



EACO RADIO FREQUENCY SPECTRUM POLICY GUIDELINES

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1. Introduction

The East African Communications Organization (EACO) is a regional organization that brings together National Communications Regulators, Operators in the telecommunication/ICT broadcasting and postal sectors and ICT institutions in the six (6) EAC Partner States namely Burundi, Kenya, Tanzania, Uganda, Rwanda and South Sudan. It is registered as a regional organization with legal and diplomatic status in the Republic of Rwanda from 18th September 2012. EACO is thus hosted in Rwanda, through a Hosting Agreement with the Government of the Republic of Rwanda and its office is located at Ex-Fair House, 1st Floor, KN6 AV 11 in Kigali.

The mandate of the organization is to coordinate development of the Communications sector through harmonization of policy and regulatory framework in the East African Community member states;

The specific objectives of EACO are;

- i) to harmonize Communications sector Policy and regulatory frameworks in the East African Community member states;
- ii) to promote the development of broadcasting, postal and telecommunications/ ICTs;
- iii) to devise ways and means to achieve fast, reliable, secure, affordable and efficient communication services within the EAC Community member states.

The radio frequency spectrum is the portion of electromagnetic spectrum arbitrary above 9kHz and below 3,000GHz which is utilised for radiocommunication services. that carries radio waves. The radio frequency spectrum is used for a wide range of economic, social, cultural, and developmental purposes with an enormous number of end user services: communications for firms, households and communications used by defence forces, emergency services, broadcasting and air traffic control among others. The use of the Radio frequency spectrum cannot thus be left entirely unregulated hence the call for EAC Regulators to manage.

Recent years have witnessed an explosion of radio frequency spectrum-based technologies including the use of wireless voice and data communications systems by individuals, businesses, and governments. These systems range from mobile telephony to broadcasting, satellite communication systems, to air traffic control, among others. Such services need to be available, free of interference and effectively managed. Policies geared towards effective management of the radio frequency spectrum are essential to the future growth of the *communications in the EACO region*.

2. Radio frequency spectrum Policy Guidelines

2.1. Policy Vision and Mission

The mission, vision and guiding principles of the EACO Radio frequency spectrum Policy guidelines are laid in this chapter. The chapter also lays out the Policy objectives, Strategies and specific policy action areas.

2.1.1. Policy Vision

“Digitally connected EACO member states through efficient radio frequency spectrum management”

2.1.2. Policy Mission

“Ensure harmonized radio frequency spectrum allocation and interference free cross border operation for efficient utilization”.

2.2. Policy Objectives

The objectives of this Policy are to;

- i) Promote efficient, equitable and effective use of Radio frequency radio frequency spectrum in order to maximize the value of radio frequency spectrum for socio-economic benefits and facilitate provision of affordable and reliable communication services;*
- ii) Support and promote innovations, research and development of radio applications and technologies to meet EACO requirements;*
- iii) safeguard EAC interests relating to radio frequency spectrum;*
- iv) promote public safety and security;*
- v) ensure public, commercial and non-commercial demand for radio frequency spectrum is met;*
- vi) promote the harmonization of standards for Radiocommunications services within the region;*
- vii) minimize harmful interference between Radio communication services.*

2.3. Guiding Principles

The core principles underpinning efficient and effective spectrum policy framework include but not limited to the following;

- i)* Planning for efficient utilization of radio frequency spectrum for optimal use;
- ii)* Timely release of available radio frequency spectrum for assignment;
- iii)* Assignment of radio frequency spectrum in an objective, fair, flexible and transparent manner;
- iv)* Conformity to Regional and International Standards and Agreements;
- v)* Harmonisation with overall EACO objectives;
- vi)* Promotion of universal access to electronic communication services.
- vii)* Transparent and inclusive processes through stakeholder engagement and /or consultation;

To enhance the growth of digital economy and transformation in the EAC region, the radio frequency spectrum management principles shall seek to promote;

- i)* collaboration between the EACO member states;
- ii)* radio frequency spectrum harmonization among EACO member states;
- iii)*
- iv)* harmonisation with peer regional bodies on the continent as well as international best practices.

