

TELECOM REGULATORY AUTHORITY OF INDIA

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For Immediate Release

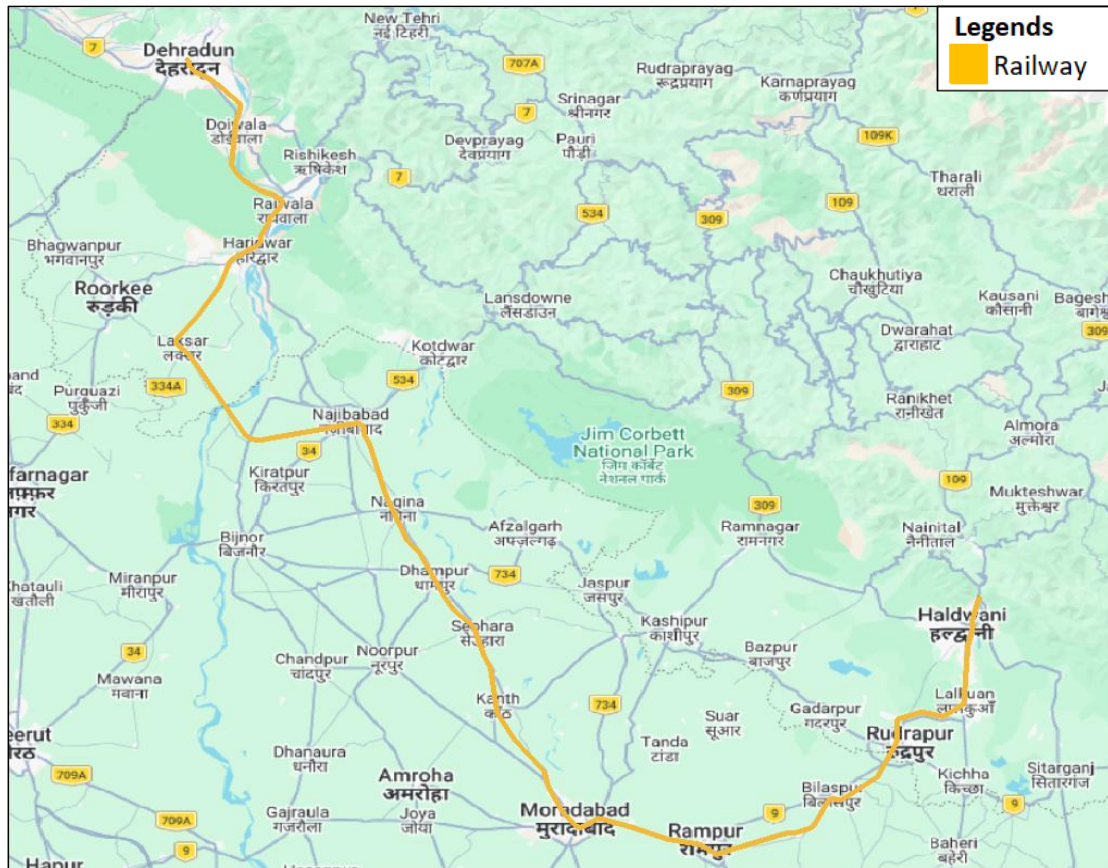
TRAI Assesses Mobile Network Quality Across Kathgodam to Dehradun Railway route passing through Haldwani, Lal Kuan, Rudrapur City, Rampur, Moradabad, Najibabad Junction, Haridwar etc.

The Telecom Regulatory Authority of India (TRAI) has released findings of Independent Drive Test (IDT) conducted through its appointed agency across Kathgodam to Dehradun Railway under UPW LSA, during the month of August 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). The performance of TSPs for key Quality of Service (QoS) parameters, captured during IDT are published to inform Consumers and encourage TSPs to improve their services. 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. `

2. These tests were conducted under the supervision of the TRAI Regional Office Bhopal. 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.

3. The drive tests conducted across City drive – 335.8 KMs Kathgodam to Dehradun Railway from 13th August 2026 in **UP West LSA**.

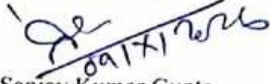
4. **Drive Test Route Map:** The following map provides overview of drive test routes indicating City drive, Inter-operator calling, Hotspots and Walk tests, as per the legends shown on the map: -



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 (Mute) Rate, Speech Quality (MOS).
 - c) **Call Silence (Mute) Instance:** Number of call silence (Mute) instance occurred during the calls.
 - d) **Data Services:** Download/ Upload Throughput, Latency, Jitter, Packet Drop Rate
6. The overall mobile network performance in Kathgodam to Dehradun railway route for the key parameters has been summarised 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, were **2833/ 23986** for **Airtel**, **6638/ 23597** for **BSNL**, **1734/ 23643** for **RJIL** and **2774/ 24080** for **VIL** for Kathgodam to Dehradun railway route. 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 **5/ 115** for **Airtel**, **24/ 129** for **BSNL**, **5/ 124** for **RJIL** and **6/ 126** for **VIL** for Kathgodam to Dehradun railway route. 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 **113.02 Mbps** for **Airtel (5G)**, **10.84 Mbps** for **BSNL (4G)**, **156.76 Mbps** for **RJIL (5G)** and **36.32 Mbps** for **VIL (5G)** for Kathgodam to Dehradun railway route. Detail of Download throughput has been provided in the map **Annexed**.
 - ii) **Data Upload performance (Overall):** Average upload speed was observed as **16.60 Mbps** for **Airtel (5G)**, **4.83 Mbps** for **BSNL (4G)**, **18.18 Mbps** for **RJIL (5G)** and **8.47 Mbps** for **VIL (5G)** for Kathgodam to Dehradun railway route. Detail of Upload throughput has been provided in the map **Annexed**.
- Locations of Dropped Calls 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) **Railway Route** - Kathgodam to Dehradun passing through Haldwani, Lal Kuan, Rudrapur City, Rampur, Moradabad, Najibabad Junction, Haridwar etc.

6. The finding 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. For any clarification or additional information, an email can be sent to adv.bhopal@traigov.in or Regional Office of TRAI at Bhopal RO can be contacted on telephone no. +91-755-2575501.



