QUARTERLY STATISTICAL BULLETIN ON COMMUNICATIONS IN GHANA

Volume 5 Issue 2

NATIONAL COMMUNICATIONS AUTHORITY

SECOND QUARTER

APRIL - JUNE, 2020

Communications for Development

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LIST OF ABBREVIATIONS

BWA	Broadband Wireless Access
LTE	Long-Term Evolution
FM	Frequency Modulation
GH₵	Ghana Cedi
GHp	Ghana pesewas
MB	Megabytes
MNO	Mobile Network Operator
MoU	Minutes of Use
NCA	National Communications Authority
SMS	Short Message Service
TV	Television

VISION AND MISSION

Vision

A world-class communications regulator that facilitates innovative, reliable and sustainable communication solutions to meet stakeholders' expectations.

Mission

Regulate the communications industry in a forward-looking and transparent manner that promotes fair and sustainable competition, stimulates innovation, encourages investment, protects stakeholders' interests and facilitates universal access to quality communications services for national development.

Core Values

- Teamwork
- Accountability
- Consistency
- Trust
- Innovation
- Transparency

Tag Line/Slogan – Communications for Development

INTRODUCTION

This Quarterly Statistical Bulletin on Communications is a reference document that entails segregated data, industry trends and analysis of the Ghanaian communications sector. The purpose of this document is to promote open and enriched public discussions on policies for telecom analysts, consumers, academia, policy makers, investors and other stakeholders for decision-making.

This bulletin is prepared from the monthly and quarterly data received from various licensees[1]*. It also includes data on internet service providers and broadcasting entities and services providers that was gathered in-house.*

The publication of this bulletin is consistent with the National Communications Authority's mandate under section 26 (2) (a) of the Electronic Communications Act 2008, Act 775; "to publish the result of research that it carries out or that is carried out on its behalf on its website and in any other manner that it considers appropriate to bring the results to the attention of the public".

[1] MTN, Vodafone, AirtelTigo, Glo, Surfline, BBH, Telsol and BLU

DEFINITION OF TERMS

Average SMS per subscriptions - This is calculated by dividing the total average volume of SMS for the quarter by the total average mobile subscriptions for that quarter.

BWA Data Usage per Subscriptions - This is calculated by dividing the total average volume of BWA's traffic for the quarter by the total BWA subscriptions for that quarter.

Cellular network or mobile network – refers to a communication network where the last mile connection is wireless. The network is distributed over land areas called cells, each served by at least one fixed-location transceiver, known as a cell site or base station. This base station provides the cell with the network coverage, which can be used for transmission of voice, data and others.

Fixed-line network - The term refers to all of the wired networks that are used for voice and data communications. A fixed-line can be seen as a connection to an end-user, by means of a cable, through which they can make phone calls or connect to the Internet.

Minutes of Use per Subscriptions - It is calculated by dividing the total average volume of traffic for that quarter with the total average subscriptions for that quarter.

Mobile Data-refers to active mobile data subscriptions to GPRS, EDGE, HSPA, UMTS, EV-DO, 3G, and LTE that have generated internet traffic (uploaded and/ or downloaded data) within the last ninety (90) days.

Mobile Data Usage per Subscriptions - It is calculated by dividing the total average volume of data traffic for the quarter with the total average mobile data subscriptions for that quarter.

Mobile Penetration or Teledensity – This represents the total number of mobile subscriptions per every 100 inhabitants in a geographical area.

Net Subscriptions Addition – It refers to the total number of new mobile network subscribers minus customers that terminate a service with the service provider at a given time.

On-net traffic - refers to phone calls made to a recipient on the same network as the caller.

Off-net traffic - refers to phone calls made to a recipient on a different network.

Quarter-on-quarter – This is a comparison of the quarter under review with the preceding quarter.

Q1 – First Quarter (January – March).

Q2 – Second Quarter (April – June).

Q3 – Third Quarter (July – September).

Q4 – Fourth Quarter (October – December).

Year-on-year – This is a comparison of a period under review (month, quarter etc.) with the same period of the preceding year.

THE COMMUNICATIONS INDUSTRY AT A GLANCE

A1. Service Providers Authorised/Licensed to operate

Operator/Service Providers	Number of Authorisation/Licences	Number in Operation
Mobile Network Operators	4	4
Fixed Network Operators	3	3
Broadband Wireless Access	5	5
Television Stations	146	103
FM Stations	575	428

B1. Total Subscriptions

SUBSCRIPTION	QUARTER-ON-QUARTER			YEAR-ON-YEAR			Units
	Q1 2020	Q2 2020	*Growth (%)*	Q2 2019	Q2 2020	*Growth (%)*	
Mobile Voice Subscription	41.96	40.48	*-3.53%*	41.11	40.48	*-1.55%*	Million
Fixed Voice Subscription	0.296	0.300	*1.35%*	0.283	0.300	*6.0%*	Thousand
Mobile Data Subscription	25.63	25.20	*-1.67%*	28.53	25.20	*-11.66%*	Million
Fixed Data Subscription	0.0751	0.0746	*-0.68%*	0.0589	0.0746	*26.67%*	Thousand
Broadband Wireless Access	0.0470	0.0466	*-0.94%*	0.0513	0.0466	*-9.24%*	Thousand

B2. Voice, Data and SMS Traffic

TRAFFIC	QUARTER-ON-QUARTER			YEAR-ON-YEAR			Units
	Q1 2020	Q2 2020	*Growth (%)*	Q2 2019	Q2 2020	*Growth (%)*	
Mobile Voice Traffic (Domestic)	22.97	24.54	*6.83%*	19.51	24.54	*25.77%*	Billion
Fixed Voice Traffic	8.77	7.19	*-18.00%*	9.99	7.19	*-28.00%*	Million
Incoming International Traffic (Direct to Network Only)	51.47	59.06	*14.73%*	94.90	59.06	*-37.77%*	Million
Outgoing International Traffic	122.78	117.35	*-4.43%*	132.38	117.35	*-11.36%*	Million
Mobile Data Traffic (MB)	157.69	197.62	*25.32%*	81.84	197.62	*141.49%*	Billion MB
BWA Data Traffic (MB)	3.41	4.70	*37.67%*	3.58	4.70	*31.24%*	Billion MB
SMS Count	501.5	502.0	*0.10%*	725.0	502.0	*-30.76%*	Million

B3. Penetration Rate (%)

PENETRATION RATE (%)	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q1 2020	**Q2 2020**	***Growth (%)***	**Q2 2019**	**Q2 2020**	***Growth (%)***
Mobile Voice Subscription	138.15	132.47	*-4.11*	137.82	132.47	*-3.88*
Fixed Voice Subscription	0.97	0.98	*1.03*	0.95	0.98	*3.16*
Mobile Data Subscription	84.39	82.49	*-2.25*	95.64	82.49	*-13.75*
Fixed Data Subscription	0.19	0.25	*31.58*	0.20	0.25	*25.00*
Broadband Wireless Access	0.15	0.15	*0.00*	0.17	0.15	*-11.76*

C1. Broadcasting Sector

FM/TV AUTHORISATION & OPERATIONS	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q1 2020	**Q2 2020**	***Growth (%)***	**Q2 2019**	**Q2 2020**	***Growth (%)***
FM Authorisation	543	575	*5.89%*	458	575	*25.55%*
FM Station Operating	403	428	*6.20%*	375	428	*14.13%*
TV Authorisations	144	146	*1.39%*	138	146	*7.25%*
TV Stations Operating	96	102	*6.25%*	91	102	*12.09%*

C2. Categories of Authorised FM Radio Stations

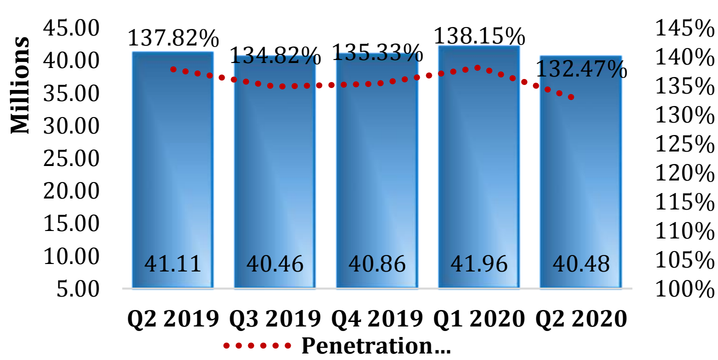
CATEGORIES OF FM RADIO STATIONS	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q1 2020	**Q2 2020**	***Growth (%)***	**Q2 2019**	**Q2 2020**	***Growth (%)***
PUBLIC	31	31	*0.00%*	26	31	*19.23%*
PUBLIC FOREIGN	5	5	*0.00%*	5	5	*0.00%*
CAMPUS	21	21	*0.00%*	22	21	*-4.55%*
COMMUNITY	79	81	*2.53%*	70	81	*15.71%*
COMMERCIAL	405	437	*7.90%*	310	437	*40.97%*

1.0 Cellular Mobile Network

This section provides information on the Mobile Network Operators (MNOs) in Ghana by looking at the mobile voice subscriptions, net additions to voice subscriptions, mobile penetration, volume of voice/data traffic and mobile data subscriptions. There are four service providers licensed by the National Communications Authority (NCA) to provide mobile telecoms services in Ghana namely AirtelTigo[2], Glo, MTN and Vodafone.

1.1 Mobile Voice Subscriptions and Penetration Rate[3]

Figure 1: Mobile Voice Subscription and Penetration Rate



Mobile Voice subscriptions decreased from 41.96 million at the end of Q1 2020 to 40.48 million at the end of Q2 2020, representing a decline of 3.53 %.

Year-on-year subscriptions decreased from 41.11 million at the end of Q2 2019 to 40.48 million at the end of Q2 2020, recording a negative growth of 1.55%.

The penetration rate as at the end of the second quarter of 2020 was 132.47% as compared to 138.15% recorded in the first quarter of 2020, indicating a decline of 4.11% (Figure 1) (Table 1).

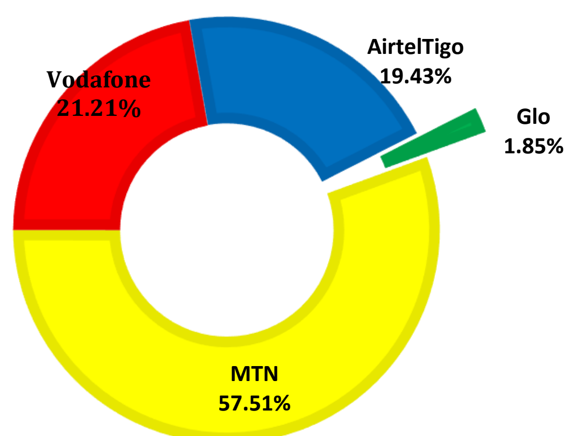
1.1.1 Market Share per Operator

At the end of Q2 2020, MTN had 57.51% of the market with 23.28 million subscriptions, followed by Vodafone with 8.59 million subscriptions (21.21%).

AirtelTigo is the third largest mobile network operator by subscription with a market share of 19.43% and subscriber base of 7.87 million.

Glo recorded 0.75 million subscriptions with a market share of 1.85% (Figure 2) (Table 2).

