Mobile Internet Connectivity Report

(April- June, 2020)

Division of Telecom & Space (DoTS)

Department of IT and Telecom

Executive Summary

In compliance to the instruction of the Hon'ble Prime Minister to check and monitor the quality of the Internet in the Dzongkhags, the DITT/MoIC has prepared the thirteenth report for this fiscal year based on data inputs collected by the Dzongkhags.

Objective of the study

To study the quality of mobile Internet connectivity in Bhutan

Methodology

A dashboard was prepared for monitoring/measuring the quality of telecom services based on different parameters listed as follows:

- Internet speed using the OpenSignal app.
- Call blocking rate
- Call dropping rate
- Voice Quality
- SMS received/sent failure rate
- Signal coverage
- Switchover

This dashboard is being shared with the Dzongkhag ICT Officers. The ICT officers were given instructions on the usage of the dashboard via email, letter and telephone after which they were asked to carry out and record measurements on above parameters from time to time on a monthly basis starting July, 2016. This data collection is an ongoing process and will be refined from time to time.

In this report, we have displayed the lowest & highest average mobile Internet speed for twenty Dzongkhags in the form of a column chart. Data has been analysed and compiled as shown below based on inputs provided by the Dzongkhag ICT Officers.

Key Findings

Based on the data submitted by all the twenty Dzongkhags ICT Officers (avg. mobile Internet speed for B-Mobile and TashiCell services has been compiled in the table below.

Mobile Internet speed (Avg.)									
Sl. No.	Dzongkhags	TashiCell				B-Mobile			
		3G		4G		3G		4G	
		Downloads (Mbps)	Uploads(Mbps)	Downloads (Mbps)	Uploads(Mbps)	Downloads(Mbps)	Uploads (Mbps)	Downloads(Mbps)	Uploads (Mbps)
1	Bumthang	0	0	0	0	0	0	0	0
2	Chukha	0	0	0	0	0	0	19.47	10.96
3	Dagana	0	0	0	0	0	0	0	0
4	Gasa	0	0	0	0	4.6	1.06	0	0
5	Haa	0	0	0	0	0	0	0	0
6	Lhuntse	0	0	0	0	0	0	0	0
7	Mongar	0	0	0	0	0	0	0	0
8	Paro	0	0	3.02	0.6	0	0	6.6	1.7
9	P/gatshel	0	0	0	0	0	0	0	0
10	Punakha	0	0	0	0	0	0	0	0
11	S/Jongkhar	0	0	0	0	0	0	0	0
12	Samtse	0	0	0	0	0	0	0	0
13	Sarpang	0	0	0	0	0	0	0	0
14	T/Yangtse	0	0	0	0	0	0	30.8	26.8
15	Tashigang	0	0	0	0	0	0	0	0
16	Thimphu	0	0	0	0	0	0	0	0
17	Trongsa	0	0	0	0	0	0	0	0
18	Tsirang	0	0	0	0	0	0	0	0
19	Wangdue	0	0	0	0	0	0	0	0
20	Zhemgang	0	0	0	0	0	0	0	0

