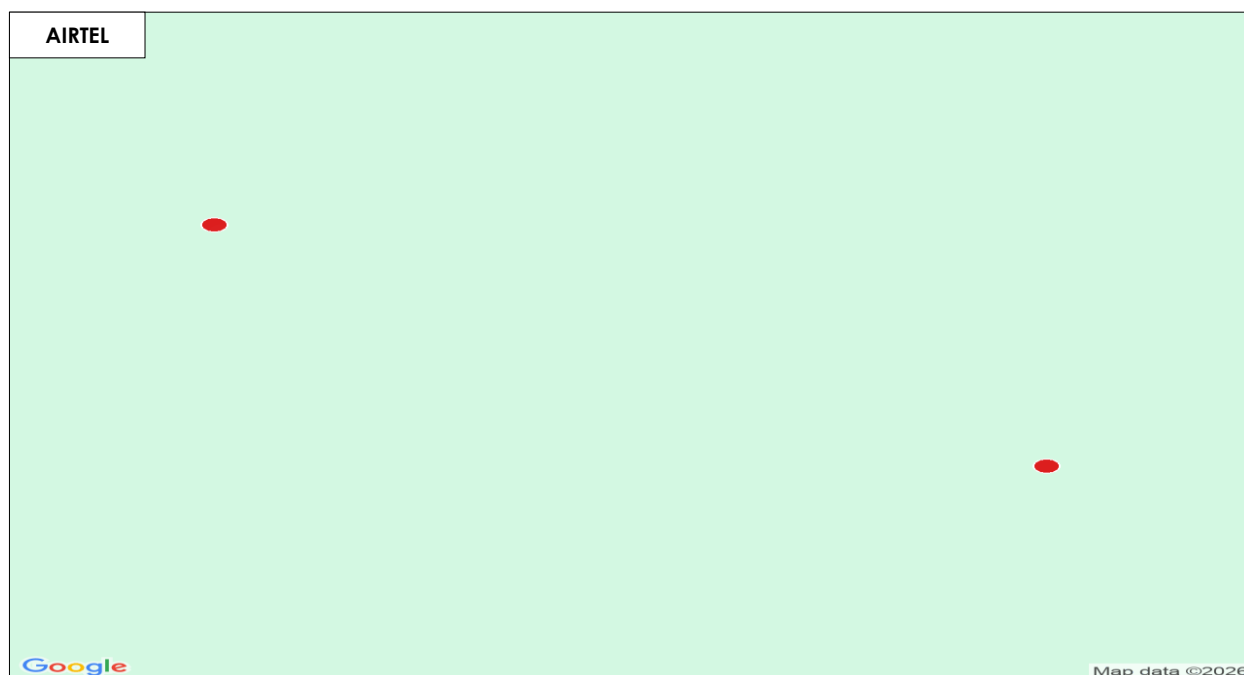
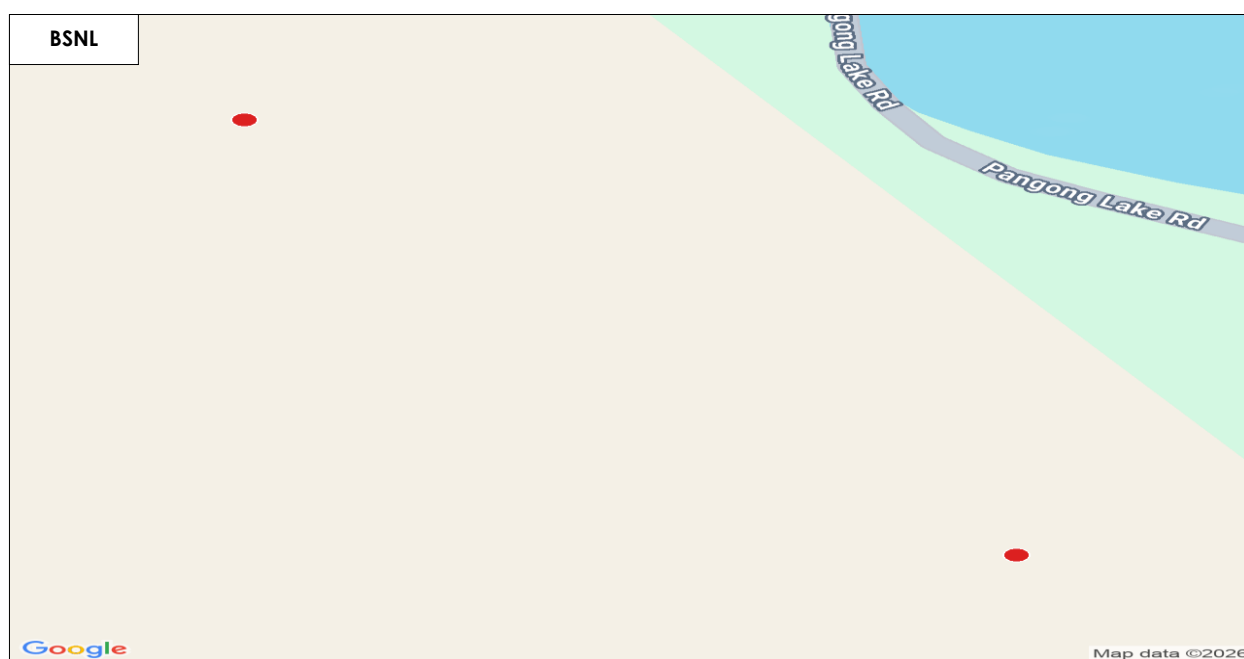


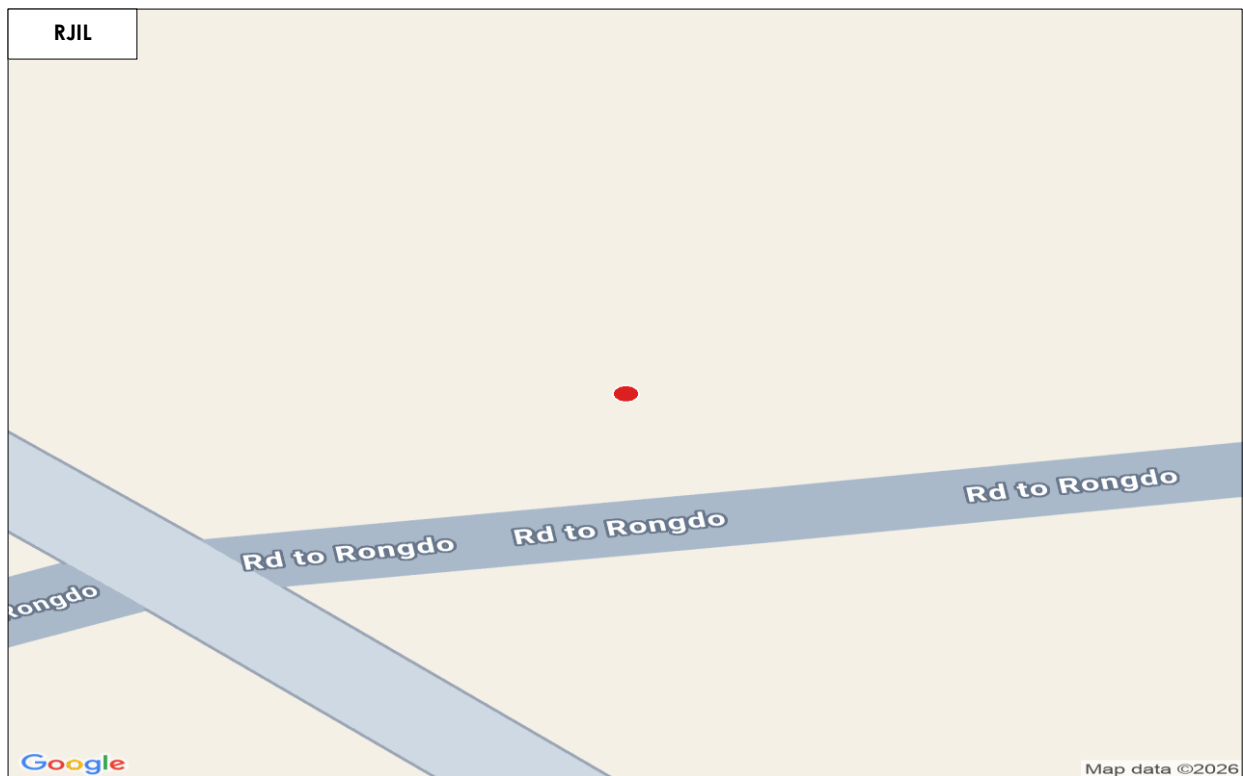
Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

(c) Call Silence Instance - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G).

Parameter	AIRTEL	BSNL	RJIL
Call Established (within service provider network)	75	75	72
Number of silences calls for >3 Sec	1	1	1
Total number of silence instances for >3 Sec	2	2	1

Locations of Call Silence Instance



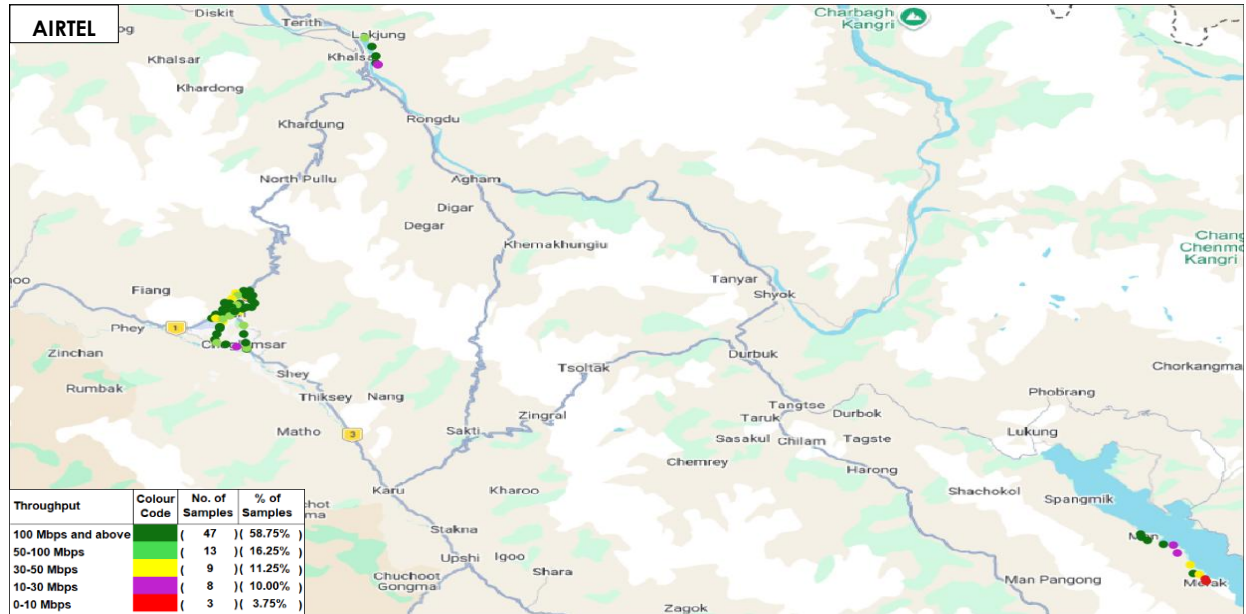
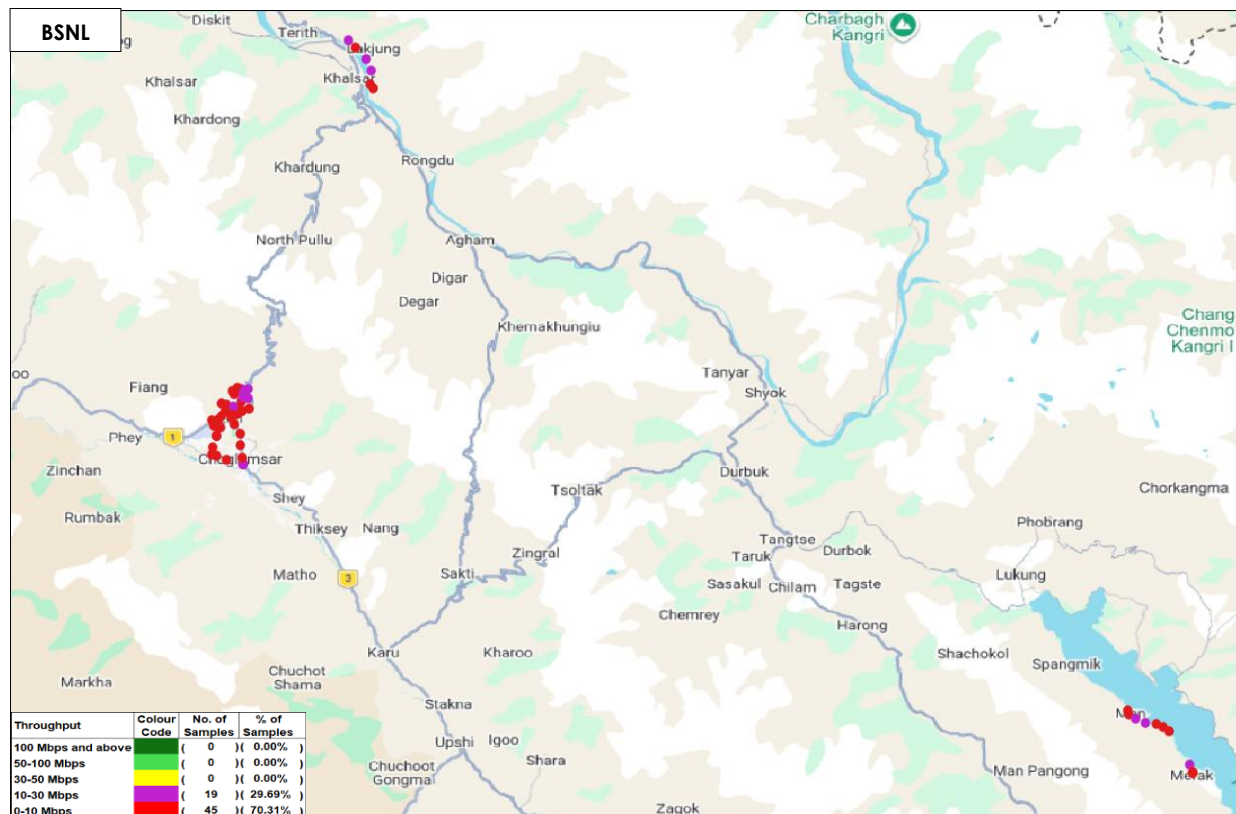