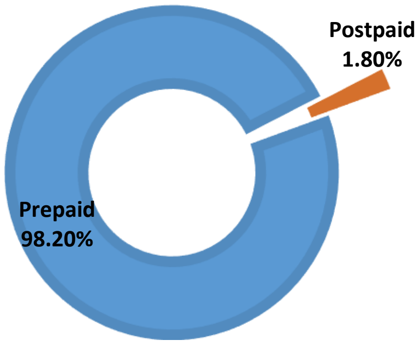
Figure 2: Market Share per Operator



[2] Airtel Ghana and Tigo merged in 2018.
[3] The Penetration Rate is partially attributed to people owning more than one sim.

1.1.2 Prepaid and Postpaid Mobile Voice Subscriptions

Figure 3: Prepaid and Postpaid Mobile Voice Subscriptions



The mobile voice subscription for prepaid subscribers is 39.75 million representing a market share of 98.20% whilst postpaid stood at 1.80% with a subscription of 0.73 million (Figure 3) (Table 3).

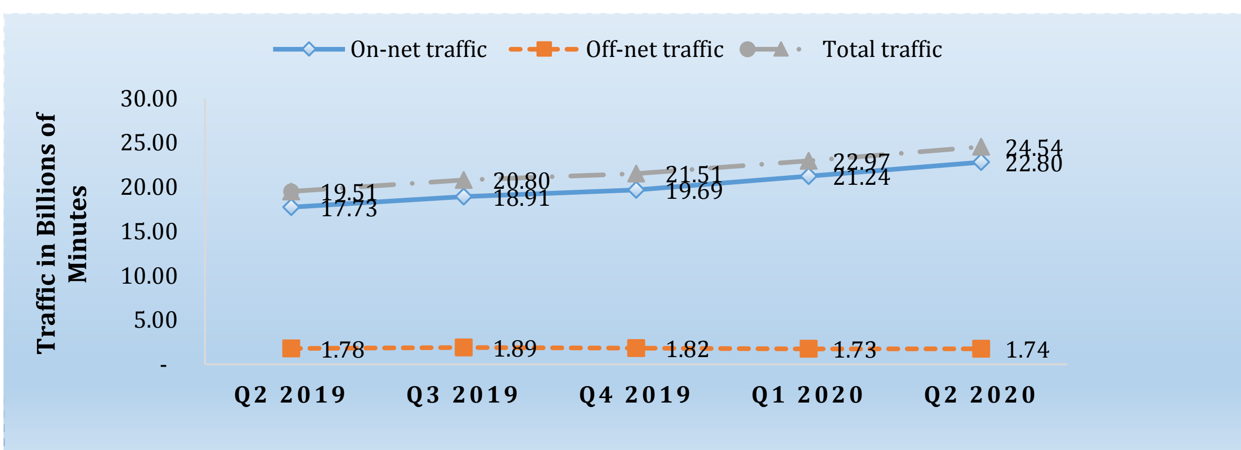
1.2 Mobile Voice Traffic (Domestic)

Outgoing off-net traffic to other networks increased from 1.73 billion minutes at the end of Q1 2020 to 1.74 billion minutes at the end of Q2 2020, representing a decline in growth by 0.62%. Year-on-year off-net traffic declined by 2.58%, from 1.78 billion minutes in Q2 2019 to 1.74 billion minutes at the end of Q2 2020.

On-net traffic increased from 21.24 billion minutes in the previous quarter to 22.80 billion minutes during the quarter under review, representing a growth rate of 7.33%. Year-on-year on-net traffic also grew from 17.73 billion minutes in Q2 2019 to 22.80 billion minutes at the end of Q2 2020 representing 28.62% in growth rate.

Total domestic mobile voice traffic recorded a rise from 22.97 billion minutes in the previous quarter to 24.54 billion minutes, in Q2 of 2020 representing 6.83% growth. Year-on-year mobile voice traffic also increased from 19.51 billion minutes at the end of the second quarter of 2019 to 24.54 billion minutes in the second quarter of 2020, representing a growth rate of 25.77% (Figure 4) (Table 4).

Figure 4: Mobile Voice Traffic (Domestic) in Billions of Minutes



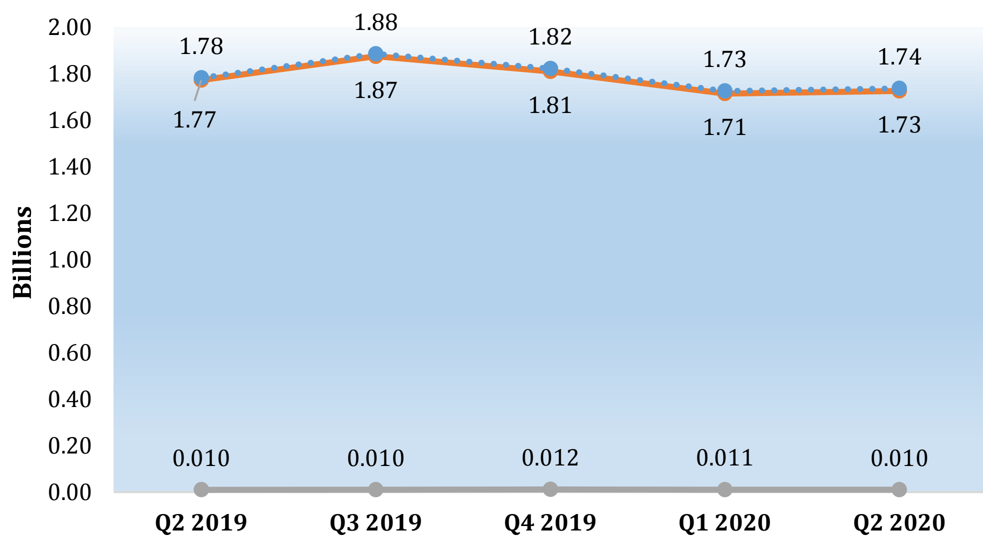
1.2.1 Mobile Off-net Traffic Distribution between Mobile and Fixed Networks

Mobile-to-mobile off-net traffic increased from 1.71 billion minutes at the end of Q1 2020 to 1.73 billion minutes at the end of Q2 2020 representing a 0.67% growth.

Year-on-year mobile-to-mobile off-net traffic decreased from 1.77 billion minutes at the end of Q2 2019 to 1.73 billion minutes at the end of Q2 2020, representing a decrease of 2.62% in growth.

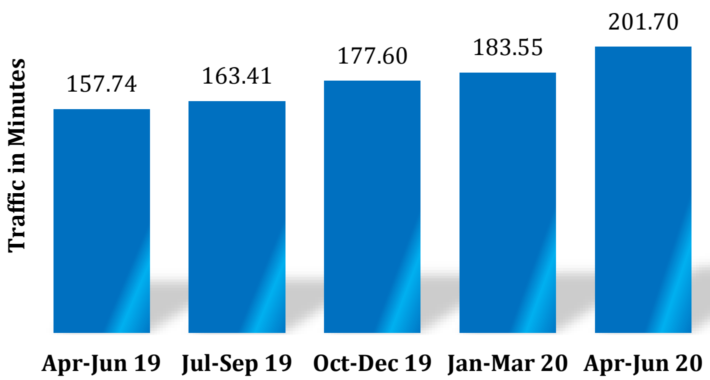
Mobile to fixed off-net traffic decreased from 11.21 million minutes to 10.41 million minutes representing a 7.09% decline in growth quarter-on-quarter. Year-on-year mobile-to-fixed off-net traffic increased from 10.05 million minutes at the end of Q2 2019 to 10.41 million minutes at the end of Q2 2020, representing 3.66% growth (Figure 5) (Table 5).

Figure 5: Off-net Traffic Distribution between Mobile and Fixed Networks



1.2.2 Minutes of Use (MoU)[4]

Figure 6: Mobile Voice Traffic Minutes of Use (MoU) per subscriptions

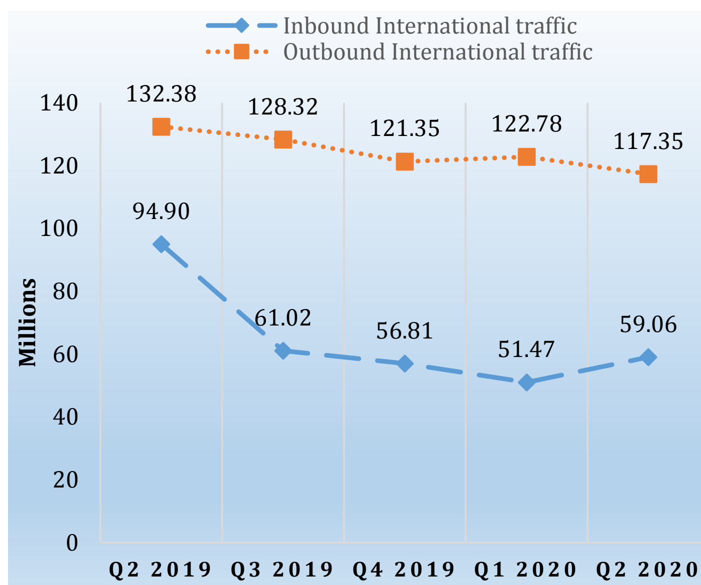


Quarter-on-quarter average minutes of use per subscription rose from 183.55 minutes in Q1 2020 to 201.70 minutes (9.89%) in Q2 2020.

Year-on-year minutes of use per subscription grew from 157.74 minutes in Q2 2019 to 201.70 minutes in Q2 2020, representing 27.87% growth (figure 6) (Table 6).

1.3 International Traffic

Figure 7: International Traffic in Minutes (Millions)



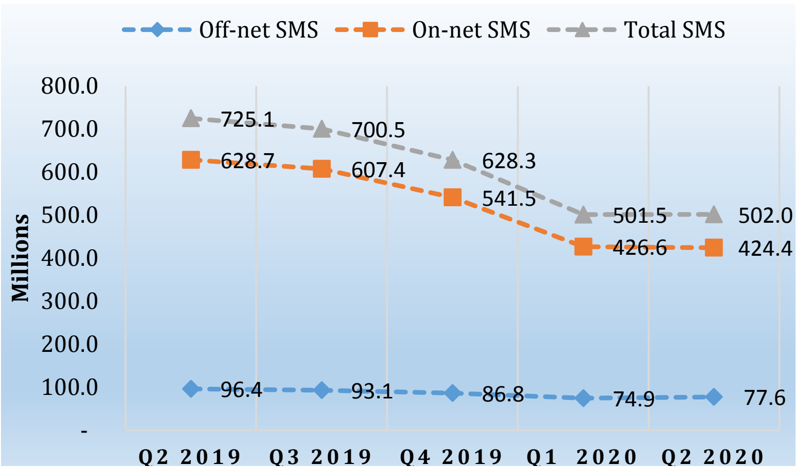
During the quarter under review, inbound international traffic increased from 51.47 million minutes to 59.06 million minutes, representing a growth of 14.73%. Year-on-year inbound international traffic also declined from 94.90 million minutes to 59.06 million minutes representing a decrease in growth by 37.77%.

Outbound international traffic decreased from 122.78 million minutes in Q1 2020 to 117.35 million minutes at the end of Q2 2020, representing a decrease of 4.43%. Year- on –year outbound international traffic declined from 132.38 million minutes to 117.35 million minutes, indicating a decrease of 11.36% (Figure 7) (Table 7).

[4] Minutes of use per subscriptions is calculated by dividing the total average volume of traffic for the quarter with the total average subscriptions for that quarter.

