**GOVERNMENT OF INDIA**
**MINISTRY OF COMMUNICATIONS**
**DEPARTMENT OF TELECOMMUNICATIONS**

**LOK SABHA**
**UNSTARRED QUESTION NO.1628**
**TO BE ANSWERED ON 13$^{TH}$ FEBRUARY, 2019**

**TELECOM SERVICES IN RURAL AND REMOTE AREAS**

†1628. SHRI LAXMAN GILUWA:
　　　　SHRI NISHIKANT DUBEY:
　　　　SHRI RAVINDRA KUMAR PANDEY:

Will the Minister of COMMUNICATIONS be pleased to state:

(a)　　whether the various telecommunication services including mobile and internet facilities are not satisfactory specially in the rural, hilly/remote and tribal areas of the country;

(b)　　if so, the details thereof along with the number of such areas with poor telecom services/connectivity, State/UT-wise including Jharkhand; and

(c)　　the steps taken/being taken by the Government to improve these services?

ANSWER

**THE MINISTER OF STATE (IC) OF THE MINISTRY OF COMMUNICATIONS &**
**MINISTER OF STATE IN THE MINISTRY OF RAILWAYS**
**(SHRI MANOJ SINHA)**

(a)　　Quality of Service is monitored by Telecom Regulatory Authority of India (TRAI). As per their report released on quarterly basis, the telecom services (including mobile and internet services) are by and large satisfactory. It is also satisfactory in rural, hilly/remote and tribal areas as per Quality of Service (QoS) report released by Telecom Regulatory Authority of India (TRAI) in respect of basic services.

(b)　　The Quality of Services benchmarks for telecommunication services are notified by TRAI under TRAI Act, 1997 at the level of License Service Area (LSA) as a whole. These LSAs cover all States and Union Territories of India.

In order to maintain tele-connectivity, performance benchmarks have been prescribed for upkeep of telephone networks and services which includes:

(i)　　For Basic services: At least 75 % of the faults to be repaired by next working day and 100 % of the faults to be repaired within 7 days for rural and hilly areas.

As per the TRAI's Performance Monitoring Report for the quarter ending September 2018, all Telecom Service Providers (TSPs) have complied to these benchmarks.

(ii)　　For mobile services, the network related key benchmarks include:

a.　　'Base Transceiver Stations (BTSs) Accumulated downtime' (not available for service) which measures the downtime of the BTS including its transmission links/ circuits during the period of a month but excludes all planned service downtime for any maintenance,(benchmark ≤ 2%).

c. 'Call Set-up Success Rate (within Licensee's own network)' is ratio of established calls to call attempts in TSP's network, (benchmark ≥95%).

d. 'Traffic Channel (TCH) Congestion' is a measure of congestion in the network's Traffic Channel(s) which carry user's speech or data, (benchmark ≤2%).

e. 'Call Drop Rate': TRAI, through "The Standards for Quality of Service for Basic (Wireline) and Cellular Mobile Telephone Services(**Fifth Amendment) Regulations, 2017**" dated 18th August, 2017 has prescribed two new parameters for assessment of Drop Call Rate in a mobile network, viz. "Drop Call Rate (DCR) Spatial Distribution Measure" with benchmark value <2% and "DCR Temporal Distribution Measure" with benchmark value <3% effective from 1st October 2017.

**Drop Call Rate (DCR) Spatial Distribution Measure** (benchmark ≤ 2%) implies that at-least 90% of Cells in the network should perform better than specified 2% benchmark on at-least 90% of the days in a quarter.

**DCR Temporal Distribution Measure** (benchmark ≤ 3%) will give confidence that on at-least 90% of Days in a quarter, network performed better than specified 3% benchmark for at-least 97% of the Cells.  (A Base Transceiver Station (BTS) installed by a TSP has normally 3 Cells).

