



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 Servies:** Download/ Upload Throughput, Latency, Jitter, Packet Drop Rate

6. The overall mobile network performance in Hyderabad for the key parameters has been summarised below:-

- a) **Coverage Gap** –(i) 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 **5648/37277** for **Airtel**, **14768/35428** for **BSNL**, **4976/ 44323** for **RJIL** and **3910/ 17533** for **VIL**. Details of the coverage gaps have been provided in the map **Annexed**.

- (ii) 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 **Limited service (No Coverage)** out of the total samples collected, was **6939/37277** for **Airtel**, **4807/35428** for **BSNL**, **975/ 44323** for **RJIL** and **13448/ 17533** for **VIL**. 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 **10/325** for **Airtel**, **33/308** for **BSNL**, **7/406** for **RJIL** and **0/ 156** for **VIL**. 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 **23/340** for **Airtel**, **14/212** for **BSNL** **14/385** **RJIL** and **17/137** for **VIL**. Details of the call silence instance 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 **81.74 Mbps** for **Airtel (5G/4G)**, **6.71 Mbps** for **BSNL (3G)**, **186.07 Mbps** for **RJIL (5G/4G)** and **17.91 Mbps** for **VIL (5G/4G/2G)**. Detail of Download throughput has been provided in the map **Annexed**.

- ii) **Data Upload performance (Overall):** Average upload speed was observed as **18.09 Mbps** for **Airtel (5G/4G)**, **3.54 Mbps** for **BSNL (3G)**, **13.46Mbps** for **RJIL (5G/4G)** and **9.63 Mbps** for **VIL (5G/4G/2G)**. 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:-

**City**

**Ganjam district-** Ganjam, Chatrapur, Arjyapalli, Gopalpur, Brahmapur, Chikiti, Patrapur, Jarada, Pudamari, Dengausta and Digapahandi etc.

**Gajapathi district-** Uppalada, Paralakhemundi, Kurigam, Kashinagar, Birikota, Mohana, Chandragiri, Jeerango, Mahendragada and Luhagudi etc.

**Rayagada district-** Gunupur, Kujendri, Gumuda, Padmapur, Akhusingi, Kenduguda Mahendragada, Luhagudi, Pudamari, Dengausta and Digapahandi etc.

**Hotspots:** 1.Ganjam Railway Station 2. Gopalpur Beach 3.Gunupur Bus Stand 4.Market Street Paralakhemundi 5.Mohana Market 6.Paralakhemundi Bus Stand 7.R Udayagiri Market 8.Rayagada Market

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.trai.gov.in](http://www.trai.gov.in). For any clarification or additional information, an email can be sent to [adv.hydreabad@trai.gov.in](mailto:adv.hydreabad@trai.gov.in) or Regional Office of TRAI can be contacted on telephone no. 040-23000761.

