



# THE Regulator

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Quarterly magazine of the Tanzania Communications Regulatory Authority

JULY - SEPTEMBER 2018

## Corporate Sustainability



REAPING THE DIGITAL DIVIDEND

## Tanzania targets advanced broadband coverage by 2024



KISWAHILI SUPPLEMENT  
KANUNI ZA WATUMIAJI HUDUMA NA BIDHAA ZA MAWASILIANO

## PUBLIC NOTICE

# Registration and use dot tz (.tz) domain names in the United Republic of Tanzania

### 1.0 INTRODUCTION

Electronic addresses used for electronic communications include addresses under dot-tz country code Top Level Domain (.tz ccTLD). The Tanzania Communications Regulatory Authority (TCRA) has the mandate of overseeing the management and administration of the dot tz (.tz) country code Top Level Domain (ccTLD) resource in the country.

Section 79 of the Electronic and Postal Communications Act (EPOCA) confers upon TCRA the role of regulating all electronic communication numbering and electronic addresses and ensuring efficient use by, among others; performing an oversight role in the management of the .tz country code Top Level Domain.

Regulation 10 sub-regulations (1) and (2) of the Electronic and Postal Communications (Electronic Communication Numbering and Addressing) Regulations GN. No.62 published on 23rd February, 2018 provide that:

(i) Any company, government and nongovernmental organizations, society, partnership or community registered and conducting business in Tanzania shall register and use domain names with dot-tz ccTLD.

(ii) Dot-tz Electronic Communications shall be used for all official correspondences unless where proved technically not possible.

### 2.0 THE TANZANIA NETWORK INFORMATION CENTRE (tzNIC)

The Tanzania Network Information Centre (tzNIC) is registered in accordance with Regulation 10(3) of the Electronic and Postal Communications (Electronic Communication Numbering and Addressing) Regulations, 2018 and serves as a national registry of dot-tz ccTLD on behalf of TCRA.

The functions of tzNIC are derivative of the mandate of TCRA as conferred under the Electronic and Postal Communications Act, Cap. 306 and the Electronic and Postal Communications (Electronic



Communication Numbering and Addressing) Regulations, GN. No.62 published on 23rd February, 2018.

The Tanzania Network Information Centre (tzNIC) shall at all times publish the statistics of .tz domains and also provide means of ascertaining the dot tz domain registration and status.

### 3.0 NOTICE

NOTICE is hereby given to the public and all business entities registered in Tanzania, to register and use .tz domain names in order to comply with the above Regulatory requirements.

Failure to register and use .tz domain is an offence and may attract a fine and/or imprisonment as stipulated under Electronic and Postal Communications Act, Cap. 306.

### 4.0 REGISTRATION INFORMATION

For .tz domain registration services visit [www.karibu.tz](http://www.karibu.tz) and for more information regarding the registration of .tz domain names and other related issues visit [www.tznic.or.tz](http://www.tznic.or.tz); or contact tzNIC at the address below:-

**8th Floor, LAPF Millennium Tower,  
Ali Hassan Mwinyi Road,  
Postcode 14107; Dar es Salaam.  
Tel: +255 22 2772659;  
Email: [info@tznic.or.tz](mailto:info@tznic.or.tz)**

**T**he **Regulator** is published quarterly by the Tanzania Communications Regulatory Authority (TCRA), an independent Government agency established under the Tanzania Communications Regulatory Authority Act No. 12 of 2003 to regulate the electronic and postal sectors in Tanzania.

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The Editor invites articles, contributions and comments in all areas of electronic and postal communications.

Contributors are invited to submit full-length articles, including figures and possible references, font size 12, single-spacing, up to four A4 pages.

Articles should be submitted to: The Editor, Regulator Magazine, TCRA, Tanzania Communications Regulatory Authority, Mawasiliano Towers, 20 Sam Nujoma Road, P. O. Box 474, 14414 Dar es Salaam.

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### FROM OUR ARCHIVES

Past copies of the Regulator can be accessed on the TCRA website - [www.tcra.go.tz](http://www.tcra.go.tz). Navigate to 'Publications and Statistics', - scroll down to The Regulator.



### Letter from the Editor

**T**he auctioning of spectrum in the 700 MHz frequency in June, presentation of TCRA's financial contribution to the Government and the launching of Tanzania's campaign for a seat in the Governing Council of the International Telecommunication Union (ITU) are major regulatory, corporate and diplomatic events covered in this edition of the Regulator.

Tanzania successfully auctioned spectrum in the 700 MHz frequency range in June 2018 for a total of 20 million US dollars; with a target of 90 per cent broadband coverage by 2024. Vodacom Tanzania Limited Azam Telecom Limited acquired 2x10 MHz spectrum each for US dollars 10,005,000 and 10,000,000 respectively. They are required to ensure 60 per cent broadband coverage by 2021 and 90 per cent by 2024. The coverage was 9.2 in 2017, according to ITU's 'measuring the information society report' (MISR), 2017.

We have articles on digital payment and poverty, electronic waste management and the latest communications statistics, showing a fourfold increase in mobile phone subscriptions between 2008 and 2018.

Mobile money has transformed lives in Africa; in terms of enabling communities to access financial services from remote locations and promoting entrepreneurship. There are more than 20 million mobile money accounts in Tanzania and transactions through mobile phones total TZS. 10,38 trillion monthly.

We have updates; including the planned review of the National Postal Policy of 2003 and a study on the costs of internet services.

A new section for reports from other countries, a sort of benchmarking, has been introduced; starting with an article on a Nigerian innovation that has made teachers' work easier.

We join the rest of the world in paying tribute to Kofi Annan, the 8th UN Secretary General, who passed away on August 18 this year by reproducing his speech on technology and development.

The Kiswahili section carries a translated version of the reviewed EPOCA Consumer Protection Regulations which were published earlier this year.

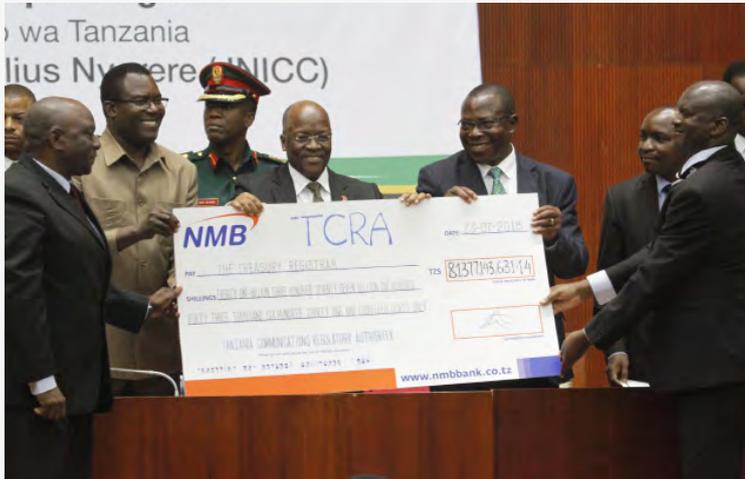
We wish you good reading.

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July - September, 2018

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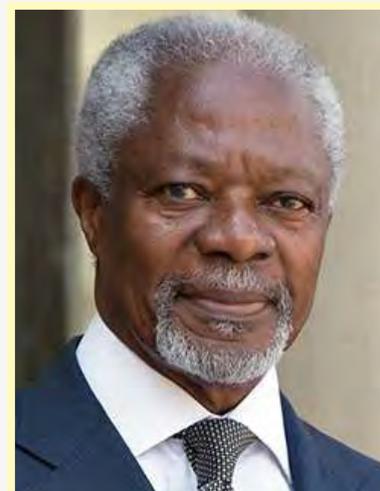
*President John Pombe Joseph Magufuli, receives a symbolic cheque of Tshs 81,377,143,631.14 from the TCRA Board Chairman Dr Jones A. Killimbe (left) and TCRA Director General Eng. James M. Kilaba (right) in Dar Es Salaam in July; being the Authority's contribution to the Government this financial year.*

*Others in the picture are the Chairman of the Parliamentary Public Investments Committee, Hon. Dr. Raphael Chegeni (second left) and Minister for Finance and Planning, Dr. Philip Mpango (third right).*

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*TCRA has acquired new state of the art mobile frequency spectrum monitoring stations to ensure efficient utilization of the resource and to enforce compliance to quality of service parameters.*



## TRIBUTE TO KOFI ANNAN

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# Leveraging broadband for development

Pursuant to the provisions of the Tanzania Communications Regulatory Authority Act Chapter 172 and the Electronic and Postal Communications Act, (EPOCA) Chapter 306 of the laws of the United Republic of Tanzania, which entrusts the Tanzania Communication Regulatory Authority (TCRA) with powers to allocate, assign, issue, distribute, retrieve, suspend, cancel or otherwise modify distribution among users or licensees of any radio communication frequencies or frequencies channels; the Authority has conducted and completed spectrum assignment of the 700 MHz band through an auction.

Following the auction which was carried out on 8th June 2018, TCRA hereby announces the successful conclusion of the auction of 2 x 20 MHz of spectrum in the 700 MHz frequency range. Among other things, the 700 MHz spectrum auction was designed to achieve the National Information Communications and Technology Policy (National ICT Policy), 2016 objectives which are:

- i.) Promotion of an efficient use of spectrum (where efficiency implies assigning spectrum to those that will generate the greatest socio-economic benefit from its use);
- ii.) Promotion of competition, i.e. An outcome which supports or does not undermine effective competition;
- iii.) Promotion of benefits for consumers, though the sustainable provision of widespread, high quality services; and
- iv.) Promotion of investment and innovation.

In furtherance to the National ICT Policy, it is the intention of TCRA that the spectrum auction of the 700 MHz band will, among other things, bring the following benefits to the nation:-

- a.) Advancement of the country's mobile broadband infrastructure and capability which will serve as a catalyst for the nation's economic development;
- b.) Facilitation of social economic benefits as mobile broadband will be key for promoting efficient provision of services such as education, health, agriculture, commerce, financial services through ICTs;
- c.) Lowering mobile communications costs due to cost savings as a result of deploying fewer base stations for wider coverage and therefore potential lower consumer prices;
- d.) Extending the provision of mobile broadband



services to a wider Tanzanian population especially those in rural areas;

e.) Promotion, enhancement and facilitation of innovation for new ICT services and technologies to be deployed in the band; and

f.) Source of national revenue by obtaining optimal return for the spectrum band as a scarce resource.

All spectrum available were assigned, and the results of the Auction are as follows:

- a.) Vodacom Tanzania PLC acquired 2 x 10 MHz for a total price of US\$10,005,000;
- b.) Azam Telecom (T) Limited acquired 2 x 10 MHz for a total price of USD 10,000,000.

The total Auction proceeds is USD 20,005,000.

To ensure that consumer benefit fully from access to mobile broad band services TCRA has included the following coverage obligations in the license to be issued:

- i.) By end of year 2021, population coverage for broadband services meeting the specified quality of service level should be equal to 60%; and
- ii.) By end of year 2024, population coverage should be equal to 90%.

TCRA congratulates Vodacom Tanzania PLC and Azam Telecom (T) Limited for their participation and acquisition of the 700 MHz spectrum.

*Licensees  
to ensure 60%  
broadband coverage by  
2021 and 90 percent  
by 2024*

## Postal policy being reviewed

**R**eview of the 2003 national postal policy is in high gear and the Government has invited stakeholders' inputs to the new document. The Ministry of Works, Transport and Communications has circulated questionnaires to service providers, consumers and the regulator, addressing issues such as accessibility, service experiences and safety and security of postal services.

Some of the objectives of the 2003 policy have been met; including the introduction of a new addressing and postcode system in Tanzania.

Technological advances have affected the performance of the postal sector in Tanzania and recent years have seen a the number of posted items – from 22,992,828 domestic posted items in 2012 to 8,228,501 in 2017 and international items from 8,137,969 to 1,892,887.

## Internet costs under scrutiny

**T**he Tanzania Communications Regulatory Authority will commission a study to establish the costs of internet services in the country, where there are 23 million users; most of them accessing on mobile devices.

The consultancy for “a cost study to establish cost based internet and over the top (OTT) services tariffs provided by internet service providers (ISPs) and fixed mobile broadband service providers in Tanzania.”

OTT is a term that refers to telecommunication services accessed directly over the internet through com-

puters, mobile devices, smart televisions and digital media players. ISPs are licensed under the category of application service providers, of which there were 69 by June 2018. The study seeks to fulfill requirements of Regulations 4(2) of the Electronic and Postal Communications (Tariffs) Regulations, 2018 which requires that the tariffs for communication services be cost oriented and made on objective criteria.

The consultancy also includes conducting a regulatory impact assessment (RIA) over any decision to be made after adopting the cost based tariffs.

## Addressing the fireman



*The benefits of the new addressing and postcode system, including physical access, vital in emergencies such as fire outbreaks, was the major theme at the TCRA stand in a recent exhibition in Dodoma on fire and rescue services. LEFT: Francis Mibayo receives a certificate of merit from the Fire and Rescue Force Commissioner General, Tobias Andengeny. RIGHT: Abel John hands over educational leaflets to a fireman. Others in the picture are Francis Mibayo and Mabel Masasi.*



*District commissioners in Dodoma region recently participated in a seminar organized by TCRA on the obligations of multiplex operators to carry free to air television channels and the rights of viewers to access free channels. Pictured from right are Mr Audiphage Mushi (Kongwa), Ms. Mwanahamisi Munkunda, (Bahi), Mr Simon Odunga (Chemba), Ms, Vumilia Nyamoga (Chamwino) and Ms. Sezaria Makota (Kondoa).*



*ABOVE: Acting Head of the TCRA Central Zone, Mr. Antonio Manyanda (right) at a consumer education event in Dodoma. TCRA empowers consumers by educating them on services and products so they make informed choices and on their rights and obligations.*

*LEFT: Stepping out in style: Some of the members of the TCRA legal team leaving Mawasiiano Towers for an assignment.*

# Digital innovations for the new post

■ **Abel John, TCRA**

**T**he growth of digital infrastructure, mobile phones and online applications accelerates the uptake of e-commerce: purchasing and selling merchandise online.

The digital revolution has created a podium for organizations to strive for “survival and competitiveness in the digital world”. While this revolution clusters general community as suppliers and consumers; customers expect fast, simple and seamless experience in buying and selling goods, services and commodities.

These drastic changes require rethinking of the business model of the post to exploit digital infrastructure in developing and delivering products. The digital exploitation of the post should enhance customers to purchase online and trace the movement of their merchandise prior to delivery.

Digital paradigm shifts in both local-purchase and international tracking and trace of products necessitate the post to transform and quickly adapt to digital infrastructure. This demands a shift to smart data management.