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- 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	23986	23597	23643	24080
Number of Samples having poor signal strength	2833	6638	1734	2774
Number of Samples having limited service (No Coverage)	511	635	666	326

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

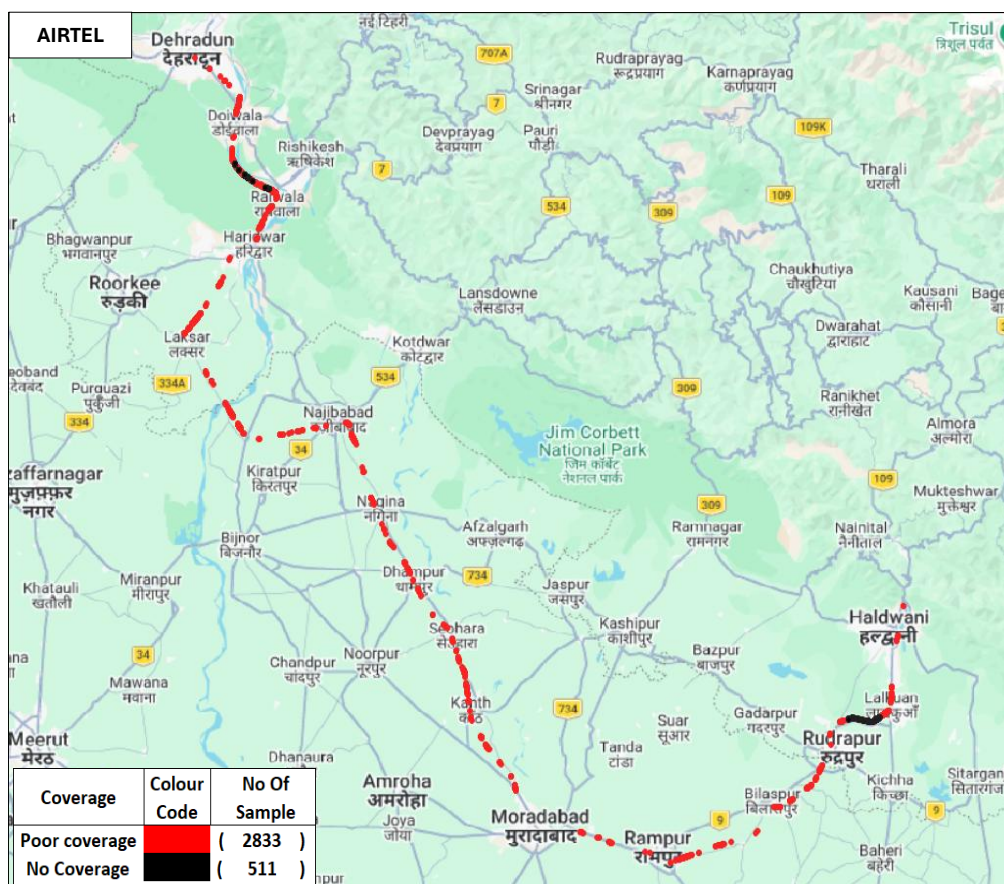


Figure-1: Poor coverage & no coverage locations in auto-selection mode (5G/4G/3G/2G) voice-Airtel.

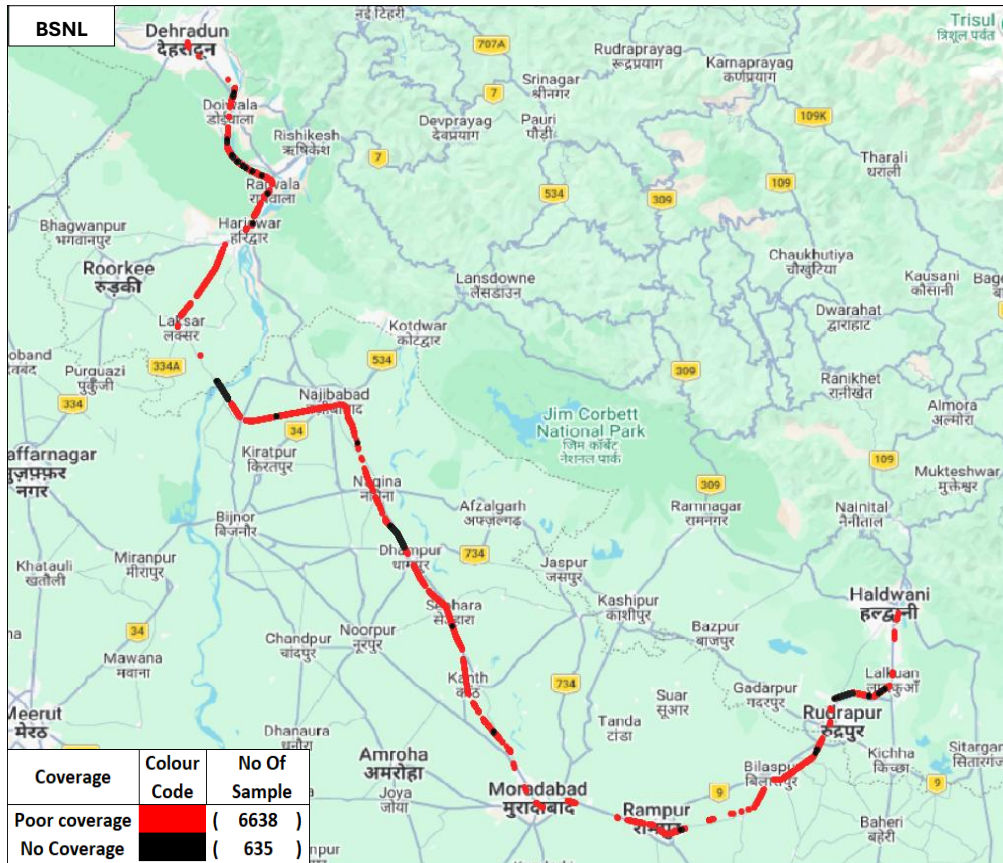


Figure-2: Poor coverage & no coverage locations in auto-selection mode (5G/4G/3G/2G) voice-BSNL.