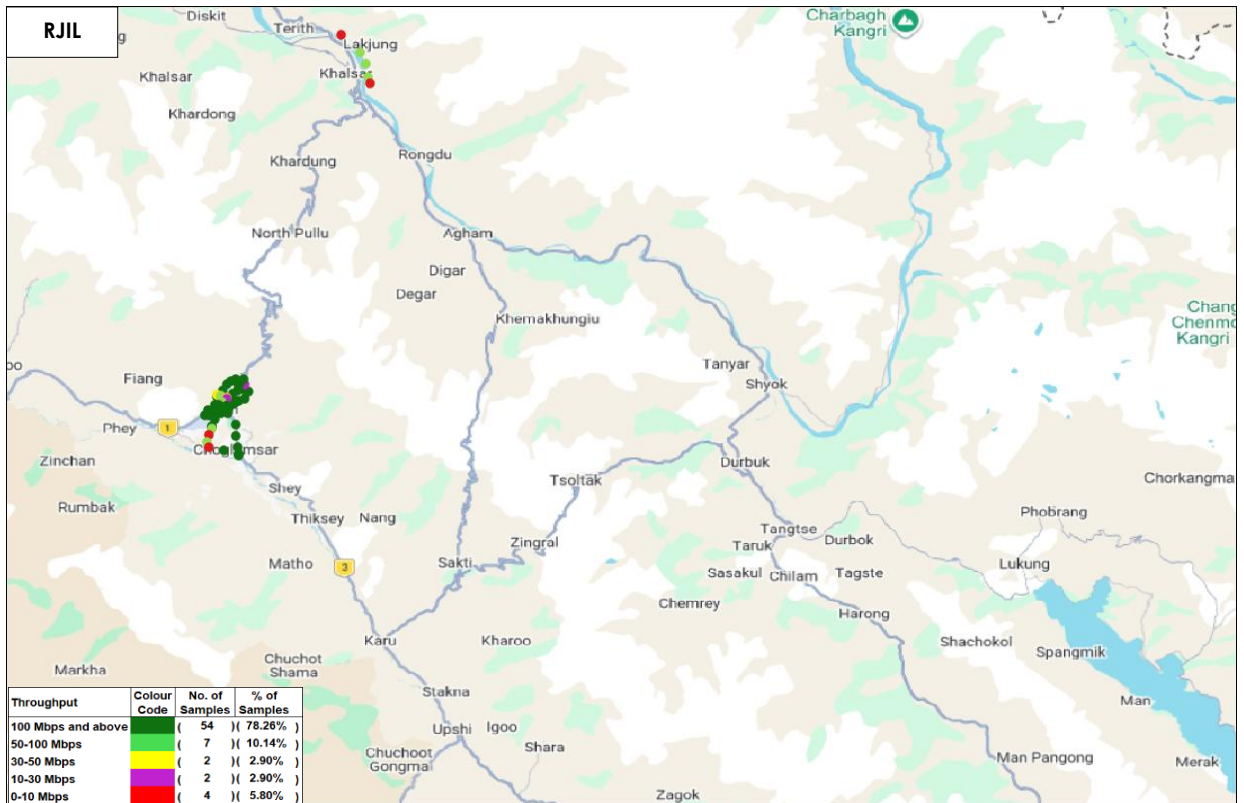
Note: Call silence instances are shown in red colour, and which can be clicked to know the exact location (latitude and longitude) on the map.

(d) Data Download and Upload Throughput:

(i) Data Download Throughput: The TSP-wise details of **Average Download (DL) throughput** against declared typical DL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Download Throughput declared by TSP	(Mbits/s)	23.00	5.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	121.65	8.00	267.13



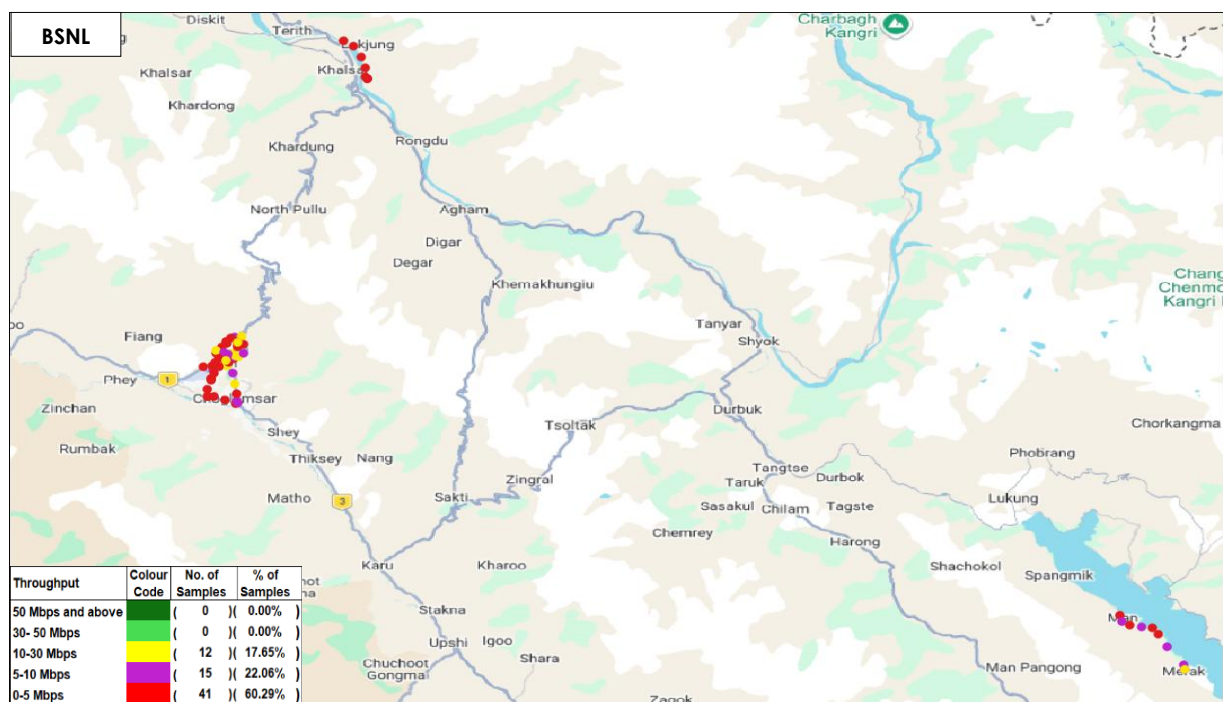


Note: Plot is based on Dynamic Drive Test results only.

(ii) Data Upload Throughput: The TSP-wise details of **Average Upload (UL) throughput** against declared typical UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Upload Throughput declared by TSP	(Mbits/s)	10.00	3.00	7.00
Average Upload Throughput measured during IDT	(Mbits/s)	22.13	4.87	21.20





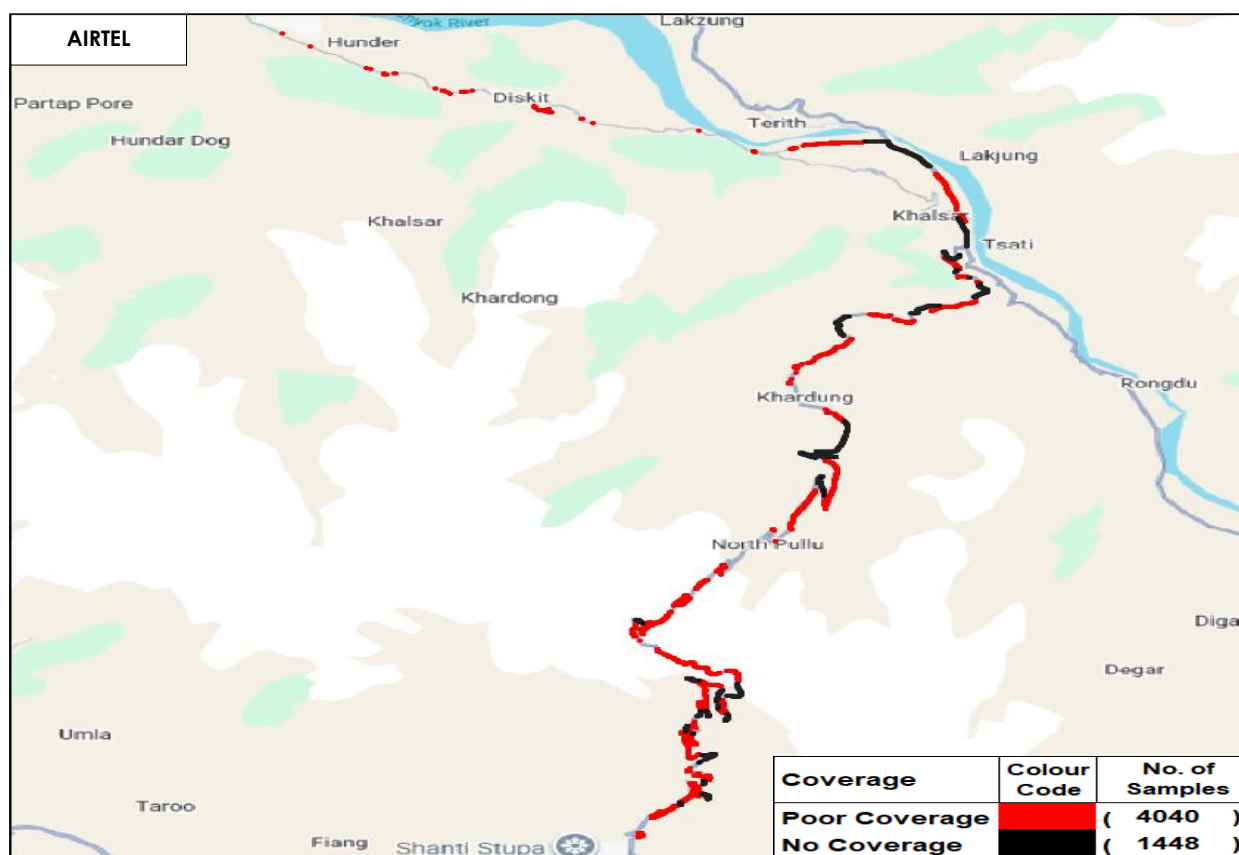
Note: Plot is based on Dynamic Drive Test results only.

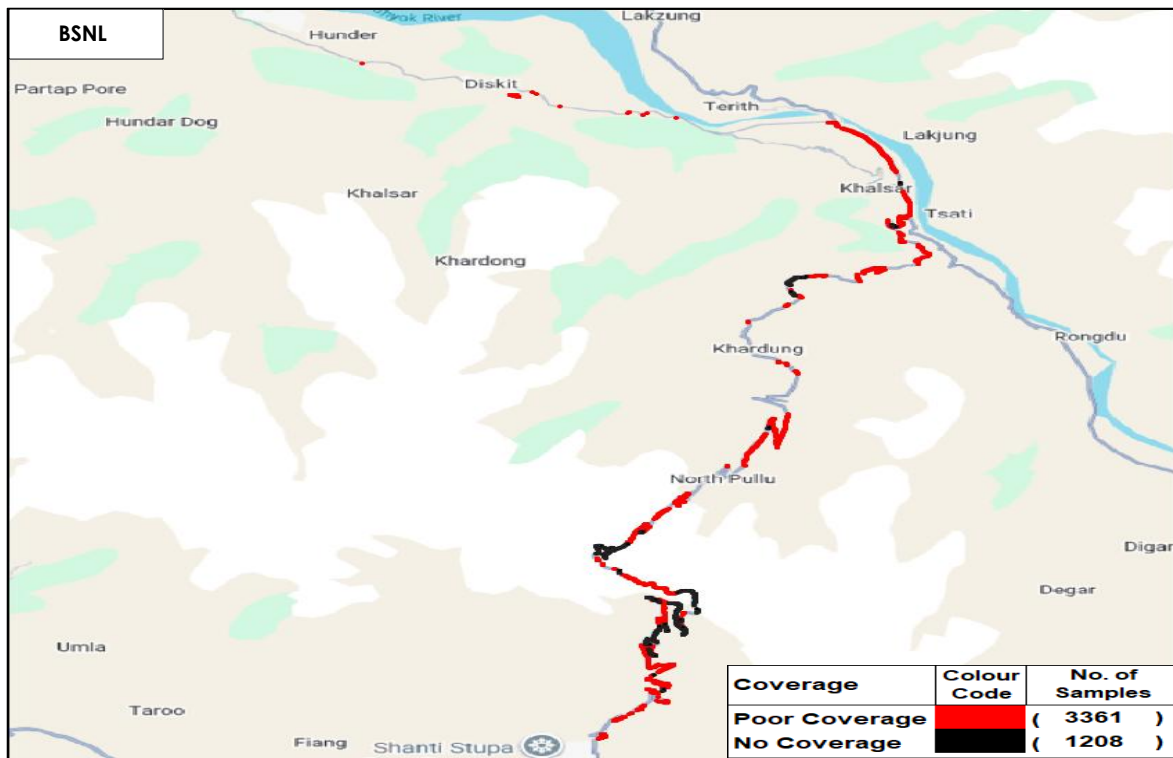
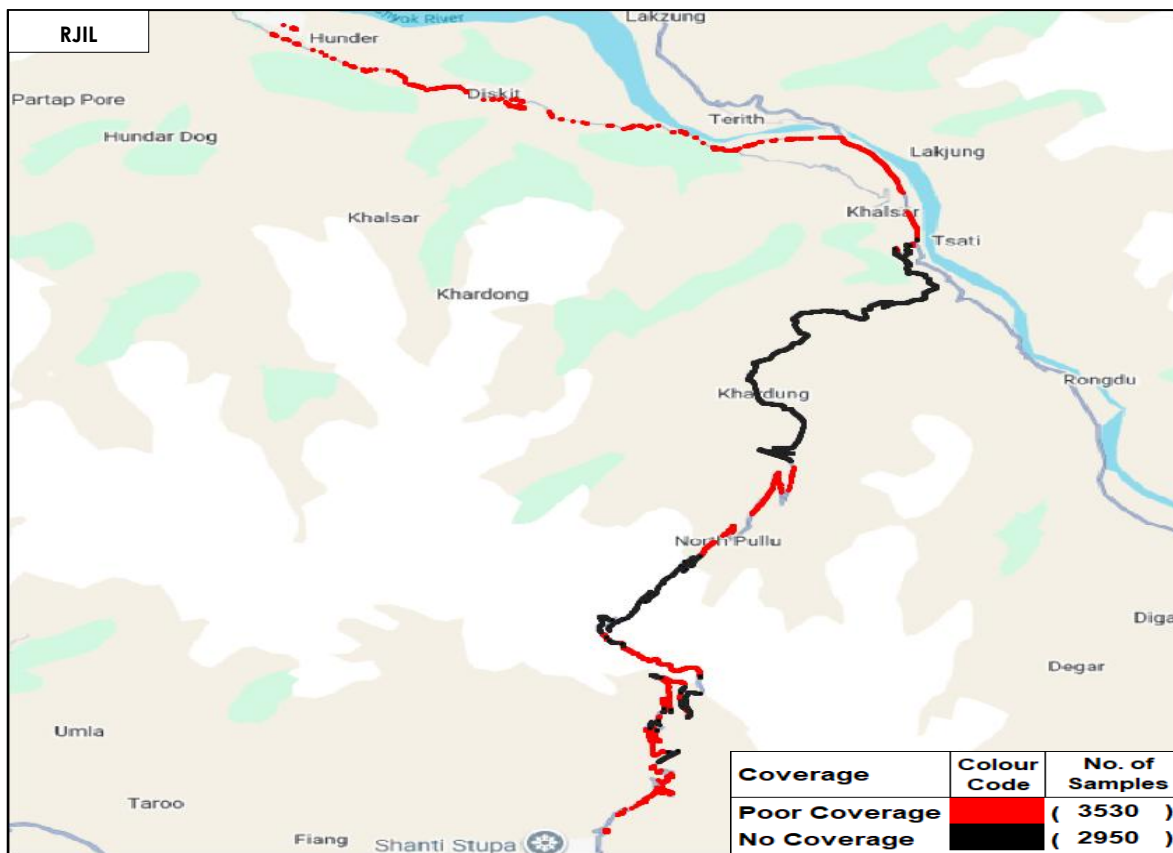
2. Highway Drive: Leh to Nubra Valley