Integration of the National Addressing and Postcode system (NAPS) and the electronic Population Register System (e-PRS) is an example for digital platforms to revolutionize the postal sector. Through the use of mobile phones information on households

will be captured in the field and directly uploaded to NAPS. The system will improve service delivery through easy reach by vital services like rescue, navigation, tax collection and the e-commerce facilitation.

The integration of NAPS and e-PRS is a timely innovation considering the fact that the government is moving towards industrialization and a middle level economy. Development of proper NAPS will also simplify and facilitate security, reliability and easy delivery. It will enable the postal sector to align its business model and tap the benefits of e-commerce.

However, successful digital transformation requires postal business strategies to be dynamic and focus on business solutions which create value to customers. Postal operations need to ensure they have a comprehensive digital strategy and road map to provide improved customer experience through interconnected technology devices.

With the development of technology, post agencies are obliged to embrace and rethink digital transformation in service delivery. Postal infrastructure should embrace routing delivery gears, interpret large amounts of transport and logistics data types to obtain real time information for mails runners, tracking of parcels and monitoring of the movement of postal consignments.



*Left: Postal sector stakeholders in a meeting convened by TCRA on a new drive and thrust for the implementation of the postcode and physical addressing system in Tanzania. Below: The system facilitates physical access.*



# Tanzania for re-election to ITU Council

■ *Isaac Mruma*

Tanzania has submitted her candidature for a seat in the 48 member Governing Council of the International Telecommunication Union (ITU) in elections to be held in Dubai in November 2018.

Optimism is high; partly due to Tanzania's exemplary performance in the ICT sector in the past few years and the country's participation in ITU work and events. The Union's 2017 measuring the information society report gave Tanzania hailed the country's regulatory interventions as predictable and forward looking.

Tanzania also came on top in Southern Africa in terms of affordable internet tariffs and was fourth in Africa after Egypt, Tunisia and Guinea.

All the country's seven mobile phone companies have deployed 3G technology; and four have launched Long Term Evolution (LTE), a standard for high speed mobile communication. Some of the operators market LTE as 4G mobile service.

The recent auction of 700 MHZ spectrum brought in a new service provide – Azam Teleom – with plans to deploy 4G services.

Tanzania's campaign document cites internet accessibility mobile phone services penetration, financial inclusion facilitated by mobile money services as among major ICT milestones.

Mobile network coverage country is 94 per cent with mobile subscriptions totalling 41,708,218. There were 22,995,109 internet users by June 2018; with internet penetration of 45 percent. The development of mobile networks has led to the increase of mobile financial services, with TZS. 10.38 trillion being transacted across mobile networks every month.

The ITU Council is the Union's governing body between plenipotentiary conferences – its top policy-making body. It meets every four years. Abbreviated PP, the last conference was held in Busan, Korea in which Tanzania was re-elected to Council.

After becoming the first country in Africa to introduce the Converged Licensing Framework

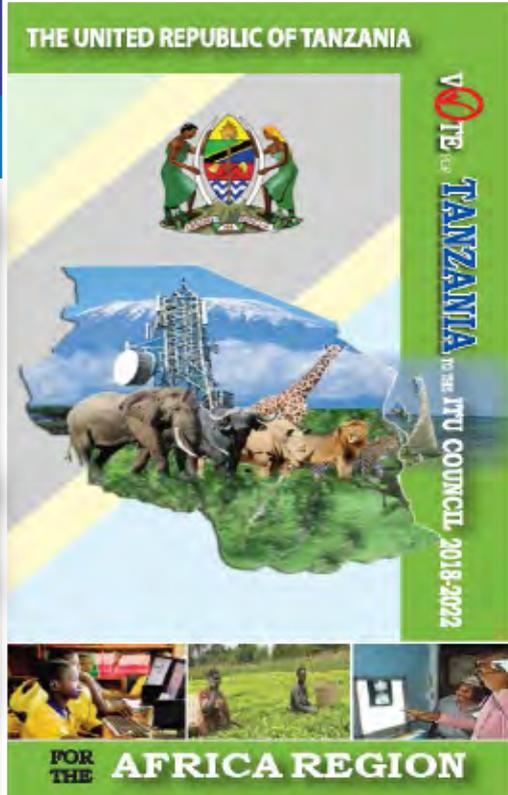
(CLF) in 2005 in response to the convergence of technologies, Tanzania was elected to the Council at the 2006 PP held in Antalya, Turkey and was re-elected at the 2010 PP in Guadalajara, Mexico and at the 2014 PP in Korea.

Africa has 13 seats in the Council. Other African members elected in 2014 are Algeria, Burkina Faso, Egypt, Ghana, Kenya, Mali, Morocco, Nigeria, Rwanda, Senegal, Tunisia and Uganda. There were 17 candidates.

## Results of the 2014 PP votes for the ITU Council in Busan, Korea

S/No	Country	Votes	Status
1	Mali	133	Yes
2	Ghana	130	Yes
3	Kenya	127	Yes
4	Burkina Faso	124	Yes
5	Uganda	117	Yes
6	Egypt	115	Yes
7	Tunisia	115	Yes
8	Morocco	114	Yes
9	Rwanda	110	Yes
10	Senegal	110	Yes
11	Tanzania	110	Yes
12	Nigeria	109	Yes
13	Algeria	106	Yes
14	South Africa	105	No
15	Cameroon	102	No
16	Côte d'Ivoire	99	No
17	Zambia	89	No

The elections at PP 18 Dubai will pit 19 African countries; namely, Tanzania, Algeria, Burkina Faso, Cameroon, Cote d'Ivoire, Egypt, Ghana, Kenya, Mali, Mauritania, Morocco, Nigeria, Rwanda, Senegal, South Africa, Sudan, Togo, Tunisia and Uganda.



The Converged Licensing Framework has led to a remarkable increase in the number of licensees; types of technologies used and variety of services provided.

Tanzania has actively participated in ITU events such as Study Groups, World Telecommunication Standardization Assembly, World Telecommunication Development Conference, World Radiocommunication Conference, the Council and Telecom World.

Tanzania has been a member of the ITU since 1962 and has immensely participated and contributed in the work and activities of the Union through Council membership, participation in meetings, conferences and events of the Union, hosting of ICT events in the country as well as implementing decisions and resolutions of the Union.

As an active Council Member during the 2014–2018 period, Tanzania has voiced and consistently endeavored to achieve the mission and purpose of the Union and has effectively cooperated with other ITU Member States. Our country has taken measures to manage risks and dangers that come with the growth of ICTs, including providing a safe environment for digital participation.

Tanzania is seeking to be re-elected to the ITU Council for the period 2018-2022 for the Africa Region. Our country has actively participated in various ITU events such as ITU Study Groups, World Telecommunication Standardization Assembly, World Telecommunication Development Conference, World Radiocommunication Conference, ITU Council and ITU Telecom World.

Along with ITU, Tanzania has hosted ITU workshops and meetings, including the FIRST-ITU Regional Symposium for Africa and Arab Regions; Applied Learning for Emergency Response Teams (ALERT) in 2017 and the 8th Green Standards

Week in 2018.

**Tanzania communication sector**

The communication sector in Tanzania has grown significantly over the past few years. The country has one of the fastest growing communication sectors in Africa; accelerated by the necessary Government interventions including policies, regulations and legislation. Tanzania was the first country in Africa to migrate to a Converged Licensing Framework (CLF). As a result, there is a remarkable increase in the number of licensees; types of technologies used and number of services provided to consumers. By June 2018, there were 22 Network Facilities licensees, 14 Network Services licensees 83 Application Service providers, 26 licensed television stations and 156 radio stations.

Mobile network coverage in the country is 94 per cent with 41,833,834 mobile subscriptions. There were 22,995,109 internet users by June 2018; with internet penetration of 45 percent. The development of mobile networks has led to the increase of mobile financial services. As of January 2018, the average amount of mobile money that cross mobile networks per month was 10.38 trillion Tanzanian shillings. (The exchange rate was 2,220 to the US Dollar).

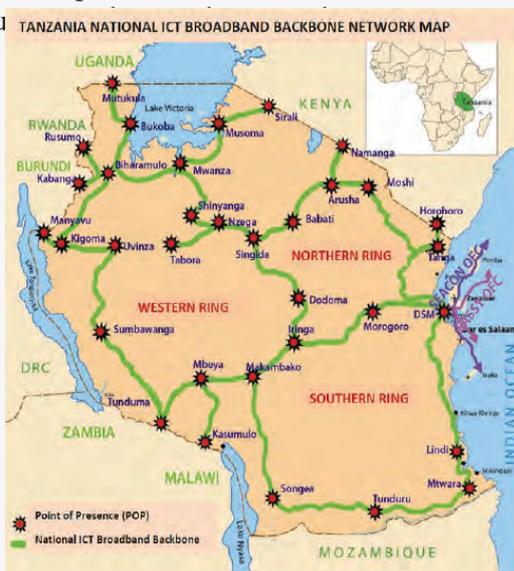
Tanzania is one among the very few African countries that managed to successfully migrate from analogue to digital television broadcasting

countrywide by the ITU set deadline of 17th June 2015. It was the first country in Africa to successfully auction spectrum in the 700 MHz band, which was released after the migration. The move will advance the country's mobile broadband infrastructure and capability and will promote efficient provision of services such as education, health, agriculture, commerce, financial services through ICTs.

The country has invested in broadband infrastructure and deployed over 25,000 kilometres of fiber optic cables that form the National ICT Broadband Backbone (NICTBB). It connects all administrative regions and districts as well as data centers. The country has Internet Protocol Multilayer Label Switching (IP/MPLS) network to facilitate provision of lower bandwidth capacities with high speed and enhanced security.

### Tanzania's contribution to ITU Connect 2020 Agenda

Tanzania has established the Universal Communications Service Access Fund to bridge the digital divide between the urban and rural areas and enable full participation of all in the digital economy which is key for meeting 2030 Agenda for Sustainable Development. The Fund provides subsidies to mobile operators to provide telecommunications services in a set of u



*The National fiber ICT Broadband Backbone provides international links to Tanzania's landlocked neighbours, namely; Uganda, Rwanda, Burundi, DRC, Zambia and Malawi.*

To manage risks and dangers that come with the growth of ICTs, Tanzania has established the Computer Emergency Response Team (TZ-CERT) and the Cybercrime Unit under the Tanzania Police Force to help provide alerts on possible cyber-attacks at national and international levels as well as giving possible mitigation systems.

Legal frameworks have also been updated to include the Cybercrime Act of 2015 and the Electronic Transaction Act of 2015. The country is now in the process of enacting the Personal Data Protection Act, in line with Regional and International cyber laws frameworks.

### Infrastructure Deployment

- Investing in National fiber ICT Broadband Backbone (NICTBB) to connect all administrative regions, districts data centres and national border points. The backbone provides international links to Tanzania's landlocked neighbours, namely; Uganda, Rwanda, Burundi, DRC, Zambia and Malawi; and also connects to Kenya.

- Investing in Internet Protocol Multilayer Label Switching (IP/MPLS) network to facilitate provision of lower bandwidth capacities with high speed and enhanced security.

- Implementation of Domain Name System Security Extensions (DNSSEC) to enhance security at the dot tz (.tz) country code Top Level Domain.

- Deployment of Public Key Infrastructure (PKI) to enhance security of electronic transactions.

### Our Commitment and Pledge

Tanzania is committed to continue collaborating with other member countries for greater development of ICT in Africa and the entire world through the ITU Council. Through its internal experience and the experience gained from participating in the Council and other ITU activities, Tanzania is confident that upon her re-election as Council member she will significantly contribute to the development of ITU and contribute to the realisation of a harmonised global ICT framework. Tanzania is ready to render its utmost active support and contribution to the ITU towards reaching the Union's goals through the work of the Council.

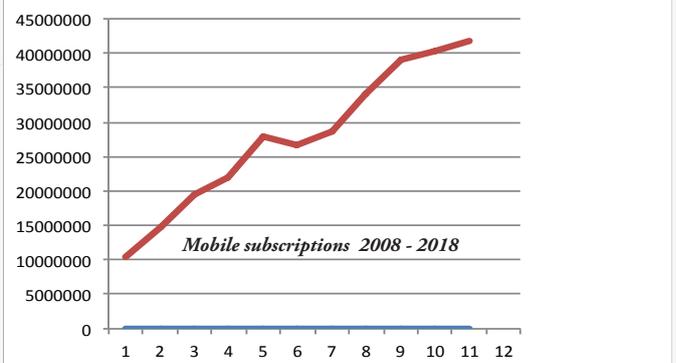
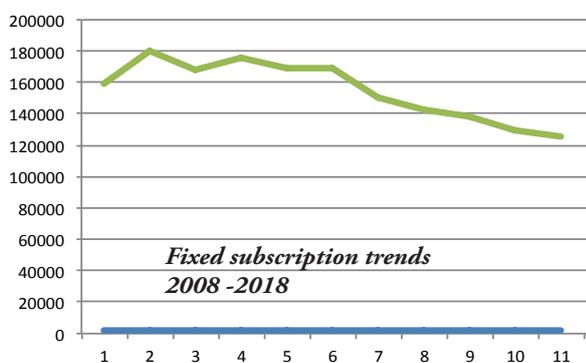
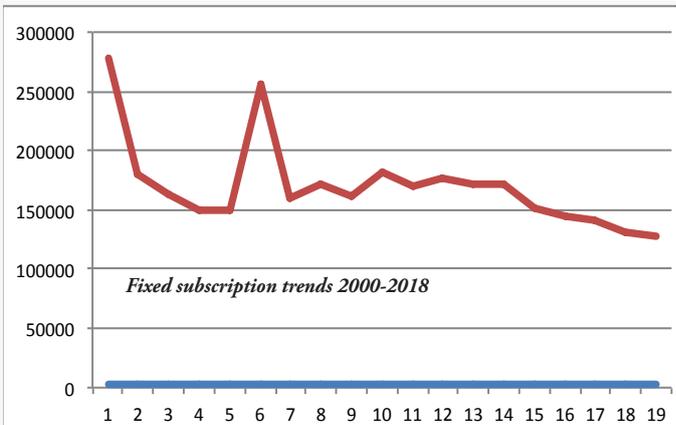
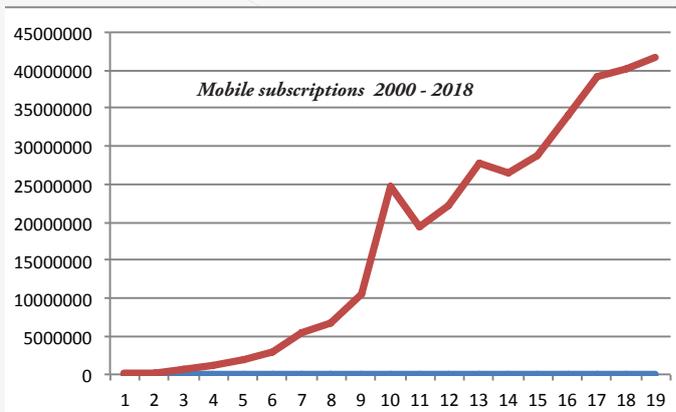
# Mobile Subscriptions Quadruple in 10 Years

**M**obile phone subscriptions increased fourfold between 2008 and 2018 in a trend that has seen the licensing of eight service providers in the period, according to the latest statistics. The June 2018 communications figures, compiled by TCRA, based in submissions by operators, show a jump from 10,268,673 to 41,708,218 subscriptions between June 2008 and the same period this year. Fixed telephony subscriptions have however dropped

from 159,370 to 125,616 in the period under review. Mobile subscriptions grew incrementally between 2000 and 2002 but became exponential from 2005. There were increases of 1,479,906 mobile phone subscriptions and 569,354 mobile money accounts, between June 2017 and this year. Mobile money subscriptions increased from 20,285,810 in June 2017 to 20,855,164 in 2018. The amount of monthly mobile money transactions on all networks totals 10.38 trillion shillings.

