**Comments of the Community Network Cooperative Societies in Response to the Public Consultation on The Electronic and Postal Communications (Digital and Other Broadcasting Networks and Services) Regulations 2018, and the Electronic and Postal Communications (Licensing) (Amendment) Regulations, 2021**

In Public Notice “MWALIKO WA KUTOA MAONI KWENYE MAREKEBISHO YA KANUNI ZA LESENI NA KANUNI ZA MIUNDOMBINU YA UTANGAZAJI”, August 19, 2021, Waziri wa Mawasiliano na Teknolojia ya Habari Mhe. Dkt. Faustine E. Ndugulile anawakaribisha wadau wa Sekta ya Mawasiliano nchini kutoa maoni katika rasimu za marekebisho ya Kanuni za Leseni za mwaka 2018 na Kanuni za Miundombinu ya Utangazaji za mwaka 2018: (1) The Electronic and Postal Communications (Digital and Other Broadcasting Networks and Services) Regulations 2018, and (2) the Electronic and Postal Communications (Licensing) Regulations 2018).

Tanzania Community Networks Alliance has contributed to the production of this document and wish to thank the Minister of Communication and Information Technology, Hon. Dr. Faustine E. Ndugulile (MP) for his consultative approach on behalf of other partners.

We appreciate the opportunity to comment on the Electronic and Postal Communications (Digital and Other Broadcasting Networks and Services) Regulations 2018, and the Electronic and Postal Communications (Licensing) Regulations 2018).

All of us are moved by the common objective of supporting the “amendments[[1]](#footnote-2)” in the creation of a vibrant ICT ecosystem, with quality, meaningful and affordable telecommunications, and in favor of digital inclusion and the socio-economic development of all Tanzanians as was mentioned in the Public Notice “maboresho hayo yatazifanya Kanuni hizo ziendane na maendeleo ya teknolojia pamoja na kuongeza wigo wa upatikanaji wa huduma za mawasiliano na habari kwa wananchi”.

In presenting our feedback, we focus on documents (1) and (2) above and wish to recommend that the minister considers innovative licensing models, particularly those that support the growth of locally-owned, not-for-profit community networks to participate in the competitive telecom market. In our submission we have outlined why this is important to accelerate the growth of the telecommunication sector. We are encouraged to see that the Minister of Communication and Information Technology is seeking input from various stakeholder groups before producing the final version of the documents. We hope this collaborative, multi-stakeholder approach, begun by the *Minister* will continue as Tanzania pursues a competitive and viable digital economy and telecoms sector.

**Introduction**

The COVID-19 pandemic has brought to the fore the critical importance of universal and affordable access to internet connectivity. Despite efforts from the different stakeholders, universal affordable access is far from being achieved, as existing national operators focus their efforts on using technologies and building or upgrading infrastructure in areas where traditional business models apply. Therefore, sparsely populated areas, where household incomes may be lower and traditional models of connectivity are not viable, remain unconnected. As a result, there is an emerging consensus regarding the need to do something different from “business as usual”.

We believe that community networks can offer a complementary solution to address coverage and usage gaps that national operators have deemed unviable or unprofitable. And so does the ITU, which in a recent report recognizes that “Community networks are an important part of connectivity ecosystems, and they help bridge the digital divide”[[2]](#footnote-3). This reinforces the findings from the ITU’s Digital Trends in Africa 2021 that includes Community Networks as part of its “*Considerations for the Africa region to address affordability and meaningful connectivity*”[[3]](#footnote-4).

Where regulations allow, local operators, in the form of both small commercial ISPs and not-for-profit community networks, have been quick to take advantage of new technologies for the expansion of the telecommunication operator ecosystem, demonstrating their agility and interest in providing services in areas unserved by national, regional and district networks. These local operators serve a distinct market, with deeper knowledge of their users, and are able to provide more affordable connectivity when it comes to serving a local market.