(a) Coverage Gap – The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Total Number of Samples captured on Drive test route	11146	11313	9209
Number of Samples having poor signal strength	4040	3361	3530
Number of Samples having limited service (No Coverage)	1448	1208	2950

Coverage Gap observed



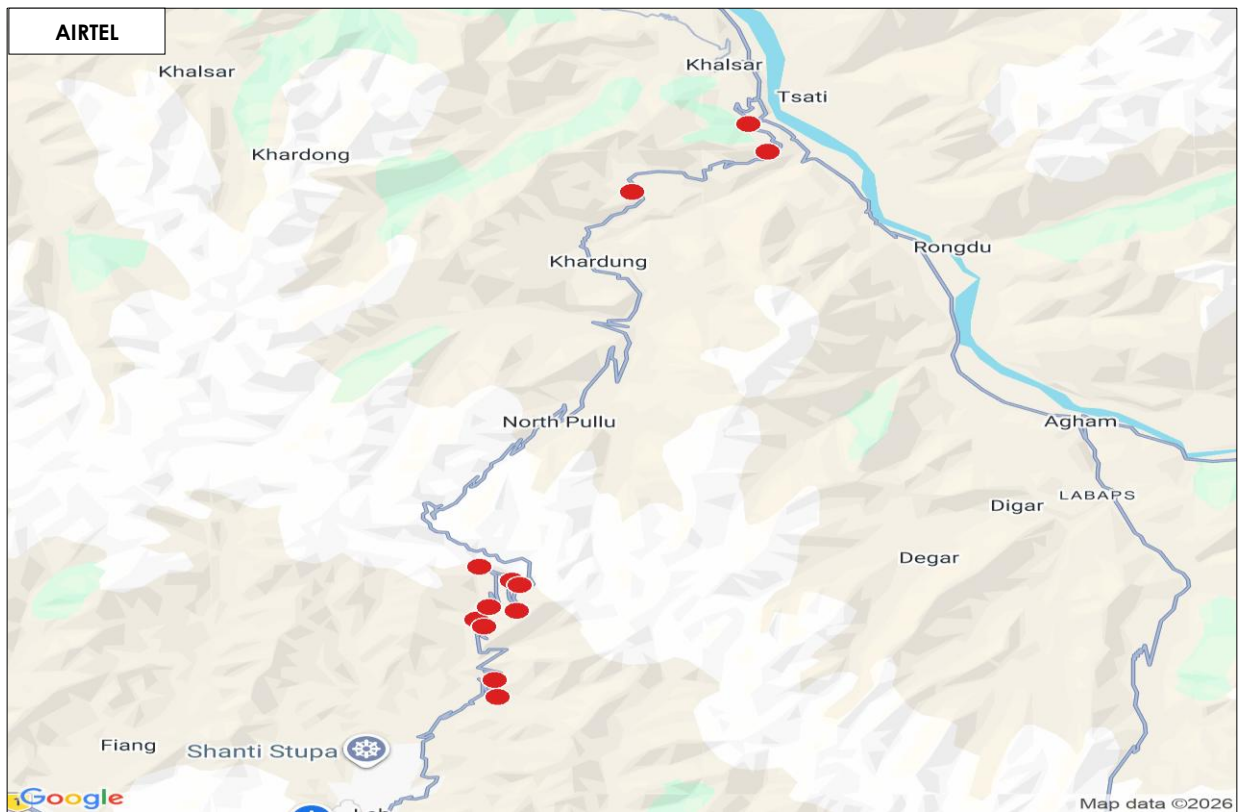


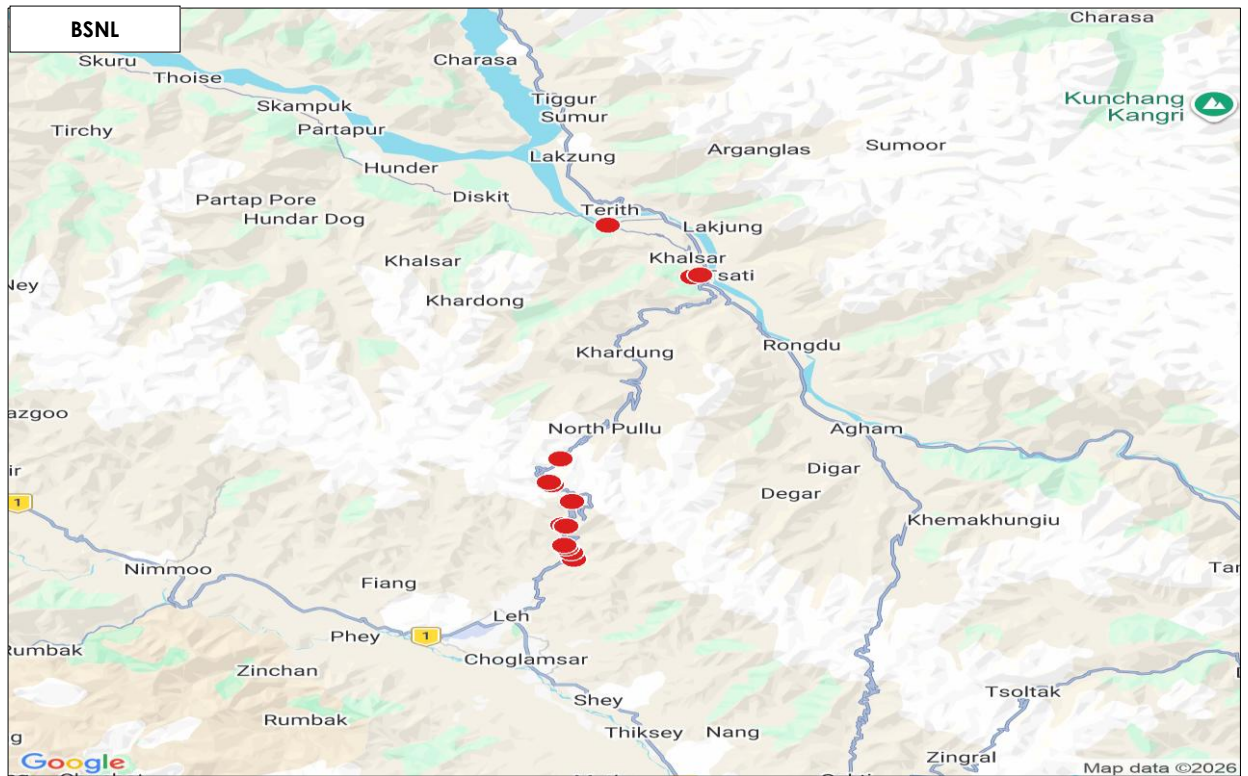
Note: Plot is based on Dynamic Drive Test results only.

(b) Dropped Calls - The TSP-wise details of dropped calls in auto selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Number of successful Calls Established	108	95	85
Number of dropped Calls	12	13	4

Locations of Dropped Calls



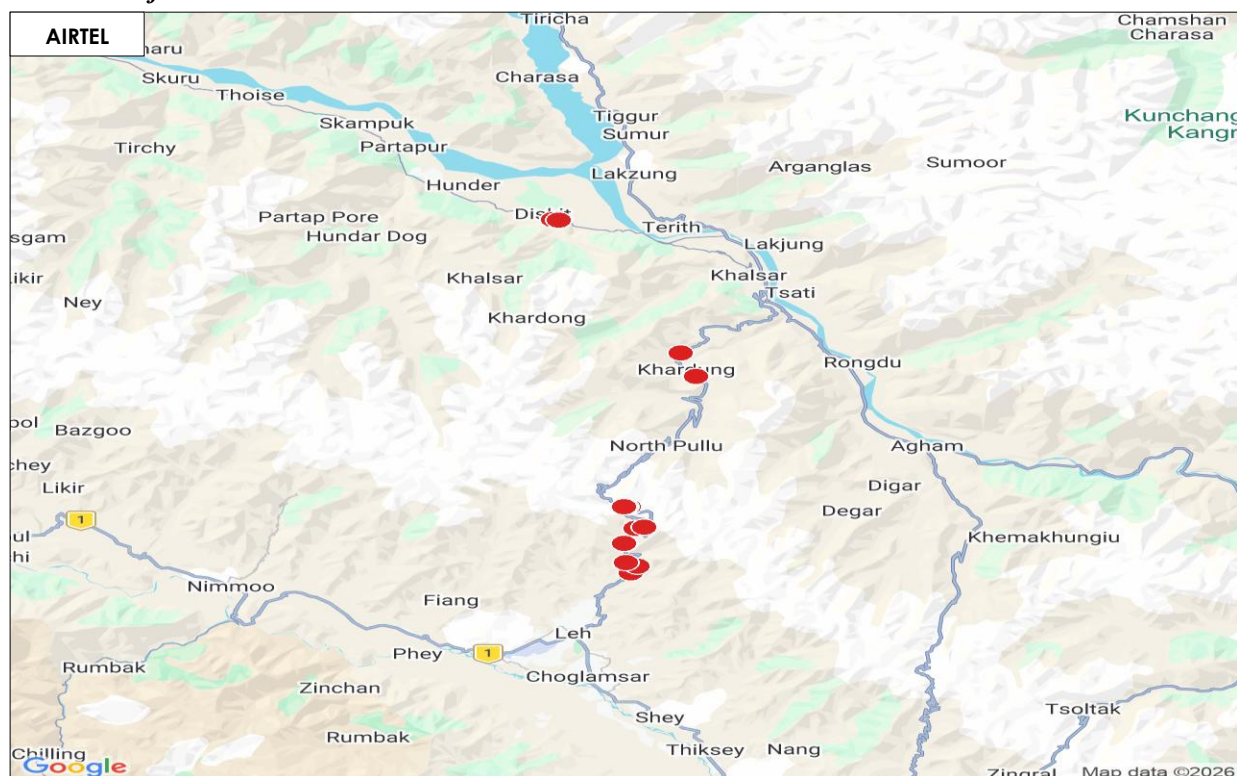


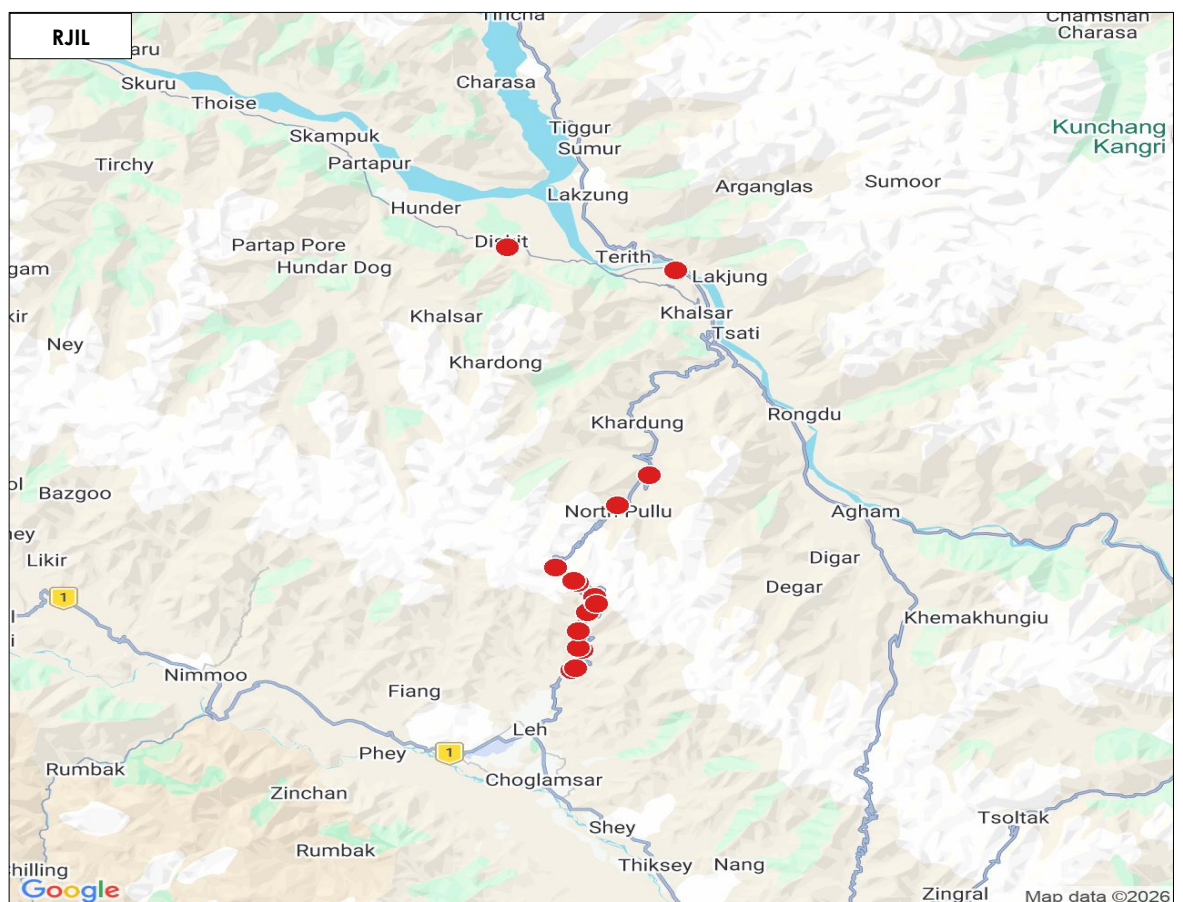
Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

(c) Call Silence Instance - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G).