1.4 Short Messages Service (SMS)

Figure 8: Total Number of SMS



The total number of short messages service (SMS) sent at the end of Q2 2020 was 502.0 million as compared to 501.5 million in the preceding quarter, recording 0.10% increase.

Year-on-year SMS counts went down from 725.1 million in Q2 2019 to 502.0 million at the end Q2 2020, representing a decrease of 30.77% (figure 8) (Table 8).

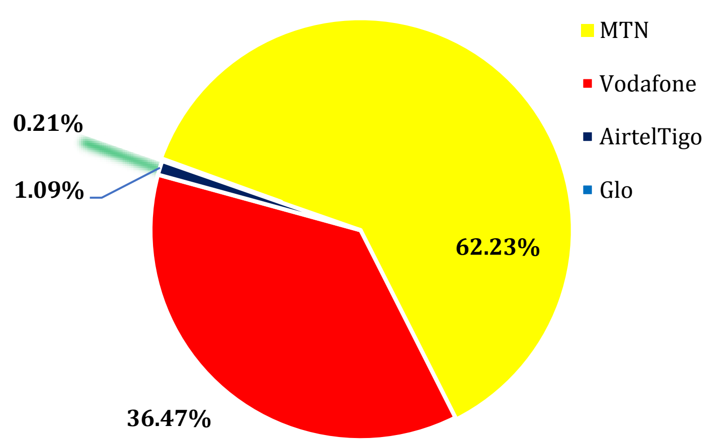
1.4.1 SMS Counts per Mobile Network Operator/Market Share

Figure 9: Average SMS per Mobile Network Operator

The volume of SMS traffic originating from MTN was 312.38 million at the end of Q2 2020; representing a market share of 62.23% of the total, SMS count.

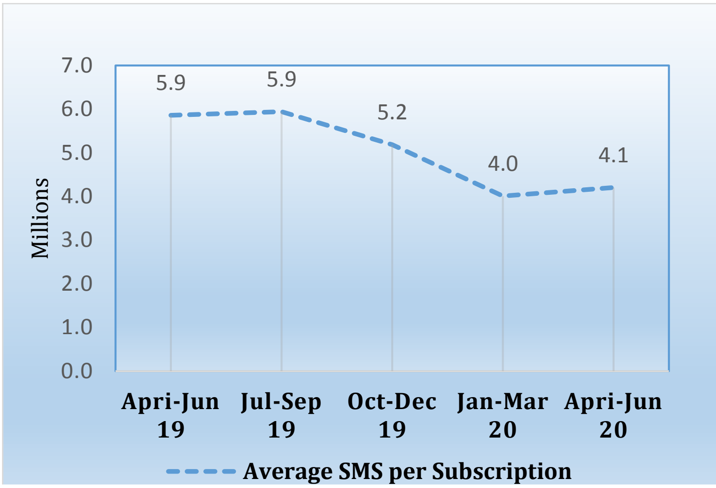
The volume of SMS traffic from Vodafone was 183.05 million, representing a market share of 36.47% of the total SMS count.

AirtelTigo had an SMS count of 5.47 million, representing 1.09% of the market share of the total SMS count. Glo generated 1.04 million SMS count recording a share of 0.21% (Figure 9) Table 8).



1.4.2 Average SMS per subscription

Figure 10: Average SMS per Subscription



Quarter-on-quarter average SMS sent per subscription at the end of Q2 2020 was about 4.1 SMS, indicating an increase of 2.96% as compared to the end of Q1 2020, which was 4.0.

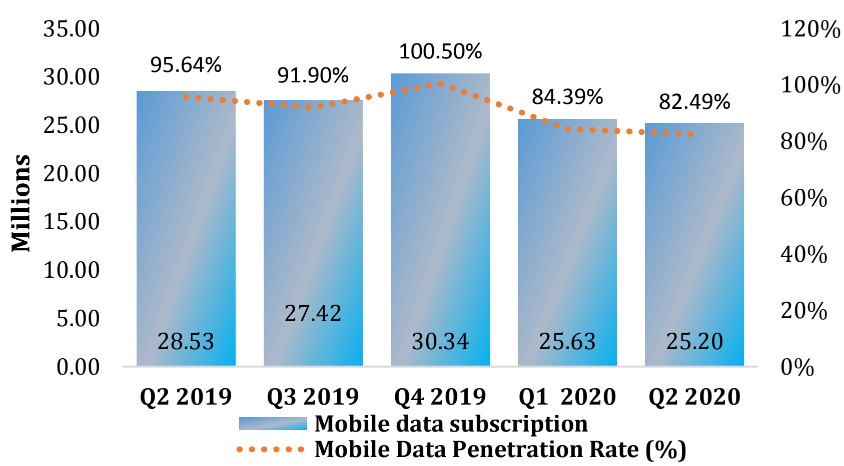
Year-on-year average SMS volume per subscription decreased from approximately 5.9 at the end of Q2 2019 to approximately 4.1 at the end of Q2 2020, recording a decrease of 29.62% (Figure 10) (Table 9).

1.5 Mobile Data Subscriptions and Penetration Rate (%)

At the end of Q2 2020, mobile data subscriptions decreased by 1.67% from 25.63 million at the end of Q1 2020 to 25.20 million.

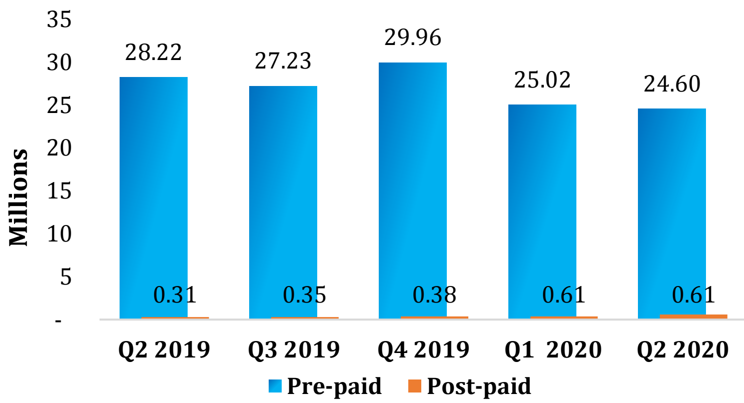
Year-on-year subscriptions decreased by 11.66%, from 28.53 million at the end of Q2 2019 to 25.20 million at the end of Q2 2020 (Figure 11) (Table 10).

Figure 11: Mobile Data Subscriptions and Penetration Rate (%)



1.5.1 Mobile Data Pre-paid and Post-paid Subscriptions

Figure 12: Mobile Data Pre-paid and Post-paid Subscriptions

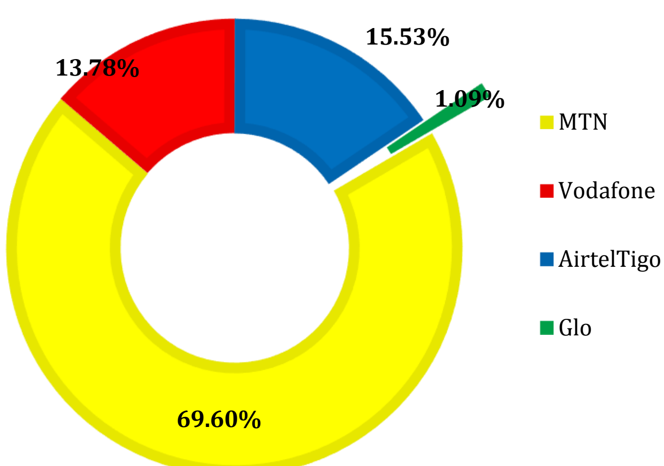


Mobile data pre-paid subscriptions decreased from 25.02 million in the first quarter of 2020 to 24.60 million subscriptions at the end of the second quarter of 2020, representing 97.59% of the market share.

Post-paid subscriptions recorded a market share of 2.41% with a subscription of 0.61 million at the end of Q2 2020 (Figure: 12) (Table: 10).

1.5.2 Mobile Data Subscriptions per Mobile Network Operator

Figure 13: Mobile Data Subscription per Operator



MTN recorded 17.54 million subscriptions with a market share of 69.60%.

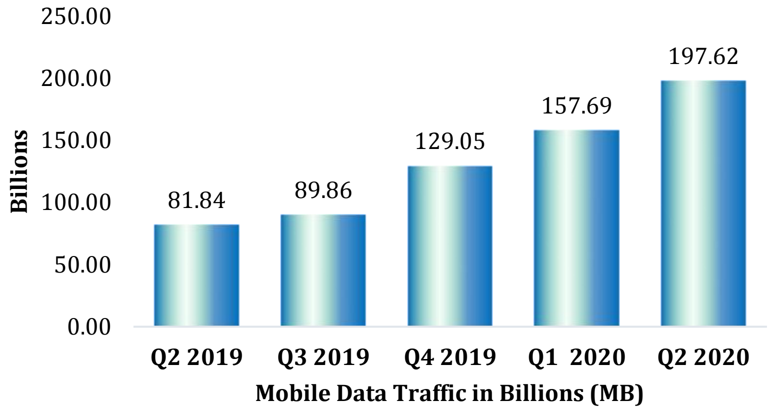
Vodafone also recorded 3.47 million subscriptions with a market share of 13.78%.

AirtelTigo registered 3.91 million in mobile data subscriptions with a market share of 15.53%.

Glo ended the second quarter of 2020 with a total data subscription of 0.28 million and a market share of 1.09% (Figure 13).

1.6 Mobile Data Traffic in Billions of Megabytes (MB)

Figure 14: Mobile Data Traffic in Billions of Megabytes (MB)



At the end of Q2 2020, internet traffic generated by the mobile network operators was 197.62 billion megabytes of data, recording a growth rate of 25.32% as compared to 157.69 at the end Q1 2020.

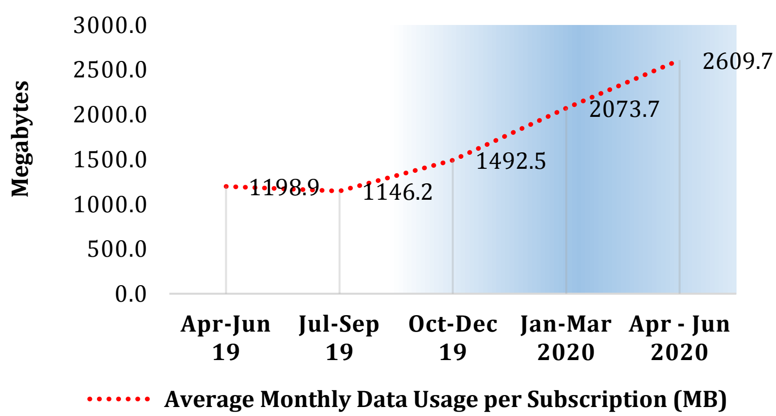
Year-on-year internet traffic increased from 81.84 billion megabytes at the end of Q2 2019 to 197.62 billion megabytes at the end of Q2 2020, representing an increase of 141.49% (Figure 14) (Table 11).

1.6.1 Mobile Internet Usage per Subscription (MB)[5]

Figure 15:Mobile Data Usage per Subscription (MB)

The average mobile internet usage per subscription increased from 2073.7 megabytes at the end of Q1 2020 to 2609.7 megabytes at the end of Q2 2020 recording a growth rate of 25.85%.