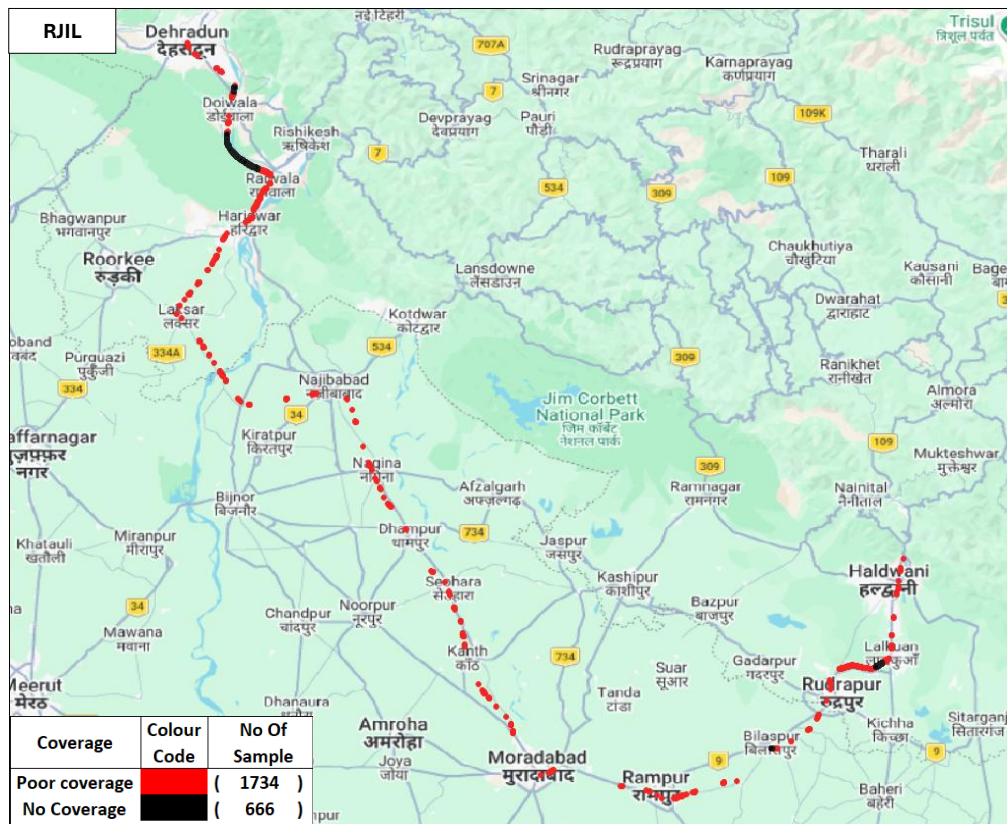


Figure-3: Poor coverage & no coverage locations in auto-selection mode (5G/4G/3G/2G) voice-RJIL.

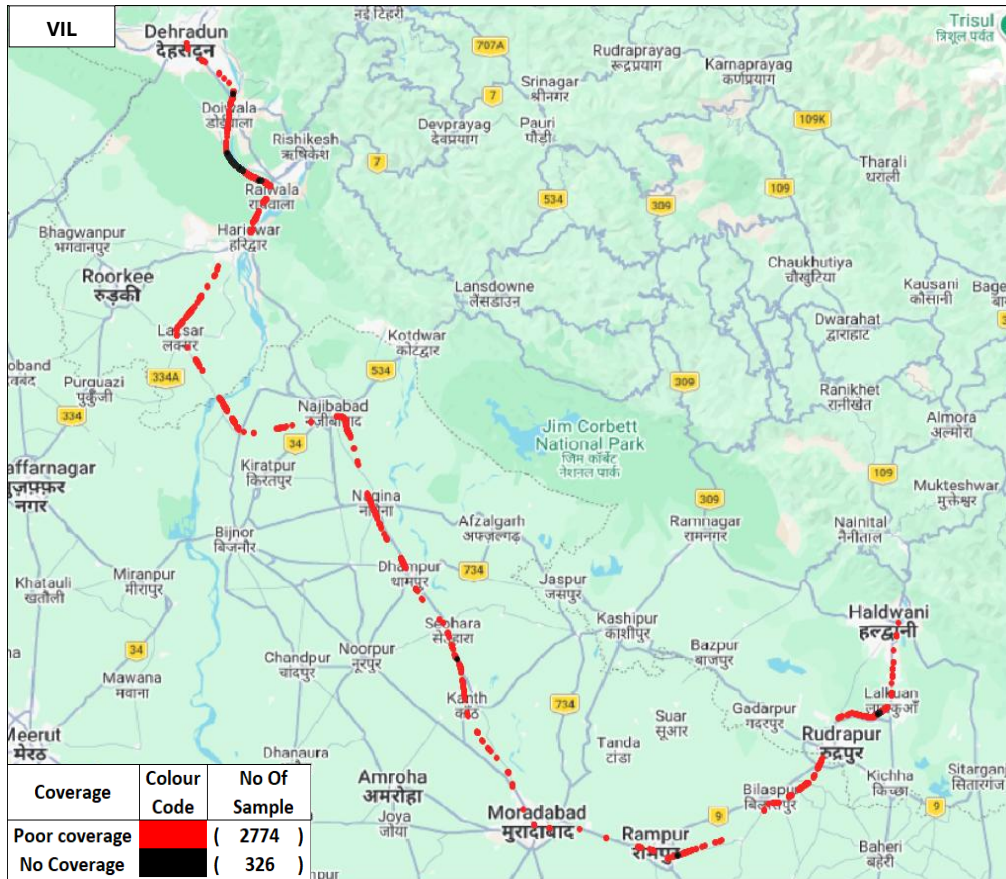


Figure-4: Poor coverage & no coverage locations in auto-selection mode 5G/4G/3G/2G voice- VIL.

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	115	129	124	126
Number of dropped Calls	5	24	5	6

Locations of Dropped Calls

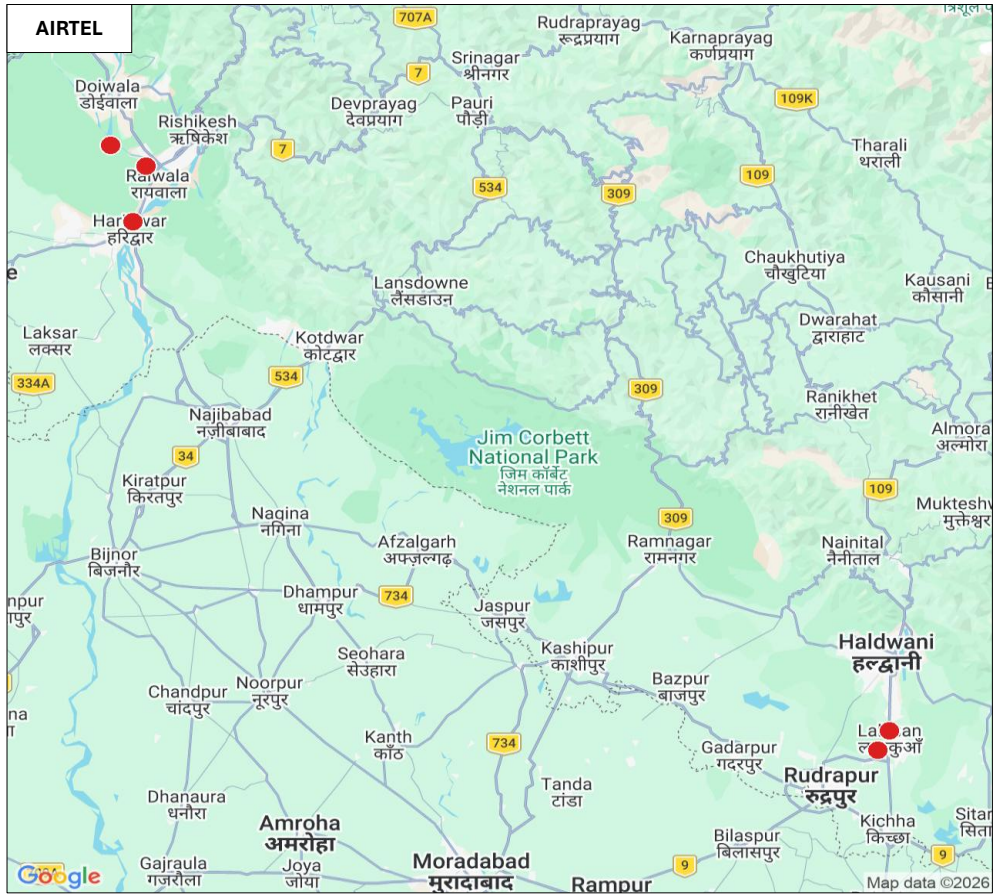


Figure-5: Drop call locations in auto-selection mode (5G/4G/3G/2G) voice – AIRTEL