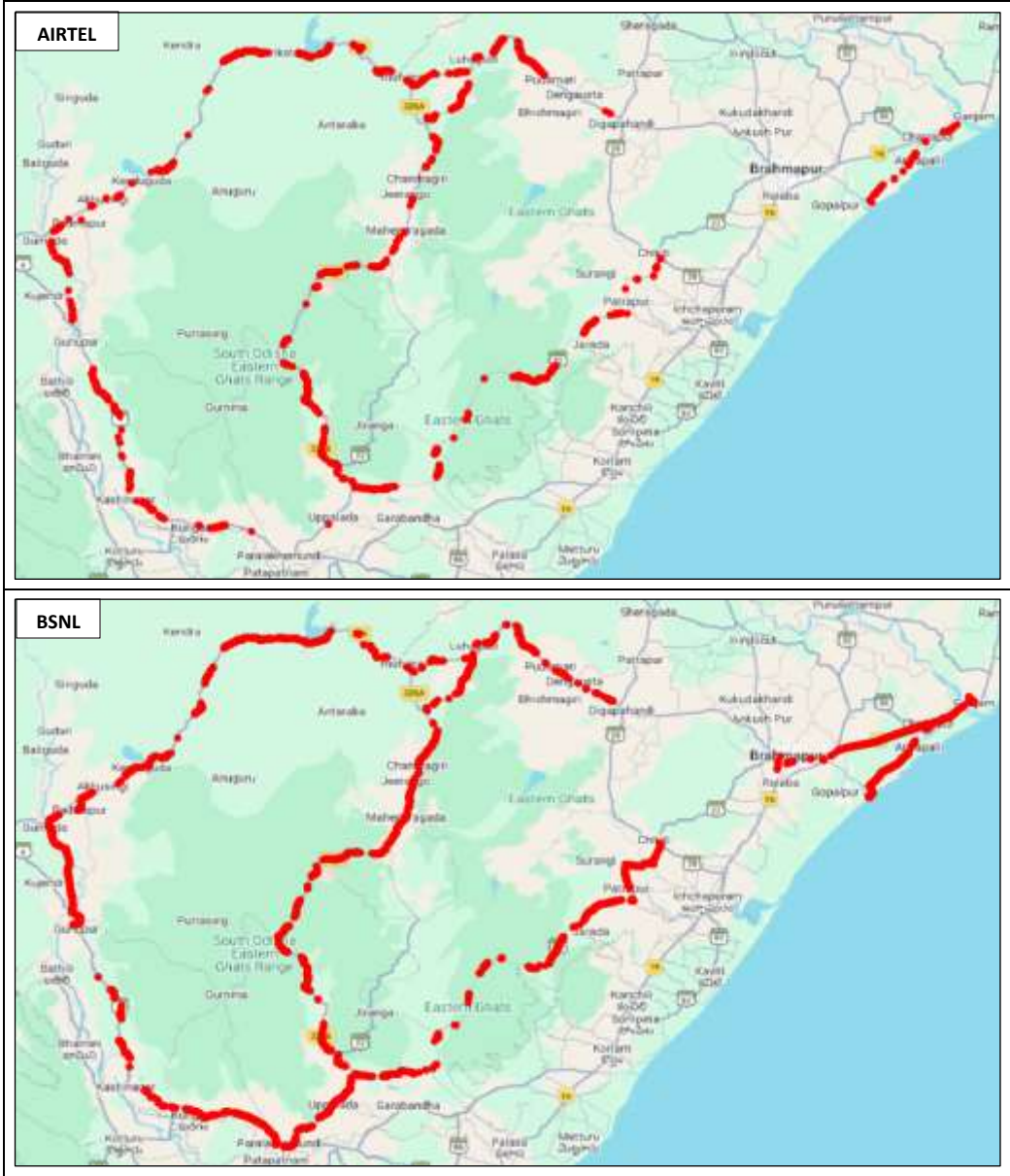
  
**B. Praveen Kumar**  
Advisor, RO Hyderabad

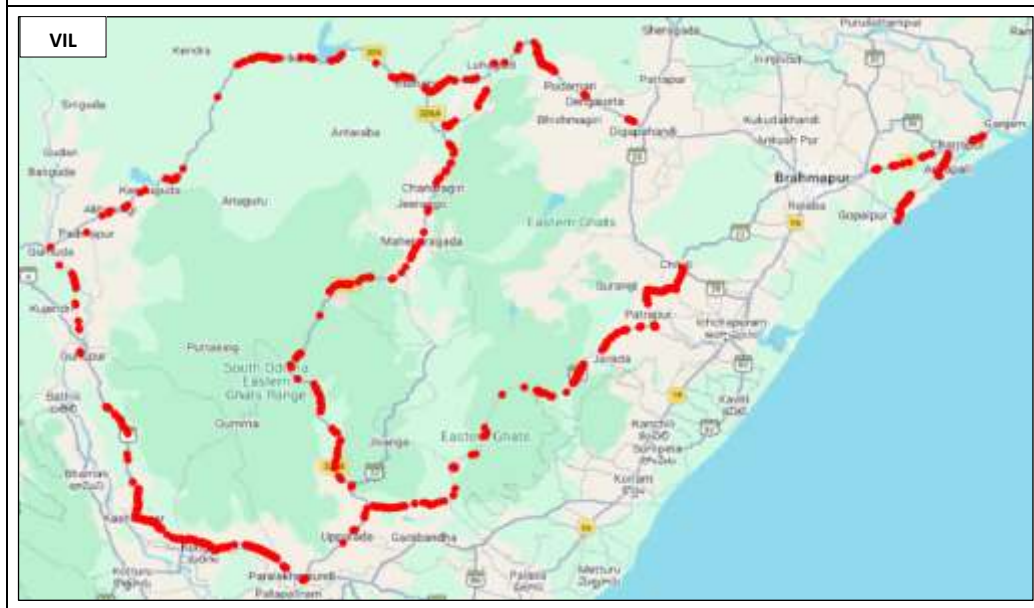
**Coverage Gap** – The coverage distribution found less than the minimum specified signal strength for the drive test route in auto-selection mode (5G/4G/3G/2G) during voice testing, is as below:

Parameter	AIRTEL	BSNL	RJIL	VIL
Total Number of Samples captured on Drive test route	37277	35424	44323	17533
Number of Samples having poor signal strength	5648	14768	4976	3910

**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**



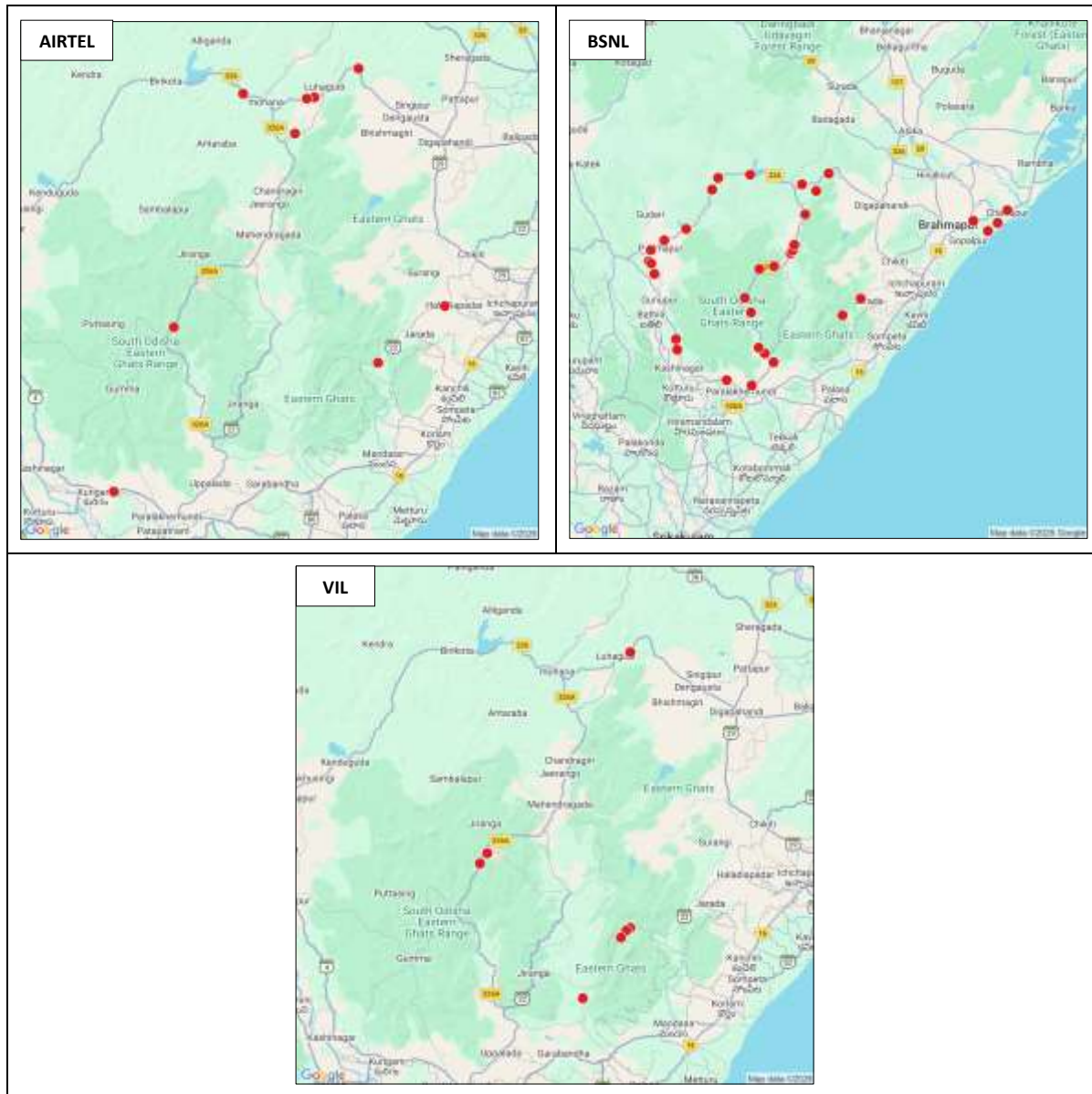


**Note:** Plot is based on Dynamic Drive Test results only.

a) **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	325	308	406	156
Number of dropped Calls	10	33	7	0