## Subscription Trends 2000 -2018

Year	Mobile	Fixed
2000	110,518	275,591
2001	275,557	177,802
2002	606,859	161,590
2003	1,298,000	147,003
2004	1,942,000	148,360
2005	2,963,737	254,430
2006	5,609,279	157,287
2007	6,822,857	169,135
2008	10,428,043	159,370
2009	24,723,175	179,849
2010	19,424,264	168,531
2011	22,076,715	175,249
2012	27,855,716	168,895
2013	26,555,053	169,165
2014	28,730,705	150,073
2015	34,108,851	142,950
2016	39,097,660	138,784
2017	40,228,312	129,719
2018	41,708,218	125,616



## QUARTERLY TRENDS April - June, 2018

### Voice telecom subscriptions by June 2018

Operator	April	May	June
Airtel	11,005,202	11,078,826	11,134,547
Smart	132,132	132,203	132,278
Halotel	3,513,927	3,550,520	3,649,805
Tigo	11,460,964	11,723,878	12,006,568
TTCL			
Vodacom	12,689,666		13,277,574
Zantel	1,047,284	1,060,003	1,071,586
<b>TOTAL</b>	<b>40,343,662</b>	<b>41,106,323</b>	<b>41,833,834</b>



### Local and international short messages (SMS)

### Subscriptions to mobile and fixed networks (April-June 2018)

Network	April	May	June
Mobile networks	40,217,607	40,981,512	41,78,218
TTCL fixed	126,024	124,780	125,584
Zantel fixed	31	31	32
Total fixed	126,055	124,811	125,616
<b>TOTAL</b>	<b>40,343,662</b>	<b>41,106,323</b>	<b>41,833,834</b>

April	
Local on Net SMS	4,696,232,868
Local off net SM	2,907,074,968
International SMS	863,605
<b>Sub-total</b>	<b>7,604,171,441</b>
May	
Local on Net SMS	4,358,167,585
Local off net SM	3,118,168,398
International SMS	960,700
<b>Sub-total</b>	<b>7,477,296,683</b>
June	
Local on Net SMS	4,573,912,285
Local off net SM	3,535,587,787
International SMS	1,012,535
<b>Sub-total</b>	<b>8,110,512,607</b>
Total April - June	
Local on Net SMS	13,628,312,738
Local off net SM	9,560,831,153
International SMS	2,836,840
<b>Quarterly total</b>	<b>23,191,980,731</b>

### Mobile Money Subscriptions (Mobile Money Accounts)

Operator	April	May	June
Airtel Money	3,923,378	3,963,716	4,070,922
Tigo Pesa	6,948,196	6,916,273	6,979,382
M Pesa	8,303,734	8,447,393	8,642,262
Ezy Pesa	298,351	309,007	307,525
Halopesa	622,268	547,181	756,332
TTCL	68,063	83,517	98,741
<b>TOTAL</b>	<b>20,163,990</b>	<b>20,267,087</b>	<b>20,855,164</b>

### Total traffic (minutes)

Destination	April	May	June	Total
On Net Traffic	4,036,132,297	4,334,503,516	4,524,572,753	12,895,208,566
East Africa	1,216,179	1,279,189	1,508,797	4,004,165
Off net traffic	678,145,212	769,198,569	82,487,543	2,27,831,324
International	4,680,859	4,798,288	4,886,066	14,365,213

# Minimum technical specifications for base stations and repeater

## 1.1 Scope of Specification

This specification defines the minimum technical requirements for base stations and repeater equipment to be used in the Public Mobile Radio Communication System and services which employ:

- a.) The Global System for Mobile Communications (GSM) technology;
- b.) The ITU IMT-2000 (UTRA FDD and E-UTRA FDD) technologies; and c) The ITU IMT-Advanced radio interface technologies.

## 1.2 Safety and Health

Use of base station or repeater equipment shall comply with International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for limiting exposure to time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz).



*A base station at Magomeni Usalama, Dar Es Salaam.*

Compliance with the above radiation safety standards does not by itself confer immunity from legal obligations and requirements imposed by national health or safety authorities. TCRA may invalidate the equipment registration if so requested by the relevant authority for reasons of safety or hazards that would likely be caused to users.

## 2.0 Technical Requirements

The cellular base station and repeater equipment shall operate within the following frequency bands:-

Transmit Frequency	Receive Frequency
925 MHz - 960 MHz	880 MHz - 915 MHz
791 MHz – 821 MHz	832 MHz – 862 MHz
1 805 MHz - 1 880 MHz	1710 MHz - 1785 MHz
2110 MHz - 2170 MHz	1920 MHz - 1980 MHz
2300 MHz – 2400 MHz	2300 MHz – 2400 MHz
2570 MHz – 2620 MHz	2570 MHz – 2620 MHz
2620 MHz – 2690 MHz	2500 MHz – 2570 MHz
3400 MHz – 3600 MHz	3400 MHz – 3600 MHz

**Table: 1: Base Station operating frequency bands**

The present document contains requirements to demonstrate that radio equipment both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.

The precise operating frequency range of a base station and repeater shall follow that of the Network Operator from whom the service is obtained.

**Note:** Frequency allocations can change and this information should be checked with TCRA.

## 2.1 Radio Interfaces Requirements

Vendors shall demonstrate that the cellular base stations and repeater equipment have been tested and certified for operating in the frequency bands stated in table 1 and conformity to any or a combination the following standards and all applicable standards referenced within. Please note that the latest version of the referenced document (including any amendments) applies.

a.) ETSI EN 301 502: Global System for Mobile communications (GSM); Harmonized EN for Base Station Equipment covering the essential requirements of article 3.2 of the R&TTE Directive.

b.) ETSI EN 300 609-4: Global System for Mobile communications (GSM); Part 4: Harmonized EN for GSM Repeaters covering the essential requirements of article 3.2 of the R&TTE Directive

c.) ETSI EN 301 908-01: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 1: Introduction and common requirements.

d.) ETSI EN 301 908-03: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 3: CDMA Direct Spread (UTRA FDD) Base Station (BS).

e.) ETSI EN 301 908-11: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 11: CDMA Direct Spread (UTRA FDD) (Repeaters).

f.) ETSI EN 301 908-14: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 14: Evolved Universal Terrestrial Radio Access (E-UTRA) Base Stations (BS).

g.) ETSI EN 301 908-15: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 15: Evolved Universal Terrestrial Radio Access (E-UTRA FDD Repeaters).

h.) ETSI EN 301 908-18: IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 18: E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS).

i.) ITU-R M.1457-13: Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)

j.) ITU-R M.2012-3: Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT-Advanced)

## 2.2 Electromagnetic Compatibility Requirements

Vendors shall demonstrate that the base stations and repeater equipment have been tested and certified to meet the EMC limits and methods of measurement as specified in the following IMT-2000 Third-Generation Cellular System specifications published by the ETSI:-

a) ETSI EN 301 489-1: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

b) ETSI EN 301 489-23: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 23: Specific conditions for IMT-2000 CDMA, Direct Spread (UTRA and E-UTRA) Base Station (BS) radio, repeater and ancillary equipment.

## 2.3 Electrical Safety Requirements

Suppliers shall demonstrate that the base stations and repeater equipment have been tested and certified to meet the following safety standards:

a) IEC 60950/EN 60950: Safety of Information Technology equipment including Electrical business equipment

b) IEC 60215/ EN 60215: Safety requirements for radio transmitting equipment.

# On digital payments and poverty

■ *Leora Klapper, World Bank*

**N**early 800 million people globally live in extreme poverty, estimates the World Bank. Africa is home to more extremely poor people than all other regions combined. Most of the poor have low educational attainment and work in agriculture.

What can we do about it?

The United Nations Sustainable Development Goals provide a snapshot of current thinking on poverty reduction. One of the goals focuses on improving schools, for example. Others call for better jobs and lower corruption. I want to argue for a solution that touches on all of these problems.

Reducing poverty depends on helping poor people manage their money. Bank accounts are one of the best ways to do that.

It's not that poor people are too uneducated to control their finances. Quite the opposite. They manage highly complicated budgets on very tight margins. My argument is that bank accounts help poor people more effectively confront the problems that keep them stuck in poverty.

Poor people have money – but their incomes are unpredictable and insecure. Sometimes people give me a puzzled look when I say this. You might be thinking: “poor people don't have money – isn't that what makes them poor?” So why do they need tools to manage money?

But poor people do have money – at least a little. It's just that their finances tend to be unstable, unpredictable and hard to manage. Farmers, for example, don't have the luxury of a regular 9-to-5 paycheck. They might only get paid twice a year. And their earnings depend on many factors beyond their control, such as the weather or the whims of the market.

They need to make their infrequent payments stretch a long time between harvests, while covering the costs of daily food, monthly school fees, and fertilizer and seeds for the next planting season. Often the juggle becomes too much to manage and they run out of money. When that happens, they might have to skip

meals, for example, which makes them less healthy and even more poor.

A lot of farmers are unbanked, so they rely on cash. But cash is tricky. It's easy to lose and easy to spend. Instead of using a bank account to hold savings, an unbanked farmer might stuff cash under a mattress. What if (someone)steals it? What if their house burns down? Or maybe they save by purchasing livestock. What if there's a surplus of animals when they need to sell, and they can only get half of what their animals are worth?

Bank accounts help people escape poverty and survive unexpected expenses.

In this situation it's hard enough to stay solvent. Forget about saving for long-term goals, such as buying better farming equipment, or investing in education. But accounts, whether accessed through a bank or mobile money provider, make all that much easier. They help people take control of their money and financial lives.

One study found that farmers increased harvest investments, earnings and household consumption when they had their payments deposited into savings accounts. In Nepal, savings accounts helped women ramp up spending on education and nutritious foods.

Account-based digital payments represent a key innovation in the fight against poverty. Distributing social benefits through digital channels instead of cash has been shown to cut corruption, increase efficiency and help recipients build savings.

The spread of mobile money in Kenya slashed poverty, drove up savings and helped women leave agriculture for jobs in business and retail.

Mobile money accounts don't just make life easier. They can help prevent people from falling into poverty by softening the impact of sudden expenses. For example, medical bills push millions of people into poverty annually. When a villager gets sick, she can use mobile remittances to gather money from faraway relatives.

Research suggests that people with mobile money accounts get more money when an emergency



*A small holder farmer in Songea, Tanzania. A study has found out that farmers increase harvest investments, earnings and household consumption when they have their payments deposited into savings accounts.*

hits, from a wider social and geographic network of friends, thereby helping them make ends meet during a crisis.

The World Bank's Global Findex data offer a bright spot on the global development landscape. Roughly 1.2 billion people have opened an account since 2010, creating new opportunities to improve their financial well-being.

Digital technology has driven much of the progress in financial inclusion. Millions of people, especially in Africa, are getting accounts through simple mobile phones. Since 2014, ownership of mobile money accounts has nearly doubled in Sub-Saharan Africa. The technology is catching on in other countries too, such as Bangladesh, Iran, Mongolia, and Paraguay.

There's a big caveat to this global progress. Women in developing countries are still nine percentage points less likely than men to have an account. That number has not improved, and it's even worse in some places. For example, in Pakistan, men are five times as likely as women to have an account.

So how can we help close the gender gap? Africa points to one solution: mobile phones. Gender differences in account ownership are often much smaller in African countries where mobile money is widespread.

It's still too early to tell if there's a genuine connection between mobile money and gender equality, but the early signs are promising.

Our numbers show that 1.1 billion unbanked adults have a mobile phone, including 605 million unbanked women. Many make routine cash

transactions that could be moved into accounts. Globally, 235 million unbanked farmers are still paid in cash.

If those payments were digitized, the number of unbanked adults could fall by up to a quarter or more in Mozambique and Nigeria, by roughly a third in Burkina Faso and Sierra Leone, and by about half in Ethiopia.

People get skeptical when I say poor people need bank accounts. Rightly so. Financial institutions have a troubling history of swindling customers. Of course, not all financial services are equally good. They must be affordable, transparent, and underpinned by vigorous consumer safeguards.

Others say that unbanked people don't want bank accounts. Our numbers don't support that. The Global Findex shows that only 3% of unbanked adults globally say lack of need is their only reason for not having an account. This suggests that most unbanked people would be open to using financial services if they were accessible, affordable, fair and useful.

Fixing global poverty is hard. But one solution might be as simple as using a mobile phone to access financial services.

**About the Author:** Leora Klapper is Lead Economist for Development Research Group at the World Bank.

**Source:** ITU News magazine; accessed August 2018.

# Nigerian ICT Innovators Lessen Teacher Burdens

## ■ ITU News update

Two young Nigerian entrepreneurs have won USD 50,000 for developing a programme that helps to speed up teachers' administrative processes and tasks, allowing them to focus on improving their teaching and classroom practice.

Dimeji Falana and Dare Adebayo emerged top at an innovators' forum in Switzerland earlier this year. The two graduated from the same computer science programme at a university in Nigeria in 2010. Soon afterwards, they started a business as software developers, winning big clients such as banks and the Nigerian government. They co-founded their first business serving the needs of schools in 2010 with no money.

But they always knew their computer programming skills could be used to serve causes closer to their hearts. Indeed, when they were still at university, one of their friends was experiencing difficulties running a school that was seeing increasing rates of enrolment but deteriorating quality of schooling. So Falana and Adebayo developed a Fast-forward to 2018, and their solution has caught on.