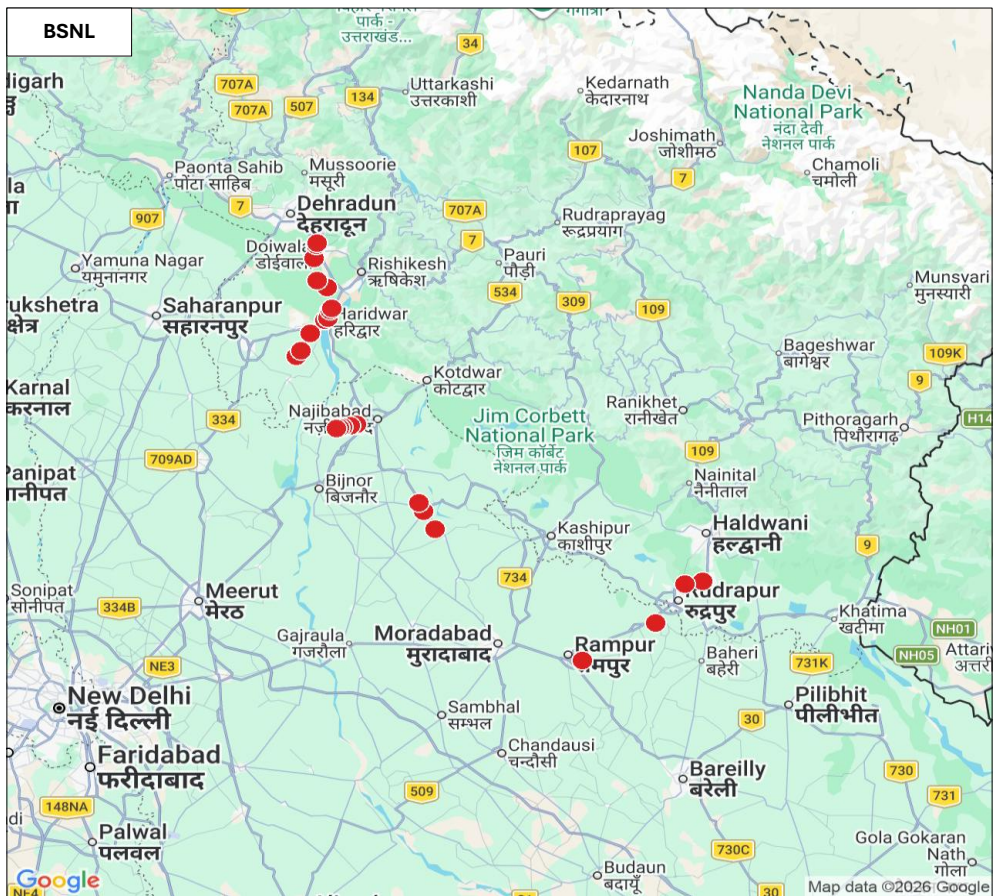


Figure-6: Drop call locations in auto-selection mode (5G/4G/3G/2G) voice – BSNL

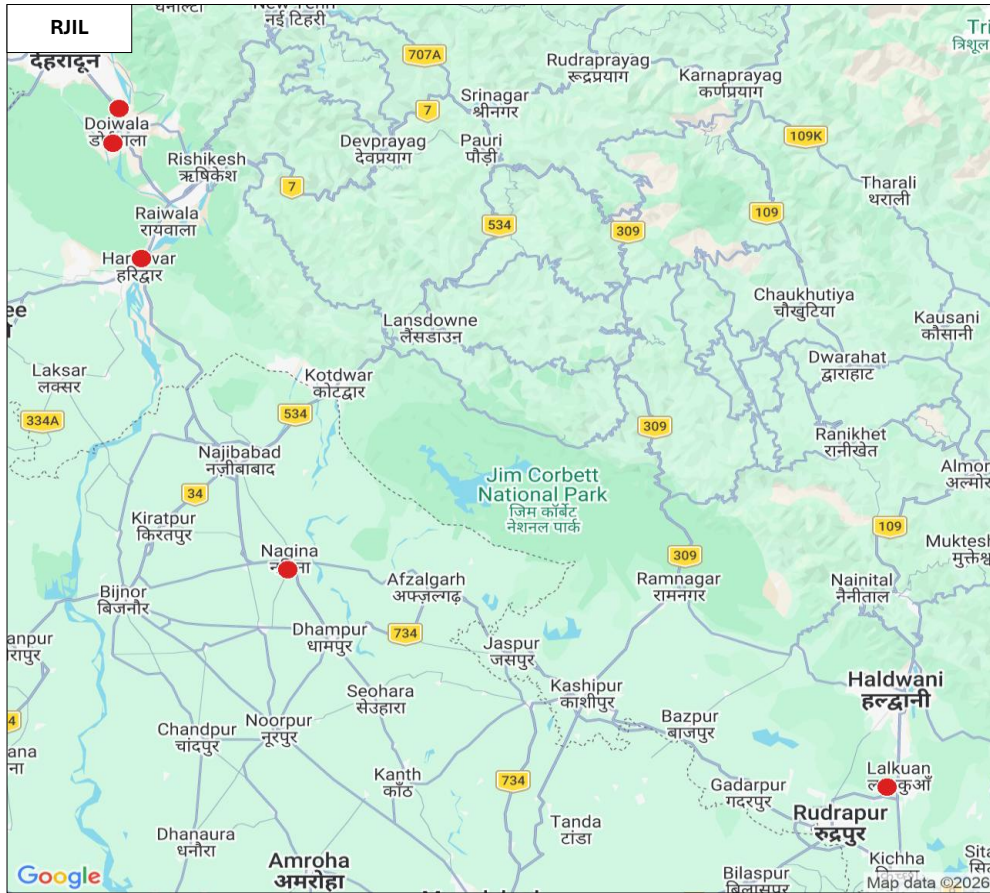


Figure-7: Drop call locations in auto-selection mode (5G/4G/3G/2G) voice – RJIL

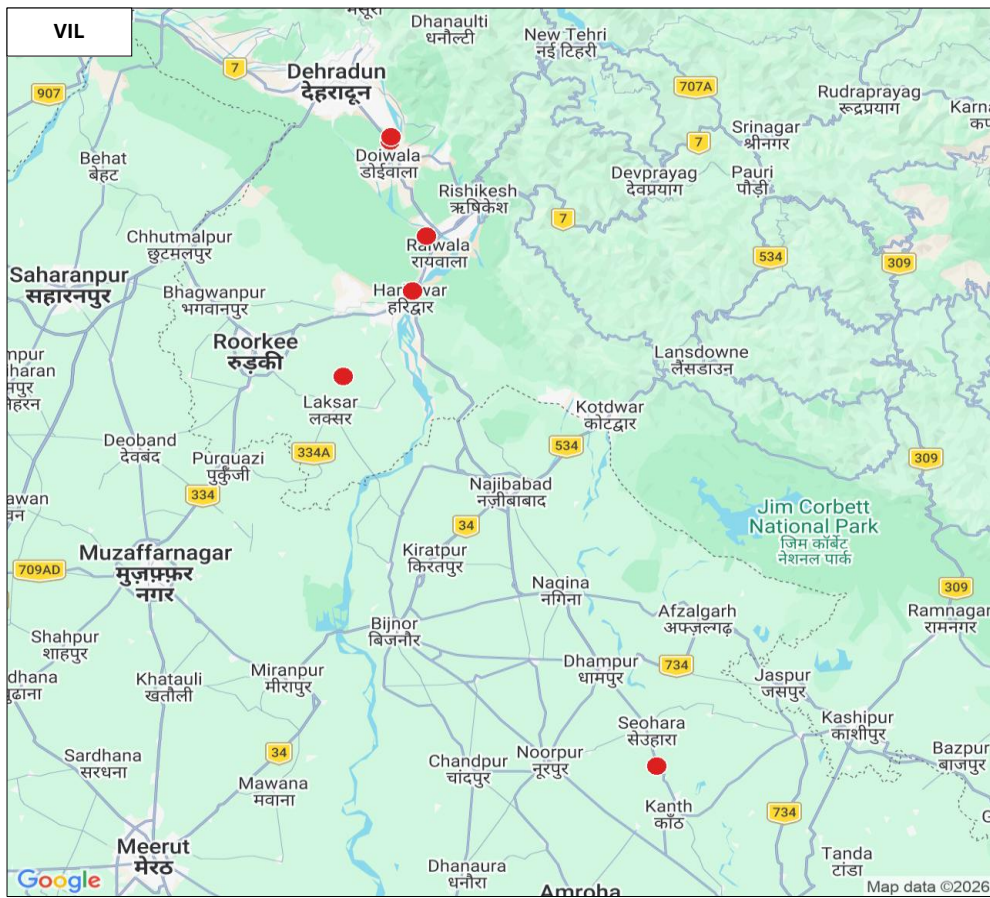


Figure-8: Drop call locations in auto-selection mode (5G/4G/3G/2G) voice – VIL