Parameter	AIRTEL	BSNL	RJIL
Call Established (within service provider network)	91	71	78
Number of silences calls for >3 Sec	11	6	13
Total number of silence instances for >3 Sec	14	6	16

Locations of Call Silence Instance



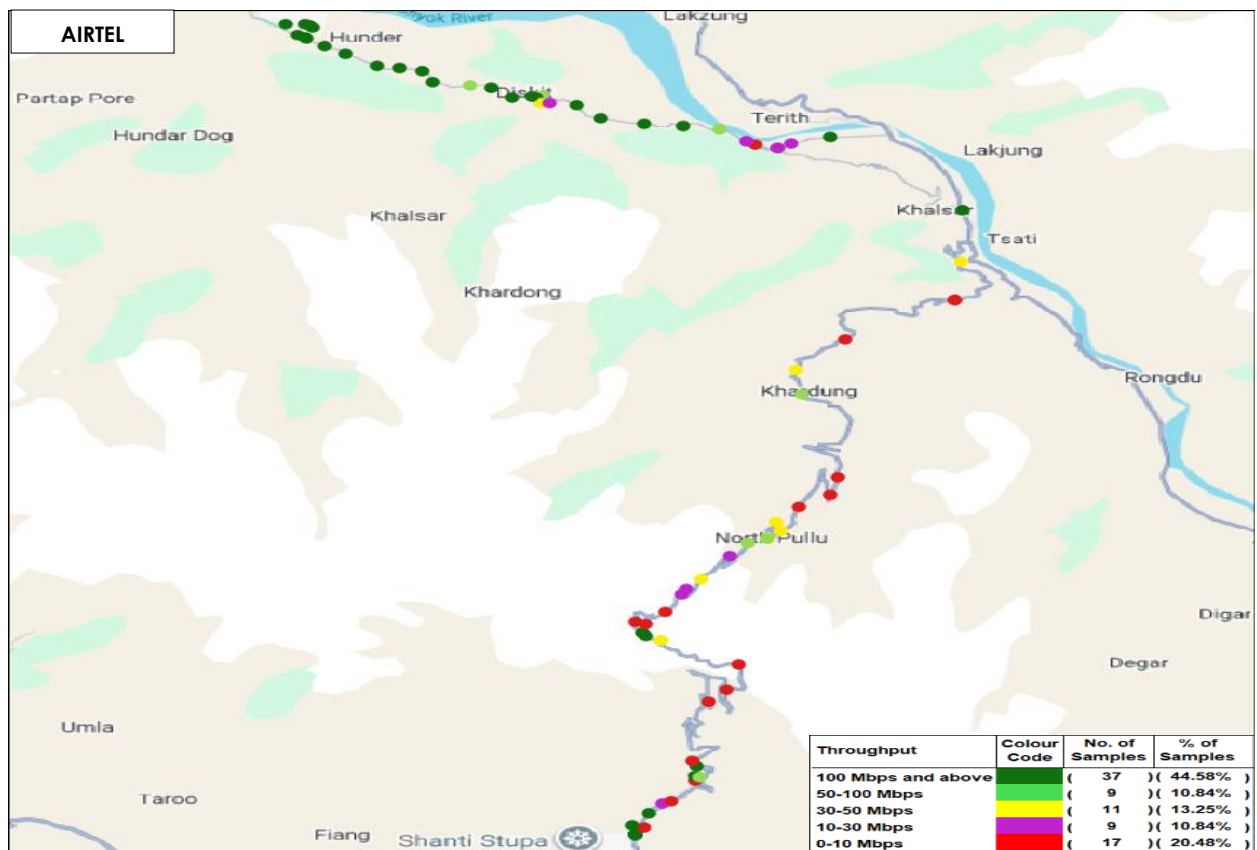


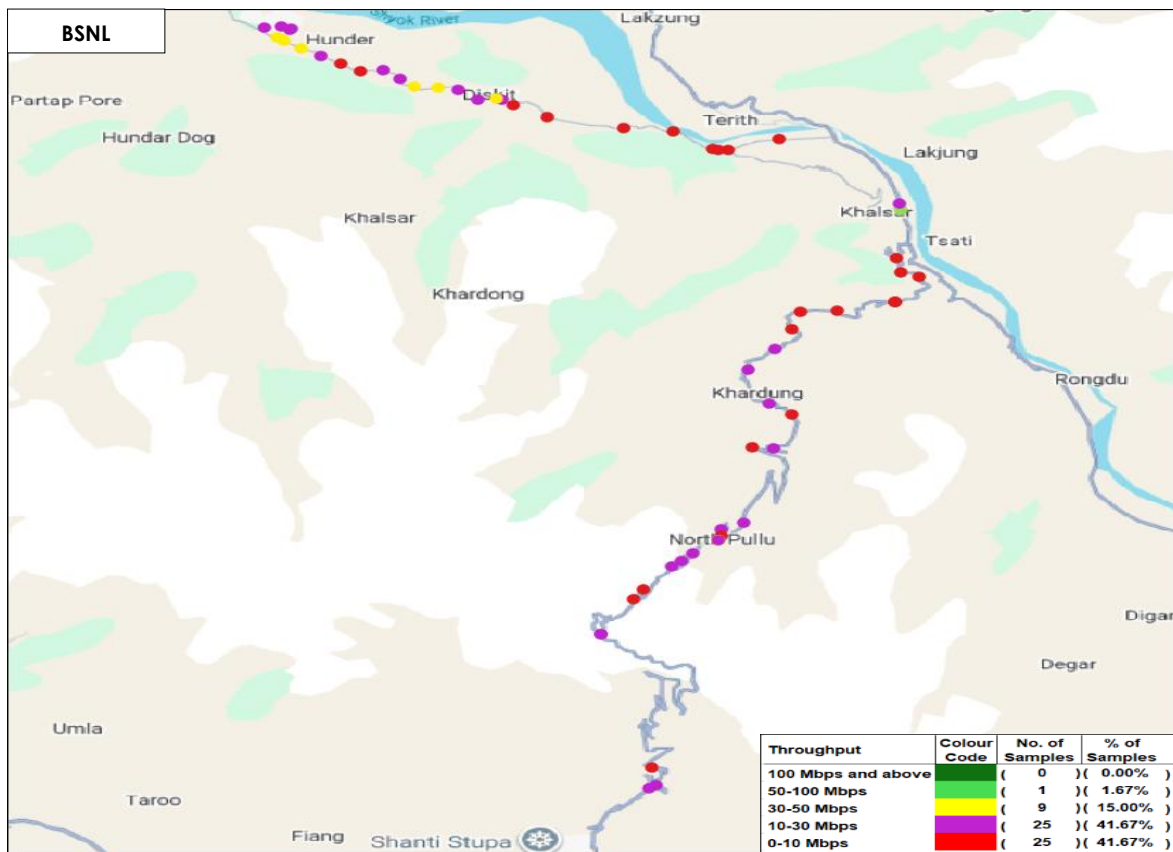
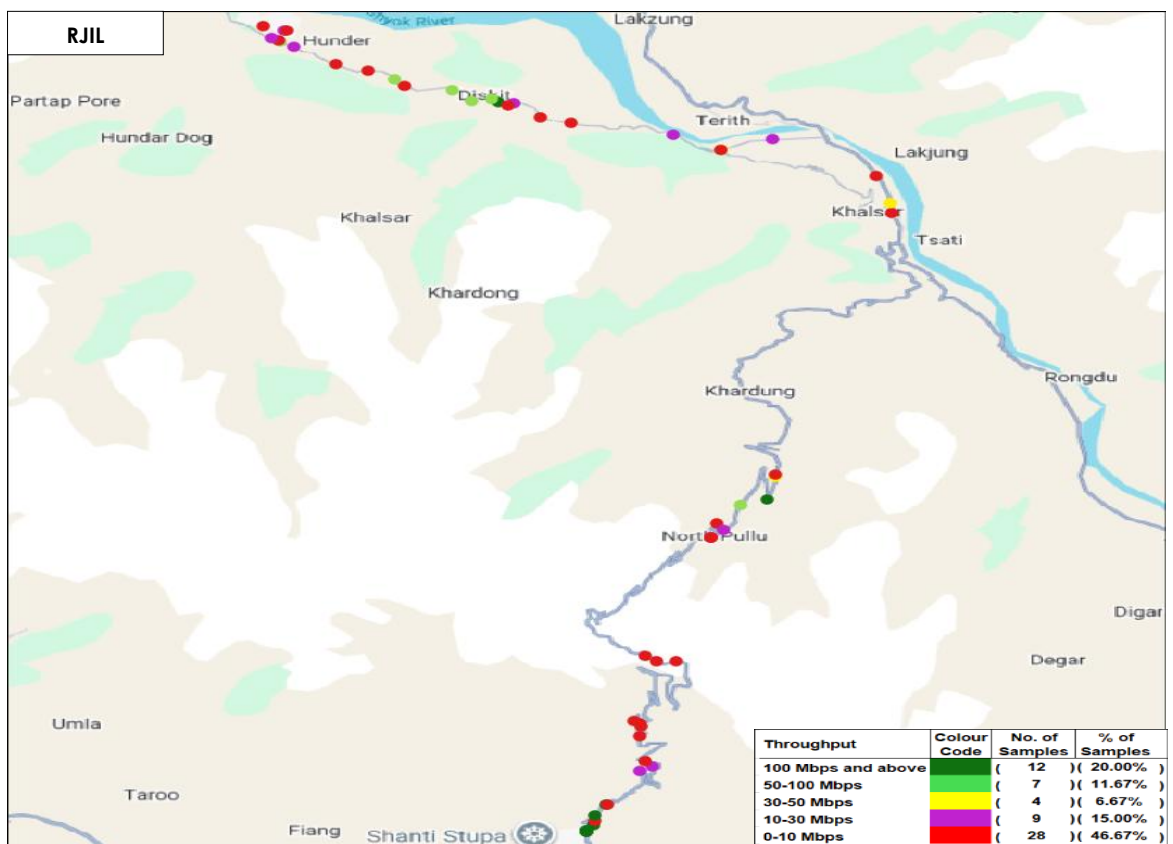
Note: Call silence instances are shown in red colour, and which can be clicked to know the exact location (latitude and longitude) on the map.

(d) Data Download and Upload Throughput:

(i) Data Download Throughput: The TSP-wise details of **Average Download (DL) throughput** against declared typical DL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Download Throughput declared by TSP	(Mbits/s)	23.00	5.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	109.57	16.39	122.16



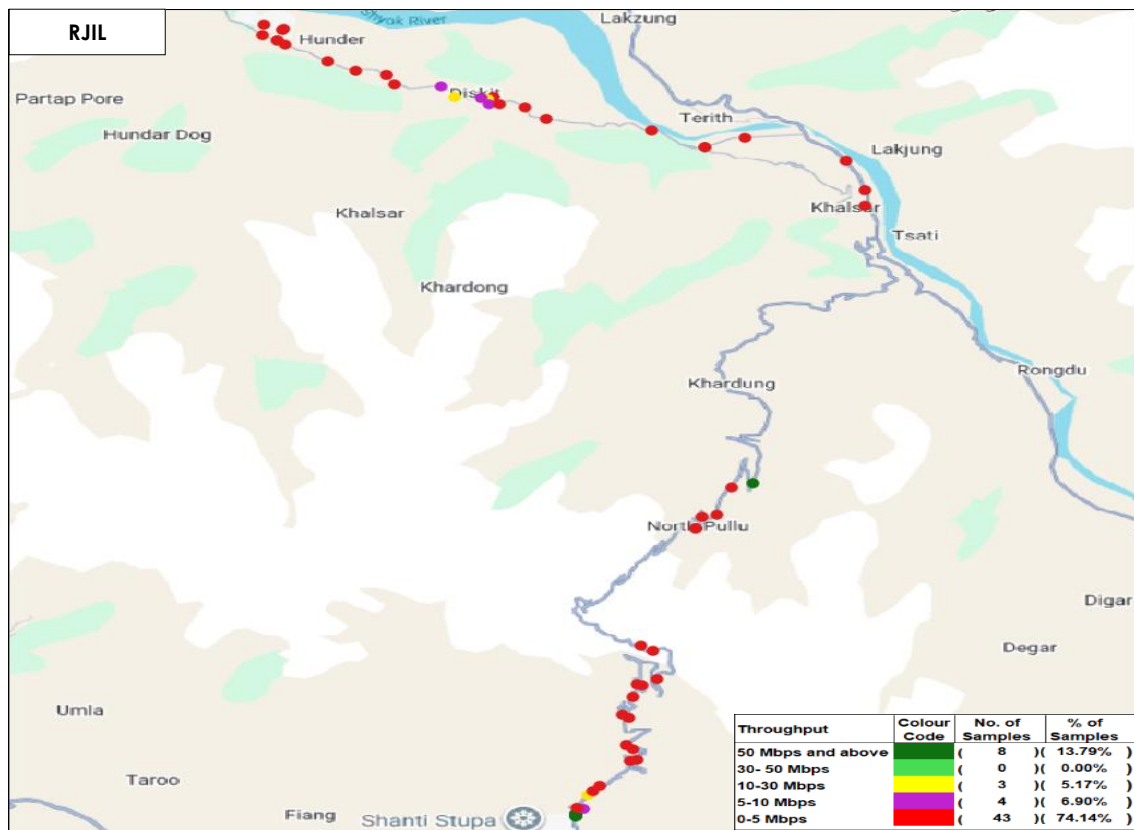


Note: Plot is based on Dynamic Drive Test results only.