They are now serving the needs of 300 schools in 14 states in Nigeria, and plan to expand to other African markets, where they hope to help address a wider issue, as African schools are seeing expanding rates of enrolment but the quality of education is suffering, partly due to a shortage of trained and motivated teachers.

Initially this work was just a side business, but in 2016 Falana and Adebayo were already working with 66 schools. "I was like: 'This is making sense!'" said Dimeji Falana. "So we incorporated and launched it officially in 2016 under the name Edves. And within that time we've been able to grow."

According to its website, Edves is an easy and secure web-based portal that encompasses all school management needs. It assists schools to track growth and to manage admissions, payments, report cards,

homework, and parent-teacher communication. It serves the needs of teachers, parents, students and school administrators.

"It takes on average 2 weeks for teachers to prepare end-of-the-term student reports for 200 students with pen and paper. But with Edves, it takes them just 2 days," explained Falana.

Edves also offers teacher training. "These are training sessions to allow the teachers to use the platform so they can delve deeper into what they need to do to provide quality education... curriculum training, tech training — so many things we train teachers in!" exclaimed Adebayo.

"It is important to keep iterating the products or the service and your processes", says Adebayo.

"We've been cash-flow positive since the inception," says Falana. "People buy it and we use the money to run the business.... We have been profitable for a long time, but we want to raise the funds so that we can quickly do more and then expand outside of Nigeria".

They both trust in the promise of a better future and are committed to making it happen. Their plan today is to expand to 1,000 schools in the next year, and to serve 5,000 schools in Nigeria and other African countries by the end of 2019.

They advise other entrepreneurs to make sure they are sincere with the problem they are solving, and that they have empathy for the people that have the problem. Empathy will be the driver. When they run into problems, this will come back to their minds to say, this is what essentially we will need to solve so that these people can get out of this mess," said Falana.

Adebayo emphasized that understanding users' needs will also help drive the development of better processes and a better product. "It is important to keep iterating the products or the service and your processes. If you don't change your process, it means you will keep on getting the same result. But if you keep optimizing your processes, you will keep getting better results."

**Source:** ITU News magazine; accessed August 2018.

# TCRA awarded for honouring commitments

**T**CRA's recent cheque of 81.377 billion shillings to the Government underlines the Authority's quest to align its strategic goal with national priorities.

The Authority's Board Chairman, Dr. Jones Killimbe and Director General, Eng. James Kilaba presented President John Pombe Magufuli with a cheque for Tshs. 81,377,143,631.14 on July 23 this year; being TCRA's contribution to Treasury.

Several other Government agencies and parastatal organizations presented remittances and dividends.

The President praised TCRA for meeting its commitments and presented the board chairman with a certificate of appreciation for the 'outstanding contribution to the Government consolidated fund'.

The Authority successfully auctioned spectrum in the 700 MHZ frequency band for a total of US dollars 20,0005,000. See details n page 3.

The Authority's current strategic plan seeks to "enhance the welfare of Tanzanians through effective regulations that promote innovation and ensure universal access to secure, quality and affordable communication services".

TCRA regulates electronic and postal communications in Tanzania; including broadcasting in the

Mainland. Zanzibar has a separate commission for broadcasting.

The plan outlines its mission of effectively regulating the sector, promoting efficiency among service providers and protecting consumers; the objective being to contribute to Tanzania's development. TCRA's vision is to be a world class regulator. The Authority complies to ISO 9001:2015 certification.

The plan has six strategic objectives, namely to:-

- i. Modernize TCRA operations by utilizing state of the art technologies, enhancing high quality research on regulated services and staff competences.
- ii. Promote efficient, reliable and secure communications infrastructure and applications;
- iii. Promote efficient and affordable communications services and increase access to Postal and ICTs in under-served and un-served areas;
- iv. Protect interests of stakeholders and enhance awareness of their rights and obligations;
- v. Monitor performance of regulated services and enforce compliance to legislation, regulations and standards; and
- vi. Coordinate implementation of national, regional and international sector commitments.



*President John Pombe Magufuli presents a certificate of appreciation to TCRA Board Chairman Dr Jones A. Killimbe. Right is the Authority's Director General Eng. James M. Kilaba. The event was witnessed by Minister for Finance and Planning, Dr. Philip Mpango (second right) and the Chairman of the Parliamentary Public Investments Committee, Hon. Dr. Raphael Chegeni (second left).*

# Alignment of TCRA strategic

Tanzania Development Vision 2025	Sustainable Development Goal 2030	Manifesto of the Ruling Party 2015 – 2020
1. High Quality Livelihood	SDG 3: Good health and well-being	1. Enhance communications infrastructure and promote access to communications services to improve social-economic opportunities
2. Good Governance and the Rule of Law	SDG 4: Quality Education	2. Ensure universal access to communication services in all villages in Tanzania mainland and Zanzibar 3. Protect consumers of communication services against cyber-attack 4. Establish innovation centers that will promote growth of emerging communications companies which will employ youth
3. A Strong and Competitive Economy	SDG 8: Decent Work and Economic Growth	5. Connect to NICTBB to all primary and secondary schools, District Commissioners offices, hospitals, Police (OCD), Universities, and 65 post offices to facilitate eHealth, eEducation and eLibrary
4. A Well Educated and Learning Society	SDG 9: Industry Innovation and Infrastructure SDG 11: Sustainable cities and communities	6. Promote competition in communications sector to enhance access to affordable communications services 6. To increase number of internet users from 9 million in 2015 to 20 million 2020
5. A Strong and Competitive Economy	SDG 15: Life on land	

## Service providers licensed by July 31, 2018

### Electronic communications services

No.	Licence category	Number	Description
1	Network facility	22	Ownership and control of electronic communication infrastructure
2	Network service	14	Operating electronic communication networks to provide services;
3	Application service	69	Reselling or procurement of services from Network Service operators. Examples are internet service providers, virtual mobile operators, data services providers
Content Service			
4	Radio	123	
5	Television	26	
Online content service			
6	Simulcast radio	19	Broadcasting of programmes or events across more than one medium at the same time
7	Simulcast television	5	
8	Online radio	2	An audio service transmitted online
9	Online television	53	A video service transmitted online
10	Blogs	42	A website containing a writer's or group of writer's own experiences, observations, opinions including current news, events, journals, advertisements and images, video clips and links to other websites
11	Web blogs	23	
12	Online forums	2	An online discussion site where people can hold conversations in the form of posted messages or journals.

# Plan with national priorities

TCRA VISION, MISSION AND STRATEGIC GOALS	TCRA STRATEGIC OBJECTIVES
<b>VISION</b> To be a World class Regulator of Electronic and Postal Communications	<b>OBJECTIVE 1</b> To modernize TCRA Operations by utilizing state of the art technologies, enhancing high quality research on regulated services and Staff competences.
<b>MISSION</b> To effectively regulate electronic and postal communications services, promote efficiency among service providers and protect consumer interests with an objective of contributing to development in the United Republic of Tanzania	<b>OBJECTIVE 2</b> To promote efficient, reliable, secure and affordable communications infrastructure and applications
<b>STRATEGIC GOAL</b> To enhance the welfare of Tanzanians through effective regulation that promotes innovation and ensures universal access to secure, quality and affordable communication services	<b>OBJECTIVE 3</b> To promote efficient communications services and increase access to ICTs in under-served and un-served areas
<b>CORE VALUES</b> Professionalism    Respect    Empowerment    Integrity Accountability, Innovation    Team work    Efficiency Non Discrimination	<b>OBJECTIVE 4</b> To protect interests of stakeholders and enhance awareness of their Rights and obligations
(1) <b>Professionalism:</b> We maintain the highest degree of professionalism and ethical standards and undertake our activities objectively to deliver quality services. (2) <b>Respect:</b> We are an organization that values its Employees and respects its Customers. (3) <b>Empowerment:</b> We believe in empowerment and effective delegation enabling Employees to make decisions and take challenges commensurate with their own levels of responsibility. (4) <b>Innovation:</b> We encourage creativity and innovation leading to enhancement of our capacity in handling regulatory issues. (5) <b>Integrity:</b> We believe in integrity and we are determined to treat Customers and each other with trust, confidentiality and honesty. (6) <b>Accountability:</b> We are accountable, undertaking our duties fairly, with care and transparency. (7) <b>Teamwork:</b> We benefit from teamwork, putting together diverse expertise to achieve success. (8) <b>Efficiency:</b> We believe in providing our regulatory services in an efficient way and actively seek opportunities to improve our regulatory services. (9) <b>Non-discrimination:</b> We believe in equal opportunity and treatment for our internal and external Stakeholders and do not discriminate against Gender, Religion, race, affiliation and origin.	<b>OBJECTIVE 5</b> To monitor performance of regulated services and enforce compliance to legislation, regulations and standards



*TCRA Board Chairman Dr Jones A. Killimbe cuts a ribbon to launch the Authority's Client Service Charter recently. Centre is Director General Eng. James M. Kilaba and left is the Acting Head of Quality Assurance, Mr Haruni Lemanya. The charter defines the standards and quality of services offered to the Authority's clients.*

*The Minister for Works, Transport and Communication Eng. Isaac Kamwelwe addressing TCRA staff and other stakeholders during his visit to the Authority in July this year. He later witnessed the award, to Vodacom Tanzania PLC, of a 700MHz spectrum licence following the company's successful bid in a spectrum auction in June 2018.*



*TCRA Director General Eng. James M. Kilaba presents the licence to Vodacom Tanzania PLC Acting Chief Executive Officer Hisham Hendi. Second left is Vodacom's Acting Head, Legal section Olaf Momburi and Head of Regulatory Issues, Ngayama Matongo (left).*



*TCRA participated in a recent exhibition in Dodoma on fire and rescue services. Home Affairs Minister, Hon. Kangi Lugola being briefed by Mabel Masasi of the corporate communication unit on the new addressing and postcode system.*

# events

*The Minister for Information, Culture, Arts and Sports Dr. Harrison Mwakyembe addresses the media where he clarified on the carrying of free to air channel by multiplex operators. Left is TCRA's Head of Enforcement and Compliance Dr. Philip Filikunjombe.*



*TCRA's Acting Head of Tele-traffic Management Dr. Emmanuel Manasseh briefs members of the Parliamentary Budget Committee on the teletraffic monitoring system (TTMS) when they visited the Authority recently. Seated from right are Deputy Permanent Secretary, Ministry of Works, Transport and Communication, Dr. Jim Yonazi; Hon. Hawa Ghasia and Permanent Secretary, Ministry of Works, Transport and Communications, Dr Maria Sasabo.*

*TCRA Director General, Eng. James M. Kilaba presents a licence to the CEO of Geita TV Online, Joachim Buyobe at Geita Municipal Offices recently. More online content providers are being licensed by the Authority following the publication of Online Content Regulations earlier this year.*



*The Authority's Head of Central Zone Mr Antonio Manyanda hands over a registration certificate to the owner and director of Hai Cable Network, based in Manyoni district, Singida region, Mr. Aminieli Zephania. TCRA has opened offices in Zanzibar and in five zones as part of taking taking its services closer to stakeholders.*

# E-waste recycling industry potential in Tanzania

■ *Abel John; Bahati Z.*

## Abstract

The rapid increase in the use of computers, mobile phones, charging equipment, solar and other devices has led to an increase in electronic waste (e-waste); which has become one of the fastest growing sources of waste in Africa. Although most of the major electronics firms in the world such as those in Japan and China have initiated clean up practices to reduce e-waste, such schemes for recycling have in general not reached developing nations, including Tanzania. Regardless of its health and environment hazardous, e-waste recycling has not been adopted as part of economic activities including job creation to individuals and SMEs.

This paper addresses issues related to e-waste and presents policy recommendations and actions to key stakeholders, E-waste can be turned into an economic opportunity in Tanzania. The paper presents preliminary findings from various 'Green IT' research projects in Asia and East Africa on recycling of e waste and recycling businesses and individuals in Bangladesh. A case study conducted in Nigeria, Kenya and Rwanda has shown how recycling of off-grid equipment into solar products can revolutionize the quality of life in Africa, especially in areas where energy access remains a challenge. According to the Social Impact Metrics from the Global Off-grid Lighting Association (GOGLA), over 76 million people worldwide have benefited from improved energy access from off-grid lighting products.

## E-waste management and the environment

E-waste or Waste Electrical and Electronic Equipment (WEEE) is a term used to cover almost all types of electrical and electronic equipment (EEE) that cannot be upgraded or repaired for re-use; and finally enter the waste stream. Electronic waste, or e-waste, refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use (Step Initiative 2014).

Electronic waste is a general term. It can be considered to cover television sets, computers, mobile phones, white goods (e.g. fridges, washing machines, dryers etc.), home entertainment and stereo systems, toys, toasters and kettles – almost any household or business item with circuitry or electrical components with power or battery supply.

Waste electrical and electronic equipment (WEEE) or e-waste is one of the fastest growing waste streams in the world. In developed countries, it equals one per cent of total solid waste on average. The increasing "market penetration" in developing countries, "replacement market" in developed countries and "high obsolescence rate" make WEEE/E-waste one of the fastest waste streams.

There is a pressing need to address e-waste management; particularly in developing countries like Tanzania. The presence of valuable recyclable components attracts informal and un-organized search of valuable minerals. As more and more electronic equipment is deployed, there is more and more e-waste to dispose of; hence more consequences to the environment.

Many electronic equipment contain hazardous chemicals and materials such as lead, cadmium and beryllium. Informal recycling and disposal of electronic waste in developing countries can cause serious health and pollution problems; although these countries are also most likely to reuse and repair electronics.

Some electronic scrap components, such as Cathode Ray Tube (CRT)s may contain contaminants even in developed countries. Much used electronic equipment finds its way to Africa and other less developed countries and ends its useful life within the uncontrolled patterns; so the issue of disposal of such equipment is very important for sustainable disposal of waste.

Although e waste disposal is a major issue, it can be turned into an opportunity, creating jobs and value added activities. Besides the negative effects associated with e-waste; it also contains many valuable and precious materials such as copper (Cu), tin, special metals (cobalt (Co), indium (In), antimony (Sb), and precious metals (silver (Ag), gold (Au), palladium (Pd).

(silver (Ag), gold (Au), palladium (Pd). Precious metals such as gold and silver can be retrieved from e-waste' However, due to the complex composition of valuable and hazardous substances, specialized, often high-tech, methods are required to process e-waste in ways that maximize resource recovery and minimize potential harm to humans or the environment, Nevertheless e waste treatment is closely related to climate change and in reducing carbon emissions.