2.4. Policy Strategies

Objective 1: *Promote efficient, equitable and effective use of radio frequency spectrum in order to maximize the value of radio frequency spectrum for socio-economic benefits and facilitate provision of affordable and reliable communication services through;*

- i)* Identifying radio frequency spectrum requirements and ensure availability of the radio frequency spectrum for growth of the ICT sector;

- ii) Ensuring that allocated radio frequency spectrum is technology neutral and efficiently utilized;
- iii) Establishing coverage and other obligations for all service areas and services;
- iv) Conducting regular re-farming or rearrangement to defragment previous allocations (as applicable) as well as provisioning of contiguous blocks to allow for the introduction of new technologies.
- v) Promoting radio frequency spectrum sharing, pooling for optimal utilization of radio frequency spectrum in the region;
- vi) Promoting the use of white spaces without causing harmful interference to licensed services and applications;
- vii) Conducting periodic radio frequency spectrum audit to establish the level of utilization.

Objective 2: *To Support and promote innovations, research and development of radio applications and technologies to meet EACO requirements through;*

- i) setting aside radio frequency spectrum for experimental use*
- ii) encouraging radio frequency spectrum sharing among services and applications;*
- iii) promoting the use of license-exempted bands.*
- iv) promoting collaboration with academic institutions across EAC region;*
- v) working with industry partners to collaboratively conduct studies in areas of radio frequency spectrum management and utilization;*

Objective 3: *To safeguard EACO interests relating to radio frequency spectrum through;*

- i) regularly conducting meetings among member states to establish the respective member states national interests on radio frequency spectrum matters;*
- ii) actively participating in regional and international radio frequency spectrum management processes, events, including ITU-R WRC studies*

iii) harmonizing member states varying interests and defending the same at regional and international fora

iv) Increasing collaboration and partnership with regional and international stakeholders;

Objective 4: To promote public safety and security through;

i) setting aside harmonized radio frequency spectrum for public protection and disaster relief in the EACO region.

ii) Efficiently assigning and monitoring the spectrum to ensure interference free operation of safety of life services and applications

iii) ensuring ICNIRP and other internationally recognized radio emission standards are adopted and maintain across the region;

iv) conduct regular measurements to ensure that all radio operators conform to the applicable standards;

v) Promote proper e-waste disposal;

Objective 5: To ensure public, commercial and non-commercial demands for radio frequency spectrum are met through;

i) developing an EACO radio frequency spectrum road map;

ii) developing an EACO radio frequency spectrum allocation plan taking into account radio frequency spectrum needs, and requirements for public, commercial and non-commercial use.

Objective 6:

To promote the harmonization of standards for Radiocommunications services within the region through;

i) actively participating in regional and international fora on radiocommunications standards;

ii) adopt globally harmonized standards to benefit from among others the use of economies of scale and interoperability;

iii) Strengthen collaboration and partnership within the EAC;

Objective 7: To minimize interference between radio communication services through

- i) developing harmonized cross-border coordination framework(s) and schedules;
- ii) encouraging member states to actively participate in the ITU radio frequency spectrum coordination activities including among others, the GE84 and GE06, [Res170], Res559 (WRC-19), coordination of satellite networks in the Plan whenever identified as affected.

3. Radio frequency spectrum Policy Guidelines

3.1 Access to the Radio frequency spectrum for emergency, security, safety of life and public protection applications

EACO member states shall ensure prioritised access to radio frequency spectrum for services involving the security and sovereignty of the country and the safety of life and property, such as those provided by National Defence, police, fire, ambulance and certain international harmonized radio use (e.g., civil aviation, marine traffic, space/satellite communication) without necessarily constraining access to spectrum for commercial services.

3.2 Radio frequency spectrum sharing

EACO member states shall promote sharing of radio frequency spectrum to the extent practicable. The sharing of frequencies shall not apply in those frequency bands where the safety of life, quality of service or the public interest may be compromised.

3.3 Radio frequency spectrum Re-farming

Member states shall conduct continuous and systematic review of frequency radio frequency spectrum allocation plans to phase out legacy technologies i reform the radio frequency spectrum for reallocation to emerging technologies and new services in the EACO region.

3.4 Radio frequency spectrum Licensing

EACO member states shall adopt the following approaches when conducting spectrum licensing;

- i) Ensuring appropriate balance of radio frequency spectrum in the licensed as well as licence-exempted bands to support demand as well as innovation;
 - ii) meeting radio frequency spectrum demands for various services;
 - iii) ensuring regulatory certainty through sufficient license durations, appropriate license terms and conditions, protection of incumbent services, and transparency in radio frequency spectrum assignment processes;
 - iv) managing cross border interference and/or forced roaming;
- promoting technology and service neutrality to foster innovation
- v) Employing a competitive licensing process when the demand exceeds the radio frequency spectrum supply in some cases and bands.
 - vi) Issuing temporary frequency authorization to support technology trials and new technology experiments subject to compliance with the specified obligations.

