



L E S O T H O
C O M M U N I C A T I O N S
A U T H O R I T Y

RADIO FREQUENCY SPECTRUM POLICY

February 2008

1. BACKGROUND

The mandate of Lesotho Communications Authority (LCA) is stated in the LCA Act 2000 (as amended) (hereinafter referred to as “the Act”) and among the elements of the mandate are the following: ensuring the efficient and effective use of the radio frequency spectrum; promoting the range and quality of telecommunication services and other consumer interests; taking reasonable steps to promote telecommunication services that will satisfy reasonable demands of least advantaged members of the communities for the provision of services such as emergency services.

Lesotho is a member of the International Telecommunication Union (ITU) whose continued role is to ensure that the systems making use of radio frequency spectrum all continue to function smoothly and provide reliable wireless services to the world’s inhabitants. Lesotho participates in the meetings and conferences of the ITU where the radio regulations are formulated and reviewed. LCA is an agency charged with a responsibility of spectrum management.

The importance of radio frequency spectrum resource is growing by the day; it is deployed in socio-economic activities such as broadcasting, communications, security & defence, aeronautical radio navigation, radio location, maritime and in many other activities. The demand for spectrum is growing as new technologies are developed. However, radio frequency spectrum is a scarce and finite or limited resource and for this reason there is a need for establishment of a policy and spectrum management guidelines for its use.

2. LEGAL AND REGULATORY FRAMEWORK FOR RADIO FREQUENCY SPECTRUM MANAGEMENT

The Act is the principal legal and regulatory instrument. Section 4 of the Act established LCA as a body corporate. According to Part IX of the Act, LCA shall manage the radio frequency spectrum on behalf of the Government of Lesotho.

Parts 6&7 of the LCA Regulations 2001 and part 13 of the LCA (Administrative Procedural and Service Provision) Rules 2000 contain provisions which give effect to the Act by stipulating procedures for the management and licensing of the radio frequency spectrum.

Section 15(2)(i) of the Act stipulates that it is the duty of LCA to establish advisory committees composed of individuals with appropriate expertise representing the stakeholders. In order to meet this requirement LCA has established relevant radiocommunication committees.

3. THE SPECTRUM MANAGEMENT OBJECTIVES

The following are the objectives of spectrum management:

1. Efficient and effective use of radio frequency spectrum resource through rationalization strategies;
2. Assuring the end users good quality services;
3. Protection of national interests through coordination and harmonization of the national band plans with international and regional band plans; and
4. Support and promotion of innovation, research and development in radiocommunication.

3.1 Efficient and effective use of radio frequency spectrum resource

In order to meet this objective each frequency band in the Band Allocation Plan should be studied so that it may be rationally utilized. The Authority should be aware of the demand for spectrum in each frequency band so that it may choose the appropriate method of allocation and licensing of spectrum. According to the Communications Sector Liberalisation Framework and its attached rules for the provision of Internet in Lesotho, regulated frequency bands are to be allocated on a first-come-first-served basis with due regard to efficient deployment of the spectrum. Also the Authority regards spectrum as a limited resource that facilitates provision of services by authorized users and therefore excludes auctioning method of allocation. The framework document under reference should be periodically reviewed. Depending on the demand for regulated spectrum and its availability, the most appropriate method from the list given below will be applicable:

- Granting spectrum on a basis of first come first served;
- Increasing the price of spectrum in an attempt to keep demand lower than supply.

Special consideration shall be made by the Authority to have reduced tariffs for spectrum intended for use by public institutions providing social and security services and humanitarian organizations.

In line with international best practices, the Authority shall designate some bands and frequencies as licence exempt for distress & emergency services and public protection & disaster relief (PPDR),

The ISM bands should be licence exempt. However, ITU-R Radio Regulation nos. 5.150 and 15.13 shall be observed. Non-ISM equipment used in these bands should not transmit at power levels exceeding 100mW.

3.2 Assuring the end users good quality services

Part VIII of the Act enables the Authority to establish equipment and installations standards, ensure that operators use only type approved equipment and to carry out inspections. This is very important for good quality services, public health, safety and protection of the environment.

Section 51(1) (c) of the Act stipulates that the Authority shall monitor the use of spectrum so as to eliminate harmful interference. Among others, the access networks and broadcasting frequencies should be monitored for good quality.

3.3 Protection of national interests

In line with the ITU-R requirements and for good neighbourliness, the LCA shall coordinate the frequencies that are likely to cause harmful interference to the planned or existing networks of other countries. This will protect the information transported within Lesotho networks and at the same time facilitate maintenance of good relations with neighbouring countries.