## Economic challenges and impact to e-waste

Economic challenges include unequal access to ICT services. Digital divide is an economic inequality between individuals or groups that is construed, in terms of access to or the use of information and

communications technologies (ICTs)

Some of the major disadvantages that come from bridging the digital divide are the negative environmental and health effects (digital dumping), which are associated with e-waste.

E-waste contains a combination of reusable and toxic materials. These raw materials have value and can be reused to manufacture new products.

E-waste is usually shipped away from industrialized countries and dumped in less developed countries. Improper disposal in developing countries can create significant health and environmental risks, including for children. Suppliers need to assume a responsibility for the safe and efficient disposal of their equipment. Consumer awareness should be increased.



**LEFT: Imported used electronic equipment. RIGHT: Dumped electronic waste. Informal recycling and disposal of electronic waste in developing countries can lead to serious health and pollution problems.**



### E waste generation and collection per continent

Indicator	Africa	Americas	Asia	Europe	Oceania
Countries in region	53	35	49	40	13
Population in region ( millions)	1,174	977	4,364	738	39
WG (kg/inh)	1.9	11.6	4.2	16.6	17.3
Indication WG (Mt)	2.2	11.3	18.2	12.3	0.7
Documented to be collected and recycled (Mt)	0.004	1.9	2.7	4.3	0.04
	0%	17%	15%	35%	6%

The Global e waste monitor- UNU (2017)

## Case Study

### Recycling of off grid lighting products into solar products

**The recycling of off grid lighting products into solar products as an economic opportunity:** Off-grid solar products have been revolutionizing the quality of life in Africa, especially in areas where energy access remains a challenge. According to the Social Impact Metrics from the Global Off-grid Lighting Association (GOGLA), over 76 million people worldwide have benefited from improved energy access from off-grid lighting products.

Consumers are saving over GBP 2.6 billion (exchange rate: IGBP=2,900 shs) from savings on lighting and phone charging costs compared to traditional energy sources. The broader societal benefits from better education, health, employment opportunities and environment are multi-fold. Therefore, many African governments, international agencies and private companies see off-grid solar as an opportunity to not only provide quick and affordable energy access, but also to meet broader sustainable development goals.

The most promising off-grid lighting devices are Solar Portable Lights (SPL) and off-grid Solar Home Systems (SHS). They typically consist of one or more photovoltaic modules (PV), components to provide light or charge electric devices and battery storage. Depending on the component quality, these

products are used for three to five years.

Current waste volumes from this sector are almost negligible, in proportion to the quantity and environmental impact of the total e-waste stream. A case study conducted in 2016 by joint researchers at United Nations University and European Commission showed that off-grid products represent less than 0.5% of the overall e-waste stream. In 2014, an estimated 2,500 tonnes of off-grid solar products were put on the market, and only 800 tonnes were expected in the waste stream, as compared to nearly 850,000 tonnes of electrical and electronic equipment (EEE) put on market, and 460,000t of waste EEE (WEEE).

The overall economic impact for off-grid solar products was expected to be in the range of GBP 7.8 million to 9.4 million in 2017, varying from approximately 0.1 to 2.5% of product price. This estimate considered expected volumes across Africa and the potential collection and recycling costs. Due to rapid sector growth, the estimated volumes are expected to pass 10,000 tonnes by 2020. Therefore, the report makes the case for developing the end-of-life (EOL) management of off-grid solar products without delay.

### The Complexity of the e-waste problem

Relevant international instruments have developed steps to be taken at the national level including laws, regulations, a national agency and public education.

The instruments include:

- Declaration of the United Nations Conference on the Human Environment;
- Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes;
- Recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods;
- Brussels Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- Lome IV Convention relating to the international

movement of hazardous wastes and radioactive wastes;

- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal;
- Bamako Convention on the ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa;
- Article 11 of the International Telecommunication Regulations.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, is a treaty that regulates trans boundary movement of hazardous waste (including e-waste) globally. The Convention is intended to minimize the amount and toxicity of wastes generated, to ensure their environmentally sound management as closely as possible to the source of

generation; and to assist developing countries in environmentally sound management of the hazardous and other wastes they generate or may receive from other countries. The disposal of waste may be seen as an economic activity in some developing countries. However, if not properly regulated, this can have negative consequences.

A considerable number of developing countries are signatories of the Basel Convention but challenges include lack of the necessary formal recycling and recovery infrastructure; lack of technical capacity to dismantle and retrieve usable / valuable components; and lack of general awareness on both the hazardous and resource potential of e-waste.

### **Steps on e-waste resources**

The best way to deal with E-Waste is to avoid it, or at least to minimize it. This can be done at the manufacturing stage, but also by lengthening product life and by active management of product disposal. Standards can play an important role and can be agreed upon and implemented faster than regulations.

Key actions to solve the E-Waste problem include to:

- Raise awareness on the dangers of e-waste;
- Encourage the consideration of e-waste management in the design of ICT policy;
- Adopt strategic policies, international standards and regulatory approaches that are sensitive to local context;
- Encourage concerted cooperation in handling e-waste at the national, regional and international level.

### **Importance of legal and regulatory frameworks**

Legal and regulatory frameworks on e-waste issues are important. Steps to be taken at the national level include laws, regulations, a national agency, and public education. At present there is no link between producers and e-waste disposal, and informal collectors are not connected to formal recycling structures. Fair and enforced regulations are paramount and regional approaches are needed.

The Kenyan approach can be taken as a model. Some producers have joined together to create an E-waste Alliance for Africa. Partnerships are essential.

Swiss components in addressing e-waste issues include traceability, sustainability standards, and recycling. Uncontrolled conditions in the informal sector have negative consequences. Burning is a source of pollutants; gold leaching can create toxic fumes and lead may not be handled safely. Switzerland has cooperated with national e-waste programmes in China, Columbia, India, Peru, and South Africa.

The programs include e-waste assessments, legal frameworks, capacity building, information campaigns, etc. A new program which involve Brazil, Columbia, Egypt, Ghana, India, Peru, South Africa. It will focus on stewardship of secondary raw materials, recycling initiatives, and life cycle inventories.

The number of devices is growing and life-spans are shrinking. Devices contain toxic materials, and many are thrown in the trash bins instead of being recycled. There is a lack of regulation, and waste management options are highly technical and require high financial investments. International policies and legislation are needed to bridge the digital divide.

Steps to take include sensitization and awareness raising; formulation of national strategy and policies; capacity building and implementation; use of standards and best practices; and partnerships and collaboration.

Progressive legislation regarding e-waste has been adopted at both regional and international levels, but little has been done to assist developing countries to come up with their own legislation or strategies on dealing with e-waste. Treaties have been adopted, but not necessarily transposed into national law. Issues include limited capacity and capability of responsible institutions; poor implementation of legal instruments; poor cooperation amongst stakeholders; and lack of funding.

It is recommended that e-waste management strategies and policies be adopted at regional and country levels. These should feed into regional ones;

at the global level, clearly defined standards and best practices should be formulated; global partnerships should be created to assist developing countries; participation in regional and international conferences must be ensured; there should be a regional center of expertise.

### **Right way forward on addressing the e waste Menace**

- Developing countries to develop and implement e-waste policies, regulations, and best practices, pursuant to article 11 of the International Telecommunication Regulations.
- Partnerships with the African Union, Regional Economic Committees, ITU and other relevant organizations such as Basel Convention, Bamako Convention, UNEP, UNIDO, STEP, etc., to assist African countries to develop national legislation/regulation.
- Developing a model program for cooperation between governments and industry for national actions to handle e-waste including the implementation of international standards (e.g. ITU-T L.1000, L.1101) at the national and regional level.
- Developing a model legislation and best practice for e-waste management, based on existing regulations that have proven effective.
- ITU to carry out a project in Africa to illustrate and promote the benefits for a country and its population to implement e-waste policies, regulations and best practice for e-waste management, as well as the possible establishment of processing and refining/recycling facilities.

More studies are needed in the area of e-waste management in order to come up with better ways of handling this challenge; through the involvement of various stakeholders at different stages such as production, transportation, distribution, usage/recycling and disposal.

### **E-waste recycling opportunities for industrial**

E-waste contains valuable and scarce materials and recovery of these materials as secondary resources can alleviate mining of virgin materials - and is often

much more efficient compared to mining. This is why business opportunities and “green jobs” can be created and enabled. Examples on solar portable lights (SPL) and off-grid solar home systems (SHS), opportunities include copper in cables, gold in circuit boards and lead in batteries. Metals like gallium, tellurium, germanium and indium used in modern photovoltaic applications, are in some cases, like gallium, recovered in dedicated plants in Germany, Japan, UK and USA from production scrap (OEKO, 2009).

### **Key Actions**

Government and other stakeholders should note the following:

### **Specific treatment requirements and targets**

E-waste collected must be treated in authorized facilities according to best available techniques. In order to ensure high level of environmental and human health protection, specific performance targets for collection and recovery might be established. Hazardous practices (like open burning of cables) should be prohibited.

**Financing mechanism for operations:** Financing of waste management activities and allocation of economic responsibilities along the downstream is a key element. A model of how stakeholders financially contribute to different activities varies. For example in California consumers pay for e-waste management upon purchase of new appliances while in Japan consumers (waste holders) pay for e-waste management when disposing off the equipment.

**Information and reporting requirements:** one of the fundamental elements is the setup of a register of producers: this to ensure control over obliged parties for financing but also to keep records of EEE placed on national markets, WEEE collected, treated and recovered or recycled.

On an operational level, there are four main considerations for e-waste management systems for take-back and recycling operations. These are access to waste, collection, transport and treatment.

**Access to waste:** includes the costs (or revenues) to obtain the waste from the original holder (the

consumer). In the majority of developed countries consumers get rid of their waste for free (or in some cases they have to pay); In the context of developing countries in most of the cases it is the opposite: the holder of the product to be discarded expects economic compensation when disposing off the waste. **Collection:** which depends on existing infrastructure, or in some cases might also mean the cost of setting it up, including for example hiring/ leasing a space, purchasing containers, cages, bins etc. to collect and store waste at the collection points. This also includes salary of staff at collection points.

**Transport:** normally includes all the transportation costs from the collection point to the treatment plant or sometimes even from the consumers' location itself, such as for door step collections.

**Treatment:** represents the net costs for proper treatment, including disposal of hazardous fractions. The operative costs incurred by each treatment plant processing e-waste are: labour costs, energy costs, depreciation of capital investment, other costs related to the functioning of the plant itself. E-waste being processed into the plant is dismantled and results in different fractions that are sold on national or international commodities markets. Some fractions have positive value (representing a revenue) while others have a negative value for disposal or further treatment (representing a cost).

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## INTERNATIONAL EVENTS CALENDAR SEPTEMBER - DECEMBER 2018

SEPT

10-13

ITU Telecom World 2018, Durban South Africa. The event will feature an exhibition of ICT products and services and a forum in which experts from Governments, businesses and international organizations will debate policies, strategies, business models and technologies shaping the industry. The theme is: better, sooner; underlining speedier innovations to bridge differences in access and to improve lives.

OCT 29

to  
NOV 16

ITU Plenipotentiary Conference, PP 18, Dubai, UAE. The Plenipotentiary conference is ITU's top policy-making body. It meets every four years. The last PP conference was held in Busan, Korea in which Tanzania was elected member of the 48-member ITU Governing Council; the governing body between PP conferences. Africa has 13 seats in the Council. Tanzania is seeking re-election. Story on page 7.

OCT

9

World Postal Day. It commemorates the creation of the Universal Postal Union in 1874. Governments, postal services providers and regulators organize activities to raise public awareness to the role of the Post. UPU has organized an international letter writing competition for young people in which they are required to think of a message likely to be conveyed by a letter travelling through time.

DEC

17

Africa Telecommunications and ICT Day. It marks the founding of the African Telecommunications Union (ATU) in 1977 as a specialised agency of the African Union for ICTs.

# ‘Technology makes progress possible’

*Keynote speech at the Massachusetts Institute of Technology (MIT) in 2015 on how technological advancements could improve the state of the world.*

Several crises are today playing out on the world stage, simultaneously. Democracy is threatened by autocratic governments which use fraudulent elections to wrap themselves in a veneer of democratic legitimacy.

Climate change is already wreaking havoc as those experiencing droughts, wildfires and floods can tell you.

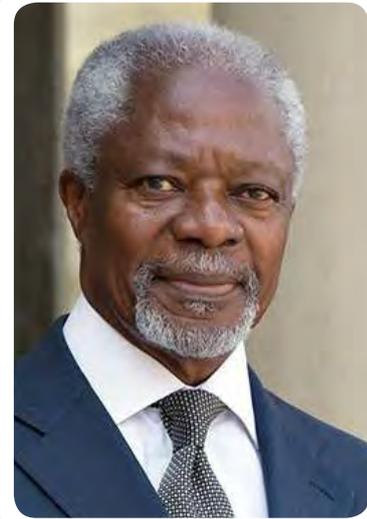
Hunger continues to haunt millions, particularly in Africa, which is the only continent on earth that depends on food imports despite having 60 per cent of the world’s uncultivated arable land. In some of the poorer parts of the world, these crises are compounded by rapid population growth, which is producing a youth boom. Africa alone is forecast to double its population to 2.4 billion by 2050.

Two crucial ingredients can help solve these crises: Technology and political will. The use of electronic systems for voter registration and identification and the tallying of votes can increase trust and reduce suspicions in countries with records of electoral fraud.

Yet the best technology is useless if the decision makers are not willing to accept the results and govern in manner that serves the public rather than their own narrow interests. Technology for harvesting solar, wind and geothermal energy can help green our economies and avert an impending climate catastrophe.

Without the political will to invest in, promote and disseminate these technologies, we will not get very far. Advanced farming techniques, if made accessible to smallholder farmers will enhance productivity and avert hunger. Drought and heat tolerant crops and improved irrigation systems have the potential to make of Africa a global food exporter and agricultural powerhouse.

Great promise also lies in digital technology allowing the many disparate African smallholder farmers to organize simply and efficiently to negotiate better seed prices and tap into bigger markets. But yet again, without the political will to put in place adequate



incentives, and remove unfair trade barriers and eliminate harmful export subsidies of the richer nations, none of these efforts will bear fruit.

Let me conclude those few introductory remarks by pointing to two other areas that hold the promise to improve the lives of people everywhere: education and big data.

The Internet can bring learning to the most remote areas of the planet. The financial means to afford a cutting edge education are no longer the prerequisite for access to cutting edge knowledge. Technology can transport this knowledge in real time, at low costs, to areas that do not even have schools, let alone universities.