Year-on- year average data usage per subscription increased from 1198.9 at the end of Q2 2019 to 2609.7 at the end of Q2 2020, recording a growth of 117.67% (Figure 15) (Table 12).



[5] Mobile Internet usage per subscription is calculated by dividing the total average volume of internet traffic for the quarter with the total average mobile internet subscription for that quarter.

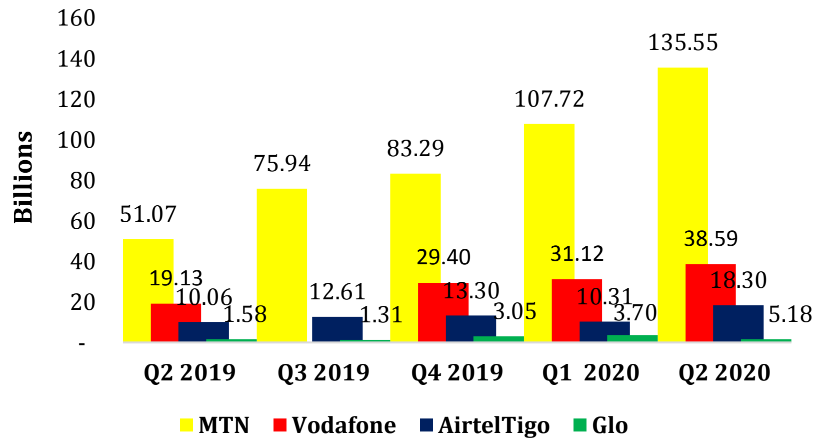
1.6.2 Mobile Internet Traffic (MB) per Mobile Network Operator

MTN generated the highest volume of internet traffic of 135.55 billion megabytes with a market share of 68.59%, followed by Vodafone with a traffic of 38.59 billion megabytes and a market share of 19.53%.

AirtelTigo also registered 18.30 billion megabytes of data, recording a market share of 9.26%.

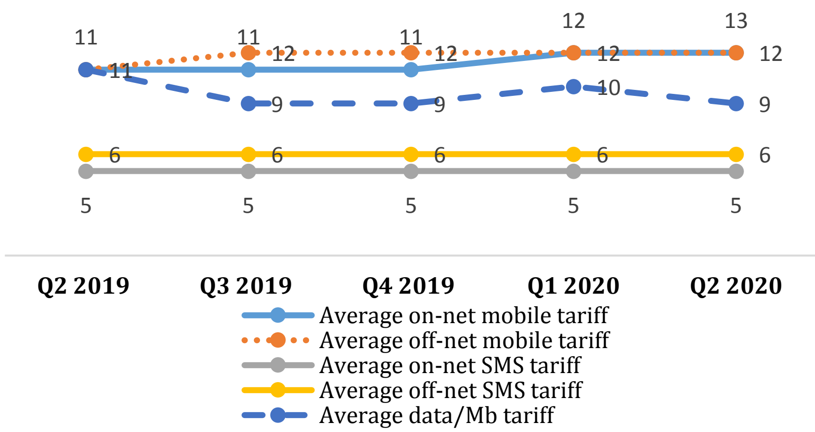
Glo recorded the least data usage, generating 5.18 billion megabytes with a market share of 2.62% (Figure 16) Table 13)

Figure 16: Mobile Internet Traffic (MB) per Operator



1.7 Mobile Telecommunications Service Tariffs

Figure 17: Average Mobile Tariffs per Service



Quarter- on -quarter average tariffs for SMS, on net and off-net mobile have not changed. The quarter- on-quarter data tariff also remain unchanged.

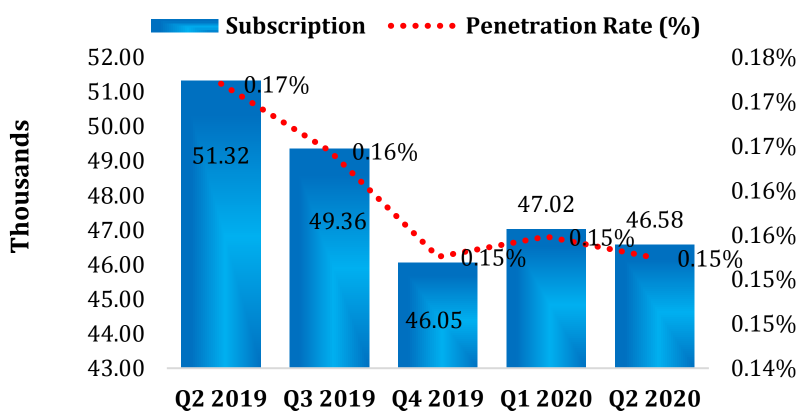
The industry average tariff for year-on-year on net and off net mobile tariff increased from 0.11 to 0.12 pesewas and 0.12 to 0.13 respectively. The average data tariff decreased from 0.11 to 0.09 pesewas per megabyte (Figure 17) (Table 14).

2.0 BROADBAND WIRELESS ACCESS (BWA)

There are five (5) Broadband Wireless Access operators in Ghana namely; BLU Telecommunications, Broadband Home (BBH), Busy Internet, Surfline and Telesol. This quarter's report covers data from BBH, Surfline and Telesol.

2.1 BWA Subscriptions and Penetration Rate

Figure 18: BWA Subscription and Penetration Rate



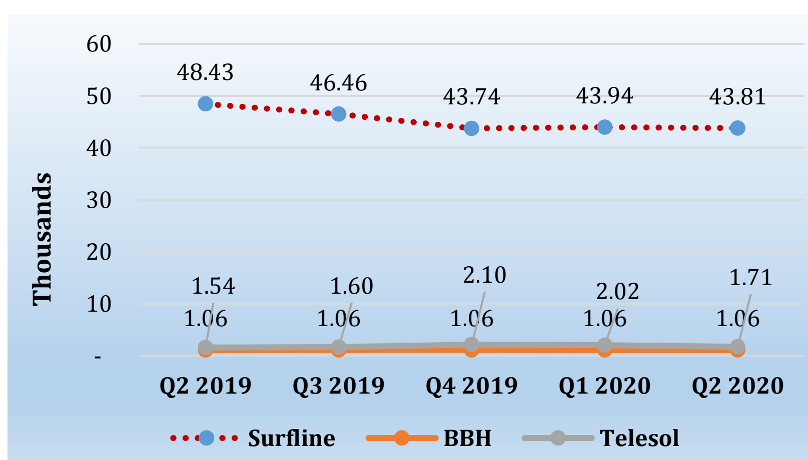
BWA subscriptions decreased from 47,019 in the first quarter of 2020 to 46,575 in the second quarter of 2020, representing a decline of 0.94%.

Year-on-year subscriptions also decreased from 51,319 in the second quarter of 2019 to 46,575 at the end of the second quarter of 2020, recording a 9.24% decrease.

Penetration rate for broadband wireless access stood at 0.15% (Figure 18) (Table 15).

2.1.1 Subscriptions per Broadband Wireless Access (BWA) Operator

Figure 19: Subscriptions per Broadband Wireless Access (BWA) Operator



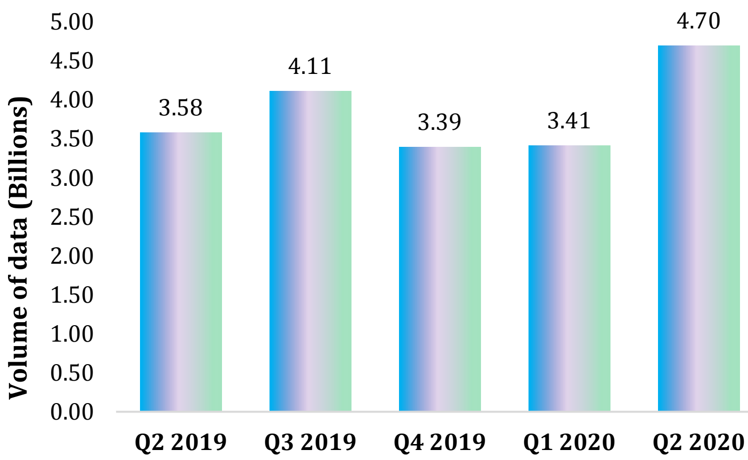
Surfline recorded a decrease in subscriptions from 43,939 at the end of Q1 2020 to 43,808 at the end of the quarter under review, representing a decrease of 0.30% and a market share of 94.06%.

Telesol recorded 1,711 subscriptions this quarter with decrease in growth by 15.46% and a market share of 3.67%.

BBH recorded 1,056 subscriptions at the end of Q2 2020 with a market share of 2.27%. (Figure 19) (Table 16).

2.2 Broadband Wireless Access (BWA) Volume of Internet Traffic

Figure 20: BWA Internet Traffic in Megabyte (MB)



The total volume of internet traffic generated by the BWAs increased from 3.41 billion megabytes at the end of Q1 2020 to 4.70 billion megabytes at the end of Q2 2020, indicating a growth of 37.67%.

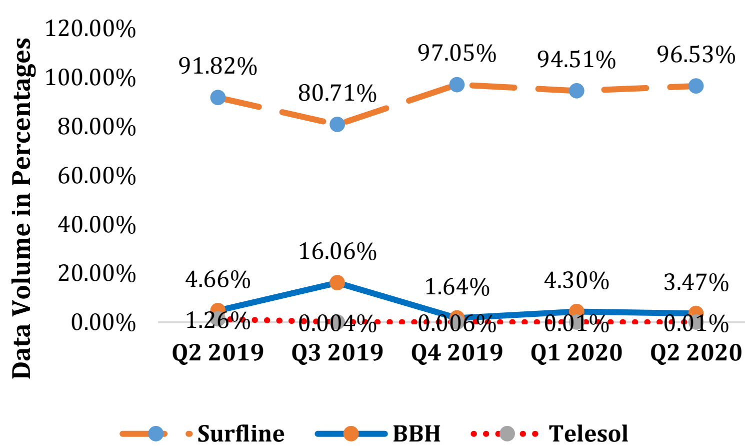
Year-on-year internet traffic also increased from 3.58 billion megabytes at the end of Q2 2019 to 4.70 billion megabytes at the end of Q2 2020, representing a growth of 31.24% (Figure 20) (Table 17).

2.2.1 Volume of Broadband Internet Traffic per Operator

Surfline's total volume of internet traffic for the quarter under review was 4.53 billion MB, representing 96.53% of the total volume of traffic.

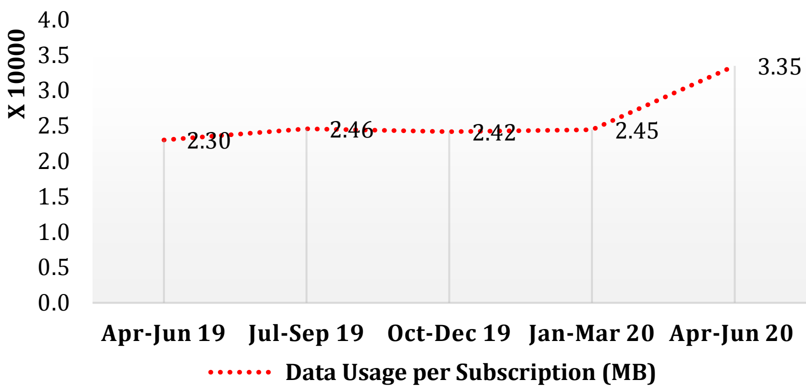
BBH recorded 0.163 billion MB of internet traffic, representing 3.47% of the market and Telesol recorded 0.003 billion MB with a market share 0.01% (Figure 21) (Table 17).