### Locations of Dropped Calls

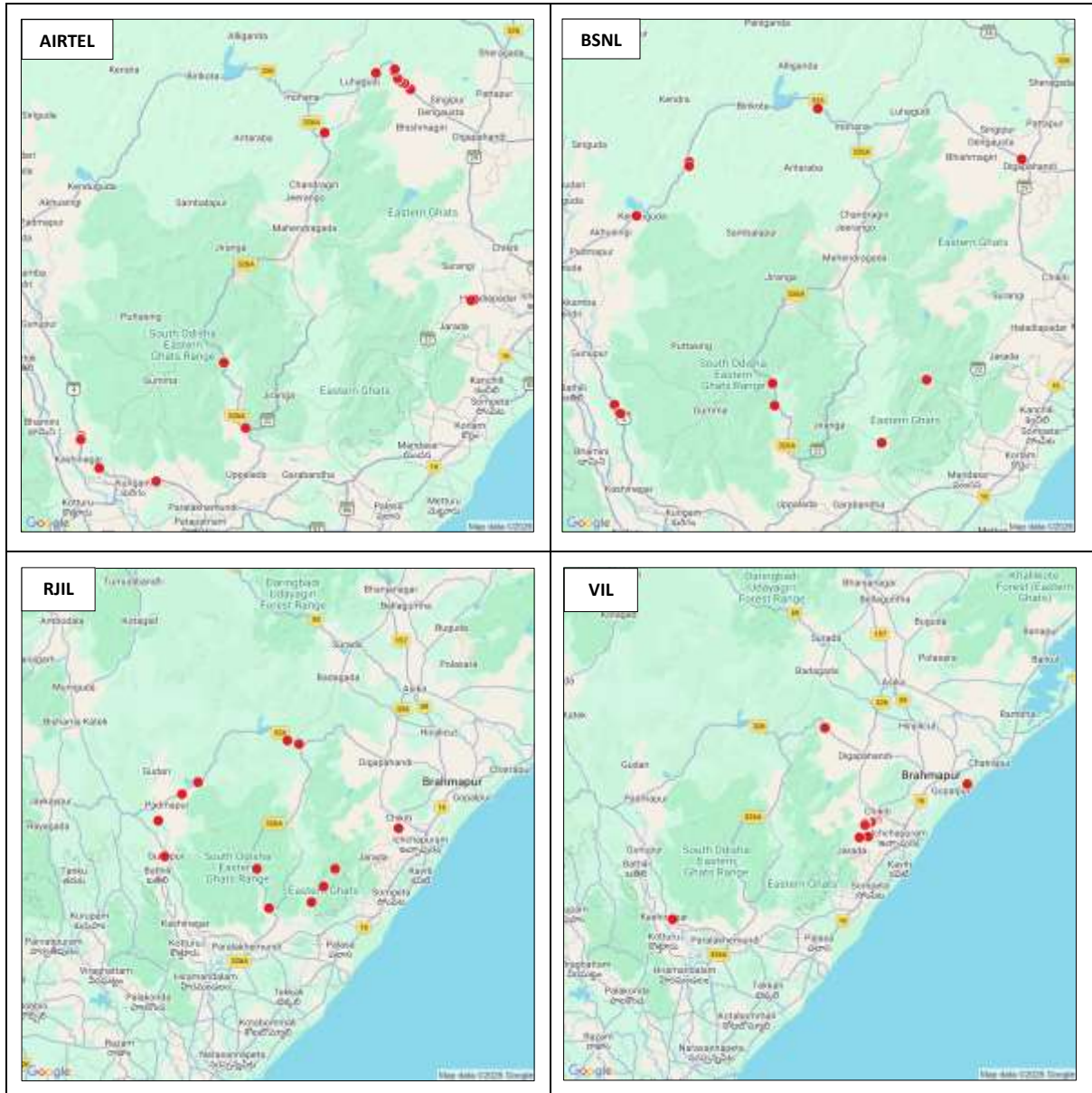


**Note:** Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

b) **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)	340	212	385	137
Number of silences calls for >3 Sec	13	10	12	11
Total number of silence instances for >3 Sec	23	14	14	17