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

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)	18.00	2.00	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	113.02	10.84	156.76	36.32

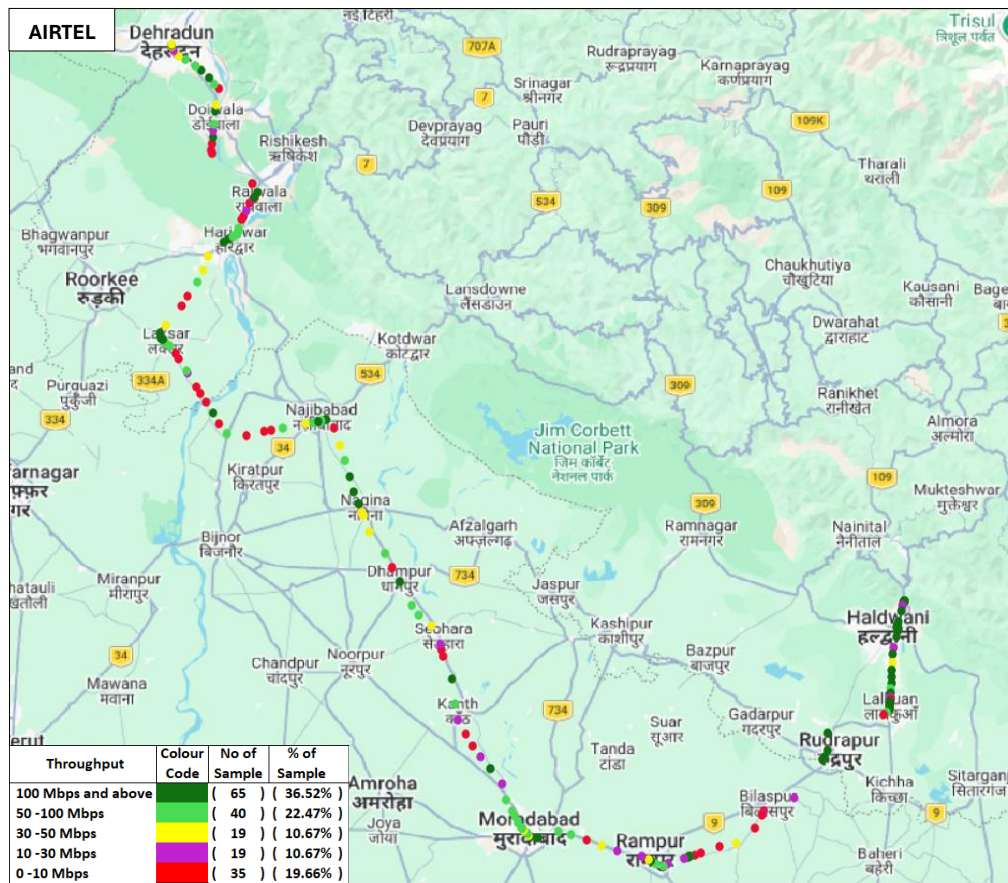


Figure-9: Download throughput distribution auto-selection mode (5G/4G/3G/2G) - AIRTEL.