(ii) **Data Upload Throughput:** The TSP-wise details of **Average Upload (UL) throughput** against declared typical UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Upload Throughput declared by TSP	(Mbits/s)	10.00	3.00	7.00
Average Upload Throughput measured during IDT	(Mbits/s)	14.21	7.81	12.02



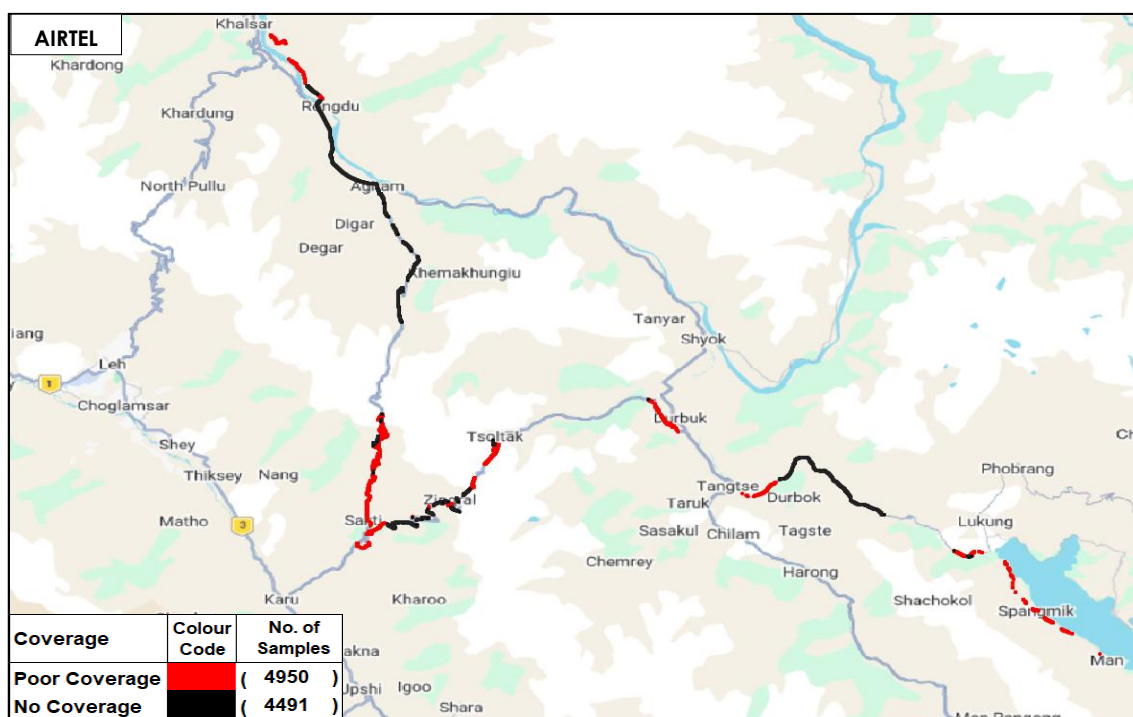
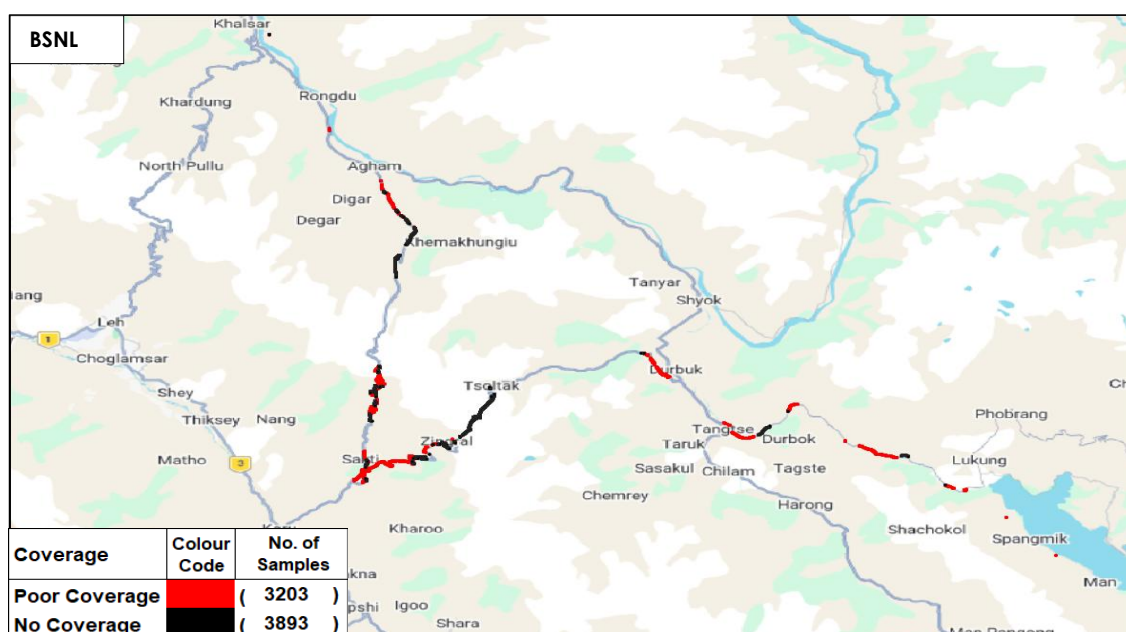


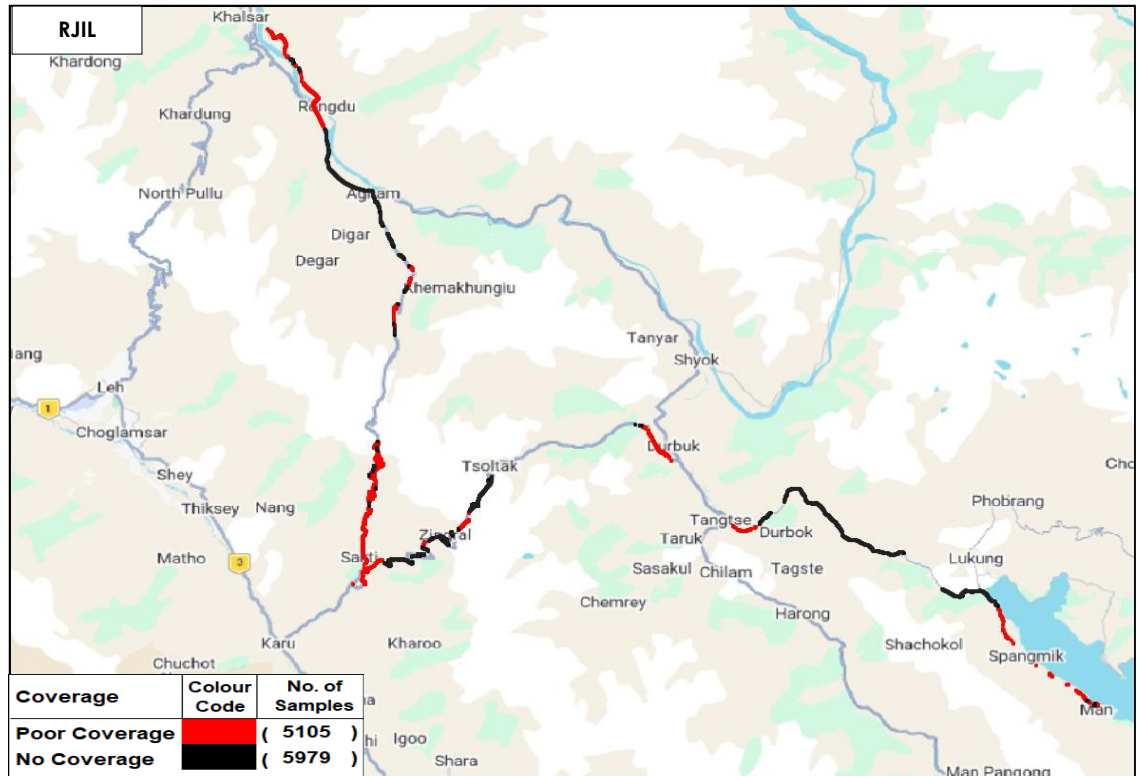
Note: Plot is based on Dynamic Drive Test results only.

3. Highway Drive: Nubra Valley to Pangong

a) **Coverage Gap** – The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Total Number of Samples captured on Drive test route	12272	12041	9930
Number of Samples having poor signal strength	4950	3203	5105
Number of Samples having limited service (No Coverage)	4491	3893	5979

Coverage Gap observed

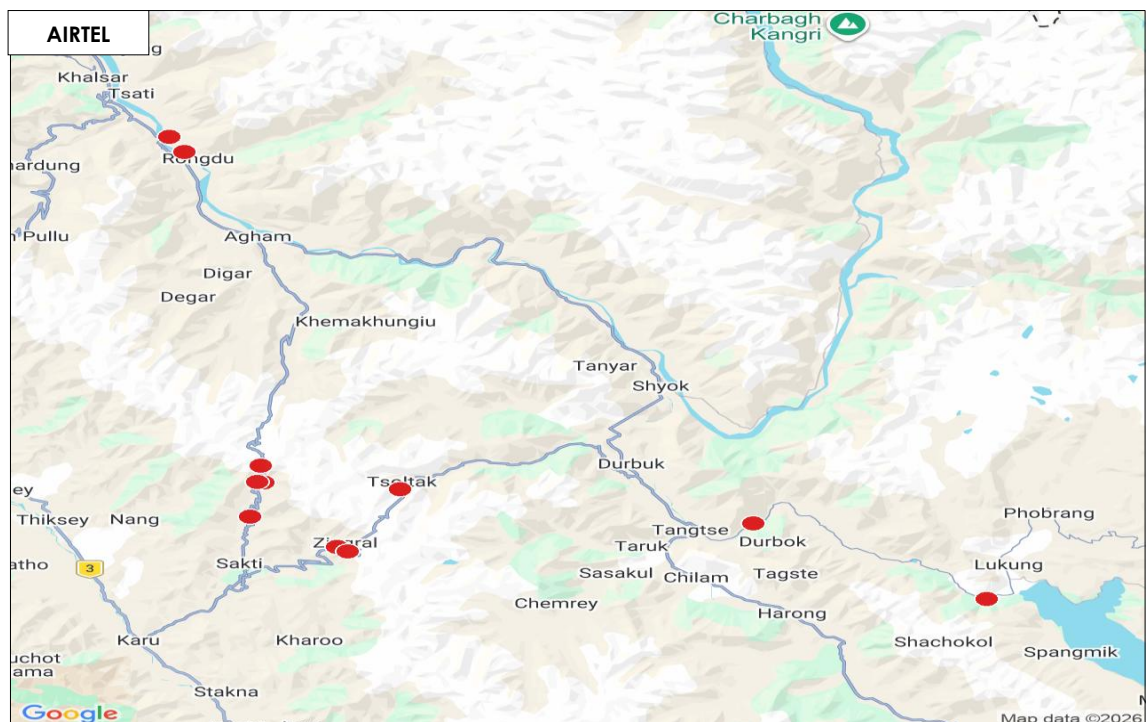


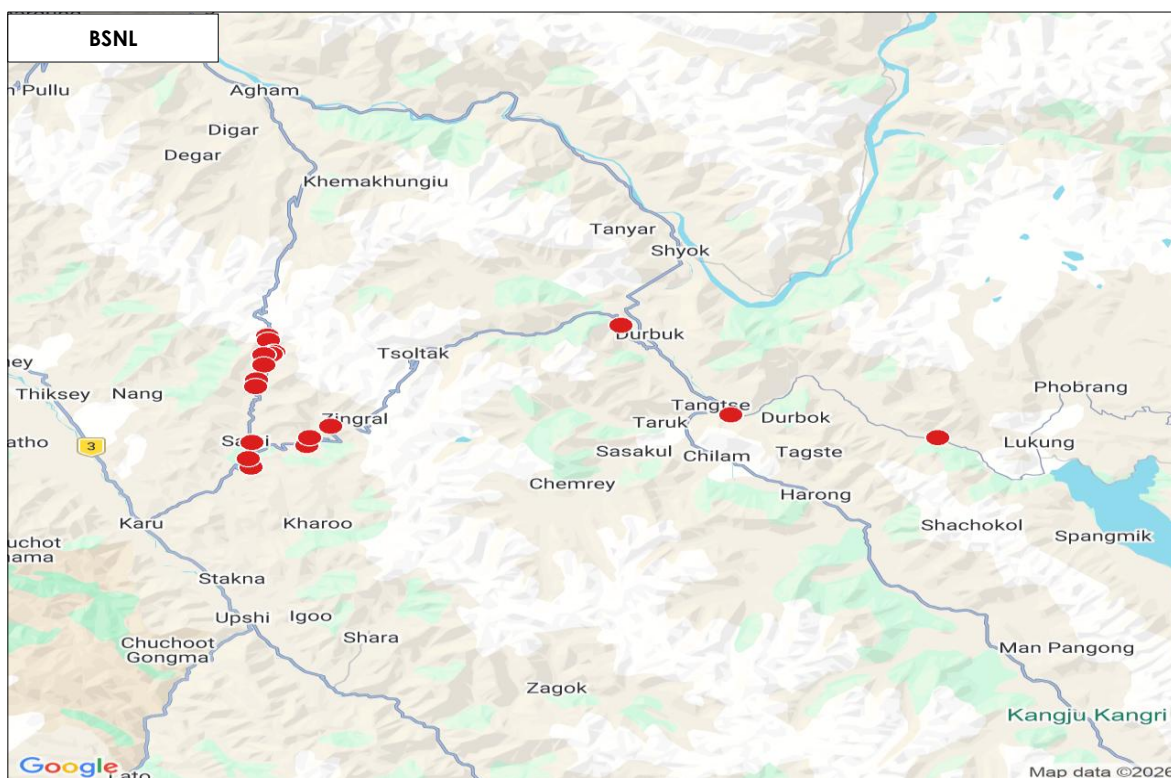
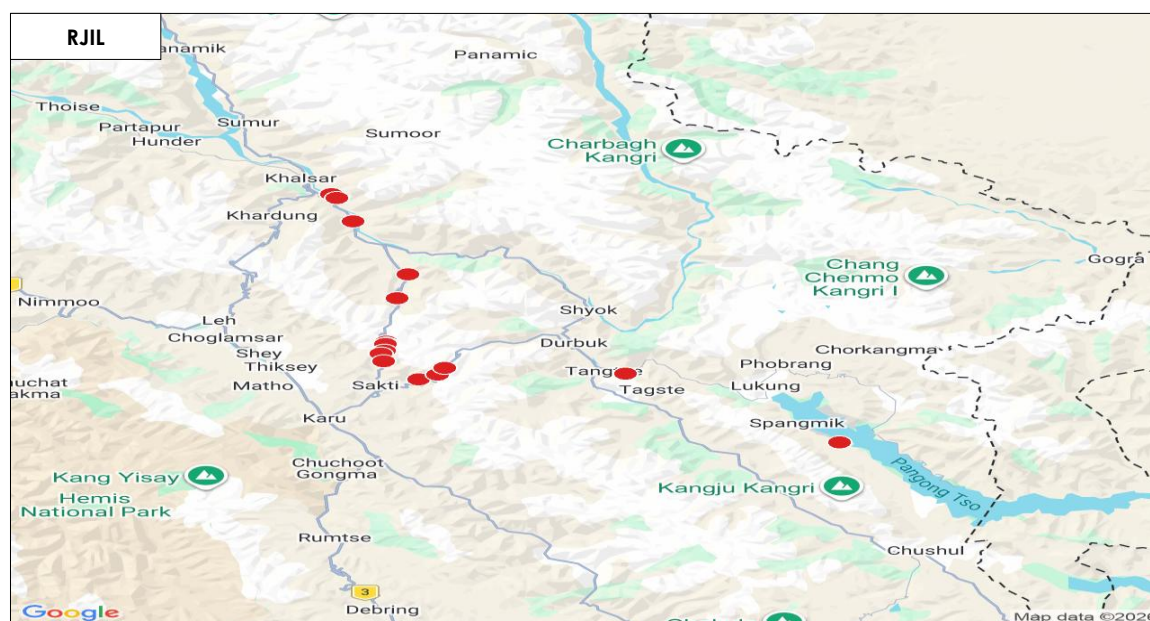
Note: Plot is based on Dynamic Drive Test results only