**Locations of Call Silence Instance**

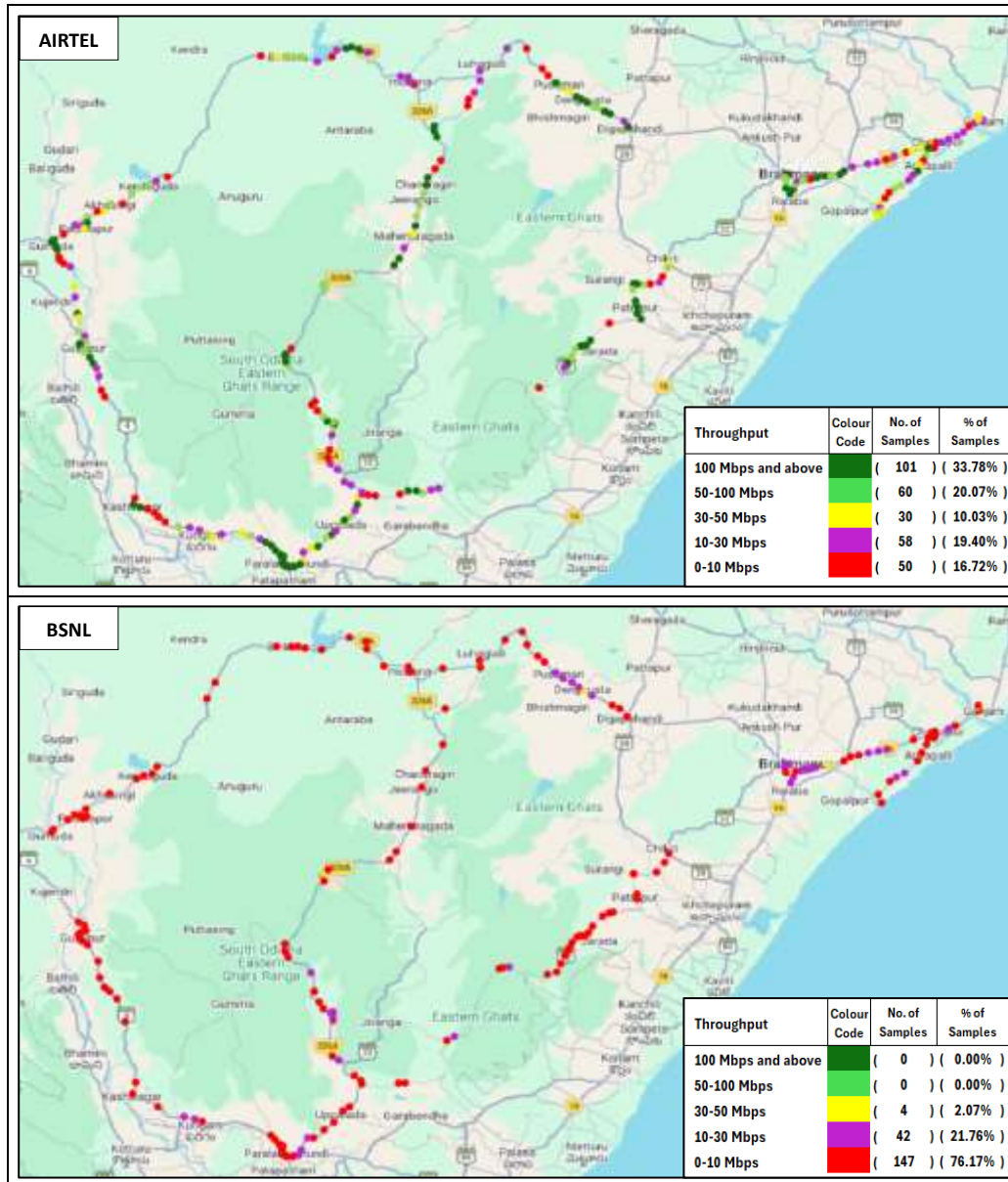


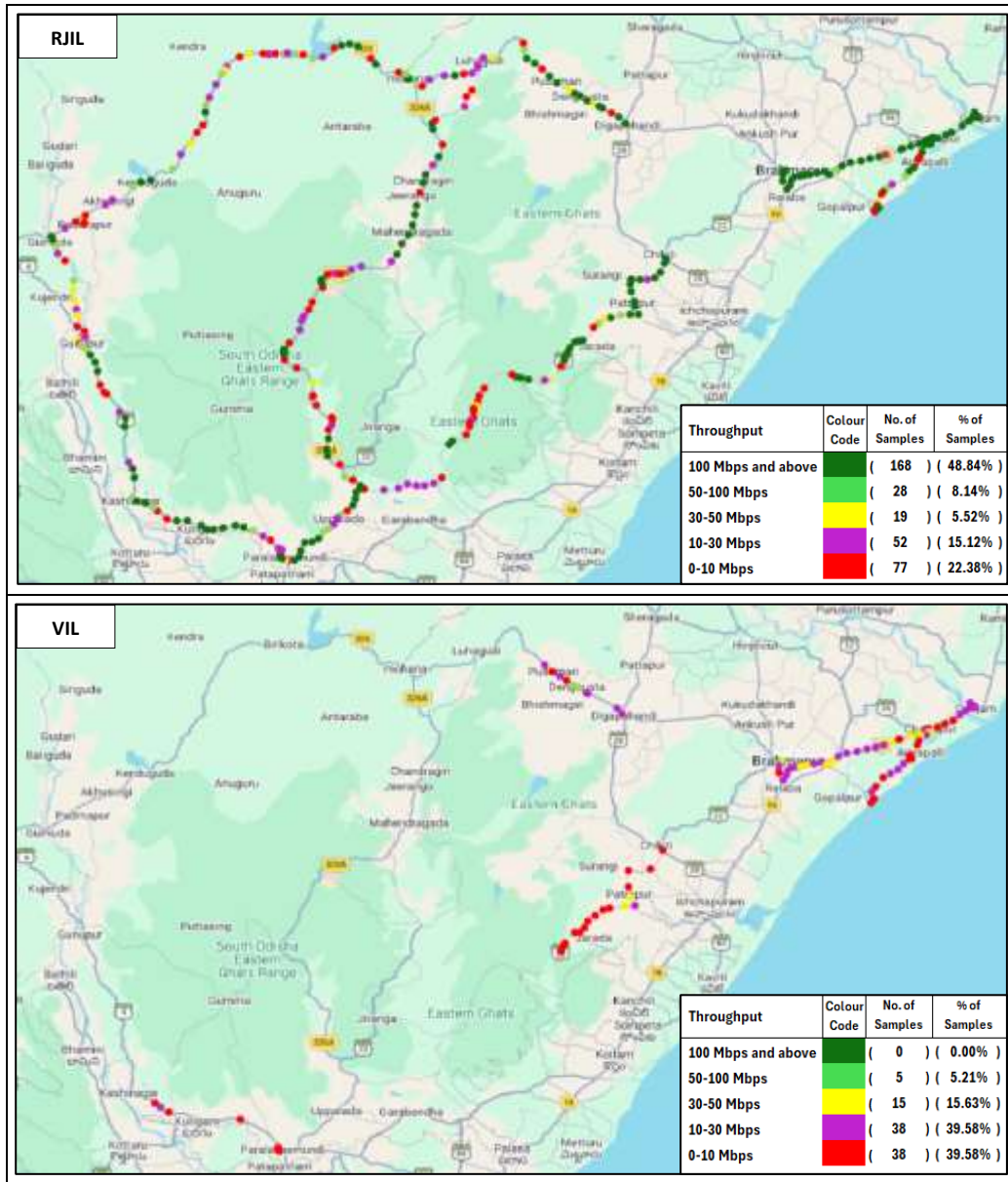
**Note:** Call silence instances are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map.

c) **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 4G)
Typical Download throughput declared by TSP	(Mbits/s)	12.77	6.49	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	81.74	6.71	186.07	17.91