Big data can predict the spread of viruses based on a community’s behaviour on search engines and how often they type in keywords such as flu. It can make the management of disaster response work more efficient by predicting refugee movements and preparing first responders ahead of time. But again, without the right policy framework ensuring that big data is not abused, our privacy, indeed our liberty, will be in danger.

In sum: let us invest in and embrace technology; it makes progress possible. But technology does not free us of the need for leadership; it makes leadership all the more important. So let us not forget that technology by itself cannot absolve us of our political responsibility to ensure that we use it wisely and efficiently for the good of society everywhere.

**Source: ITU News, August 2018.**

**About Kofi Annan:** He was the seventh Secretary-General of the United Nations, from 1997 to 2006.

He passed away on 18 August 2018.

# KISWAHILI Regulator

JULAI – SEPTEMBER 2018

**H**ili ni toleo la Kiswahili la jarida la The Regulator, linalotolewa mara nne kwa mwaka na Mamlaka ya Mawasiliano Tanzania (TCRA), taasisi ya serikali inayosimamia sekta ya mawasiliano (kama vile simu, intaneti, mtandao wa kompyuta na kadhalika), huduma za Posta na usafirishaji wa vipeto katika Jamhuri ya Muungano wa Tanzania na pamoja huduma za utangazaji (kama vile redio na televisheni) kwa Tanzania Bara tu. Zanzibar ina Tume inayosimamia utangazaji.

Kazi za TCRA zimefafanuliwa kwenye Sheria iliyoiunda Mamlaka na pia kwenye Sheria ya Mawasiliano ya Kielektroniki na Posta (EPOCA) ya 2010. Makao makuu ya TCRA yako Dar Es Salaam, Jengo la Mawasiliano Towers, Barabara ya Sam Nujoma. Mamlaka ina ofisi Zanzibar na kwenye kanda ya Mashariki (Dar es Salaam), Kati (Dodoma), Kaskazini (Arusha), Nyanda za Juu Kusini (Mbeya) na Ziwa Victoria (Mwanza).

## BODI YA UHARIRI

**Mwenyekiti/ Mhariri**  
Dr. Emmanuel Manasseh

**Mhariri/ Mratibu**  
Mr. Semu Mwakyanjala

**Mhariri wa uzalishaji**  
Mr. Isaac Mruma

**Wajumbe**  
Mr. Thadayo Ringo  
Dr. Philip Filikunjombe  
Ms. Thuwayba Hussein  
Eng. Gabriel Mruma  
Mr. Rolf Kibaja  
Mr. Erasmo Mbilinyi

## YALIYOMO

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**31** Kanuni za kulinda watumiaji

**36** Vituo vya TEHAMA  
Chachu ya Maendeleo

*Barua ya Mhariri*



**M**nada wa hivi karibuni wa masafa ya wigo wa 700 MHz, kuwasilishwa kwa mchango wa TCRA kwa Hazina na kuzinduliwa kwa kampeni ya Tanzania kuchaguliwa tena kwa nafasi kwenye Baraza la Uendeshaji la Shirika la Mawasiliano ulimwenguni (ITU) ni baadhi ya matukio ya kiusimamizi, kiutawala na kidiplomasia ambayo yameandikwa kwa undani katika toleo hili la the Regulator.

Tanzania imefanikiwa kuuza, kwa njia ya mnada, masafa katika wigo wa 700MHz Juni mwaka huu kwa jumla ya dola za kimarekani milioni 20; huku walionunua wakipewa masharti ya kuhakikisha upatikanaji wa huduma za mawasiliano za kasi (broadband) kwa asilimia 90 ifikapo 2024. Kampuni zilionunua masafa hayo ni Vodacom Tanzania Limited ambao wamelipa dola za Kimarekani 10,005,000 na Azam Telecom Limited ambao wamelipa dola 10,000,000. Masafa haya yalipatikana baada ya kuhama kutoka utangazaji wa televisheni wa analogia kwenda dijitali.

Toleo hili lina makala kuhusu namna miamala ya kifedha ya kijiitaji inavyoweza kupunguza umaskini na njia nzuri za kutupa taka zinazotokana na vifaa vya kielektroniki vilivyochakaa au kwisha muda wake wa matumizi. Linazo pia taarifa kutoka Nigeria kuhusu ubunifu ulioleta ufanisi kwa waalimu.

Kuna taarifa fupi kuhusu kupitiwa upya kwa Sera ya Taifa ya Posta ya 2003; na mpango wa kufanya utafiti kuhusu gharama halisi za utoaji wa huduma za intaneti Tanzania.

Aidha, kama kawaida ya kila toleo, kuna takwimu za mawasiliano ambazo zinaonyesha kwamba laini za simu za mkononi zimeongezeka mara nne katika kipindi cha miaka 10 iliyopita: kati ya Juni 2008 na Juni 2018; na mara 378 tangu 2000.

Akaunti za pesa mtandao zimefikia milioni 20 na jumla ya miamala inayofanywa kupitia simu za mkononi ilikuwa shilingi trilioni 10,38 kwa mwezi, kwa mujibu wa takwimu za Januari 2018.

Kama itakavyokumbukwa, kanuni za mawasiliano zilizopitiwa upya kwa mujibu wa Sheria ya Mawasiliano ya Kielektroniki na Posta (EPOCA) zilitolewa mapema mwaka huu. Mojawapo ni Kanuni za Kulinda Watumiaji; ambazo tumezitaafsiri kwa Kiswahili na tumezichapisha humu.

Uanzishwaji wa vituo vya mawasiliano, maarufu kama telesenta kumechangia katika kuinua uelewa wa watumiaji kuhusu fursa zinazotokana na TEHAMA. Kuna makala kuhusu telesenta ambazo zimeanzishwa sehemu mbalimbali nchini.

Tunawatakieni usomaji mwema.

# Masafa 'Mapya' Kuendeleza Jamii

**K**wa mujibu wa Sheria ya Mamlaka ya Mawasiliano Tanzania na Sheria ya mawasiliano ya Kielektroniki na Posta (EPOCA); ambazo zinaipa uwezo Mamlaka ya mawasiliano Tanzania (TRA) kutenga, kugawa, kutoa, kugawanya, kuchukua, kusimamisha matumizi, kufuta au kurekebisha usambazaji wa masafa ya mawasiliano ya redio au chaneli za masafa; Mamlaka imefanya na kukamilisha utoaji wa masafa katika wigo wa MHZ 700 kupitia mnada.

Kufuatia mnada huo ambao ulifanyika 8 Juni 2018, TCRA inapenda kutoa taarifa ya kukamilika kwa mnada wa masafa 20 (2 x20) katika wigo wa MHZ 700. Pamoja na mambo mengine, mnada wa masafa ya MHZ 700 ulilenga kufikia malengo ya Sera ya Taifa ya Teknolojia ya Habari na Mawasiliano (TEHAMA) ya 2016, ambayo ni:

- i. Kuendeleza matumizi ya masafa kwa ufanisi (kwa maana ya kutoa masafa kwa wale ambao watayatumia kuleta faida zaidi za kijamii na kiuchumi;
- ii. Kuendeleza ushindani;
- iii. Kuongeza faida za matumizi kwa watumiaji kupitia utoaji endelevu wa huduma zenye ubora wa juu kwenye maeneo mengi zaidi; na
- iv. Kuendeleza uwekezaji na ubunifu.

Ni lengo la TCRA kuona kwamba katika kutekeleza Sera ya Taifa ya TEHAMA, mnada wa masafa katika wigo wa MHZ 700 utaleta manufaa yafuatayo kwa taifa:-

- a.) Kuendeleza ujenzi wa miundombinu ya mawasiliano ya simu za mkononi na uwezo wa kutoa huduma zenye kasi kama chachu ya maendeleo ya kiuchumi ya taifa.
- b.) Kufanikisha shughuli za kijamii kwa kuwa mawasiliano ya simu za mkononi yenye kasi yatakuwa muhimu katika kuendeleza utoaji huduma za elimu, afya, kiimo, biashara na huduma za kifedha kwa ufanisi kupitia TEHAMA.
- c.) Kushusha gharama za mawasiliano ya simu za mkononi, na uwezekano wa kuwa na bei ndogo zaidi

kwa watumiaji kutokana na kupungua kwa gharama za uendeshaji baada ya kuweka minara ya mawasiliano michache;

d.) Kupanua utoaji wa huduma za mawasiliano ya simu za mkononi kwa kasi kwa Watanzania wengi zaidi na hasa walioko maeneo ya vijijini;

e.) Kuendeleza, kuimarisha na kuwezesha ubunifu wa huduma zaidi za TEHAMA na tekinolojia zitakazoanzishwa kupitia wigo uu wa masafa; na

f.) Kuwa chanzo cha mapato ya taifa kwa kufaidika na matumizi ya masafa kwenye wigo huu kama rasimali adimu.

Masafa yote yaloyokuwepo kwenye wigo huu yametolewa, na matokeo ya mnada ni kama ifuatavyo:

- a.) Vodacom Tanzania PLC ilipata masafa 10 (2x10 MHz) kwa bei ya jumla ya dola za Kimarekani (US\$) 10,005,000.
- b.) Azam Telecom (T) Limited ilipata masafa 10 (2x10 MHz) kwa bei ya jumla ya dola za Kimarekani (US\$) 10,000,000.

Jumla ya kiasi kilichopatikana ni dola za Kimarekani (US\$) 20,005,000.

Ili kuhakikisha kwamba watumiaji wanafaidika kikamilifu na upatikanaji wa huduma za simu za mkononi za kasi, TCRA imeweka masharti ya kueneza huduma kwenye leseni zitakazotolewa kwa walionunua masafa hayo. Masharti hayo ni kama ifuatavyo:

- i. Ifikapo mwishoni mwa mwaka 2021, huduma za mawasiliano ya kasi kupitia simu za mkononi zifikie asilimia 60 ya Watanzania, kwa kuzingatia viwango vya ubora vilivyowekwa; na
- ii. Ifikapo mwishoni mwa mwaka 2024 huduma ziwafikie Watanzania kwa asilimia 90.

TCRA inawapongeza Vodacom Tanzania PLC na Azam Telecom (T) Limited kwa ushiriki wao na kununua masafa katika wigo wa MHZ 700.



*Mwenyekiti wa Bodi ya TCRA, Dr Jones A. Killimbe (katikati) na Mkurugenzi Mkuu, Mhandisi James M. Kilaba (wa pili kushoto) wakielezwa kuhusu kituo cha televisheni cha Mahaasin Television cha Mwanza na mmiliki wa kituo, Haji Bajber. Kushoto ni Victor Nkya wa TCRA. Walikuwa kwenye ziara ya ukaguzi wa vituo vya utangazaji kanda ya Ziwa Victoria.*

# Kanuni za Kulinda Watumiaji

Sheria ya Mawasiliano ya Kielektroniki na Posta ( EPOCA)  
(CAP. 306)

## KANUNI

(Zimetolewa chini ya kifungu 165)

Kanuni za Kulinda Watumiaji, 2018

### SEHEMU YA I MAELEZO YA AWALI

1. Kanuni hizi zinajulikana kama Kanuni za Kulinda Watumiaji wa Mawasiliano ya Kielektroniki na Posta, 2018.
2. Kanuni zitatumika kwa watoa huduma za Mawasiliano ya Kielektroniki na Posta
3. Isipokuwa tu pale ambapo imeelezwa vinginevyo, maneno yaliyotumika kwenye Kanuni yanafafanuliwa kama ifuatavyo:-

sheria	Sheria ya Mawasiliano ya Kielektroniki na Posta, kwa kiingereza ni <i>the Electronic and Postal Communications Act</i> ; kifupi EPOCA.	mtumiaji	mtu yeyote ambaye anatumia huduma na bidhaa za mawasiliano ya posta au elektroniki.
Mamlaka	Mamlaka ya Mawasiliano Tanzania, iliyoanzishwa chini ya Sheria ya Mamlaka ya Mawasiliano Tanzania ya 2003.	mteja	mtu yeyote ambaye anapata au anataka kupata huduma za aina yoyote kutoka kwa mtoa huduma anayeendesha shughuli zake kwa mujibu wa kanuni hizi, ikiwa ni pamoja na watu wanaojiunga na huduma.
chama	Chama cha Watumiaji Tanzania (the Tanzania consumers' Association) au chombo kingine kilichosajiliwa kinachowakilisha watumiaji Tanzania.	mwenye leseni	chombo kilichopewa leseni na Mamlaka kutoa huduma zozote za mawasiliano ya kielektroniki, posta na usafirishaji wa vifurushi.
"bili"	taarifa iliyoandikwa ya pesa zinazotakiwa kulipwa kwa huduma zilizotolewa na wenye leseni za huduma za mawasiliano ya kielektroniki na posta.	fidia kwa kukosa huduma	fidia anayopata mteja kwa kipindi ambacho huduma hazikutolewa kwa sababu ambazo hazikusababishwa na mteja, majanga au ambazo kutotolewa kwake hakukutolewa taarifa ya awali, ikiwa ni pamoja na taarifa kuhusu matengenezo ya kawaida.
malalamiko	taarifa yoyote ya mtumiaji kutokuridhika na huduma za posta au mawasiliano ya kielektroniki.		

kutangaza bidhaa na huduma kupitia simu (telemarketing)	mawasiliano ya moja kwa moja kwa wateja kupitia simu kwa lengo la kutangaza biashara na kushawishi wateja kununua huduma au bidhaa;
laini ya simu au SIM card	SIM ni kifupisho cha Subscriber Identity Module ambacho ni kifaa kinachowekeka kwenye chombo cha mkononi cha mawasiliano kuwezesha kutumika kwa simu au vifaa vingine vya mawasiliano ya mkononi. Mifumo ya mawasiliano ya simu za mkononi inaweza kutambua laini husika na taarifa zake.

## SEHEMU YA II

### UTOAJI WA TAARIFA NA MASHARTI YA MKATABA KWA WATUMIAJI

#### Taarifa kuhusu bidhaa na huduma

4. Mwenye leseni atatoa, kwa wakati, taarifa zilizo kamili, zinazojitosheleza na sahihi kuhusu bidhaa na huduma katika lugha rahisi na inayoeleweka, kwa Kiingereza na Kiswahili au kwa lugha zote mbili.