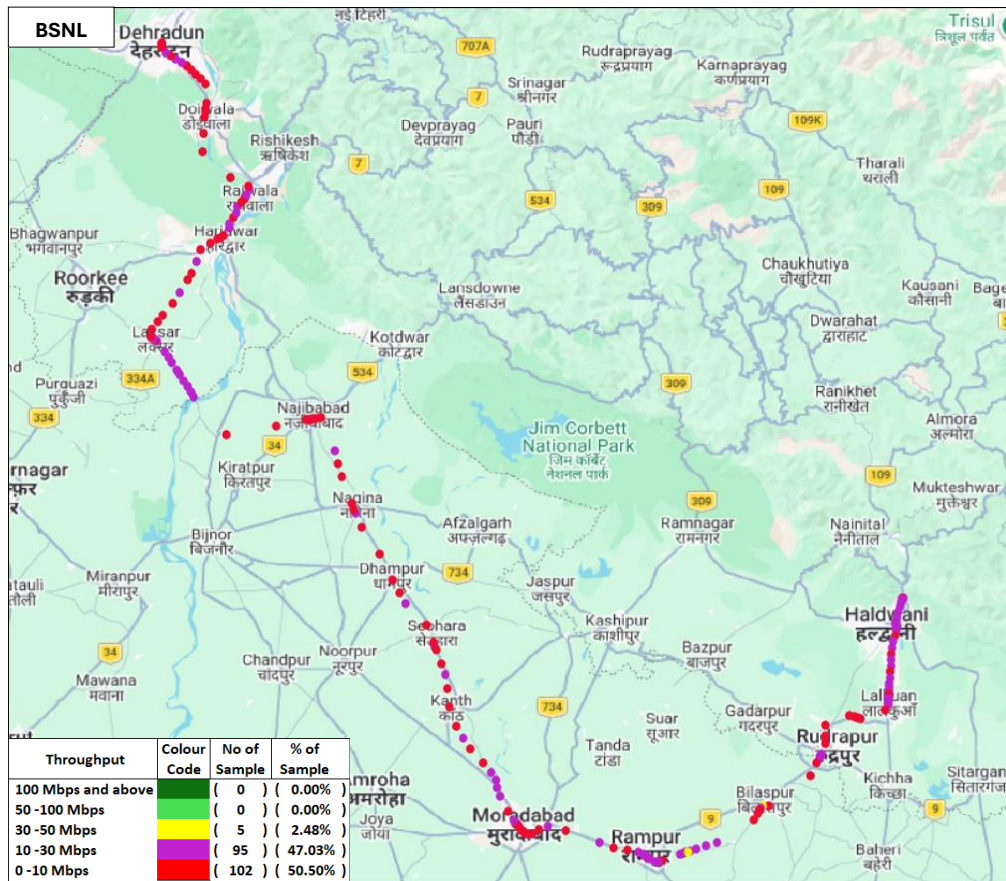


Figure-10: Download throughput distribution auto-selection mode (5G/4G/3G/2G) - BSNL.

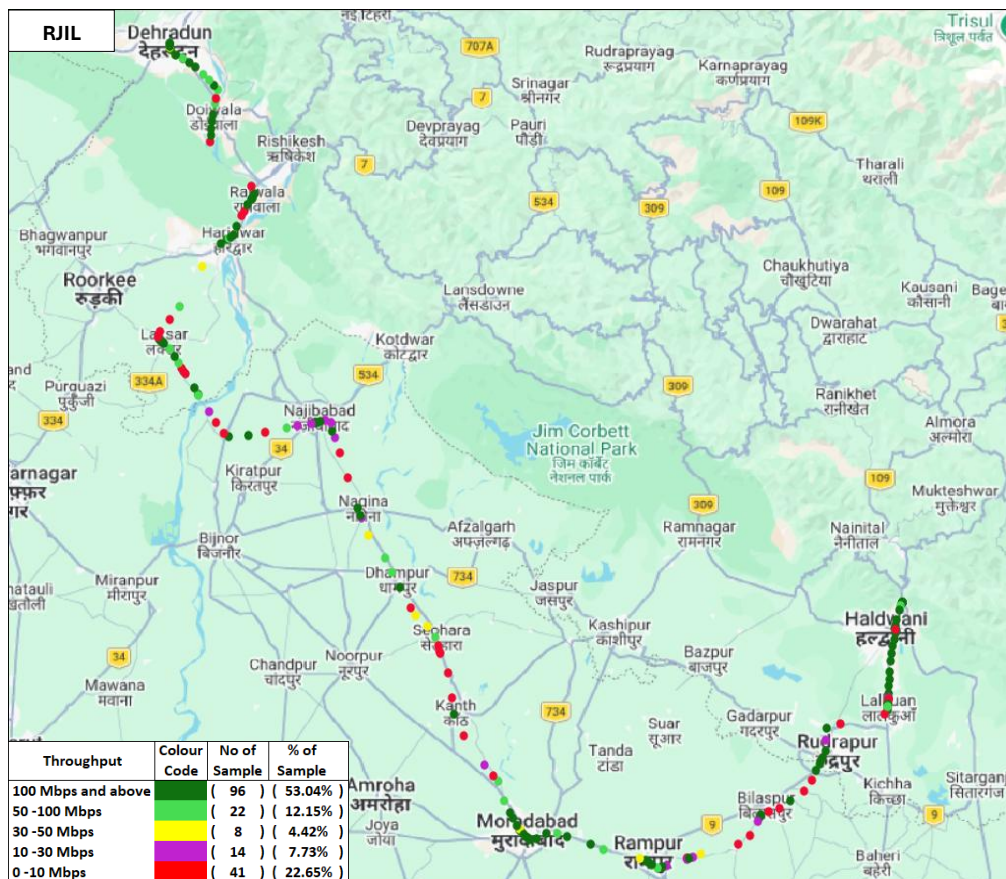


Figure-11: Download throughput distribution auto-selection mode (5G/4G/3G/2G) - RJIL.