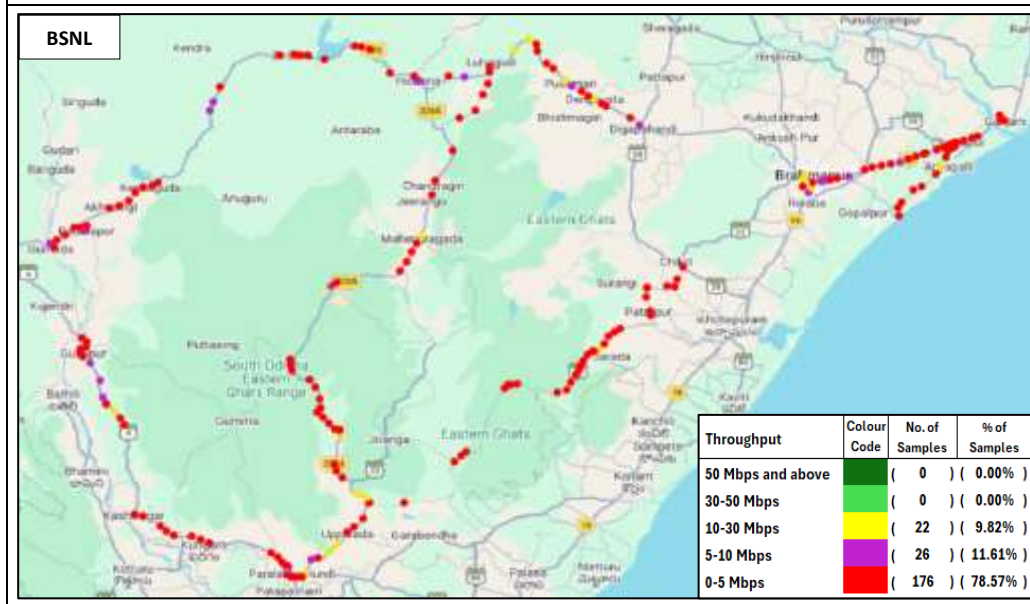
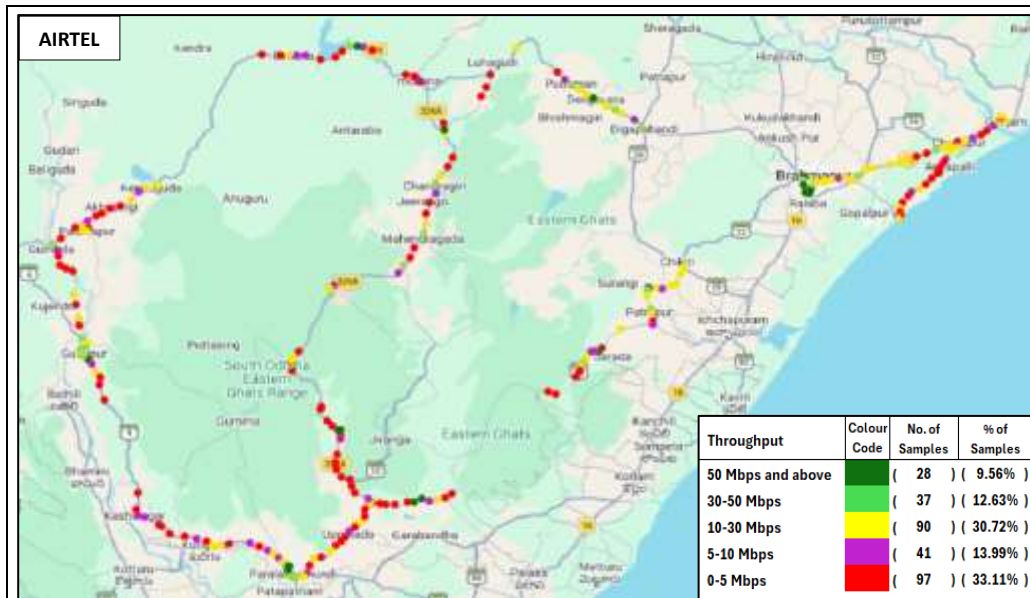