The LCA should participate in regional and international forums, in particular those of the ITU, AU and SADC dealing with frequency spectrum so as to protect national interests, and also for the purpose of harmonization of the national band plans with regional band plans.

3.4 Support and promotion of innovation, research and development in radiocommunication

The LCA shall conduct studies on spectrum requirements of the emerging technologies in particular radio services such as Broadcasting and Fixed or Mobile communication services and their future development. Particular care has to be taken on the spectrum for access systems in the Fixed or Mobile communication services. It is the responsibility of

the Authority to support the undertakings of the stakeholders on innovation, research and development of radiocommunication.

4. FUNCTIONS OF RADIO FREQUENCY SPECTRUM MANAGEMENT

In order to meet the above mentioned objectives, the LCA in consultation with the advisory committees stated in [2] above shall perform at a minimum the functions that follow below:

4.1 Spectrum Planning

Development of national frequency band plans in line with the Final Acts of the recent ITU-R World Radiocommunication Conference (WRC); also their harmonization with the regional frequency band plans.

4.2 Assignment

Verification of technical parameters of the application and the technical specifications of the radio equipment and the antennas, where necessary coordinate the frequency to be assigned. Upon satisfactorily completion of the foregoing, the frequency spectrum is licensed.

4.3 Licensing

Development of effective rules, operational procedures and guidelines for the purpose of regulating the use of spectrum so as to encourage sharing and to ensure that harmful interference is avoided.

4.4 The setting of fees/tariffs

Regular review of the fees: The spectrum fees for the radiocommunication services may vary according to particular factors such as, but not limited to, cost recovery, category of licence issued, bandwidth, nature of service, levels of demand, commercial value, social benefits, power levels, and in consideration of international best practices.

4.5 Enforcement

Development and implementation of enforcement procedures, sanctions against the violation of spectrum laws and regulations, in order to maintain discipline and effective utilisation of the frequency spectrum. Enforcement includes among other things: monitoring, inspection, investigation, market surveillance, advice, warnings and legal action.

4.6 Monitoring

Ensuring the licensed stations are operated in conformity with the national and international radio regulations. Conduct inspections to ensure that the licensed stations comply with the licensing provisions. Randomly carry out pirate raids in order to bring to book the pirates of spectrum. Conduct 24 hour routine monitoring functions in bands that so require.

4.7 Technical Specifications

Defining of the technical standards for all the equipment types whose operation will require the use of frequency spectrum. Administration of radio transmissions, granting of approvals and authorizations when the stipulated conditions have been satisfied.

4.8 Liaison (Local and International)

Maintaining close co-operation with all stakeholders in the industry such as network operators, broadcasters, manufacturers, ITU, AU, SADC (CRASA), professional groups, governmental departments, security companies and the general public.

5. POLICY GUIDELINES

The following spectrum management guidelines shall apply in Lesotho:

5.1 Spectrum

- (a) All users of spectrum shall pay appropriate fees, except where a waiver is granted.
- (b) LCA guided by principles stated in 3.1 shall determine the appropriate fees of radio frequency spectrum.
- (c) The fee paid for spectrum management should cover all the costs associated with radio frequency spectrum management.
- (d) The maximum spectrum assigned to a network operator for access networks shall not exceed 30 MHz in any one-frequency band.
- (e) The new licensees should be given the deadline for utilisation of the licensed spectrum.
- (f) The LCA shall encourage spectrum sharing among services and users in order to satisfy the growing needs for radio frequency spectrum resource.

5.2 Interference

The effects of harmful interference should be minimized to acceptable limits. The radio transmission systems should be properly installed, well earthed and screened. Any user of frequency spectrum who interferes with another user should be sanctioned if the reason for

interference, in the assessment of the Authority, is within the control of the operator. All the licensed users experiencing harmful interference should report the problem to the LCA.

5.3 Relocation of Users

A licensee may be moved from one part of the spectrum to another, for the purpose of clearing spectrum space for new services as per requirements of the Final Acts of a WRC and/or the modification of the national frequency band plan. Fair treatment and enough notice should be offered in all cases.

5.4 Spectrum Re-farming/Harvesting

A frequency spectrum licence does not confer ownership or permanent assignment rights to the user. Therefore, a portion or the whole of licensed spectrum may be harvested or withdrawn from the user, for the purpose of accommodating new services or technologies or additional users.