The parameters prevailing earlier assessed the performance of mobile networks for the License Service Area (LSA) as a whole. However, the revised parameters, effective from 1st October 2017, are more stringent as they give better insight into the network performance of Telecom Service Providers (TSPs) at each Base Transceiver Station (BTS) level.

As per latest report of TRAI for the quarter ending September 2018, all TSPs are largely complying with the TRAI's benchmarks despite rapid increase in traffic volume and more stringent benchmarks as detailed at **Annexure-I.**

(iii) For Broadband services: At least 90% of faults to be repaired by next working day and at least 99% of faults to be repaired within 3 working day. As per the TRAI's Performance Monitoring Report for the quarter ending September 2018, all the service providers are largely complying with the benchmark.

(c) TRAI has taken the following remedial measures to bring improvement:

- Close monitoring of performance of service providers, against the benchmarks for various Quality of Service Parameters laid down by TRAI, through periodic reports from service providers.

- Follow up action with service providers for improving quality of service.

- Audit and Assessment of Quality of Service through independent agencies.

- Publication of results of Audit and Assessment of Quality of Service, including for Call Drop parameters on TRAI website namely www.trai.gov.in for information of stakeholders, forcing the service providers to improve the service.

- TRAI regularly undertakes the drive tests of mobile service in selected cities, highways and railway routes to assess the Quality of Service and coverage around the areas covered in the drive test routes. The result of Drive tests are shared with the service providers and published on TRAI website namely www.trai.gov.in for information of stakeholders, forcing the service providers to improve the service.

- TRAI is already implementing its plan for undertaking operator assisted drive tests in all the Long Distance Charging Areas (LDCAs) of the country under the supervision of TRAI's appointed independent agency and officers of TRAI. This will give an indication of the coverage, voice quality and call drop issues in the various parts of the country so that the service providers could take necessary action to address the problem in these areas.

- Imposition of financial disincentives for non-compliance with the benchmarks for Quality of Services parameters.