(b) Dropped Calls - The TSP-wise details of dropped calls in auto selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Number of successful Calls Established	67	64	60
Number of dropped Calls	11	17	16

Locations of Dropped Calls



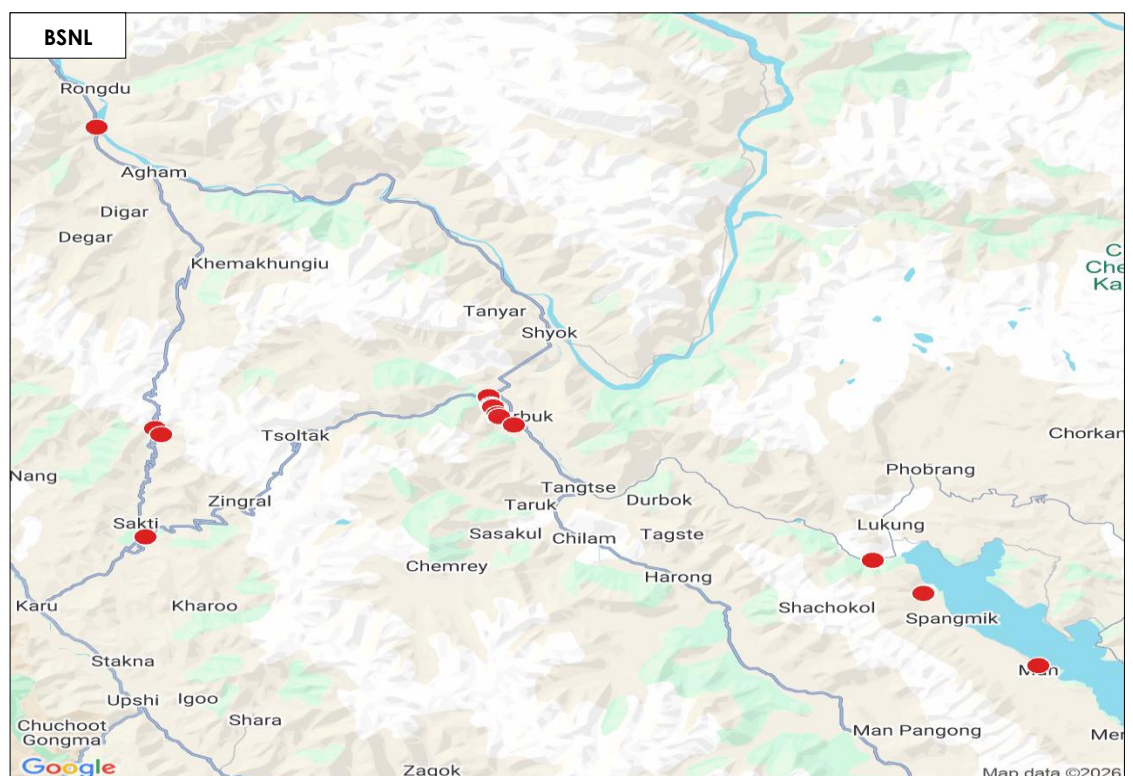


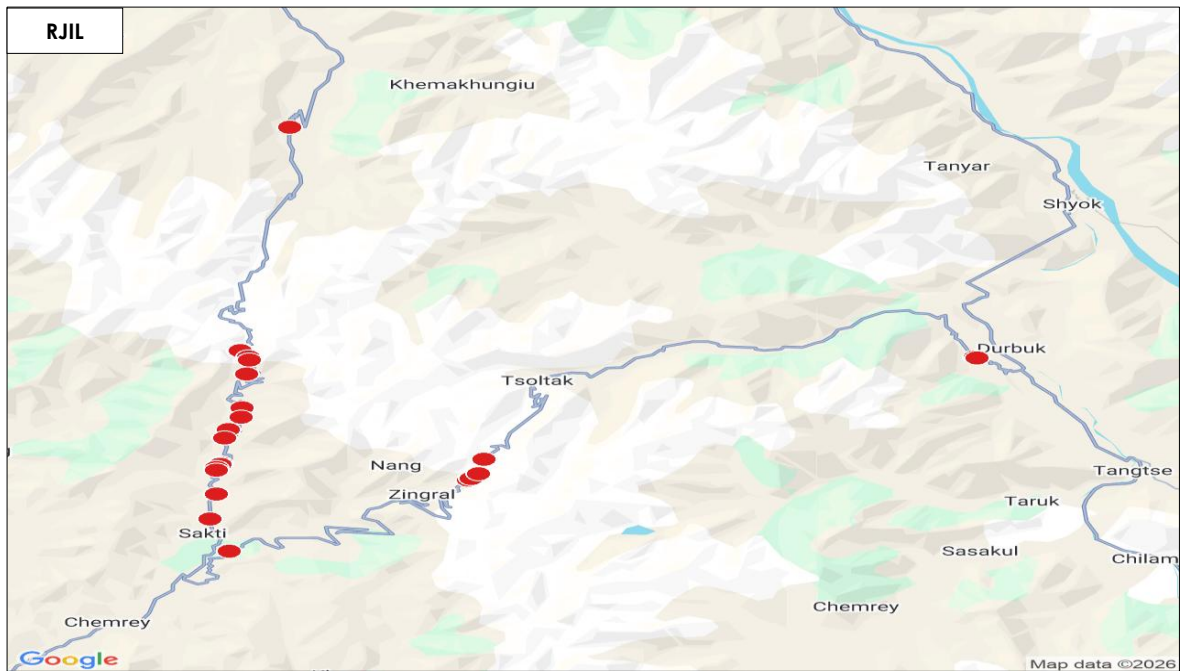
Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

(c) Call Silence Instance - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G).

Parameter	AIRTEL	BSNL	RJIL
Call Established (within service provider network)	66	59	52
Number of silences calls for >3 Sec	14	11	14
Total number of silence instances for >3 Sec	18	16	24

Locations of Call Silence Instance



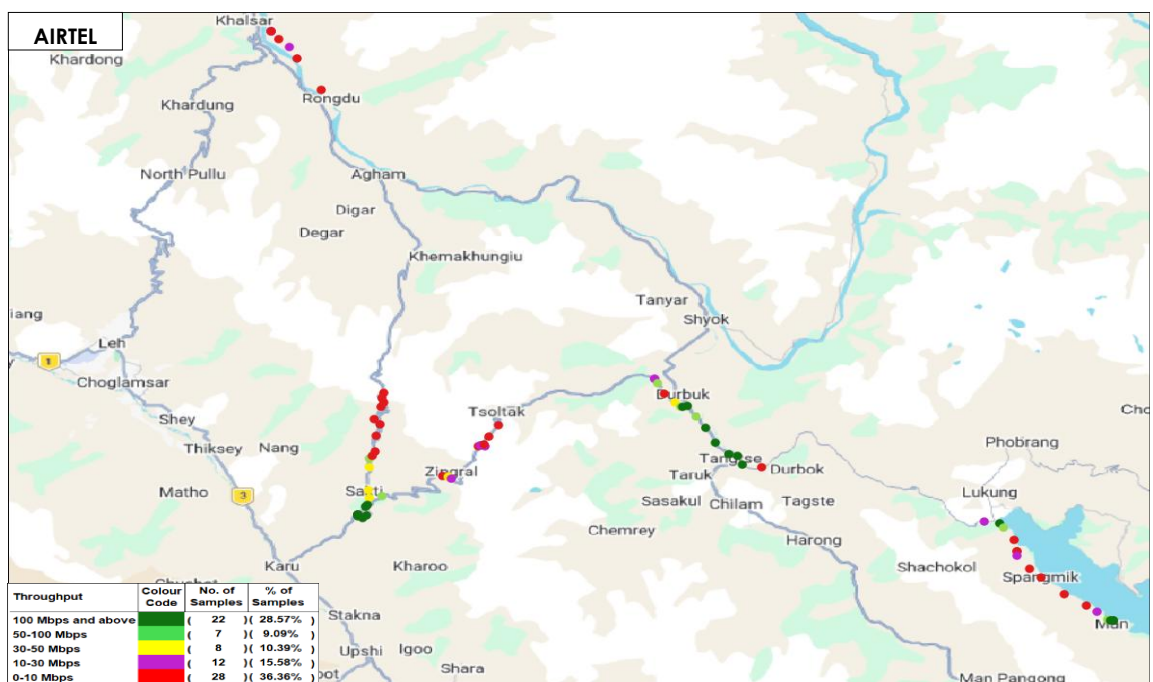


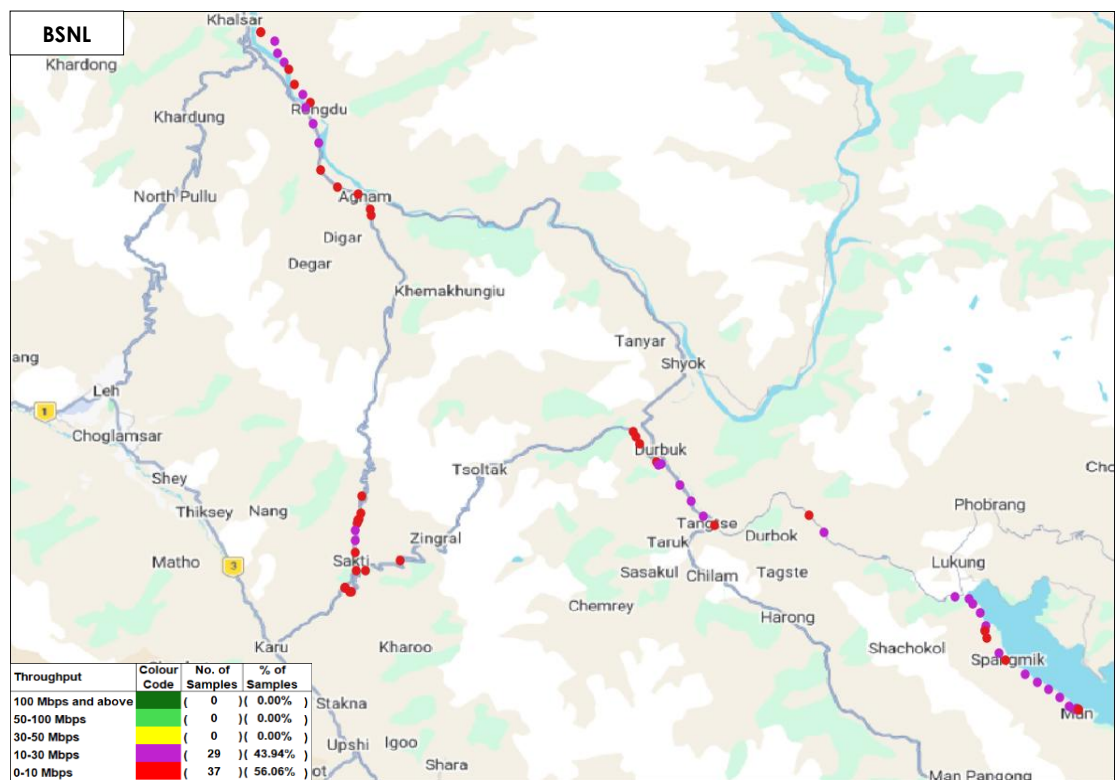
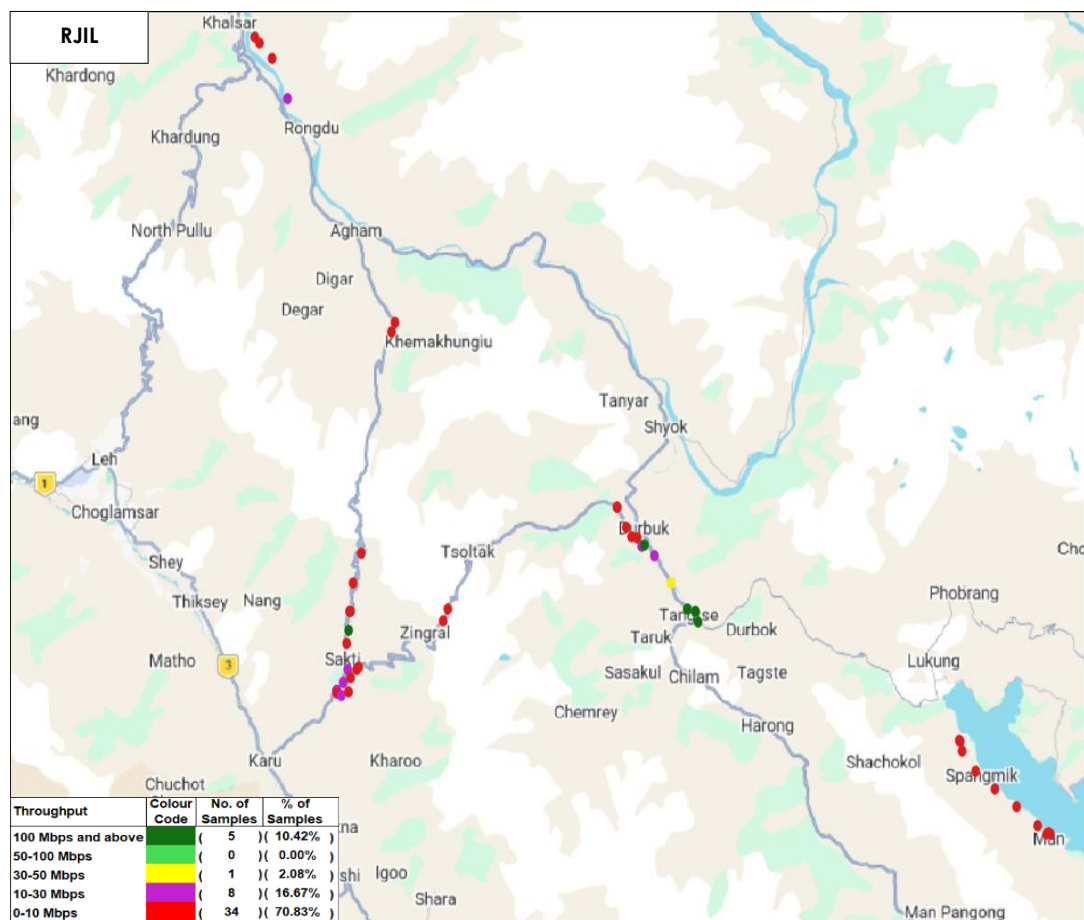
***Note:** Call silence instances are shown in red colour, and which can be clicked to know the exact location (latitude and longitude) on the map.*