Figure 21: BWA Internet Traffic per Operator (MB)



2.2.2 Average Monthly Internet Usage per BWA Subscription[6]

Figure 22: Average Internet Usage per BWA Subscription



Average internet usage per BWA subscription increased to 33,485.90 megabytes in the second quarter of 2020 from 24,452.87 megabytes in the previous quarter.

Year-on-year internet usage per subscription also increased from 23,007.70 megabytes in the second quarter of 2019 to 33,485.90 megabytes at the end of the second quarter of 2020 (Figure 22) (Table 18).

[6] BWA data per subscriptions is calculated by dividing the total average volume of BWA's traffic for the quarter with the total average of BWA subscriptions for that quarter.

3.0 FIXED NETWORK

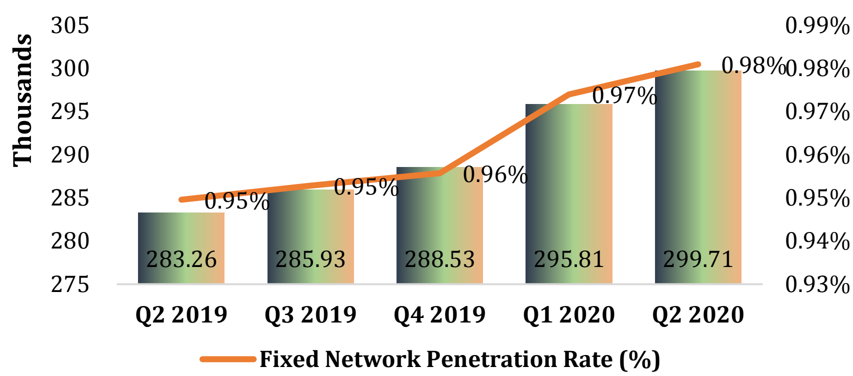
This section analyses the fixed telephone industry in Ghana. Three (3) operators namely Vodafone, AirtelTigo and MTN have been licensed by the NCA to provide this service.

3.1Fixed Voice Subscriptions and Penetration Rate

Total number of fixed line subscriptions increased from 295,814 in the first quarter of 2020 to 299,714 at the end of the second quarter of 2020. This shows a penetration rate of 0.98% and a growth in subscriptions by 1.32%.

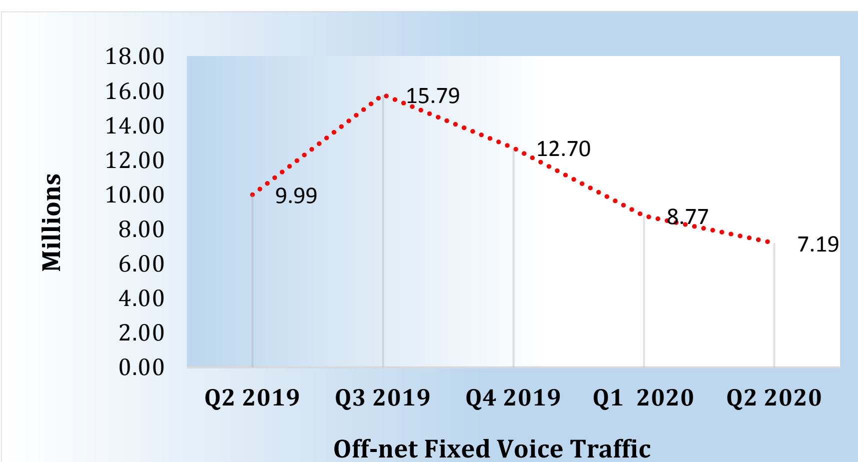
Year-on-year subscription changed from 283,261 in Q2 2019 to 299,714 at the end of Q2 2020, representing a growth of 5.81% (Figure 23) (Table 19).

Figure 23: Fixed Network Voice Subscription and Penetration Rate



3.2 Fixed Voice Network Traffic

Figure 24: Off-net Fixed Voice Traffic



Total volume of off-net traffic decreased by 18% during the quarter under review, from 8.77 million minutes to 7.19 million minutes.

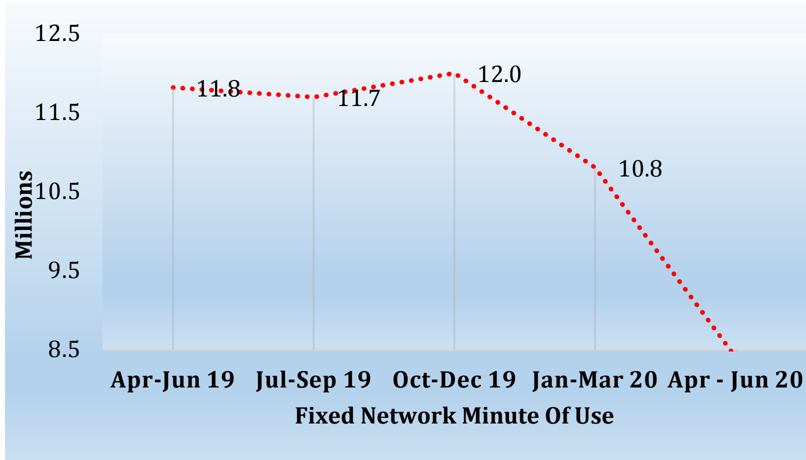
Year-on-year total volume of off-net traffic also decreased by 28%, from 9.99 million minutes to 7.19 million minutes (Figure 24) (Table 20).

3.3 Fixed Voice Average Minute of Use[7]

Average fixed voice traffic per subscription decreased from 10.8 to 8.4 minutes at the end of the second quarter of 2020 (21.84%).

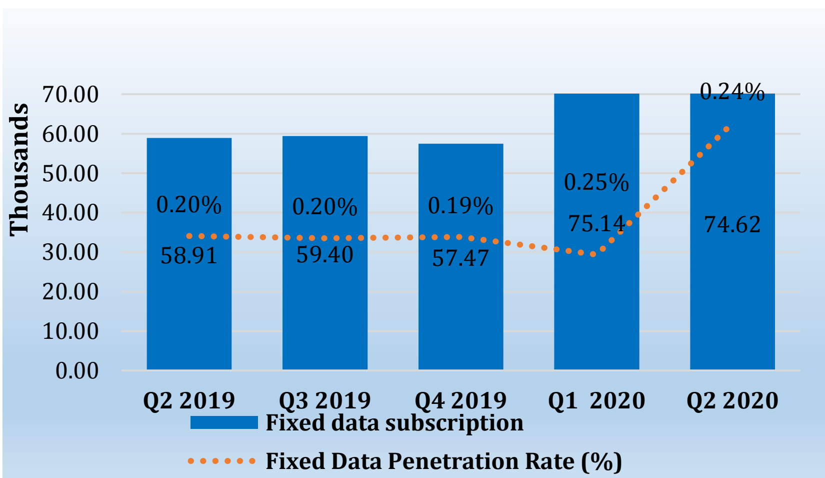
Year-on-year minutes of use per subscription declined from 11.8 minutes in the second quarter of 2019 to 8.4 minutes at the end of the second quarter of 2020 (28.76%) (Figure 25) (Table 21).

Figure 25: Fixed Network Minute of Use



3.4 Fixed Network Data Subscriptions and Penetration

Figure 26: Fixed Broadband Data Subscriptions and Penetration



Fixed Network Data subscriptions decreased from 75,137 in the previous quarter to 74,624 in the quarter under review recording a decline of 0.68%.

Year-on-year fixed data subscriptions increased from 58,911 in the preceding year to 74,624 at the end of the second quarter of 2020, recording a growth of 26.67%.

Fixed data penetration rate stood at 0.24% at the end of the second quarter of 2020 (Figure 26) (Table 22).

[7] Fixed Network Minutes of use per subscriptions is calculated by dividing the total average volume of traffic for the quarter with the total average fixed subscriptions for that quarter.

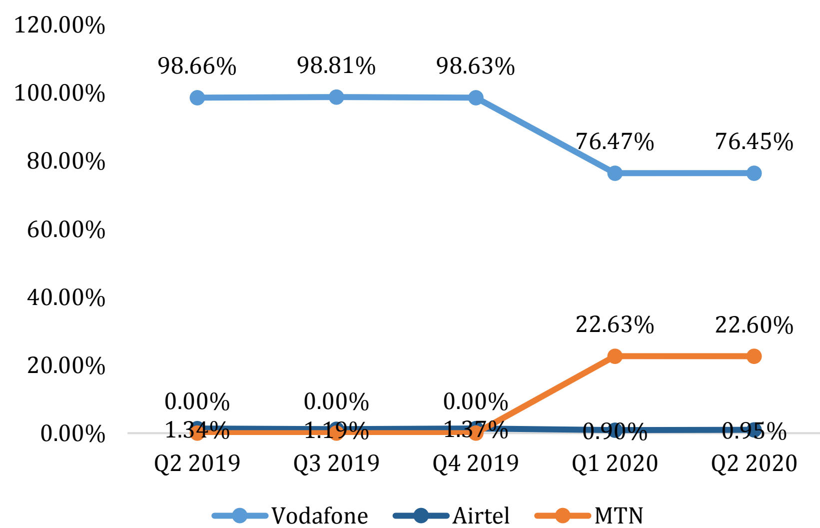
3.5 Fixed Network Data Subscriptions per Mobile Network Operator

Vodafone's subscriptions at the end of the second quarter of 2020 was 57,053 representing 76.45% of the market share. Its quarter-on-quarter and year-on-year subscriptions decreased by 0.70% and 1.84% respectively.

MTN's subscriptions at the end of the second quarter of 2020 was 16,865 representing 22.60% of the market share.

AirtelTigo recorded 706 subscriptions at the end of Q2 2020 with a market share of 0.95%. Year-on-year subscriptions declined by 10.41% from 788 to 706 (Figure 27) (Table 23).

Figure 27: Fixed Broadband Subscription per Operator



4.0 BROADCASTING

4.1 Authorised Frequency Modulation (FM) Radio Station

The total number of authorised FM stations in Ghana as at the end of the second quarter of 2020 was 575, indicating an increase from 543 in the previous quarter. The total number of operational FM stations increased from 403 to 428 in the quarter under review.

The Ashanti Region had the highest number of FM stations (83), representing 14.43% of the total number of authorised FM stations in the country. The Ahafo, North East and Oti Regions recorded the least number of authorised FM Stations, with 9 stations, representing 1.57% each (Figure 28) (Table 24).