## Performance of QoS Parameters for Cellular Mobile Service

| Sr. No. | License Service Area | Telecom Service Provider | BTS Accumula-ted down-time | Call Set-up Success Rate | Traffic Channel Congestion | Call Drop Rate [Network_QSD(90,90)] | Call Drop Rate [Network_QTD(97,90)] |
|---|---|---|---|---|---|---|---|
| | | Benchmark(s) | ≤ 2% | ≥ 95% | ≤ 2% | ≤ 2% | ≤ 3% |
| 1 | Andhra Pradesh | Airtel | 0.16 | 97.87 | 0.71 | 1.69 | 2.33 |
| | | BSNL | 0.92 | 98.15 | 1.36 | 1.85 | 1.96 |
| | | Idea | 0.04 | 98.86 | 0.75 | 1.84 | 2.17 |
| | | RJio | 0.06 | 99.60 | 0.00 | 0.35 | 0.43 |
| | | TATA | 0.34 | 99.49 | 0.04 | 0.00 | 1.11 |
| | | Vodafone | 0.07 | 99.92 | 0.08 | 1.51 | 1.81 |
| 2 | Assam | Airtel | 0.73 | 97.81 | 0.57 | 1.72 | 2.11 |
| | | BSNL | 1.97 | 98.18 | 1.82 | 1.69 | 2.71 |
| | | Idea | 0.73 | 98.76 | 0.54 | **2.16** | **3.51** |
| | | RJio | 0.50 | 99.55 | 0.00 | 0.55 | 0.64 |
| | | Vodafone | 0.80 | 98.84 | 1.10 | 1.99 | 2.54 |
| 3 | Bihar (which includes Jharkhand) | Airtel | 0.16 | 97.64 | 1.04 | 1.80 | 1.99 |
| | | BSNL | 1.73 | 95.66 | 0.50 | 1.97 | 2.87 |
| | | Idea | 0.82 | 98.12 | 1.41 | 1.85 | 2.42 |
| | | RJio | 0.37 | 99.46 | 0.01 | 0.61 | 0.75 |
| | | TATA | 0.24 | 97.87 | 0.15 | 0.00 | 0.00 |
| | | Vodafone | 0.47 | 99.16 | 0.84 | 1.92 | 2.46 |
| 4 | Chennai | BSNL | 0.29 | 98.40 | 1.62 | 1.87 | 2.38 |
| 5 | Delhi | Airtel | 0.11 | 98.55 | 0.37 | 1.79 | 2.94 |
| | | Idea | 0.26 | 98.91 | 0.50 | 1.96 | 2.45 |
| | | MTNL | 0.04 | 97.36 | 0.78 | 1.60 | 1.80 |
| | | RJio | 0.18 | 99.53 | 0.01 | 0.28 | 0.38 |
| | | TATA | 0.17 | 99.22 | 0.13 | 0.00 | 2.89 |
| | | Vodafone | 0.15 | 99.21 | 0.49 | 1.71 | 2.24 |
| 6 | Gujarat | Airtel | 0.10 | 99.21 | 0.33 | 1.87 | 2.14 |
| | | BSNL | 1.46 | 97.59 | 0.61 | 1.88 | 2.41 |
| | | Idea | 0.10 | 98.38 | 1.12 | 1.75 | 2.22 |
| | | RJio | 0.13 | 99.58 | 0.00 | 0.44 | 0.57 |
| | | TATA | 0.01 | 96.02 | 0.00 | 0.00 | 0.00 |
| | | Vodafone | 0.18 | 99.46 | 0.41 | 1.45 | 1.90 |
| 7 | Haryana | Airtel | 0.15 | 99.63 | 0.16 | 1.64 | 2.50 |
| | | BSNL | 0.59 | 98.73 | 0.35 | 1.87 | 1.89 |
| | | Idea | 0.18 | 99.14 | 0.50 | 1.82 | 2.44 |
| | | RJio | 0.13 | 99.56 | 0.00 | 0.49 | 0.60 |
| | | TATA | 0.66 | 99.63 | 0.01 | 0.00 | 0.18 |
| | | Vodafone | 0.21 | 99.60 | 0.33 | 1.52 | 2.22 |
| 8 | Himachal Pradesh | Airtel | 0.10 | 99.01 | 0.47 | 1.27 | 2.00 |
| | | BSNL | 1.92 | 98.58 | 0.92 | 1.94 | 2.10 |
| | | | 0.17 | 99.18 | 0.40 | **2.24** | 2.56 |
| | | RJio | 0.12 | 99.52 | 0.00 | 0.43 | 0.54 |
| | | TATA | 0.04 | 96.82 | 0.07 | 0.00 | 0.00 |
| | | Vodafone | 0.09 | 99.97 | 0.03 | 1.96 | 2.53 |