Due to their relatively recent emergence, there is no universally accepted definition of community networks as yet, however, it is generally understood that they are built, used, and managed by local stakeholders in a bottom-up manner. The North American Regional Internet Registry (ARIN) provides a useful working definition of a community network: “A community network is deployed, operated, and governed by its users, to provide free or low-cost connectivity to the community it services. Users of the network or other volunteers must play a primary role in the governance of the organization, whereas other functions may be handled by either paid staff or volunteers. [[4]](#footnote-5)”

Case Study of Prominent Community Networks in Africa

Community networks (CNs) are based on a wide range of technologies, from the mobile cellular networks of TIC AC in Mexico, and the rural fibre networks of B4RN in the UK, to the many Wi-Fi-based networks such as Bosco, Zenzeleni and PamojaNet in Africa, as described in more detail below[[5]](#footnote-6). In the COVID-19 era, community networks are playing an increasingly important role in meeting the rising demand for last/first-mile connectivity. In Africa, community networks are usually more than telecommunications infrastructure providers; they exist in support of economic and social activities, often aiming to minimise the outflow of economic value leaving the community to pay for connectivity services. Beyond access, they also create a platform that promotes building local capacities, as well as the creation and distribution of locally relevant content[[6]](#footnote-7).

Battery Operated Systems for Community Outreach (BOSCO) - Uganda[[7]](#footnote-8)

BOSCO is a Non-Profit NGO under the umbrella of the Catholic Archdiocese of Gulu. BOSCO is registered with Uganda Communications Commission (UCC) as using the 802.11 license-exempt spectrum for its operations to reach communities. Initiated in 2006, BOSCO started operation in 6 Internally Displaced People (IDP) camps in the two districts of Gulu and Amuru, providing VOIP, Internet and intranet services for the connected camps, with the aim of ending the severe isolation experienced by displaced people.

As people resettled back in their communities after the war in Northern Uganda, the network expanded to provide services to 13 districts in the Acholi, Lango and West-Nile sub-regions with about 50 community-owned ICT centres that focus on building digital literacy and entrepreneurship skills. The network, which now spans over 80 km of backhaul, is built using the license-exempt WiFi spectrum in the 2.4 GHz and 5 GHz bands. The organization owns 9 towers but also works closely with community radio stations which give them access to the FM broadcast towers. A majority of areas in Northern Uganda have not been connected to the country’s electrical grid thus BOSCO relies on solar energy to power the network. Through its CE3 (Connectivity, Education Entrepreneurship and Electricity) project, the organization has helped local communities set up and manage large solar energy systems (6KW, 30KW) in secondary schools, ICT centres and local enterprises. In addition to internet and solar power, ICT content is translated to the local Acholi language and Training of Trainers (ToT) to youth and women who run ICT centres takes place.

Zenzeleni Community Networks - South Africa

Zenzeleni community network is the first cooperatively owned Internet service provider in South Africa. The network started over 10 years ago in the Eastern Cape as a postgraduate doctoral research project at the University of the Western Cape (UWC), in partnership with the Mankosi community. Since then the initiative has developed into a set of independent entities utilising a two-tier operational model consisting of Zenzeleni Networks NPC, a not-for-profit umbrella organization that supports two local co-operatives (Zenzeleni Mankosi and Zenzeleni Zithulele) who in turn provide internet services to their respective communities. The network utilizes 2.4 GHz and 5 GHz license-exempt spectrum and fibre for backhaul capacity. Zenzeleni cooperatives’ services include prepaid hotspot vouchers and dedicated access for anchor clients, such as a local bank branch. The network operates a total of 60 hotspots supporting 11 anchor clients and over 8,000 unique devices.