Graph 1: 4G Tashicell Services

■ Uploads ■ Downloads

0.6

3.02
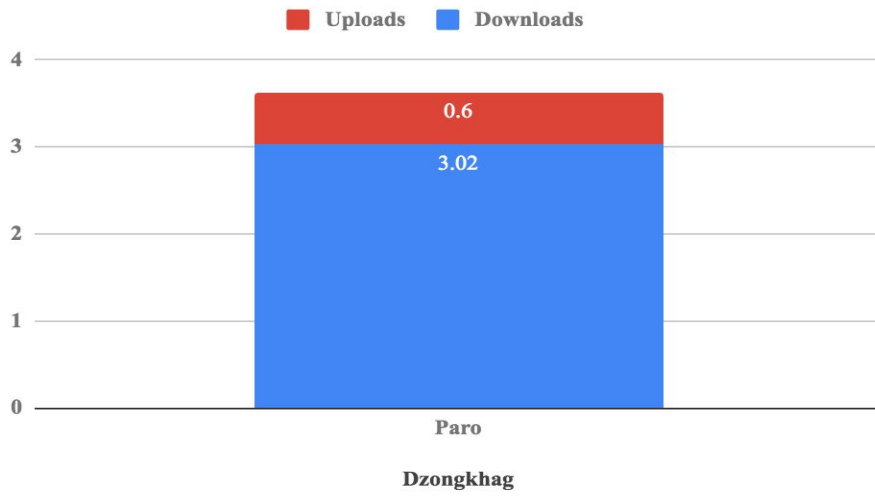
Paro

Dzongkhag

Graph 2: 3G Bhutan Telecom Services

■ Uploads ■ Downloads

1.06

4.6
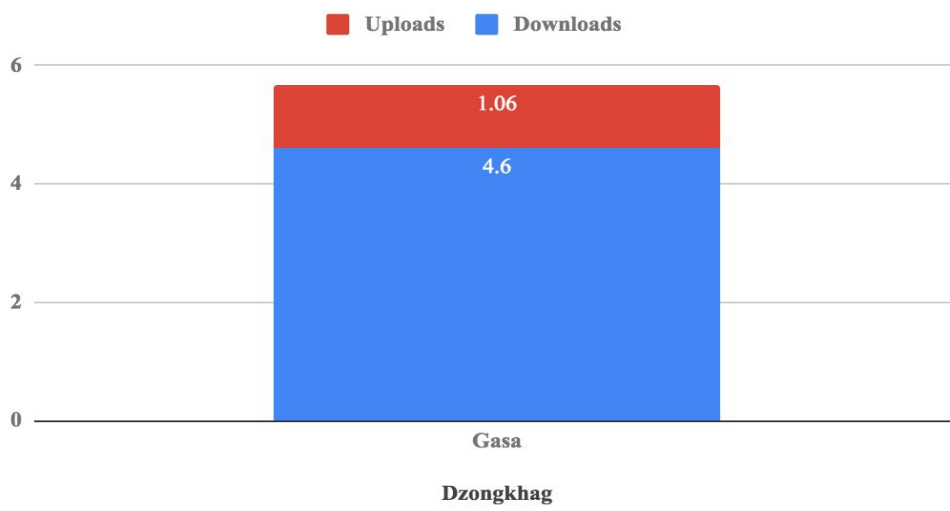
Gasa

Dzongkhag

Graph 3: 4G Bhutan Telecom Services
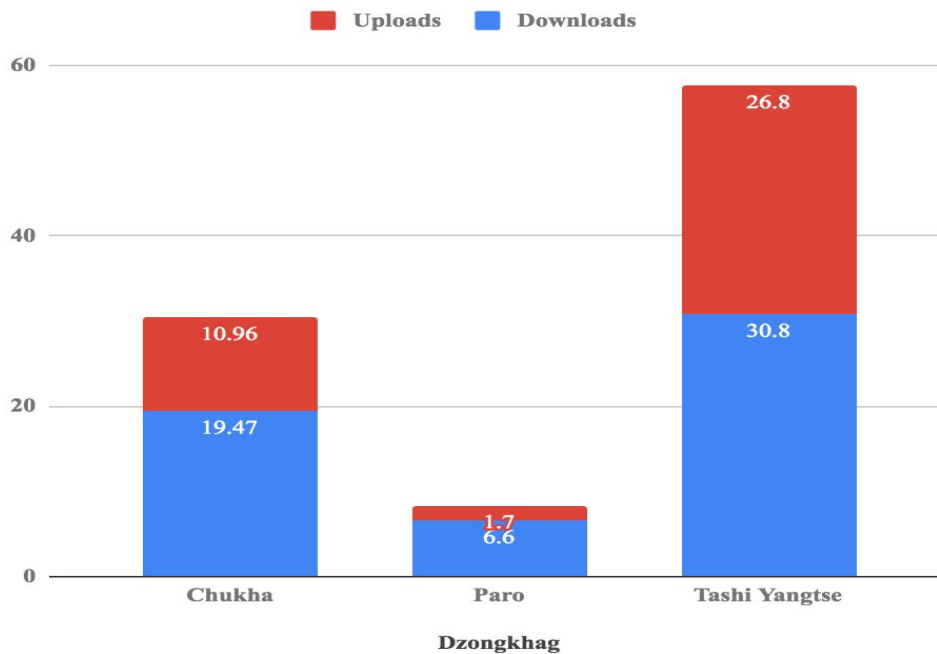
The following observations were made from the above graphs:

1. Paro dzongkhag has only provided information on 4G Tashicell services with avg. upload speed of 0.6 Mbps and 3.02 Mbps of avg. download speed.

2. Gasa dzongkhag has only provided information on 3G Bhutan Telecom services with avg. upload speed of 1.06 Mbps and 4.6 Mbps of avg. download speed.

3. Tashi Yangtse Dzongkhag has observed both highest avg. upload and avg. download speed of 26.8Mbps and 30.8 Mbps on 4G B-Mobile Services.

4. Paro dzongkhag has observed both lowest avg. upload speed and avg. download speed of 1.7 Mbps and 6.6 Mbps for 4G B-Mobile Services.

5. Most of the dzongkhags has observed good voice quality for both Telecom network services.

6. None of the dzongkhag has provided information on 3G Tashicell services

7. Dzongkhag ICTOs of Chukha, Gasa, Paro and Tashi Yangtse dzongkhag ICT officer has provided information/data for April- June 2020 report.

<u>Conclusion</u>

From this report, it has been observed that the download speed is higher than the upload speed in most of the dzongkhags, as would be preferred by the end users. An inconsistency is observed in the data rates which could be due to network issues or events like higher access at certain times.