#### Wajibu wa wenye leseni

5.-(1) Mwenye leseni atalenga kushughulikia kwa wakati maombi ya watumiaji kuhusu taarifa za bidhaa na huduma; na taarifa hizo zitatolewa bure na zitahusisha mambo yafuatayo:-

(a.) utaratibu mzima unaotumika kwa bidhaa na huduma, ikiwa ni pamoja na viwango, vigezo na masharti ya utoaji wa huduma zote kwa jamii; na taarifa hizo zinatakiwa ziwe tayari na kupatikana kwa njia ya maandishi yaliyochapishwa katika mfumo wa kielektroniki kwenye vituo vya mauzo vya wenye leseni na popote pale huduma zao zinapouzwa;

(b.) huduma na bidhaa ambazo tozo zake zinapaswa kusimamiwa na Mamlaka zinatakiwa kuwa kwenye mfumo wa machapisho na kielektroniki;

(c.) ubora wa huduma zinazotolewa, muda wa kutoa huduma na maeneo yoyote huduma zinapotolewa;

(d.) kuwajibika kikamilifu kwa utendaji wenye ufanisi katika kutoa huduma zote, ikiwa ni pamoja na huduma za baada ya mauzo, matengenezo, kushughulikia malalamiko, kutatua migogoro na mahitaji mengine ya kiutawala;

(2) Wenye leseni watatoa, au kuwa tayari kutoa wakitakiwa kufanya hivyo, nakala ya mkataba wa utoaji wa huduma, na mikataba hiyo itaandikwa katika lugha rahisi kwa Kiingereza na Kiswahili.

(3) Pale ambapo huduma zinahitajika kutolewa na mtoa huduma mwingine ili kuweza kutumia kikamilifu

huduma za mwenye leseni husika, mtumiaji ataelezwa kwa undani kuhusu mahitaji hayo au utegemezi huo kwa utoaji wa huduma hizo.

(4) Fidia yoyote, kurejeshewa fedha au utaratibu mwingine unaoweza kutumika pale ambapo mkataba umekiukwa au pale ambapo huduma hazikidhi viwango vya ubora wa huduma, pamoja na utaratibu na njia za kutatua migogoro kuhusiana na mkataba wa huduma vinatakiwa kusajiliwa Mamlaka.

(5) Pale ambapo huduma zinatakiwa kuboreshwa au kuhamishiwa mfumo mwingine wa utoaji, taarifa zinazoeleweka na kamilifu kuhusu masharti ya uboreshaji huo au uhamisho, ikiwa ni pamoja na mabadiliko katika utoaji wa huduma na ada zozote au malipo yoyote vilivyoidhinishwa kuhusiana na uboreshaji au uhamisho huo zinatakiwa kuwasilishwa kwa watumiaji angalau saa 72 kabla ya kuanza utekelezaji.

(6) Mtoa huduma atamjulisha mtumiaji namna na wapi atapata waranti iliyowekwa kimkataba kuhusiana na bidhaa zilizotolewa kwa matumizi yanayohusiana na huduma, ikiwa ni pamoja na namna ya kupata huduma kuhusiana na waranti husika iwapo nakala ya waranti haikutolewa pamoja na bidhaa.

(7) Mkataba kati ya mwenye leseni na watumiaji utakuwa na taarifa zifuatazo:-

(a.) tarehe ya kuanza mkataba;

(b.) masharti ya mkataba;

(c.) utaratibu na athari za kusitisha mkataba;

(d.) mazingira ambapo mkataba unaweza kusitishwa mapema kabla ya wakati;

(e.) kiasi au namna ya kupiga hesabu ya gharama zinazotakiwa kulipwa pale mkataba unapositishwa mapema kabla ya wakati;

- (f.) masharti ya kuhuisha (renew) mkataba; pale inapohusika;
- (g.) vigezo na masharti ambavyo vinaweza kutumika kwa kurejesha malipo yoyote ya awali, ikiwa ni pamoja na muda au makato au gharama husika;
- (h.) vigezo na masharti kuhusiana na mazingira yanayopelekea kuingiliwa, kusitishwa au kuondolewa wa huduma; na
- (i.) vigezo na masharti kuhusiana na utoaji, uwekaji na uanzishaji wa huduma.

### **Kulinda taarifa za watumiaji**

- 6.-(1) Mwenye leseni anaweza kukusanya na kuweka taarifa za mtumiaji mmoja mmoja pale ambapo kimantiki zinatakiwa kwa mahitaji ya kibiashara.
- (2) Ukusanyaji na uwekaji wa taarifa za mtumiaji mmoja mmoja utafanywa kwa utaratibu ambapo:-
- (a.) taarifa zitakusanywa na kuandaliwa kwa njia za kisheria;
  - (b.) zitaandaliwa kwa malengo yaliyoainishwa;
  - (c.) zitakuwa sahihi;
  - (d.) zitaandaliwa kwa kuzingatia haki nyingine za mtumiaji;
  - (e.) zitalindwa dhidi ya utoaji usiotakiwa au kwa bahati mbaya; na
  - (f.) hazitahamishwa kwenda kwa mtu mwingine isipokuwa tu pale ambapo imeruhusiwa na vigezo au masharti yoyote vilivyokubaliwa na mtumiaji, na kama zilivyoruhusiwa na ruhusa yoyote au idhini ya Mamlaka; au kama itakavyokuwa imeidhinishwa au kuruhusiwa na sheria nyingine husika.

### **Promosheni na matangazo ya huduma**

- 7.-(1) Katika kutoa matangazo ya promosheni za upatikanaji wa huduma, mtoa huduma atatoa taarifa kuhusu maeneo ya kijiografia ambapo huduma haipatikani na masuala ya kiufundi ambayo yataathiri uatikanaji wa huduma husika kwa watumiaji.
- (2) Mtoa huduma atahakikisha kwamba promosheni:-
- (a.) haziathiri matakwa ya ubora wa huduma;
  - (b.) hazina mwelekeo wa kuathiri ushindani;
  - (c.) zinaweza kuwa kwa kipindi hadi miezi mitatu;
  - (d.) zinaweza kuongezewa muda usiozidi miezi miwili baada ya kuidhinishwa na Mamlaka na baada ya

kuridhika kwamba zilizingatia mahitaji ya ubora wa huduma.

- (3) Wakati wa kufanya promosheni ya bidhaa au huduma, mwenye leseni ataeleza kwa uwazi jumla ya gharama za huduma inayotangazwa na vigezo na masharti husika.
- (4) Mtoa huduma hatajihusisha na utangazaji wa bidhaa na huduma zake kupitia simu, meseji au njia nyingine ya kielektoniki isiokuwa tu pale ambapo:-
  - (a.) mteja ameafiki huduma ya matangazo hayo;
  - (b.) ataeleza kwa undani taarifa za matangazo hayo, ikiwa ni pamoja na jina la mwenye leseni au la mtu yeyote ambaye anatoa matangazo hayo kwa niaba yake na lengo halisi la matangazo hayo; na
  - (c.) mawasiliano yanatoa mchanganuo kamili wa jumla ya gharama za bidhaa au huduma yoyote inayotangazwa.

### **Malalamiko yanayohusu maudhui ya utangazaji**

8. Malalamiko yanayohusu maudhui ya utangazaji yatapokelewa na Mamlaka na yatawasilishwa kwa Kamati ya Maudhui iliyoundwa chini ya kifungu cha 6 cha Sheria ya Mamlaka ya Mawasiliano Tanzania ili yashughulikiwe na kutolewa uamuzi.

### **Utaratibu wa kutoza na kukusanya tozo za watumiaji**

- 9.-(1) Mwenye leseni atahakikisha kwamba:-
- (a.) Bili za tozo zinatolewa kwa uhakika, kwa muda na zinaweza kuhakikiwa; na
  - (b.) kumbukumbu za bili ya mtumiaji na gharama nyingine husika zinahifadhiwa kwa kipindi isichopungua miezi 12.
- (2) Mwenye leseni atahakikisha kwamba taarifa zinzoingizwa kwenye bili zinakuwa na yafuatayo:-
- (a.) jina na anwani ya mtumiaji anapotumiwa bili;
  - (b.) jina la mwenye leseni linalotumika kwa wakati ule, anwani na namba ya usajili;
  - (c.) namna ya kuitambua bili au huduma au bidhaa husika;
  - (d.) kipindi cha huduma kinachotolewa bili;
  - (e.) maelezo ya gharama ambazo mtumaji anapewa bili;
  - (f.) jumla ya kiasi kinachotakiwa kulipwa, ahueni, malipo au punguzo na kiasi kamili kinachotakiwa

kulipwa na mtumiaji ( au kulipwa na mwenye leseni);  
(g.) tarehe bili ilipotolewa;  
(h.) tarehe ya kulipa au kurejeshewa pesa;  
(i.) njia za kulipa au kurejeshewa fedha; na  
(j.) anwani za kuwasilisha malalamiko na maulizo kuhusu bili.

(3) Mtoa huduma hatamtoza mtumiaji kwa kuwasilisha malalamiko, bili au taarifa zinazohusiana na bili.

(4) Mwenye leseni ataandaa na kutoa bili ndani ya siku 30 baada ya kumalizika kwa kipindi cha kuandaa bili.

(5) Bili itajumlisha gharama zote kwa kipindi cha bili isipokuwa pale ambapo:-

(a.) kuna mkataba tofauti na mtumiaji unaoeleza vinginevyo;

(b.) kuna kuchelewa katika kuingiza taarifa anazopata mwenye leseni kutoka kwa wtoa huduma wengine kuhusiana na huduma ambazo bili inatakiwa kutolewa;

(c.) kuna ucheleweshaji uliosababishwa na mabadiliko yaliyotakiwa na mtumiaji, kama vile mtumiaji kuomba kubadilishiwa muda au kipindi cha kuandaa au kupewa bili;

(d.) kuna ucheleweshaji unaotokana na kusimamishwa kwa muda kwa gharama husika kutokana na mgogoro kuhusu gharama;

(e.) kumetokea tatizo katika mfumo wa kuandaa na kutoa bili, ambapo tatizo litarekebishwa na bili kutolewa bila kuchelewa na kwa mujibu wa vipindi vilivyotambuliwa na Mamlaka; au

(f.) uandaaji na utoaji wa bili umecheleweshwa kutokana na mambo ambayo yako nje ya uwezo wa mwenye leseni, kama vile majanga.

(6) Mwenye leseni atahakikisha kwamba watumiaji wanaweza kuhakikiki bili zao kwa kuweka sehemu ambayo wenye leseni watathibitisha kupokea malipo, kwa njia ya simu au kwa kupiga simu kwenye namba mahsusi au kwa njia yoyote sahihi na rahisi kupatikana kama ambavyo yote haya yatawezesha na wenye leseni.

(7) Pale ambapo mtumiaji hajamlipa mwenye leseni malipo kamili au sehemu ya bili kwa huduma zilizotolewa na mwenye leseni, hatua zozote zitakazochukuliwa na mwenye leseni kufuatia malipo au kusimamisha huduma zitazingatia yafuatayo:-

(a.) hatua zitakazochukuliwa zitalingana na hali

halisi na hazitabagua;

(b.) zitatanguliwa na onyo kwa mtumiaji kuhusu kusudio la kusimamisha au kusitisha huduma; na

(c.) zitahusu kusimamisha au kukata huduma zinazohusika tu kwa namna ambavyo inawezekana kiufundi.

### **Wajibu wa mtumiaji**

10.-(1) Mtumiaji atatakiwa kuzingatia vigezo na masharti ya mwenye leseni kwa huduma ambazo zitatolewa kwa mkataba wa maandishi.

(2) Vigezo na masharti ya huduma vitaainishwa kwa undani kwa mojawapo ya lugha rasmi za Jamhuri ya Muungano wa Tanzania kwa namna ambayo mtumiaji ataelewa, na ambayo haina figisufigisu au kuficha baadhi ya vitu.

(3) Mtu yeyote ambaye anamilki au ana nia ya kutumia laini ya simu inayojitegemea au ambayo imejengewa ndani ya simu ya mkononi atasajili kwa mtoa huduma wake laini hiyo au simu hiyo au chombo cha mawasiliano chenye laini ndani.

(4) Mtu yeyote ambaye laini yake ya simu inayojitegemea au ambayo imejengewa ndani ya simu ya mkononi au chombo cha mawasiliano chenye laini ndani vitapotea, kuibwa au kuharibika atatoa taarifa za upotevu, wizi au uharibifu kwa Polisi na kwa mtoa huduma wake kwa mujibu wa kanuni zinazosimamia usajili wa laini za simu.

## **SEHEMU YA III**

### **KUSHUGHULIKIA MALALAMIKO**

#### **Utaratibu wa kushughulikia malalamiko**

11.-(1) Mwenye leseni atatoa taarifa kuhusu utaratibu wa kushughulikia malalamiko kwa mujibu wa Kanuni hizi.

(2) Mwenye leseni anatakiwa:-

(a.) kuweka na kutumia utaratibu wa kushughulikia malalamiko;

(b.) kuweka kumbukumbu na kuandaa ripoti ya malalamiko yanayoshughulikiwa;

(c.) kuwasilisha kwa Mamlaka, kila baada ya miezi mitatu, taarifa ya malalamiko yaliyoshughulikiwa, ikielezea hatua ziizofikiwa, kwa utaratibu utakaowekwa na Mamlaka.

(3) Utaratibu wa kushughulikia malalamiko

hautalipiwa na utazingatia yafuatayo:-

- (a.) haki ya mtumiaji ya kusikilizwa malalamiko yake;
  - (b.) ngazi za kuwasilisha malalamiko kwa mwenye leseni;
  - (c.) ushahidi unaotakiwa kuthibitisha malalamiko;
  - (d.) muda ambamo malalamiko yanatakiwa kutatuliwa kwa mujibu wa Kanuni hizi;
  - (e.) huduma za kuwawezesha watumiaji wenye ulemavu na mahitaji maalum kufikia vituo vya huduma kwa wateja;
  - (f.) utaratibu wa kukata rufaa.
- (4) Mtumiaji ambaye ana malalamiko dhidi ya mwenye leseni chini ya kanuni hii anatakiwa kuwasilisha malalamiko yake ndani ya miezi sita.
- (5) Pale ambapo mtumiaji hakuridhika na suluhisho la malalamiko yake, mwenye leseni atampatia mlalamikaji fursa ya kufuatilia malalamiko yake katika ngazi ya juu zaidi iliyowekwa ambapo malalamiko hayo yanaweza kupitiwa na mtu mwingine, ndani ya mfumo wa mwenye leseni, ambaye ana sifa za kushughulikia malalamiko ya aina hiyo.
- (6) Pale ambapo mtumiaji atapewa fursa ya kuwasilisha malalamiko yake kwenye ngazi ya juu zaidi chini ya mfumo wa mwenye leseni wa kushughulikia malalamiko, na pale ambapo hakuna tena ngazi ya juu ya kuwasilisha malalamiko, mwenye leseni atamjulisha mlalamikaji ipasavyo.
- (7) Pale ambapo malalamiko hayajatatuliwa na mlalamikaji hajaridhika, hata baada ya kulalamika ngazi za juu zaidi ndani ya siku thelathini tangu malalamiko yawasilishwe kwa mwenye leseni kwa mara ya kwanza, mwenye leseni atamjulisha mtumiaji kuhusu shauri hilo lilivyokwenda na atamshauri kuwasilisha malalamiko yake kwa Mamlaka.
- (8) Pale ambapo mtumiaji hakuridhika na utatuzi wa malalamiko yake kwenye ngazi ya mtoa huduma wake chini ya kanuni hii, mlalamikaji anaweza kuwasilisha malalamiko yake kwa Mamlaka kwa kujaza fomu ya malalamiko.
- (9) Mamlaka ikishapokea malalamiko yanayowasilishwa kwake chini ya kanuni ndogo ya 8:-
- (a.) itamjulisha mwenye leseni kuhusu malalamiko hayo na kumpa muda wa kuwasilisha majibu ndani ya siku kumi na nne; na
  - (b.) kujaribu kutafuta muafaka kati ya pande husika.
- (10) Pale ambapo mgogoro haujatatuliwa kwa nia

ya muafaka kati ya pande husika, Mamlaka itafanya yafuatayo:-

- (a.) itaweka tarehe ya kusikiliza shauri husika na kutaarifu pande zote mbili; na
- (b.) kutoa uamuzi kuhusu malalamiko hayo ndani ya siku sitini kuanzia siku shauri linaposikilizwa.