(d) Data Download and Upload Throughput:

(i) Data Download Throughput: The TSP-wise details of **Average Download (DL)** throughput against declared typical DL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Download Throughput declared by TSP	(Mbits/s)	23.00	5.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	80.59	8.86	44.48

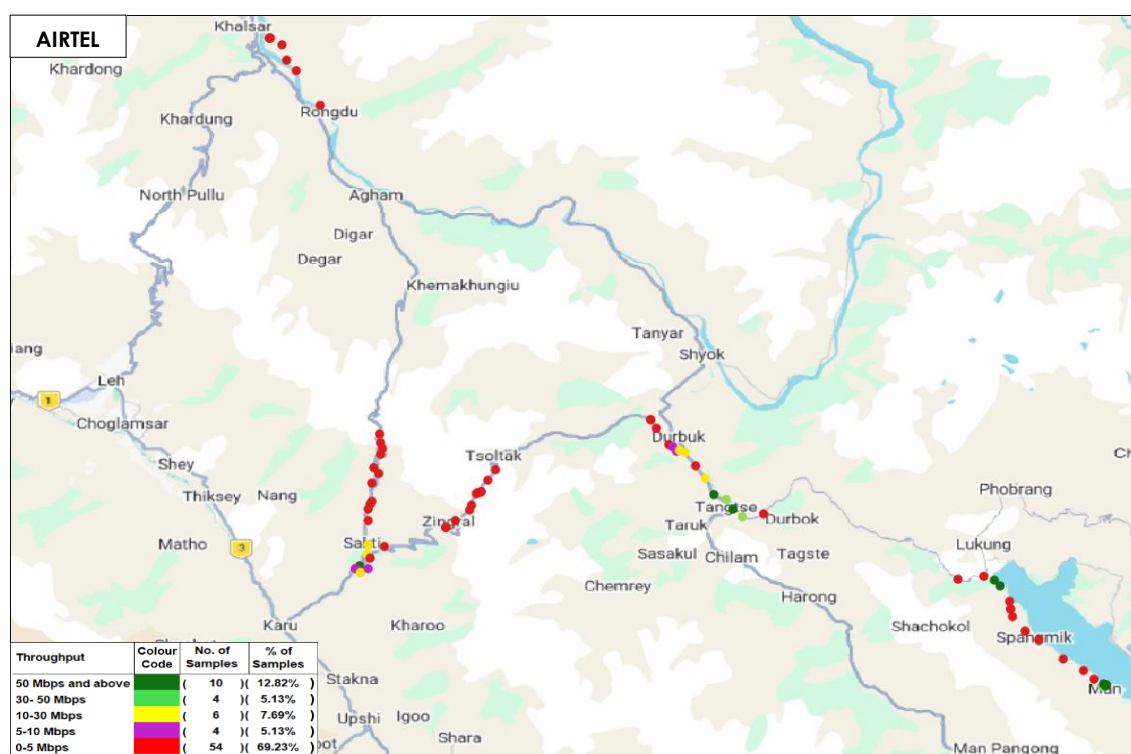


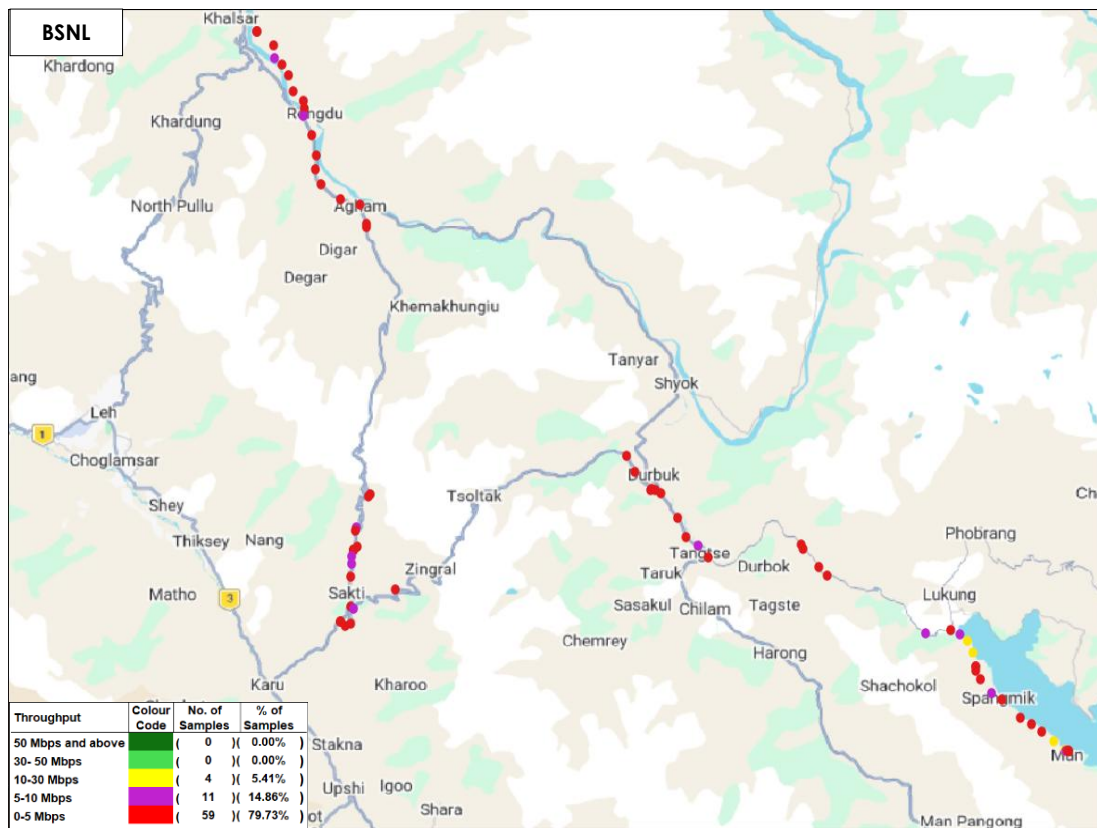
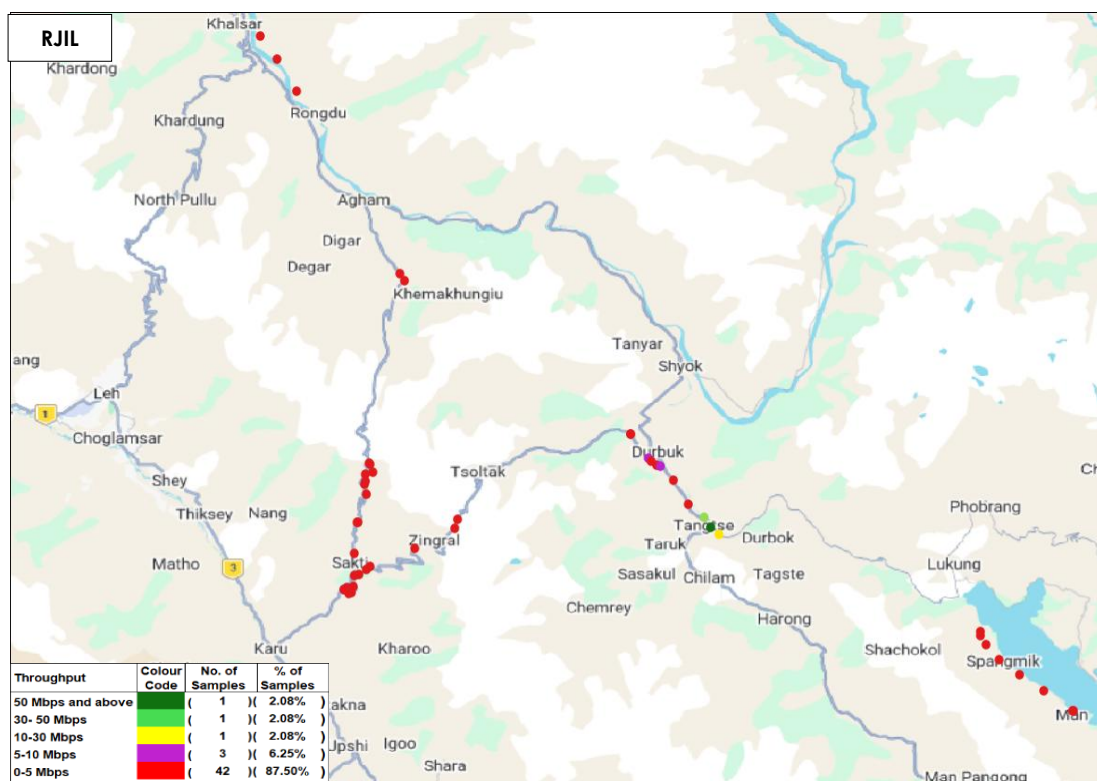


Note: Plot is based on Dynamic Drive Test results only.

(ii) Data Upload Throughput: The TSP-wise details of **Average Upload (UL) throughput** against declared typical UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Upload Throughput declared by TSP	(Mbits/s)	10.00	3.00	7.00
Average Upload Throughput measured during IDT	(Mbits/s)	14.69	3.51	3.94



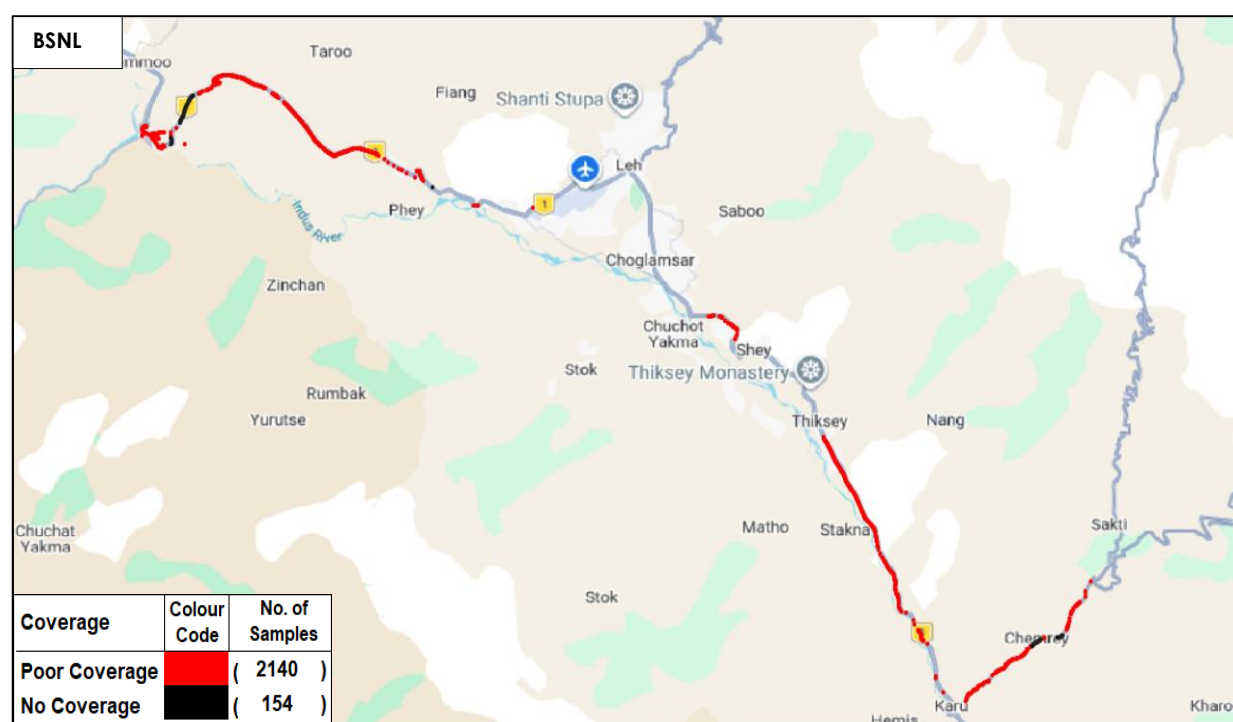


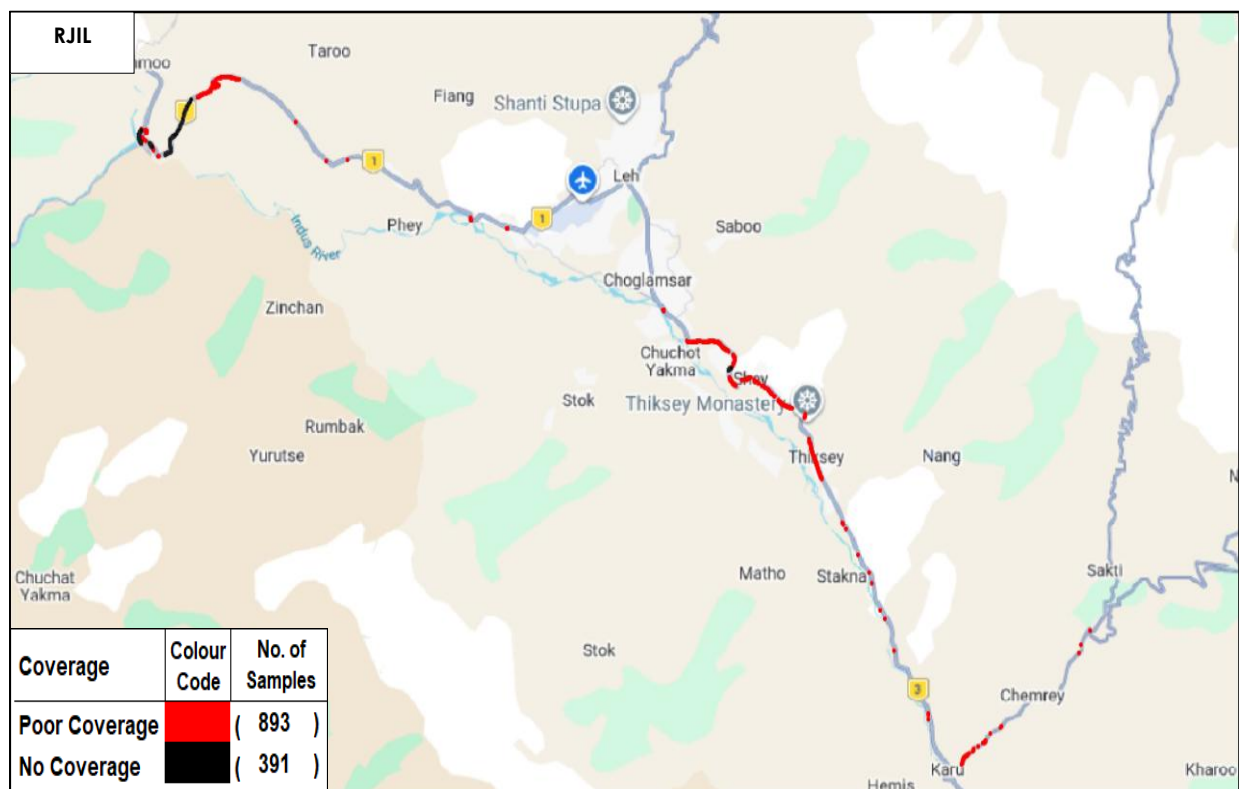
Note: Plot is based on Dynamic Drive Test results only.