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|---|---|---|---|---|---|---|---|
| 9 | Jammu & Kashmir | Airtel | 0.17 | 97.64 | 0.50 | 1.22 | 1.55 |
| | | BSNL | 1.11 | 98.80 | 0.90 | 1.93 | 2.94 |
| | | Idea | 0.47 | 98.79 | 0.72 | **2.16** | 2.60 |
| | | RJio | 0.13 | 99.55 | 0.01 | 0.66 | 0.71 |
| | | Vodafone | 0.09 | 99.97 | 0.03 | 1.98 | 2.47 |
| 10 | Karnataka | Airtel | 0.25 | 99.31 | 0.23 | 1.56 | 2.80 |
| | | BSNL | 1.32 | 98.12 | 0.76 | 1.98 | 2.97 |
| | | Idea | 0.09 | 99.70 | 0.14 | 1.68 | 2.03 |
| | | RJio | 0.20 | 99.66 | 0.00 | 0.41 | 0.52 |
| | | TATA | 0.48 | 98.80 | 0.08 | 0.58 | 1.70 |
| | | Vodafone | 0.32 | 99.86 | 0.06 | 1.09 | 1.42 |
| 11 | Kerala | Airtel | 0.18 | 99.48 | 0.18 | 1.85 | 2.81 |
| | | BSNL | 0.76 | 98.64 | 1.03 | 1.79 | 2.04 |
| | | Idea | 0.23 | 99.36 | 0.43 | 1.52 | 2.00 |
| | | RJio | 0.06 | 99.67 | 0.00 | 0.41 | 0.65 |
| | | TATA | 0.60 | 99.82 | 0.01 | 0.00 | 0.00 |
| | | Vodafone | 0.07 | 99.71 | 0.21 | 1.08 | 1.36 |
| 12 | Kolkata | Airtel | 0.02 | 99.15 | 0.07 | 1.90 | 2.14 |
| | | BSNL | 1.07 | 99.02 | 0.50 | 1.77 | 1.92 |
| | | Idea | 0.04 | 99.70 | 0.14 | 1.23 | 1.72 |
| | | RJio | 0.02 | 99.61 | 0.01 | 0.24 | 0.35 |
| | | TATA | 0.74 | 99.47 | 0.15 | 0.00 | 0.95 |
| | | Vodafone | 0.18 | 99.15 | 0.80 | 1.19 | 1.62 |
| 13 | Madhya Pradesh | Airtel | 0.10 | 98.64 | 0.79 | 1.96 | 2.38 |
| | | BSNL | 1.67 | 97.46 | 1.05 | 1.20 | 2.93 |
| | | Idea | 0.14 | 96.93 | **2.22** | 1.75 | 2.13 |
| | | RJio | 0.28 | 99.56 | 0.00 | 0.53 | 0.73 |
| | | TATA | 0.30 | 95.72 | 0.05 | 0.00 | 0.00 |
| | | Vodafone | 0.17 | 99.89 | 0.11 | 1.89 | 2.39 |
| 14 | Maharashtra | Airtel | 0.03 | 98.93 | 0.47 | 1.89 | 2.44 |
| | | BSNL | 1.31 | 97.65 | 1.32 | 1.90 | 2.49 |
| | | Idea | 0.23 | 98.09 | 0.91 | 1.72 | 2.21 |
| | | RJio | 0.27 | 99.58 | 0.00 | 0.47 | 0.60 |
| | | TATA | 0.47 | 96.30 | 1.08 | 0.00 | 1.69 |
| | | Vodafone | 0.18 | 98.98 | 0.95 | 1.58 | 2.08 |
| 15 | Mumbai | Airtel | 0.21 | 99.24 | 0.53 | 1.85 | 1.95 |
| | | Idea | 0.10 | 99.35 | 0.24 | 1.90 | 2.77 |
| | | MTNL | 0.70 | 97.50 | 0.30 | 1.87 | 2.86 |
| | | RJio | 0.16 | 99.52 | 0.01 | 0.24 | 0.34 |
| | | TATA | 0.45 | 99.12 | 0.31 | 0.00 | 0.00 |
| | | Vodafone | 0.29 | 98.43 | 1.42 | 1.60 | 2.38 |
| 16 | North East | Airtel | 1.07 | 96.96 | 1.18 | 1.75 | 2.44 |
| | | BSNL | 1.78 | 97.39 | 1.79 | 1.72 | 2.42 |
| | | Idea | 1.35 | 99.02 | 0.29 | **2.22** | **3.39** |
| | | RJio | 0.74 | 99.56 | 0.00 | 0.93 | 1.68 |
| | | Vodafone | 1.19 | 98.51 | 1.25 | 1.96 | 2.85 |
| 17 | Orissa | Airtel | 0.79 | 99.15 | 0.79 | 1.59 | 1.87 |
| | | BSNL | 1.52 | 98.55 | 1.45 | 1.94 | 2.15 |
| | | Idea | 0.22 | 99.38 | 0.27 | 1.52 | 1.87 |
| | | RJio | 0.21 | 99.62 | 0.00 | 0.43 | 0.54 |
| | | TATA | 0.57 | 99.60 | 0.00 | 0.00 | 0.00 |
| | | Vodafone | 0.18 | 99.27 | 0.72 | 1.90 | 2.73 |