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PamojaNET Community Network - Democratic Republic of Congo (DRC)

PamojaNET, a community network located on Idjwi Island in Lake Kivu, has been supported by La Difference, an NGO focussing on the provision of social and economic development support to the population of this remote island in the DRC. The network was initiated in 2017 following a request from the King (Mwami) of the northern region to create opportunities for the local youth. Idjwi Island has no electrical grid and has limited 2G network coverage. After setting up a 40km link across Lake Kivu to the nearest city of Bukavu, PamojaNET was able to offer solar power based Internet connectivity to the island residents and local organisations using fixed wireless connections and public Wi-Fi hotspots, along with a public access kiosk. The network is planning to use Open Cellular GSM base stations to enable the use of low-cost voice and SMS services through ordinary feature phones, as well as interactive voice response applications. To address affordability gaps, the network provides free off-peak Wi-Fi access which is subsidised by income generated from services provided to business and NGOs.

**The Tanzanian Context**

According to the proposed First Schedule in the Amended Licence Regulations, the minimum cost that an entity interested in building infrastructure and provide services in an underserved community is the summarized below:

| MarketSegments | Type of Facility | ApplicationFee (USD) | InitialLicence Fee(USD) | RenewalLicence Fee(USD) | Royalty Fee(GrossAnnualTurnover i.e.“GAT”) | Duration ofLicence(Years) | Type of Licence |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NETWORK FACILITIES |
| District | Links, Multiplexer and others. | 100 | 3,000 | 3,450 | 1% of GAT orUSD 1,000whichever isgreater | 15 | Individual |
| NETWORK SERVICES |
| District | A) Electroniccommunicationsnetwork operations withthe following features:1) Network accesscodes2) InterconnectioncapabilitiesB) Virtual ElectronicCommunication Services | 100  | 5,000  | 5,750 | 1% of GAT | 10  | Individual |

For many small companies, including community networks, who may have a business proposition for unserved and underserved areas (in addition to the competitive markets) the current regulatory requirements may undermine their business proposition, resulting in lost opportunities, lack of competition and low market penetration.

This underlines the need for the TCRA to revisit the regulatory framework to ensure that it creates a new entry point and lower thresholds for small investors, which include community networks. This would result in a more inclusive licensing framework, meaning greater numbers, greater tax revenue and more competition, driving down access pricing and providing diversity and choice to the consumers. The greater the number of licensees brought under the licensing umbrella, the greater the volume of revenue raised in the sector overall, including fees for the TCRA. Also, this would have positive externalities for the entire economy. Finally, it would help to more accurately quantify the small operator ecosystem.

In Tanzania, the community network sector is slowly growing, especially after Tanzania hosted the fourth Africa community networks summits in 2019[[8]](#footnote-9). Although there has been some interest from communities to start networks, barriers such as lack of financing, limited local expertise at the community level, and a lack of enabling policy and regulatory environment have contributed to the slow growth of these initiatives. It is, therefore, necessary for TCRA to implement less onerous mechanisms in order to create an enabling environment for community networks.

**International Perspectives**

A review of small scale operators licensing across 14 countries has been conducted in order to identify best practices from around the world. The details of this review are included in Appendix 1. A description is presented containing the categories identified that could support this process.

Operator’s License-exempt frameworks

Reducing requirements for fees and frequent reporting for community networks, or for providers that abide by certain principles (non-for-profit, reselling, private use, limited geographic scope, service to underserved and unserved areas etc), would be very similar to the way community networks are sanctioned by the regulator in South Africa. Similar to the Tanzanian scenario, in South Africa, small operators deploying infrastructure and providing telecommunication services require two licenses: an electronic communication networks services (ECNS) class license (similar to the Network Facilities License), and an electronic communication services (ECS) class license (similar to the Network Services License).

License-exemptions are included as part of Section 6 in the “Electronic Communications Act 2005” and operationalized in 2008: “Regulations regarding licence-exempt electronic communications networks, electronic communications network services, and electronic communication services in terms of Section 6 of the Electronic Communications Act, 2005”, where ICASA outlined conditions by which operators could be exempted from holding ECNS and ECS licenses[[9]](#footnote-10).