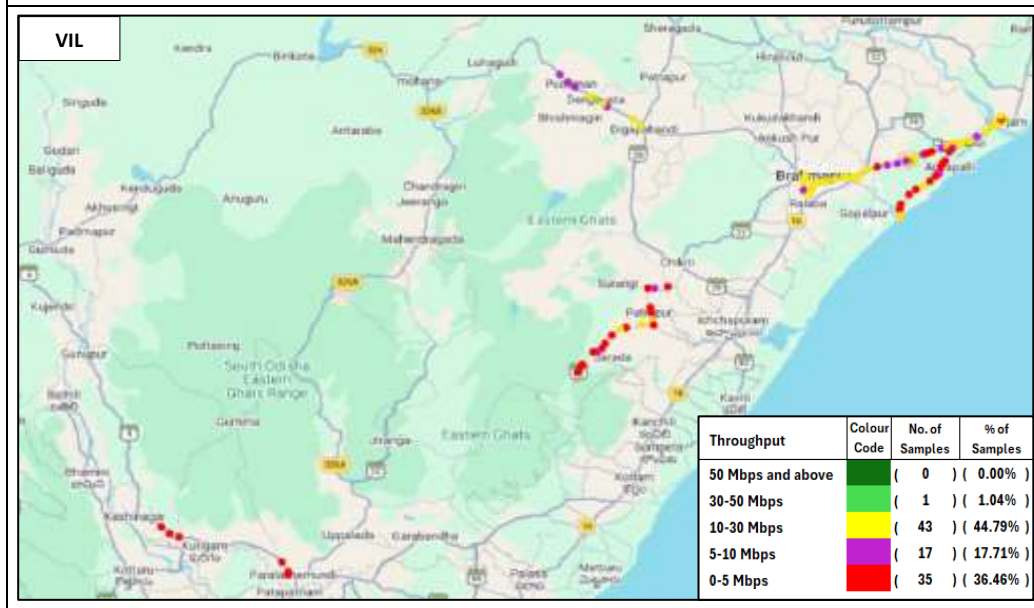
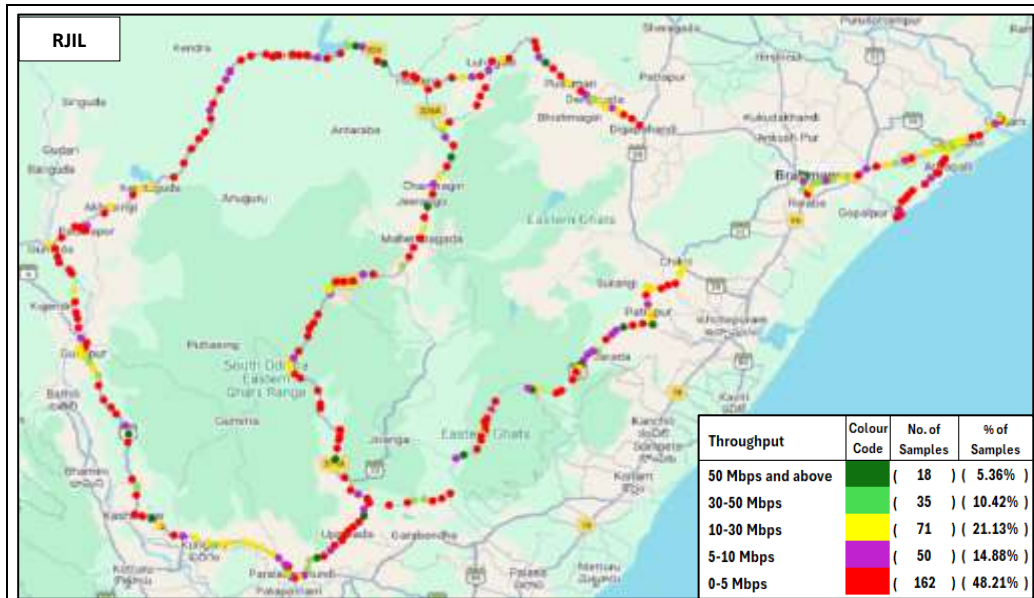


**Note:** Plot is based on Dynamic Drive Test results only.

(ii) Upload Throughput

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 4G)
Typical upload throughput declared by TSP	(Mbits/s)	2.08	5.04	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	18.09	3.54	13.46	9.63





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