#### SEHEMU YA IV

### KITUO CHA KUPOKEA SIMU ZA WATEJA NA KITUO CHA WATEJA KUWASILISHA MALALAMIKO

#### Mahitaji ya vituo vya kupiga simu

12.-(1) Mwenye leseni ataweka kituo cha kupokea simu za wateja ambacho kinafanya kazi saa ishirini na nne katika siku saba za wiki.

(2) Vituo vyote vya kupokelea simu za wateja vitakuwa na sifa zifuatazo:-

- (a.) vitakuwa na huduma inayopatikana bila malipo;
- (b.) vitazingatia vigezo vya ubora wa huduma.

(3) Vituo vyote vya kupokea simu za wateja vitakuwa nchini ili kurahisisha na kuharakisha ufumbuzi wa malalamiko kutokana na uelewa wa lugha na hali ya kijiografia.

#### Mahitaji ya vituo vya kuwasilisha malalamiko

14. Mwenye leseni atachukua hatua stahiki kuhakikisha kwamba watu wenye ulemavu wanaweza kufikia vituo vya kuwasilisha malalamiko na huduma nyingine muhimu.

#### SEHEMU YA V

### VIPENGELE VYA JUMLA

#### Adhabu

15.-(1) Mtu yeyote ambaye anakiuka kipengele chochote cha Kanuni hizi anatenda kosa na akipatikana na hatia atatozwa faini isiyopungua shilingi milioni tano au kifungo kisichopungua miezi kumi na mbili au vyote.

(2) Pamoja na kanuni ndogo (1), pale ambapo mtu ametenda kosa chini ya Kanuni hizi, Mkurugenzi Mkuu anaweza, pale ambapo mhusika anakiri kwa maandishi, kumtoa mtu huyo kiasi cha fedha kisichozidi kiasi cha faini iliyowekwa kwa kosa hilo.

# 'Vituo vya TEHAMA vinachochea maendeleo'

## ■ *Semu Mwakyanjala, TCRA*

Juni mwaka huu Mamlaka ya Mawasiliano Tanzania ilitoa msaada wa vifaa ofisi, mawasiliano na habari kwa kituo cha TEHAMA cha Buchosa, Mwanza. Hiki ni kimoja kati ya vituo vya aina hii vilivyoanzishwa nchini kote.

Akizungumza kwenye ufunguzi wa ituo hicho, Mkurugenzi Mkuu TCRA, Mhandisi James Kilaba alisema kuanzishwa kwa vituo hivyo, maarufu kama telesenta na msaada wa Mamlaka ni njia mojawapo ya kueneza huduma za TEHAMA kwa Watanzania wengi zaidi, hasa walioko maeneo ya vijijini.

Alitaja baadhi ya telesenta zilizoko; zikiwemo Sengerema na CROMABU (Mwanza), Hasina Soft (Zanzibar), Mtu Wetu (Mtwara), DONET na Mpwapwa (Dodoma), Ukombozi (Singida), Benjamin Mkapa (Pemba) na Kasulu (Kigoma).

Nyingine ni Ilula (Iringa), Kibengwe na FADECO (Kagera), NAFRAC (Shinyanga), KILSEK na Kilosa (Morogoro), Chalinze (Pwani), Kilolo (Iringa) na SIBUKA (Maswa).

Mkurugenzi Mkuu alisema pamoja na kusaidia telesenta zilizoanzishwa kwa matumizi ya jamii, TCRA imeweka mkakati wa kuwafikia vijana mashuleni kwa kuzisaidia shule mbalimbali nchini zikiwemo shule zenye uhitaji maalumu kuanzisha maabara za TEHAMA katika shule zao. Maabara hizo huwa na kompyuta pamoja na vifaa vingine vya mawasiliano, kuunganishwa na mtandao wa intaneti na tovuti ya shule.

Maabara zimeanzishwa katika shule 16 zikiwemo shule ya sekondari ya wasichana ya Christ the King Nyantakubwa Mwanza na shule za sekondari Dakawa (Morogoro), Ifunda (Iringa), Kibondo (Kigoma), Korogwe (Tanga), Mpanda (Katavi), Mpwapwa na Msalato (Dodoma).

Shule nyingine ni Rugambwa (Kagera) Ruvu

(Pwani), Tabora, Utaani (Pemba), Weruweru na Mwereni (Kilimanjaro), Longido (Arusha) na Ikungi (Singida).

Mhandisi Kilaba alichambua uhusiano kati ya TEHAMA na uchumi wa viwanda.

"Kasi ya maendeleo ya viwanda inategemea sana matumizi ya teknolojia ya habari na mawasiliano. Shughuli za kiuchumi za Buchosa zitakuwa na tija kwa taifa letu pale tu zitakapojulikana na kuweza kufikiwa. Hii itawezeshwa na matumizi ya teknolojia; kutafuta taarifa za masoko, mazao, pembejeo, huduma za ushauri na miamala ya fedha", alisema.

Mkurugenzi Mkuu alirejea majukumu ya TCRA ambayo ni pamoja na kuimarisha ustawi wa Watanzania kupitia ukuzaji wa ushindani katika sekta ya mawasiliano wenye kuleta uchumi fanisi, kulinda maslahi ya watumiaji wa taarifa mbalimbali za mawasiliano na kusimamia upatikanaji wa huduma zinazokidhi viwango na vigezo vya mawasiliano hapa nchini.

Kazi nyingine ni pamoja na kusimamia rasilimali adimu za mawasiliano kama masafa na namba mbalimbali za kutoa huduma za mawasiliano; kutoa, kuhuisha na kufuta leseni za huduma za mawasiliano, kuweka viwango kwa huduma na bidhaa zinazosimamiwa na Mamlaka, kuweka vigezo na masharti ya usambazaji wa bidhaa na huduma za mawasiliano, kudhibiti tozo na viwango vinavyohusiana na huduma za mawasiliano, kusimamia utendaji kazi wa sekta ya mawasiliano ukilinganisha na kiwango cha uwekezaji uliowekwa.

TCRA inatua migogoro mbalimbali baina ya watoa huduma za mawasiliano; wateja na watoa huduma za mawasiliano; na kusambaza taarifa zinazohusiana na shughuli za Mamlaka.

### Mwaliko kuwasilisha makala, maoni na picha

Mhariri anakaribisha makala, maoni na picha kuhusu masuala ya mawasiliano ya kielektroniki na posta. Makala ziwe hazijachapishwa au kutolewa mahali pengine. Zichapishwe kwa ukubwa wa herufi (font) 12; nafasi ya kawaida na ziwe na ukubwa usiozidi kurasa nne za A-4. Picha zihifadhiwe katika mfumo wa JPEG.

Makala zitumwe kwa Mhariri, Jarida la Regulator, TCRA, Mawasiliano Towers, Namba 20 Sam Nujoma, S.L.P 474, 14414 Dar es Salaam. Barua pepe: [regulator.magazine@tcra.go.tz](mailto:regulator.magazine@tcra.go.tz).



Mamlaka ya Mawasiliano Tanzania (TCRA) ni taasisi ya Serikali inayosimamia sekta ya mawasiliano. TCRA ilianzishwa chini ya Sheria ya Udhhibiti wa Mawasiliano Tanzania Na 12 ya 2003. TCRA ina viwango vya ISO 9001:2015.

### Maeneo yanayosimamiwa

Mitandao ya simu na intaneti, masafa ya mawasiliano, huduma za Posta na usafirishaji wa vipeto katika Jamhuri ya Muungano wa Tanzania na huduma za utangazaji (kama vile redio na televisheni) kwa Tanzania Bara tu. Zanzibar ina Tume inayosimamia utangazaji.

### Kazi za TCRA

- Kutoa leseni, kuongeza muda wa leseni na kufuta leseni
- Kuweka viwango kwa bidhaa na huduma zinazosimamiwa
- Kuweka viwango vya kanuni na masharti ya kusambaza bidhaa na huduma zinazosimamiwa
- Kudhibiti viwango na bei
- Kufuatilia utendaji wa sekta ya mawasiliano kuhusiana na viwango vya uwekezaji; upatikanaji

wa huduma, ubora na viwango vya huduma; gharama za huduma; ufanisi wa bidhaa na usambazaji wa huduma.

- Kufanikisha utatuzi wa malalamiko na migogoro baina ya watoa huduma na kati ya mtoa huduma na mtumiaji wa huduma.
- Kufanya kazi na kutekeleza majukumu mengine kwa mujibu wa sheria husika
- Kusambaza taarifa kuhusu mambo ambayo ni muhimu kwa ajili ya shughuli za Mamlaka.

### TCRA na ustawi wa Watanzania

Katika kufanya kazi zake, Mamlaka inajitahidi kuendeleza ustawi wa jamii ya Tanzania kwa:-

- Kukuza ushindani unaofaa na ufanisi wa uchumi
- Kuendeleza upatikanaji wa huduma zilizodhibitiwa kwa watumiaji wote ikiwa ni pamoja na wenye kipato kidogo waliopo vijijini na wateja walio katika mazingira magumu.

- Kulinda maslahi ya watumiaji

- Kuendeleza elimu kwa wananchi kuhusu utambuzi na uelewa wa sekta zilizodhibitiwa ikiwa ni pamoja na haki na wajibu wa watumiaji; namna ambavyo malalamiko yanaweza kuwasilishwa na kutatuliwa na kuhusu majukumu, kazi na shughuli za Mamlaka.

# Tanzania Communications Regulatory Authority

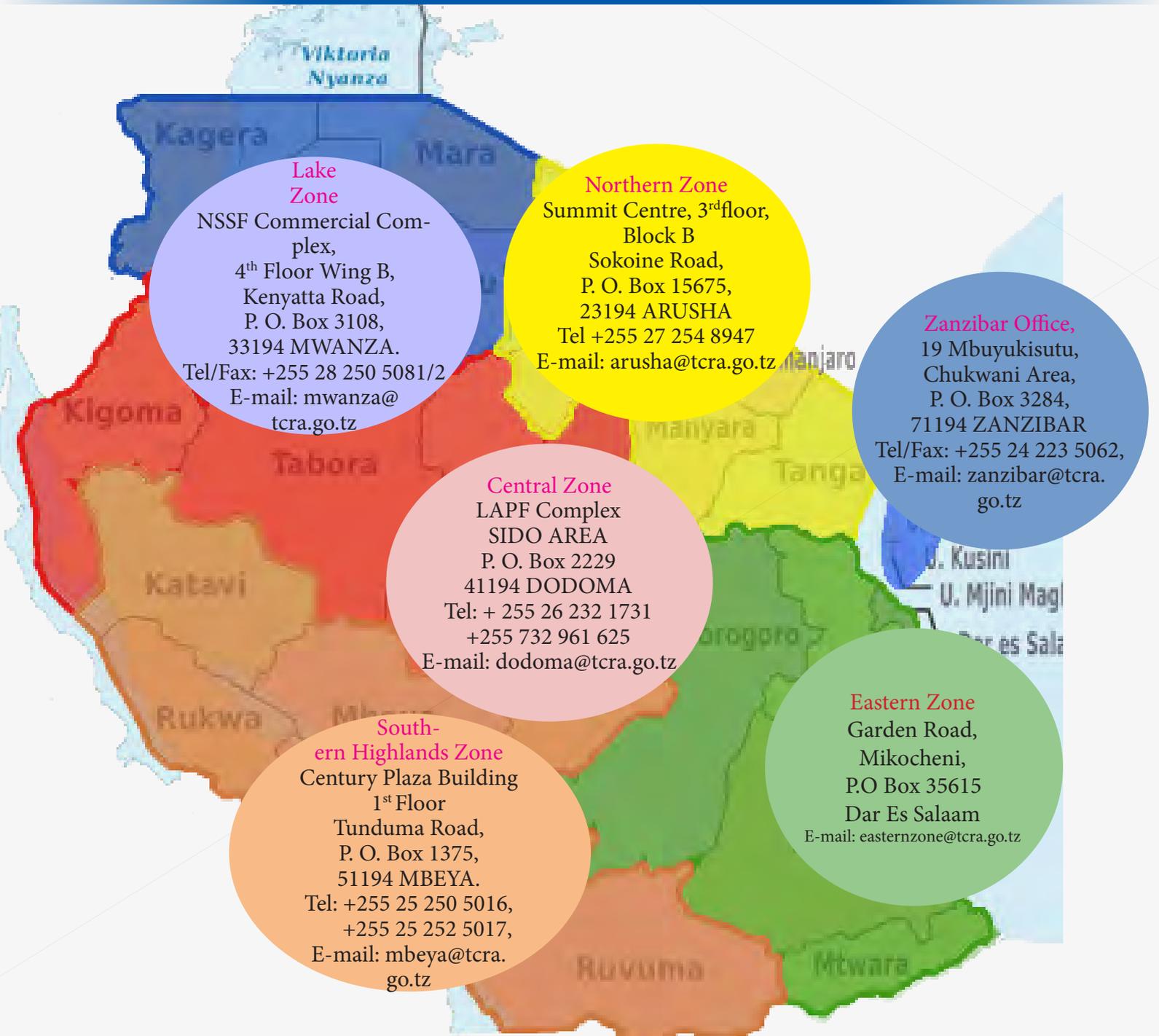
ISO 9001:2015 CERTIFIED

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