3.5 License Exempt Radio frequency spectrum Use

Specific bands shall be designated for use on license exempt basis subject to specified operational guidelines.

3.6 Monitoring and Enforcement

The regulators shall regularly monitor the use of the radio frequency spectrum resource and apply appropriate enforcement measures to ensure compliance with the applicable law, regulation, rules and other license conditions as may be imposed.

3.7 Spectrum Audit

member state shall conduct comprehensive radio frequency spectrum audits preferably bi-annually.

The radio frequency spectrum audit shall seek to establish, amongst others,

- i) the total amount of authorised radio frequency spectrum per band versus actual utilization;
- ii) the total amount of available and assignable radio frequency spectrum per band;

- iii)* if the assigned radio frequency spectrum being use in the best interest of the national ICT policy aspirations;
- iv)* if the associated radio frequency spectrum assignment technical parameters are being complied with;
- v)* the level of utilization based on geographical location;
- vi)* how does license exempted bands compare with licensed bands the provision of services;
- vii)* effectiveness of the instituted operational technical parameters in mitigating among others interference;
- viii)* what network layer might require additional radio frequency spectrum in the short run i.e., Backhaul or access.

In alignment with international best practices, member states may consider the following in preparation for conducting a comprehensive national radio frequency spectrum audit;

- i)* Ensure the respective national table of frequency allocation is updated;
- ii)* Update the respective radio frequency spectrum assignment and the associated operational parameters databases;
- iii)* Develop and work plan, including the objectives of audit etc;
- iv)* Make the information available to internal key stakeholders i.e., the economic regulations team, infrastructure development teams or as the case may be in respective member state.

3.8 Radio frequency spectrum Pricing

In setting spectrum prices, member states shall consider the cost related to general spectrum management while taking into account the market conditions within a given administration

Member states shall consider any one or a combination of the global best spectrum valuation and pricing approaches;

- i)* Benchmarking;

- ii) Auctioning;*
- iii) Administrative pricing;*
- iv) Economic and market-based pricing or valuation.*

3.9 Radio frequency spectrum Planning

EACO member states shall in consultation with key stakeholders and partners at international and regional level develop the EACO radio frequency spectrum allocation plan (ESAP) as well as a harmonized radio frequency spectrum allocation strategy/road map for IMT technologies including 5G.

3.10 Make Available radio frequency spectrum to facilitate Research and Development

EACO administrations shall cooperate with key stakeholders such as those in the communications industry and academia to undertake research on among others, new wireless technologies and services related to efficient frequency radio frequency spectrum utilization, radio frequency spectrum sharing possibilities etc.

The access to radio frequency spectrum for temporary or experimental R&D purposes may be allowed provided there is justification for an application for that purpose. There shall be guidelines under which frequency allocations for temporary or R&D initiatives shall be carried out.

3.11 Transfer of radio frequency spectrum

Radio frequency spectrum transfer may be allowed by the regulator in order to promote efficient utilization of radio frequency spectrum and enhance radio frequency spectrum availability. The transfer guidelines shall be put in place by the regulator to safeguard competition and harmonized use of the frequency. The transfer of frequency assignment may be published.

3.12 Radio Frequency Coordination

EACO shall establish frequency coordination framework and/mechanism and member states shall regularly conduct frequency coordination among neighbours in order to minimize cross border interference.

3.13 Radio Communication Standards

EACO shall maintain to the largest extent possible conformity to common radiocommunication standards such as ITU in order to ensure the efficient and effective radio frequency spectrum management and utilization.

3.14 Public or Stakeholder Consultations

Membr states shall employ the most appropriate means possible to disseminate and collect information to allow public or interested parties to provide inputs on radio frequency spectrum matters.

3.15 Bilateral, Regional and International Collaboration

EACO administrations shall maintain commitment to involvement in regional and international radio frequency spectrum matters, including those involving economic/market considerations.

3.16 Review

This framework shall be subjected to periodic reviews to enable inclusion of any changes as a result of evolution in the radio communications industry, changes in the EACO strategic plans or direction as well as regional and international best practices.