Figure 28: Regional distribution of authorised FM stations as at end of Q2 2020

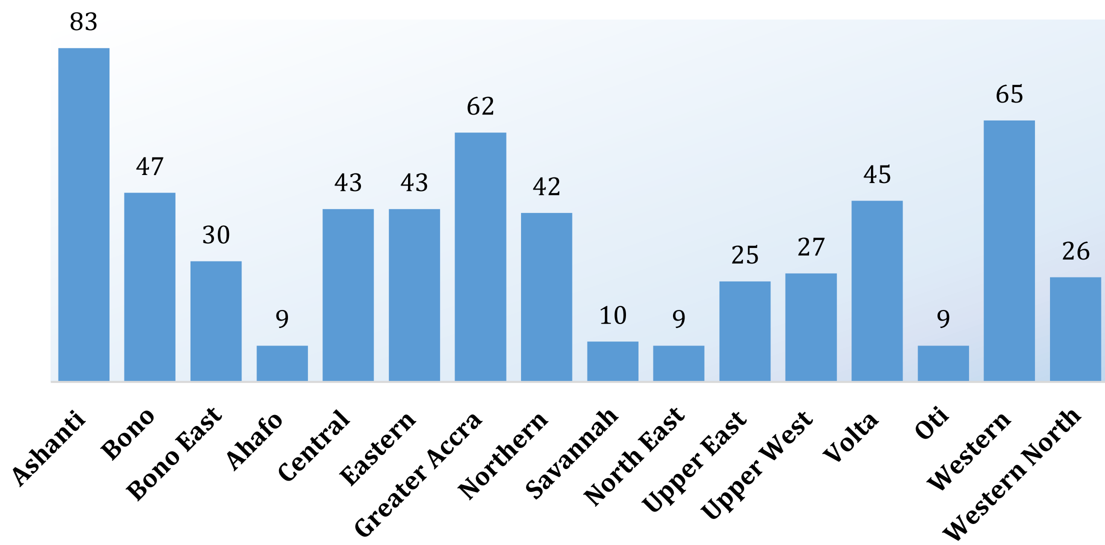


Figure 29: Regional distribution of On-air and Off-air FM stations as at end of Q2 2020

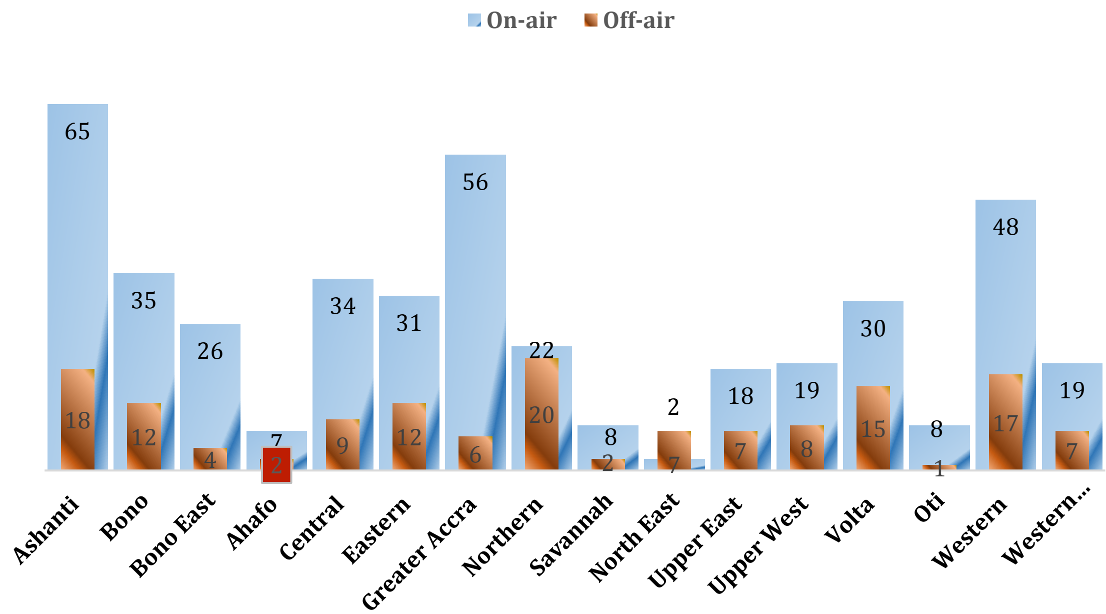
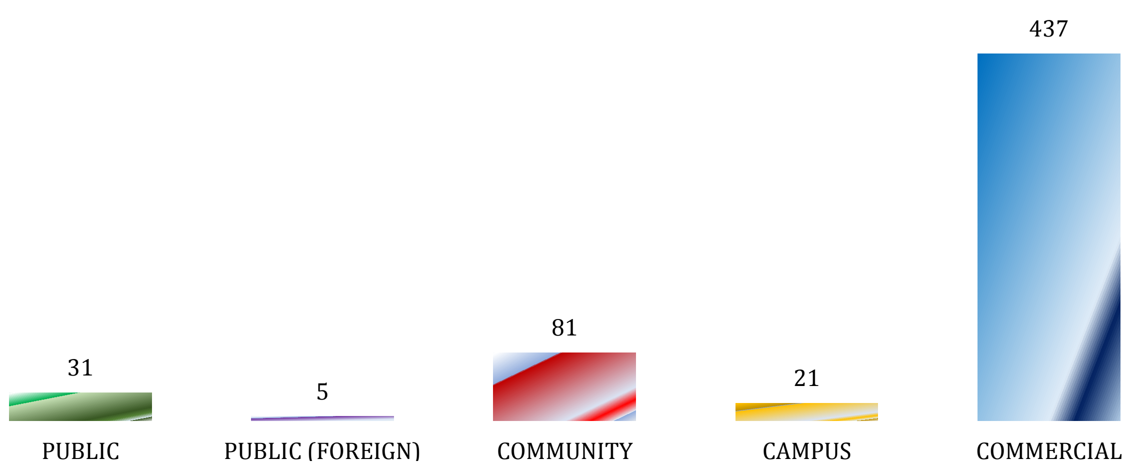


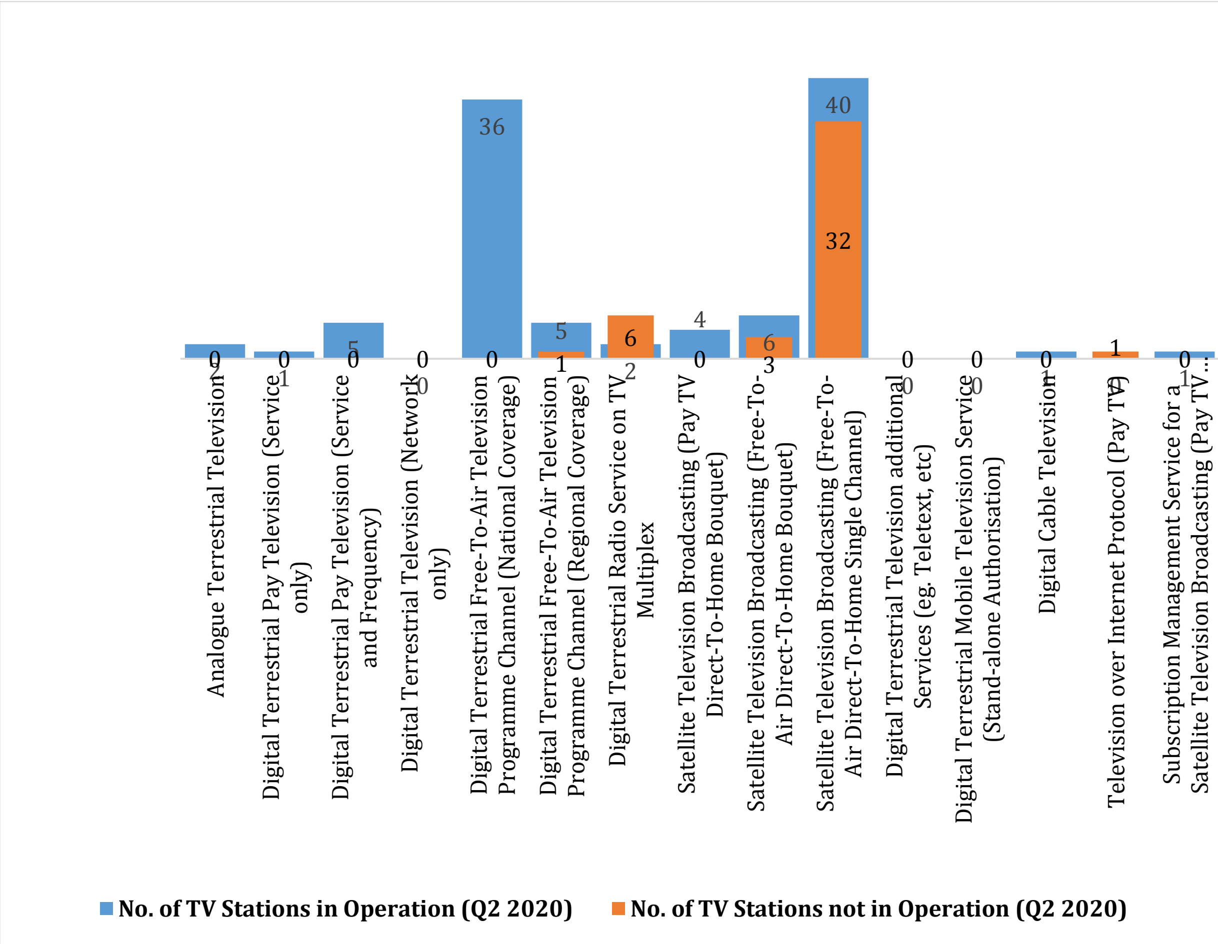
Figure 30: Purpose of Authorised Radio Stations as at Q2 2020



4.2 Authorised Television Stations

The total number of authorised TV stations in Ghana at the end of the second quarter was 146, out of which 103 were operational (Figure 31) (Table 26).

Figure 31: Distribution of On-Air and Off-Air TV Stations as at end of Q2 2020



Appendix A (List of Tables)

Table 1: Mobile Voice Subscriptions and Penetration Rate

Subscription	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Mobile Subscription	41,113,131	40,460,203	40,857,077	41,959,298	40,476,556
Mobile Subscription Growth rate (%)	-1.18%	-1.59%	0.98%	2.70%	-3.53%
Net additions	- 489,193	-652,928	396,874	1,102,221	-1,482,742
Net additions Growth Rate (%)	-173.29%	-33.47%	-160.78%	177.73%	-235%
Population[8]	29,830,322	30,009,663	30,190,081	30,371,584	30,554,178
Penetration Rate (%)	137.80%	134.80%	135.30%	138.15%	132.47%

Table 2: Mobile Voice Subscriptions and Market Share per Operator

Mobile Network Operator		Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
MTN	Subscriptions	21,342,887	21,569,033	22,555,848	23,945,672	23,277,698
	Market Share (%)	51.91%	53.31%	55.21%	57.07%	57.51%
Vodafone	Subscriptions	9,974,337	9,407,144	9,122,403	8,787,464	8,585,484
	Market Share (%)	24.26%	23.25%	22.33%	20.94%	21.21%
AirtelTigo	Subscriptions	9,074,284	8,764,093	8,453,053	8,498,008	7,866,500
	Market Share (%)	22.07%	21.66%	20.69%	20.25%	19.43%
Glo	Subscriptions	721,623	719,933	725,773	728,154	746,874
	Market Share (%)	1.76%	1.78%	1.78%	1.74%	1.85%
Total Industry Subscription		41,113,131	40,460,203	40,857,077	41,959,298	40,476,556

Table 3: Prepaid and Post-paid Voice Subscriptions and Market Share

Subscription	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Prepaid	40,573,825	39,861,332	40,216,604	41,287,248	39,747,560
Market Share	98.69%	98.52%	98.43%	98.40%	98.20%
Post-paid	539,306	598,871	640,473	672,050	728,996
Market Share	1.31%	1.48%	1.57%	1.60%	1.80%

[8] Population of Ghana was estimated based on the 2010 Population Census figure 24,658,823 published by Ghana Statistical Service (GSS) with 0.2% projected monthly growth rate.