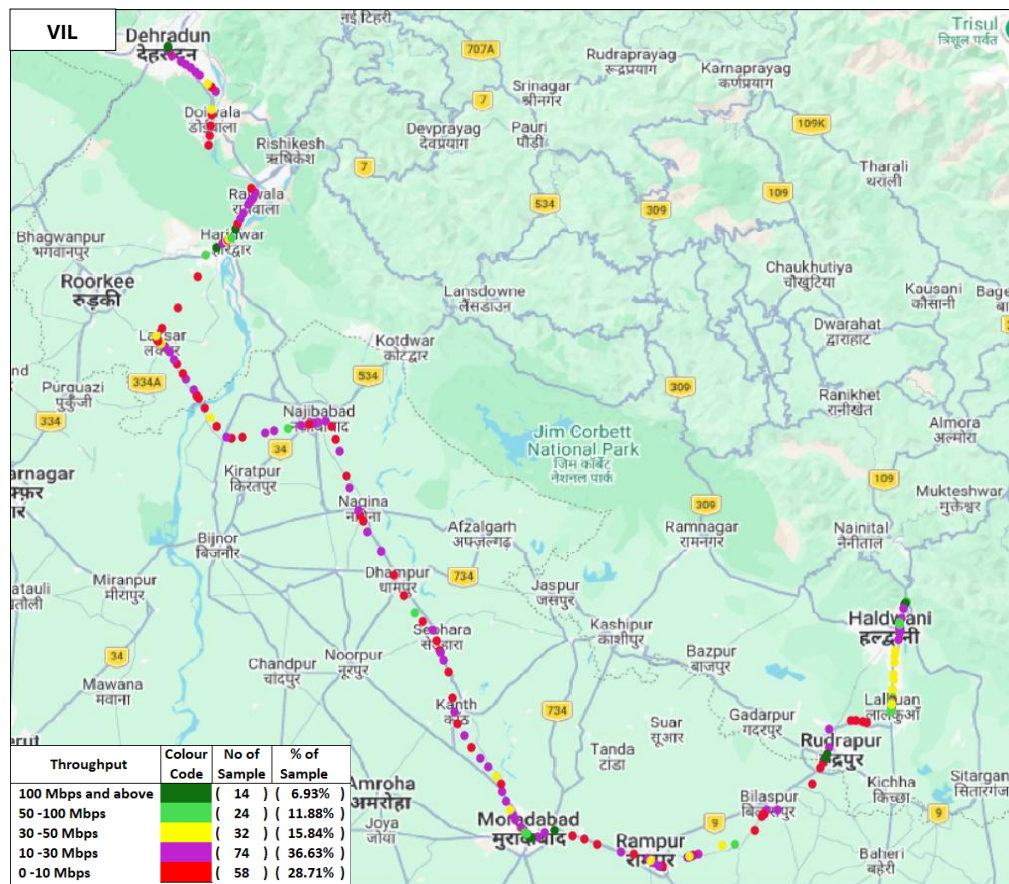


Figure-12: Download throughput distribution auto-selection mode (5G/4G/3G/2G) - VIL.

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)	8.00	2.00	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	16.60	4.83	18.18	8.47

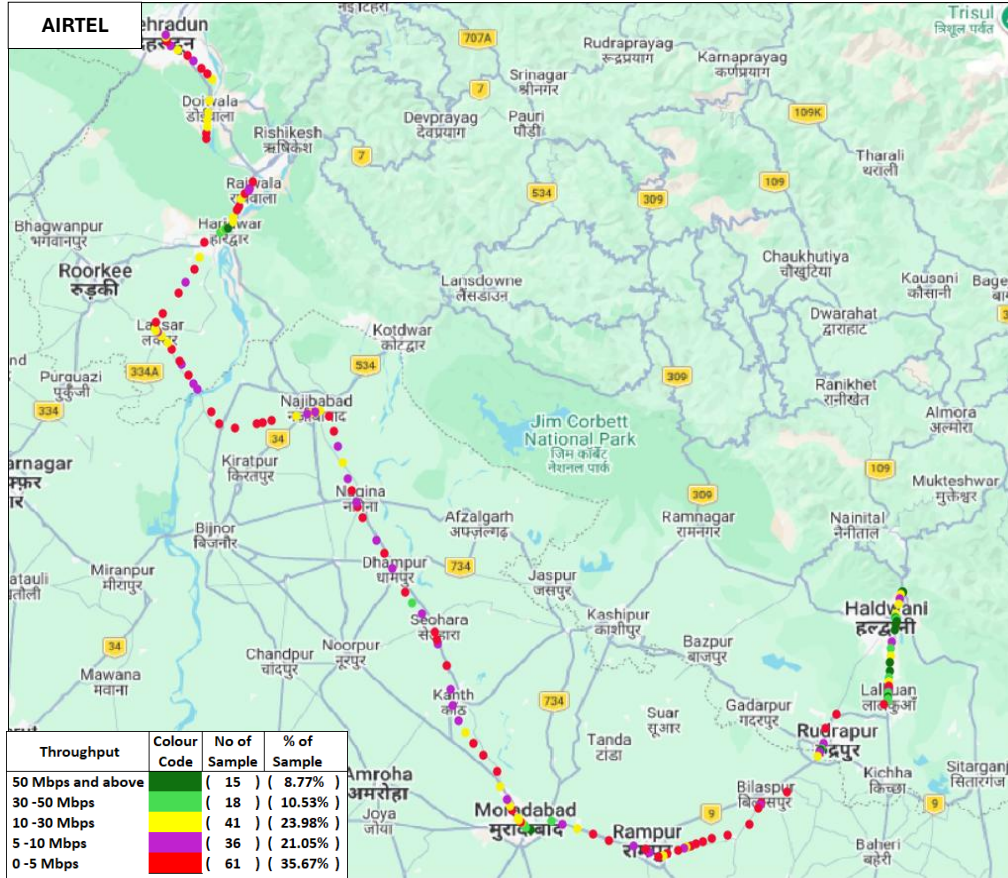


Figure-13: Upload throughput distribution auto-selection mode (5G/4G/3G/2G) - AIRTEL.

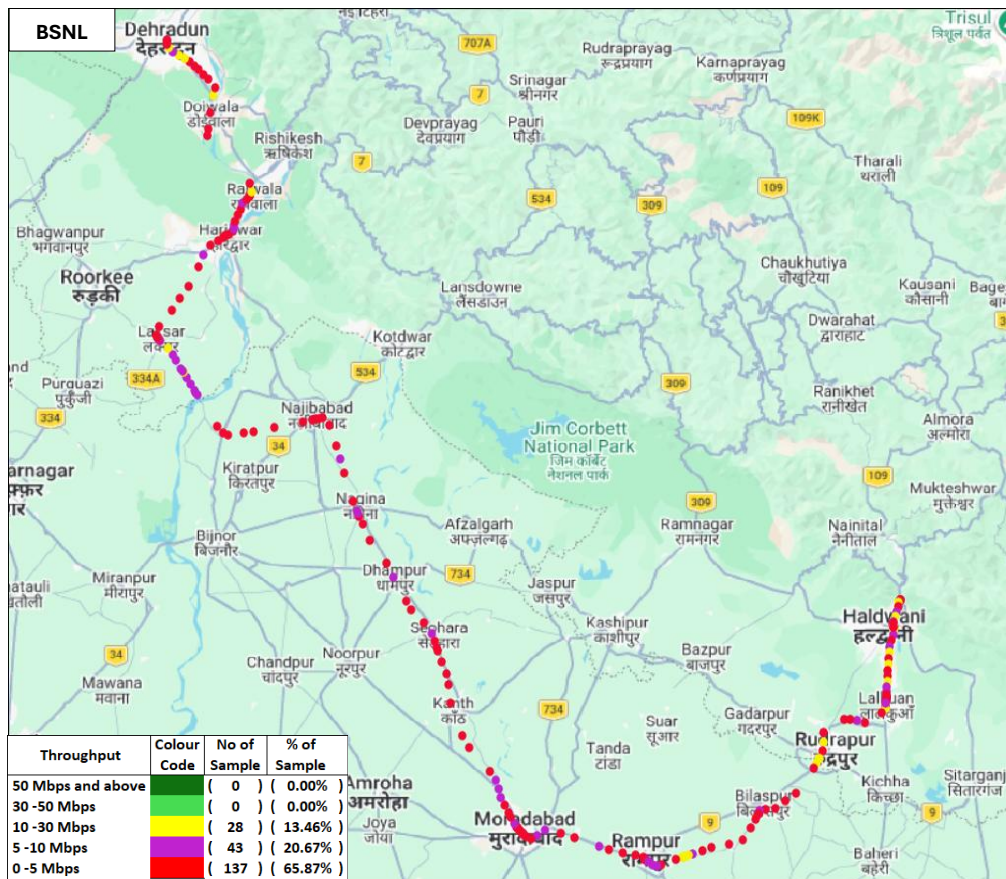


Figure-14: Upload throughput distribution auto-selection mode (5G/4G/3G/2G) - BSNL.