Community Networks license

In Argentina, the regulator created a special category for Community Networks within their licensing framework via Resolution 4958/2018[[10]](#footnote-11) defining Community Networks. This Resolution applies to Community Networks that provide access to the Internet in rural areas, areas with scarce infrastructure, and/or to vulnerable sectors of the population. The framework defines Community Networks as telecommunications infrastructure managed by the users of the network or by not-for-profit entities they establish, in settlements smaller than 5,000 inhabitants. Applicants meeting these criteria are exempted from paying licensing fees. Holders of this license are not allowed to resell service for commercial profit, defaulting to the requirement to obtain a Value Added Service license (similar to Network Service License) if they do so.

In Kenya, the Communication Authority is considering the creation of the Community Network Service Provider (CNSP) license to be integrated within the Unified Licensing Framework[[11]](#footnote-12). This way, the process for the application and granting of licenses is more integrated across CA units and their recognition by other stakeholders in the industry. The proposed CNSP license category is a hybrid model with a single category comprising both an authorisation for small scale Network Facility license and a Network Service license for a particular community in a sub-county. In the case of Kenya, it was not practical to consider the restriction of communities to settlements of less than 5,000 people, as socially vulnerable unserved or underserved populations may inhabit larger settlements. This limit is already under review in Argentina. Using the geographical boundary of a “sub-county” was viable to be used instead.

In furtherance of the Authority’s responsibility to facilitate access to ICT services by the underserved, entities eligible for this CNSP license include Community Based Organizations and Non-Governmental Organisations operating in a sub-county. This approach has been adapted from the existing community broadcasting license framework. The proposed CNSPs shall be subjected to a reduced fees structure as follows.

| MarketSegments | Type of Facility | ApplicationFee (KShs) | InitialLicence Fee (KShs) | RenewalLicence Fee(Kshs) | Royalty Fee (Gross Annual Turnover i.e. “GAT”) | Duration ofLicence(Years) | Type of Licence |
| --- | --- | --- | --- | --- | --- | --- | --- |
| COMMUNITY NETWORKS |
| Sub-county | - | KShs. 1,000 | KShs. 5,000 | KShs. 5,000 | KShs. 5,000 | 10 | - |

Operator’s Authorization

Another option to consider is eliminating the requirement for an operator license for small operators, including community networks. Instead, a ‘declaration of activity might be used, as is the case for operators in European Union countries[[12]](#footnote-13). Other countries that do not require a license for small network operators include Canada, the United States, New Zealand, Australia and others.

**Key Recommendations / Comments**

Recommendations:

1. We propose that an enabling environment be established for community networks through the creation of **a community network operator license** or through **specific license exemptions** aimed at community network operators that are able to complement the commercial operators in providing access to underserved areas. This would require further amending categories in Regulation 40 to include community networks as well as its inclusion in the amended First Schedule. A community network operator license should have significantly reduced fees and a reduced administrative burden in order to lower the barrier to sustainability. See examples from Kenya and Argentina above.
2. Specific provisions for a community network license:
	* Exclusively availability Cooperative Societies, Community Based Organizations and Non-Governmental Organisations with demonstrated support from local government.
	* The geographical coverage of a community network will be limited to a single district.
	* The license should comprise both infrastructure and service provision license provisions resulting in a single license being required to operate.
	* Initial and annual fees would be considerably lower (to the extent to be determined) than Network Facilities and Networks Services District license fees
	* Community networks should be exempt from USF contributions
	* The government should consider negotiating discounted rates for access to backhaul capacity by community networks on the state-owned national fibre optic backbone.
3. In terms of the operator requirements to fulfill coverage obligations, we encourage the “Minister” to adopt public and open technical standards for coverage maps and to proactively adopt transparency policies with regard to the disposition of telecommunications infrastructure and quality of service monitoring data.