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|---|---|---|---|---|---|---|---|
| 18 | Punjab | Airtel | 0.08 | 99.38 | 0.13 | 1.96 | 2.62 |
| | | BSNL | 0.40 | 98.61 | 0.28 | 1.78 | 2.02 |
| | | Idea | 0.09 | 99.42 | 0.11 | 1.49 | 2.00 |
| | | RJio | 0.06 | 99.57 | 0.00 | 0.22 | 0.31 |
| | | TATA | 0.35 | 99.47 | 0.06 | 0.00 | 0.00 |
| | | Vodafone | 0.06 | 99.67 | 0.29 | 1.43 | 1.92 |
| 19 | Rajasthan | Airtel | 0.20 | 97.14 | 0.92 | 1.64 | 2.08 |
| | | BSNL | 1.22 | 98.46 | 1.54 | 1.70 | 2.16 |
| | | Idea | 0.07 | 99.49 | 0.29 | 1.96 | 2.13 |
| | | RJio | 0.06 | 99.52 | 0.00 | 0.76 | 0.92 |
| | | TATA | 0.35 | 98.26 | 0.04 | 0.00 | 0.00 |
| | | Vodafone | 0.18 | 99.18 | 0.79 | 1.83 | 2.53 |
| 20 | Tamil Nadu | Airtel | 0.08 | 99.41 | 0.29 | 1.54 | 2.24 |
| | | BSNL | 0.56 | 98.09 | 0.34 | 1.92 | 2.43 |
| | | Idea | 0.02 | 99.87 | 0.05 | 1.11 | 1.56 |
| | | RJio | 0.03 | 99.62 | 0.00 | 0.22 | 0.32 |
| | | TATA | 0.13 | 99.56 | 0.02 | 0.00 | 1.54 |
| | | Vodafone | 0.08 | 98.58 | 1.34 | 1.44 | 1.85 |
| 21 | UP-East | Airtel | 0.58 | 96.11 | 1.01 | 1.57 | 2.31 |
| | | BSNL | 1.67 | 97.82 | 1.46 | 1.66 | 2.04 |
| | | Idea | 0.29 | 98.27 | 1.42 | 1.75 | 2.24 |
| | | RJio | 0.49 | 99.32 | 0.00 | 0.53 | 0.64 |
| | | TATA | 0.21 | 96.00 | 0.71 | 0.00 | 1.84 |
| | | Vodafone | 0.33 | 96.84 | **3.04** | 1.98 | 2.96 |
| 22 | UP-West | Airtel | 1.08 | 99.33 | 0.13 | 1.98 | 2.63 |
| | | BSNL | 1.69 | 98.22 | 1.29 | 1.79 | 2.36 |
| | | Idea | 0.25 | 95.43 | **2.51** | 1.71 | 2.44 |
| | | RJio | 0.23 | 99.41 | 0.00 | 0.60 | 0.73 |
| | | TATA | 0.57 | 99.41 | 0.05 | 0.00 | 0.11 |
| | | Vodafone | 0.31 | **94.97** | **5.00** | 1.98 | 2.83 |
| 23 | West Bengal | Airtel | 0.09 | 98.68 | 0.94 | 1.88 | 2.17 |
| | | BSNL | 0.50 | 97.62 | 1.58 | **3.09** | **3.67** |
| | | Idea | 0.18 | 99.59 | 0.08 | 1.91 | 2.97 |
| | | RJio | 0.21 | 99.54 | 0.00 | 0.68 | 0.90 |
| | | TATA | 0.38 | 99.88 | 0.00 | 0.00 | 0.00 |
| | | Vodafone | 0.09 | 99.14 | 0.83 | 1.71 | 2.15 |

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