Total mobile subscription	41,113,131	40,460,203	40,857,077	41,959,298	40,476,556

Table 4: Mobile Voice Traffic (Domestic) in Billions of Minutes

Traffic	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**	**Q2 2020**
Traffic(Off-net)	1,781,783,125	1,884,872,036	1,821,302,871	1,725,005,017	1,735,775,253
Share (%)	9.13%	9.06%	8.47%	7.51%	7.07%
Growth (%)	-11.08%	5.79%	-3.37%	-5.29%	0.62%
Traffic(On-net)	17,726,139,301	18,913,483,330	19,689,209,019	21,243,213,654	22,800,072,201
Share (%)	90.87%	90.94%	91.53%	92.49%	92.93%
Growth (%)	1.61%	6.70%	4.10%	7.89%	7.33%
Total traffic	19,507,922,426	20,798,355,366	21,510,511,890	22,968,218,671	24,535,847,454

Table 5: Mobile Off-net Traffic Distribution between Mobile and Fixed Network

Breakdown of Off-net Traffic	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**	**Q2 2020**
Mobile to Mobile					
Traffic	1,771,736,664	1,874,456,752	1,809,660,639	1,713,795,345	1,725,360,859
Share (%)	99.44%	99.45%	99.36%	99.35%	99.40%
Growth (%)	-11.15%	5.80%	-3.46%	-5.30%	0.60%
Mobile to Fixed					
Traffic	10,046,461	10,393,342	11,642,232	11,209,671	10,414,394
Share (%)	0.56%	0.55%	0.64%	0.65%	0.60%
Growth (%)	5.61%	3.45%	12.02%	-3.72%	-7.09%
Total Off-net Traffic	1,781,783,125	1,884,850,094	1,821,302,871	1,725,005,017	1,735,775,253

Table 6: Mobile Voice Traffic Minutes of Use (MoU) per Subscriptions

Traffic	**Apr-Jun 19**	**Jul-Sep 19**	**Oct-Dec 19**	**Jan-Mar 20**	**Apr-Jun 20**
Total mobile voice traffic	6,502,640,809	6,655,447,392	7,170,170,630	7,656,072,890	8,178,615,818
Mobile voice subscription	41,222,786	40,727,647	40,372,522	41,710,048	40,547,599
Minutes of Use (MoU) per Subscription	157.74	163.41	177.60	183.55	201.70
MoU growth rate (%)	0.66%	3.59%	8.68%	3.35%	9.89%

Table 7: International Traffic

Traffic	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Incoming International Traffic	94,897,262	61,018,472	56,814,366	51,473,267	59,056,445
Growth (%)	-5.39%	-35.70%	-6.89%	-9.40%	14.73%
Outgoing International Traffic	132,383,628	128,321,232	121,347,629	122,784,014	117,349,645
Growth (%)	-5.15%	-3.07%	-5.43%	1.18%	-4.43%

Table 8: Total Number of SMS per Mobile Network Operator in Millions

Mobile Operators	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Off- net SMS					
MTN	32,640,281	37,306,986	32,595,204	26,738,362	25,239,001
Vodafone	59,623,032	51,763,218	51,687,036	46,047,085	49,753,675
AirtelTigo	3,035,708	3,119,560	2,260,095	1,876,630	1,676,701
Glo	1,063,280	920,272	231,790	257,432	898,516
Total	**96,362,301**	**93,110,036**	**86,774,125**	**74,919,509**	**77,567,893**
On-net SMS					
MTN	313,244,554	330,421,743	305,060,095	271,939,194	287,142,138
Vodafone	302,909,431	265,778,541	228,752,668	150,323,428	133,299,083
AirtelTigo	12,408,355	11,121,701	7,655,834	4,296,095	3,794,801
Glo	106,512	118,848	12,461	26,331	141,095
Total	**628,668,852**	**607,440,833**	**541,481,058**	**426,585,048**	**424,377,116**
Total					
MTN	345,884,835	367,728,729	337,655,299	298,677,555	312,381,139
Vodafone	362,532,463	317,541,759	280,439,704	196,370,513	185,008,652
AirtelTigo	15,444,063	14,241,261	9,915,929	6,172,444	5,471,401
Glo	1,169,792	1,039,120	244,251	680,990	1,039,611
Total	**725,031,153**	**700,550,869**	**628,255,183**	**501,504,557**	**501,945,009**

Table 9: Average SMS per Subscription

	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 20	Apr-Jun 20
Total SMS	241,677,051	242,015,054	209,418,394	167,168,186	167,315,003
Mobile Subscription	41,222,786	40,727,647	40,372,522	41,710,048	40,547,599
Average SMS per Subscription	5.9	5.9	5.2	4.0	4.1

Table 10: Mobile Data Subscriptions (Prepaid/Postpaid)

Mobile Data Subscriptions		**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**	**Q2 2020**
Prepaid	Subscriptions	28,223,237	27,228,060	29,960,572	25,021,986	24,595,169
	Market Share (%)	*98.93*	*98.73*	98.75	97.63	97.59
Post-paid	Subscriptions	305,230	350,604	380,721	608,454	608,125
	Market Share (%)	*1.07*	*1.27*	1.25	1.62	2.41
Total mobile data subscriptions		**28,528,467**	**27,578,664**	**30,341,293**	**25,630,440**	**25,203,294**

Table 11: Mobile Data Traffic in Billions of Megabytes (MB)

Mobile Operator	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**	**Q2 2020**
Mobile data usage (MB)	81,835,188,472	89,863,150,227	129,046,495,642	157,693,533,779	197,623,989,682

Table 12: Mobile Internet Usage per Subscription (MB)

Mobile Operator	**Apr-Jun 19**	**Jul-Sep 19**	**Oct-Dec 19**	**Jan-Mar 2020**	**Apr-Jun 20**
Mobile data usage (MB)	32,978,998,942	31,861,047,810	43,015,498,547	52,564,511,260	65,874,663,227
Total Subscription	27,507,363	27,798,219	28,820,282	25,348,558	25,242,452
Average Data Usage per Subscription (MB)	1198.9	1146.2	1492.5	2073.7	2609.7

Table 13: Mobile Data Traffic (MB) per Operator

Mobile Operator	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**	**Q2 2020**
MTN	51,065,520,052	75,944,166,843	83,293,912,024	107,722,839,616	135,550,242,371
	62.40%	84.51%	64.55%	68.31%	68.59%
Vodafone	19,125,129,557	-	29,399,350,038	31,118,840,152	38,594,683,077
	23.37%	-	22.78%	19.73%	19.53%
AirtelTigo	10,059,886,695	12,605,850,897	13,302,050,366	15,153,701,450	18,295,463,956
	12.29%	14.03%	10.31%	9.61%	9.26%
Glo	1,584,652,168	1,313,132,487	3,051,183,214	3,698,152,561	5,183,600,278
	1.94%	1.46%	2.36%	2.35%	2.62%
Total Industry Traffic (MB)	81,835,188,472	89,863,150,227	129,046,495,642	157,693,533,779	197,623,989,682

Table 14: Average Mobile Tariff per Service (GHp)

Tariff	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Average on-net mobile tariff	0.11	0.11	0.11	0.12	0.12
Average off-net mobile tariff	0.12	0.12	0.12	0.13	0.13
Average on-net SMS tariff	0.05	0.05	0.05	0.05	0.05
Average off-net SMS tariff	0.06	0.06	0.06	0.06	0.06
Average data/Mb tariff	0.11	0.09	0.09	0.09	0.09

Table 15: BWA Data Subscriptions and Penetration

BWA Operator	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Subscription	51,319	49,355	46,050	47,019	46,575
Growth rate (%)	-2.76%	-3.83%	-6.70%	2.10%	-0.94%
Net Additions	-1,459	-1,964	-3,305	969	-444
Population	29,830,322	30,009,663	30,190,081	30,371,584	30,554,178
Penetration Rate (%)	0.17%	0.16%	0.15%	0.15%	0.15%

Table 16: Subscriptions per Broadband Wireless Access (BWA) Operator

BWA operator	Subscription and Market Share	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Surfline	Subscription	48,432	46,462	43,735	43,939	43,808
	Market share (%)	94.37%	94.14%	94.97%	93.45%	94.06%
Telesol	Subscription	1,543	1,600	2,104	2,024	1,711
	Market share (%)	3.01%	3.24%	4.57%	4.30%	3.67%
BBH	Subscription	1,060	1,058	1,058	1,056	1,056
	Market share (%)	2.07%	2.14%	2.30%	2.25%	2.27%
BLU	Subscription	284	235	211	-	-
	Market share (%)	0.55%	0.48%	0.46%	-	-
Industry Total		**51,319**	**49,355**	**46,050**	**47,019**	**46,575**

Table 17: Data Traffic (MB) per Broadband Wireless Access (BWA) Operator

BWA operator		Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Surfline	Data usage (MB)	3,286,417,500	3,320,389,950	3,294,049,738	3,224,680,819	4,534,304,590
	Market share (%)	91.82%	80.71%	97.05%	94.51%	96.53%
BBH	Data usage (MB)	166,853,980	660,855,380	55,572,920	146,550,970	162,793,380
	Market share (%)	4.66%	16.06%	1.64%	4.30%	3.47%
BLU	Data usage (MB)	80,785,806	132,424,093	44,302,566	40,655,523	-
	Market share (%)	2.26%	3.22%	1.31%	1.19%	-
Telesol	Data usage (MB)	45,093,461	183,264	213,833	217,302	337,792
	Market share (%)	1.26%	0.004%	0.006%	0.01%	0.01%
Industry Total (MB)		**3,579,150,748**	**4,113,852,687**	**3,394,139,057**	**3,412,104,614**	**4,697,435,762**

Table 18: Internet Usage per BWA Subscriptions (MB)

BWA Operator	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 20	Apr-Jun 20
Volume of data traffic	1,192,833,362	1,236,648,960	1,193,050,112	1,137,368,205	1,565,811,921
Subscription	51,845	50,294	49,373	46513	46,760
Data Usage per Subscription (MB)	23,007.70	24,588.40	24,163.90	24,452.9	33,485.9

Table 19: Fixed Network Voice Subscriptions and penetration

Fixed Operator	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Vodafone	273,398	279,247	280,321	289,106	292,661
	96.52%	97.66%	97.15%	97.73%	97.65%
AirtelTigo	9,863	6,684	8,210	6,669	7,032
	3.48%	2.34%	2.85%	2.25%	2.35%
MTN	-	-	-	39	21
	-	-	-	0.01%	0.01%
Total industry subscription	283,261	285,931	288,531	295,814	299,714
Population	29,830,322	30,009,663	30,190,081	30,371,584	30,554,178
Fixed Network Penetration Rate (%)	0.95%	0.95%	0.96%	0.97%	0.98%

Table 20: Fixed Network Volume of Traffic in Minutes

Traffic	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
On-net Fixed voice traffic	-	-	-	-	-
Off-net fixed voice traffic	9,994,343	15,786,823	12,702,490	8,774,103	7,194,754
Total Fixed Voice Traffic	9,994,343	15,786,823	12,702,490	8,774,103	7,194,754

Table 21: Fixed Network Minute of Use per Subscriptions

Traffic	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 2020	Apr-Jun 20
Total Fixed Voice Traffic	3,331,448	3,312,569	3,446,917	3,160,161	2,510,431
Subscription	282,091	283,366	287,395	293,536	298,359
Minutes of Use per Subscription (MoU)	11.8	11.7	12.0	10.8	8.4
Growth Rate	1.01%	-1.00%	2.58%	-10.24%	-21.84%