**About Tanzania Community Networks Alliance**

Tanzania Community Networks Alliance (tzCNA - [www.tzcna.or.tz](http://www.tzcna.or.tz)) has been registered in Tanzania under the Non-Governmental Organization Act No. 24 of 2002 with Reg. No. 00NGO/R/0742 to operate at the national level effectively from 05th Nov 2019. Its Headquarter is located in Dodoma City P.O. Box 607: e-mail: ceo@tzcna.or.tz and Mob +255-784-423-615. The organization is dedicated to advocate for meaningful universal connectivity that contributes to positive impact in the digital economy. Driven by the vision of becoming the association for community networks and community-based telecommunication networks that deliver affordable communication services in Tanzania.

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# APPENDIX A – Small Scale Operator License - Country Comparison

| **Small Scale Operators** | **Kenya** | **Mexico** | **South Africa** | **Brazil** | **Argentina** | **United Kingdom** | **United States** | **New Zealand** | **Canada** | **Uganda** | **Nigeria** | **Ghana** | **India** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operator Licensing (Minimum requirements)** |
| **Infrastructure License** | Tier 3 NFP license 0.4% or US$1500 | Reseller license (no annual fee) | Class ECNS license US$875 | Multimedia Licence | Community Network license | Not required (Free) | Not required (Free) | Not required (Free) | Not required (Free) | Public Infrastructure Provider Licence US$10,000 | Internet Services License US$1,300 | Internet Service Provider US$1337 | Internet Service (Category C) Secondary Service Area 8% of AGR |
| **Service License** | ASP license 0.4% or US$740 | Class ECS License US$875 | Public Service Provider Licence ( Capacity Resale) US$3,000 |
| **Other License** |  |  |  |  |  |  |  |  |  |  | Private Network Links |  |  |
| **Exemptions** |  | Exemption for social purpose |  | license-exemption for operators with < 5000 subscribers | towns < 5000 inhabitants |  |  |  |  | [Communal Access Provider License US$3,000](https://www.ucc.co.ug/wp-content/uploads/2020/05/COMMUNAL-ACCESS-PROVIDER-LICENSE-25-05-2020.pdf) |  |  |  |

1. Amendments for the Electronic and Postal Communications (Digital and Other Broadcasting Networks and Services) Regulations 2018, and the Electronic and Postal Communications (Licensing) Regulations 2018). [↑](#footnote-ref-2)
2. ITU-D Study Group 5/1: “ Telecommunications/ICTs for rural and remote area” Final Report 2018-2021 cycle.

<https://www.itu.int/en/myitu/Publications/2021/07/22/13/20/Telecommunications-ICTs--for-rural-and-remote-area> [↑](#footnote-ref-3)
3. <https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_AFR.01-2021-PDF-E.pdf> [↑](#footnote-ref-4)
4. https://www.arin.net/participate/policy/nrpm/#2-11-community-network [↑](#footnote-ref-5)
5. Bottom-up Connectivity Strategies: Community-led small-scale telecommunication infrastructure networks in the global South [↑](#footnote-ref-6)
6. Internet Society: Understanding Community Networks in Africa [↑](#footnote-ref-7)
7. https://boscouganda.com/ [↑](#footnote-ref-8)
8. https://www.internetsociety.org/events/summit-community-networks-africa/2019/ [↑](#footnote-ref-9)
9. <https://www.icasa.org.za/legislation-and-regulations/licence-exemption-application-form-for-services-and-networks-ecns-and-ecs> [↑](#footnote-ref-10)
10. https://www.enacom.gob.ar/multimedia/normativas/2018/res4958.pdf [↑](#footnote-ref-11)
11. https://ca.go.ke/public-consultation-on-draft-licensing-and-shared-spectrum-framework-for-community-networks-in-kenya/ [↑](#footnote-ref-12)
12. An example here is the UK Regulator’s General Conditions of Entitlement which set out the conditions that must be met by anyone operating a telecommunications service: <https://www.ofcom.org.uk/phones-telecoms-and-internet/information-for-industry/telecoms-competition-regulation/general-conditions-of-entitlement> [↑](#footnote-ref-13)