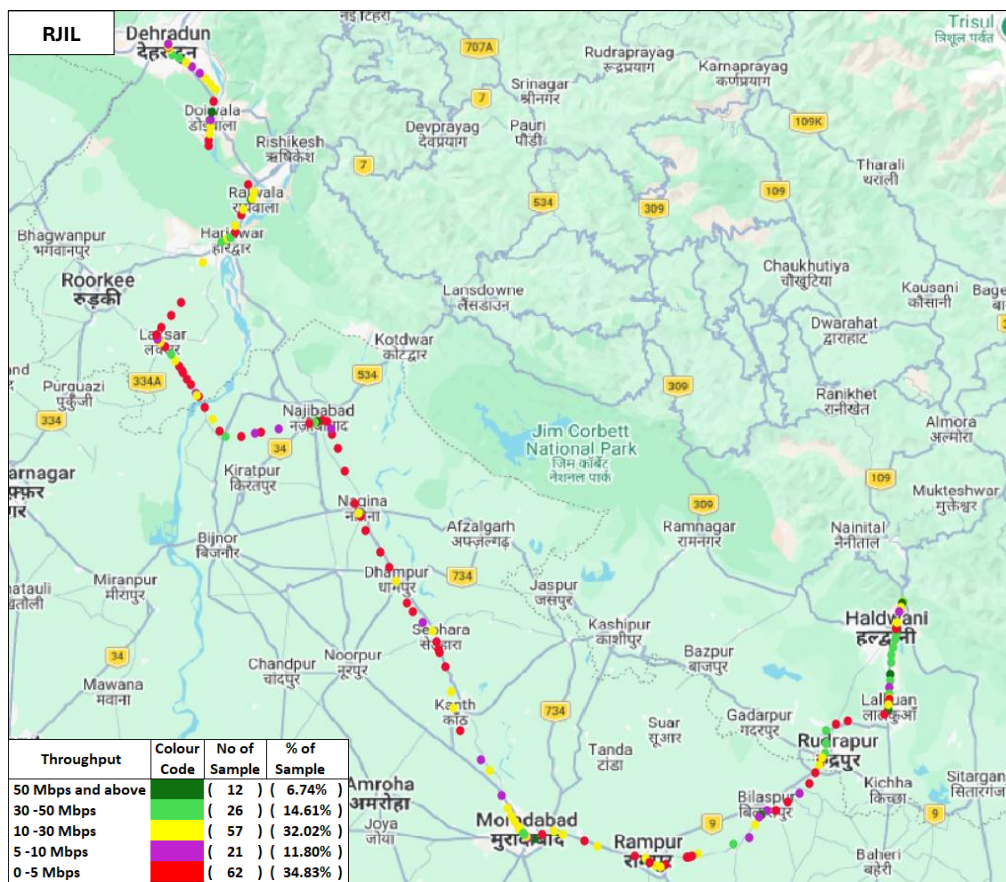


Figure-15: Upload throughput distribution auto-selection mode (5G/4G/3G/2G) - RJIL.

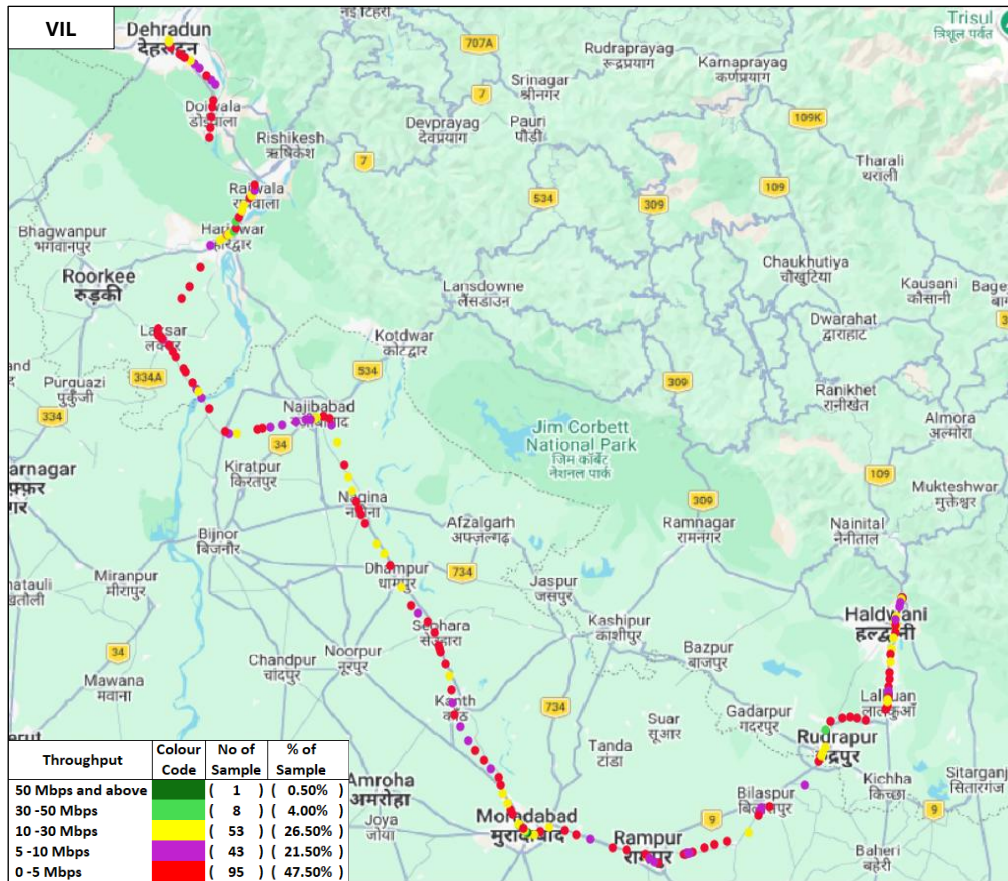


Figure-16: Upload throughput distribution auto-selection mode (5G/4G/3G/2G) - VIL.

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