Table 22 : Fixed Network Data Subscriptions and Penetration

Fixed network operator	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Vodafone	58,123	58,697	56,677	57,458	57,053
	98.66%	98.81%	98.63%	76.45%	76.45%
Airtel	788	704	788	673	706
	1.34%	1.19%	1.37%	0.90%	0.95%
MTN	-	-	-	17,006	16,865
	-	-	-	22.63%	22.60%
Total fixed data subscription	58,911	59,401	57,465	75,137	74,624
Population	29,830,322	30,009,663	30,190,081	30,371,584	30,554,178
Fixed Data penetration rate (%)	0.20%	0.20%	0.19%	0.19%	0.19%

Table 23: Fixed Network Data Subscriptions per Operator

Fixed network operator	Q2 2019	Q3 2019	Q4 2019	Q1 2020	Q2 2020
Vodafone	58,123	58,697	56,677	57,458	57,053
	98.66%	98.81%	98.63%	98.84%	98.78%
AirtelTigo	788	704	788	673	706
	1.34%	1.19%	1.37%	1.16%	1.22%
MTN	-	704	788	673	706
	-	1.19%	1.37%	1.16%	1.22%

Table 24: Regional Distribution of FM Stations by Purpose

Name of Regions	**Public**	**Public (Foreign)**	**Community**	**Campus**	**Commercial**
Ashanti	2	1	10	3	67
Bono	1	-	3	2	41
Bono East	2	-	4	-	24
Ahafo	-	-	1	-	8
Central	2	-	9	3	29
Eastern	2	-	7	1	33
Greater Accra	2	3	4	4	49
Northern	3	-	7	2	30

Savannah	3	-	4	-	3
North East	1	-	4	-	3
Upper East	2	-	8	1	14
Upper West	2	-	7	2	16
Volta	3	-	4	1	37
Oti	1	-	2	-	6
Western	2	1	5	2	56
Western North	3	-	2	-	21
Total	**31**	**5**	**81**	**21**	**437**

Table 25: Regional Distribution of FM Stations as at the end of Q2 2020

Name Of Regions	Authorised FM Stations	FM Stations In Operation
Ashanti	**83**	65
Bono	**47**	35
Bono East	**30**	26
Ahafo	**9**	7
Central	**43**	34
Eastern	**43**	31
Greater Accra	**62**	56
Northern	**42**	22
Savannah	**10**	8
North East	**9**	2
Upper East	**25**	18
Upper West	**27**	19
Volta	**45**	30
Oti	**9**	8
Western	**65**	48
Western North	**26**	19
Total	**575**	**428**

Table 26: Authorised TV Services in Ghana as at end of Q2 2020

Types of TV stations	Authorised TV stations		No. of TV Stations in Operation (Q2 2020)	No. of TV Stations not in Operation (Q2 2020)
	End of Q1 2020	End of Q2 2020		
Analogue Terrestrial Television	2	2	2	0
Digital Terrestrial Pay Television (Service only)	1	1	1	0
Digital Terrestrial Pay Television (Service and Frequency)	5	5	5	0
Digital Terrestrial Television (Network only)	0	0	0	0
Digital Terrestrial Free-To-Air Television Programme Channel (National Coverage)	35	36	36	0
Digital Terrestrial Free-To-Air Television Programme Channel (Regional Coverage)	6	6	5	1
Digital Terrestrial Radio Service on TV Multiplex	8	8	2	6
Satellite Television Broadcasting (Pay TV Direct-To-Home Bouquet)	4	4	4	0
Satellite Television Broadcasting (Free-To-Air Direct-To-Home Bouquet)	9	9	6	3
Satellite Television Broadcasting (Free-To-Air Direct-To-Home Single Channel)	71	72	40	32
Digital Terrestrial Television additional Services (eg. Teletext, etc)	0	0	0	0
Digital Terrestrial Mobile Television Service (Stand-alone Authorisation)	0	0	0	0
Digital Cable Television	1	1	1	0
Television over Internet Protocol (Pay TV)	1	1	0	1
Subscription Management Service for a Satellite Television Broadcasting (Pay TV Direct-To-Home Bouquet)	1	1	1	0
Total	**144**	**146**	**103**	**43**

Source: NCA, 2020

Disclaimer:
The National Communications Authority has been diligent to ensure the data in this bulletin are accurate. However, the Authority is not liable for inconsistencies, errors, and gaps in any data or information contained in this bulletin, which is dependent upon the various licensees data submissions to the Authority.

NCA CONTACTS AND PRESENCE COUNTRYWIDE

The Authority currently has eight (8) regional offices to support its operations. Their addresses are listed below

- ### Accra, Head Office

National Communications Authority,
NCA Tower, No 6 Airport City
Close to the Marina Mall
P. O. Box CT 1568, Cantonments, Accra
Tel: +233 (0) 302 776621, 771701
Fax: +233 (0) 302 763449
E-mail: info@nca.org.gh
Complaints: +233 (0) 30 701 1419
complaints@nca.org.gh
Website: www.nca.org.gh

- ### Accra Office

National Communications Authority
1st Rangoon Close,
Switchback Road, Cantonment, Accra
P. O. Box CT 1568,
Cantonment, Accra
Tel: +233 (0) 553 369862, (0) 553 432215
E-mail: complaints.accra@nca.org.gh

- ### Bolgatanga Office

National Communications Authority,
Zorbisi Zaare Residential Area in Bolgatanga Municipality
Private Mail Bag, Bolgatanga,
Upper East Region
Tel: +233 (0) 3820 21141
E-mail: complaints.bolgatanga@nca.org.gh

- ### Ho Office

National Communications Authority,
Plot No. 75, Stadium Road, Kabore Junction
P. O. Box HP1576, Ho, Volta Region
Tel: +233 (0) 3620 26339
E-Mail: complaints.ho@nca.org.gh

- ### Koforidua Office

National Communications Authority,
Block C along the Galloway Road
Private Mail Bag, Koforidua, Eastern Region
Tel: +233 (0) 3420 28378, 28380, 28382
E-Mail: complaints.koforidua@nca.org.gh

- ### Kumasi Office

National Communications Authority,
Fuller Road, Danyame, Kumasi
P. O. Box KS 10768, Kumasi,
Ashanti Region, Ghana
Tel: + 233 (0) 32 202 0014 / 32 202 0018 / 32 202 0019
Fax: (+233) 32 002 0064
E-Mail: complaints.kumasi@nca.org.gh

- ### Sunyani Office

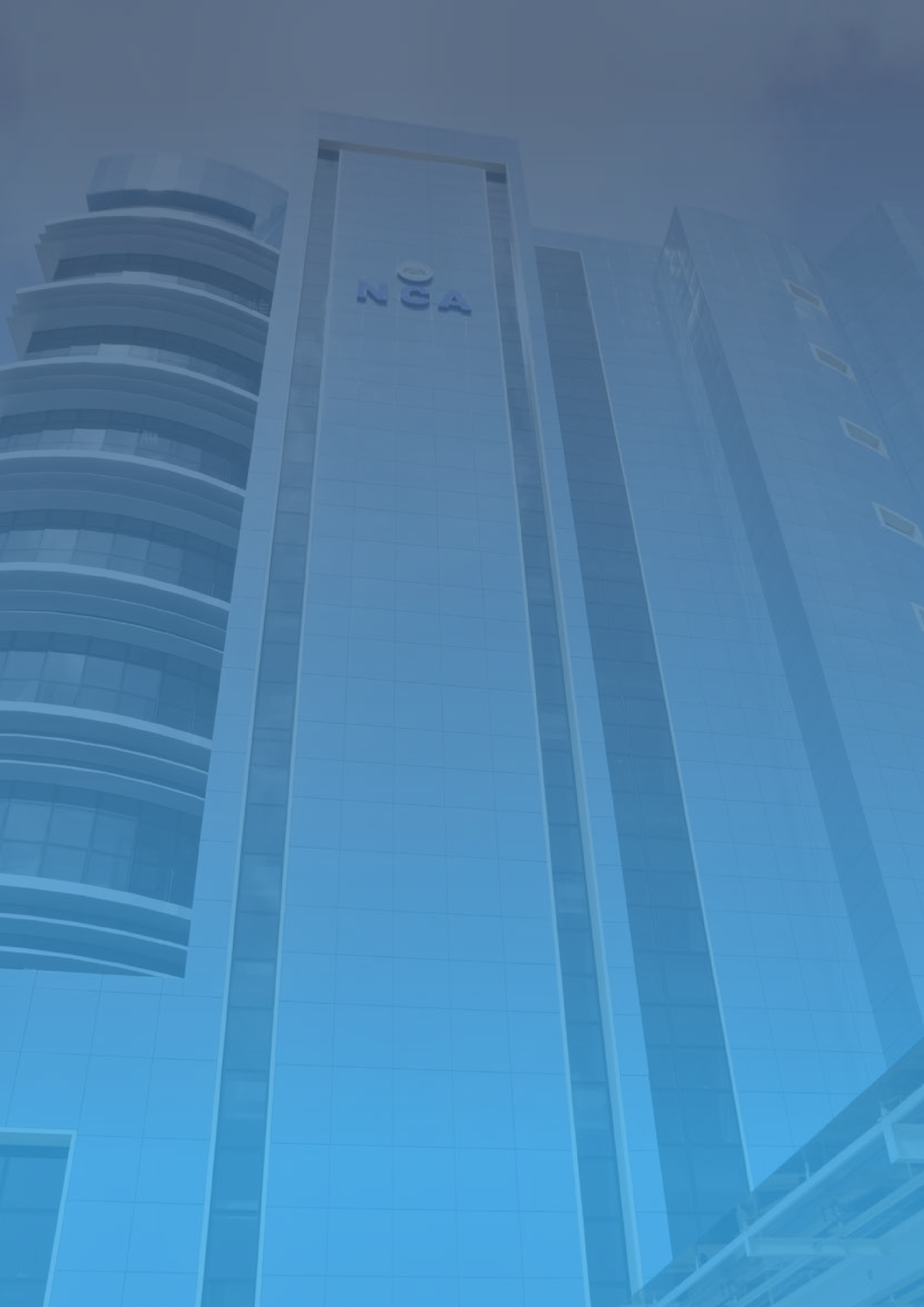
National Communications Authority,
House No 83, North Nkwabeng
P. O. Box SY125, Sunyani, Brong Ahafo Region
Tel: +233 (0) 3520 27564
E-Mail: complaints.sunyani@nca.org.gh

- ### Takoradi Office

National Communications Authority,
Bakado, 3kms away from the Prisons
(R.S.,K. Barnes Ct, Sekondi - Takoradi
P. O. Box SL 409, Sekondi,
Western Region, Ghana
Tel: +233 (0) 31 202 8073 / 31 202 8049
Fax: +233 (0) 31 202 8063
E-Mail: complaints.takoradi@nca.org.gh

- ### Tamale Office

National Communications Authority,
Watherson Residential Area
Plot No. 3 & 4, Tamale
P. O. Box TL 1590, Tamale,
Northern Region, Ghana
Tel: + 233 (0) 37 202 8105 / 37 020 8104
Fax: +233 (0) 37 202 8104
E-Mail: complaints.tamale@nca.org.gh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