4. Highway Drive: Sakti to Sangam

(a) Coverage Gap – The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Total Number of Samples captured on Drive test route	6295	6252	5597
Number of Samples having poor signal strength	800	2140	893
Number of Samples having limited service (No Coverage)	14	154	391

Coverage Gap observed

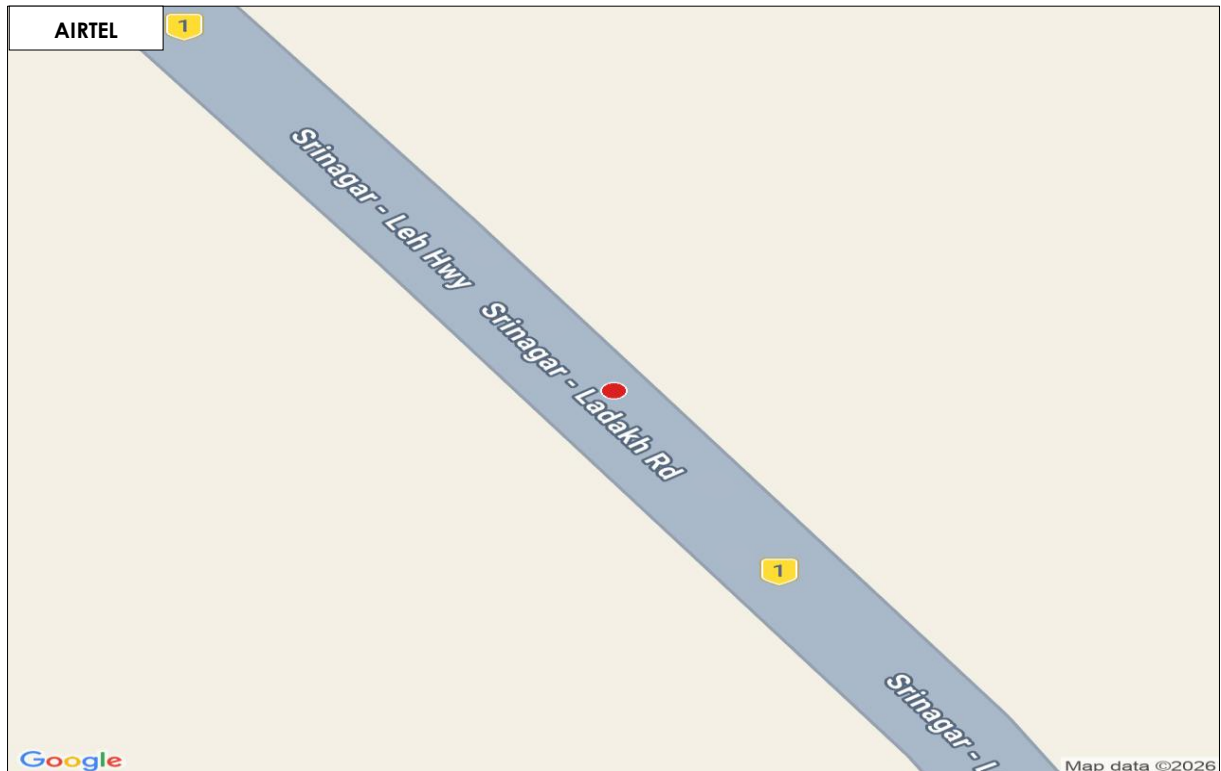


Note: Plot is based on Dynamic Drive Test results only.

(b) Dropped Calls - The TSP-wise details of dropped calls in auto selection mode (5G/4G/3G/2G).

Parameter	AIRTEL	BSNL	RJIL
Number of successful Calls Established	32	27	30
Number of dropped Calls	1	5	2

Locations of Dropped Calls



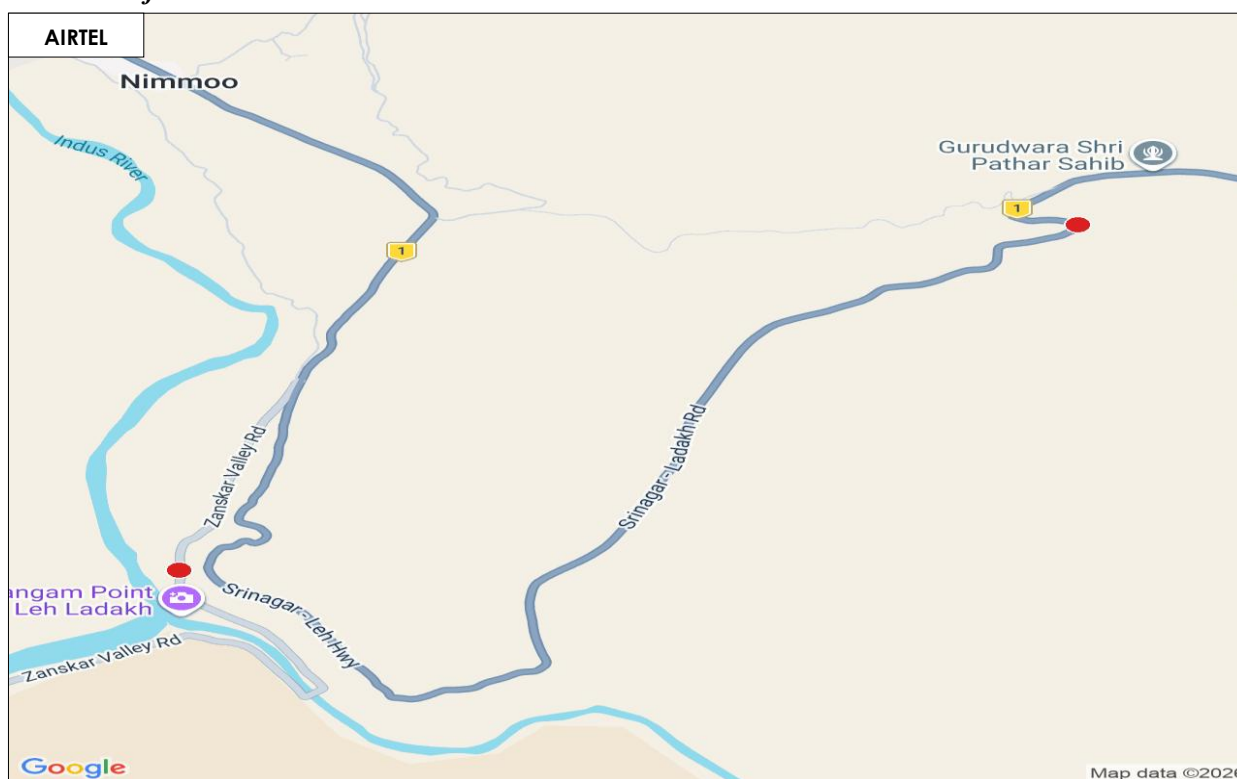
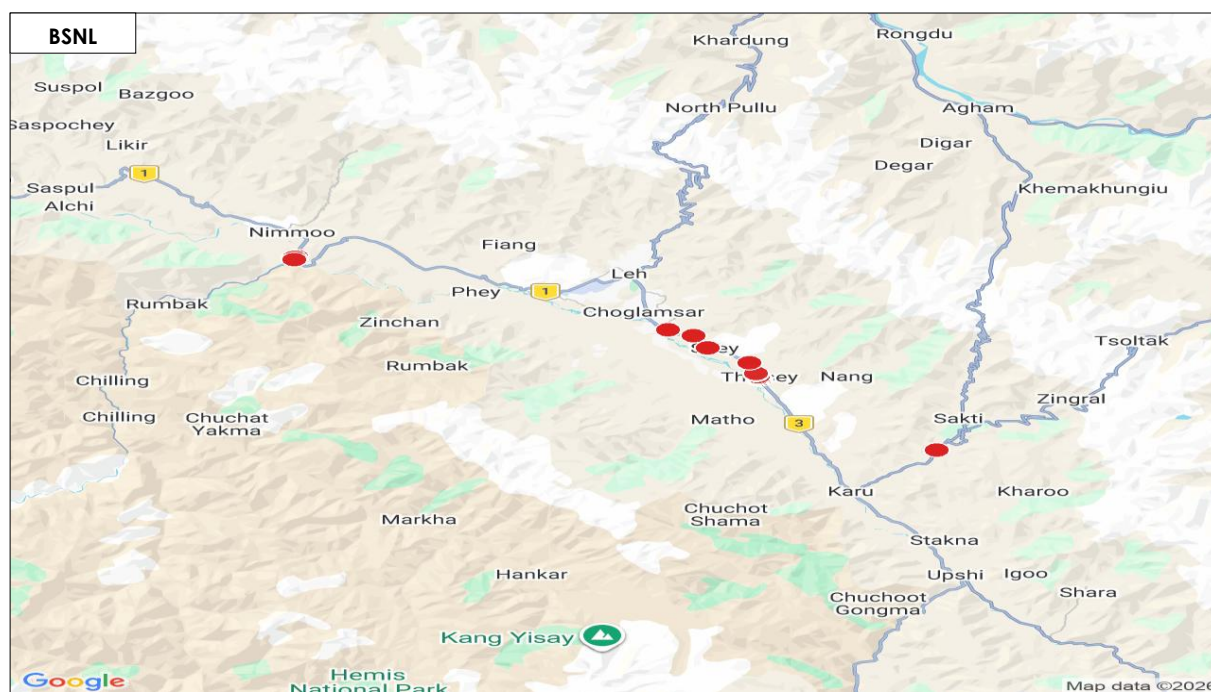


Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

(c) Call Silence Instance - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G).

Parameter	AIRTEL	BSNL	RJIL
Call Established (within service provider network)	31	26	30
Number of silences calls for >3 Sec	2	7	2
Total number of silence instances for >3 Sec	2	15	5

Locations of Call Silence Instance



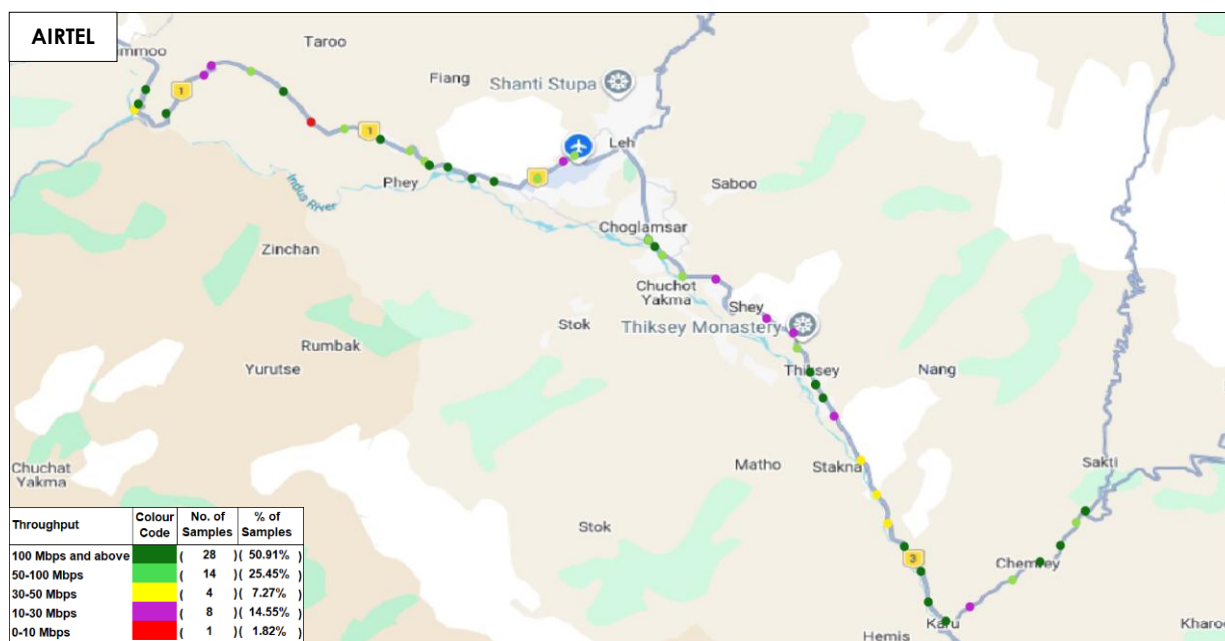


Note: Call silence instances are shown in red colour, and which can be clicked to know the exact location (latitude and longitude) on the map.

(d) Data Download and Upload Throughput:

(i) Data Download Throughput: The TSP-wise details of **Average Download (DL) throughput** against declared typical DL Throughput for month, in Auto-selection mode (5G/4G/3G/2G).

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	
Typical Download Throughput declared by TSP	(Mbits/s)	23.00	5.00	15.00	
Average Download Throughput measured during IDT	(Mbits/s)	96.97	6.00	203.25	





Note: Plot is based on Dynamic Drive Test results only

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

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)
Typical Upload Throughput declared by TSP	(Mbits/s)	10.00	3.00	7.00
Average Upload Throughput measured during IDT	(Mbits/s)	14.67	4.14	18.84





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