



CRAN

Communications Regulatory Authority of Namibia



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Spectrum Assignment Strategy

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Consultative Stakeholders Meeting

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□ 2 parts-

□ Part 1:

- Research paper setting out the mandate of the Authority, spectrum management trends, assignment models, pricing mechanisms and current status of telecommunications and broadcasting spectrum assignments

□ Part 2:

- Spectrum assignment strategy

Objectives

- ❑ **Facilitate the availability of spectrum**
- ❑ **Promote competition**
- ❑ **Promote effective and efficient use of spectrum within the digital dividend to address gaps in communication services and access to ICT infrastructure**
- ❑ **Set conditions for spectrum use to ensure efficient use, prevent anti-competitive practices such as spectrum hoarding**
- ❑ **Promote and if necessary enforce freeing up spectrum space to assignment to emerging technologies and services phasing out ageing technologies**
- ❑ **Ensure fair distribution of spectrum between market players**
- ❑ **Set spectrum fees**
- ❑ **Monitor, investigate and enforce adherence to regulatory framework**

Regulatory Framework

- ❑ The national frequency plan forms the basis of all activities related to spectrum management
- ❑ The Authority reviews this plan every 4 years in accordance with outcomes of ITU WRC and subsequent ITU regulations.
- ❑ The frequency plan is further aligned with SADC frequency plans as approved by the SADC ICT Ministers

Frequency channeling plans until 2020

International Mobile Telecommunications (IMT) services

❑ 694-790 MHz (700 band)

- **Allocated for IMT services at WRC-15 (Res 223)**
- **Current frequency channeling plan allow for 2x 45 MHz for TDD assignment to implement broadband services**
- **Provision being made in frequency channeling for Public Protection and Disaster Relief services(WRC-15 Res 646)**
- **Work done at CRASA and SADC level to be submitted to ITU RA-19 (Nov 2019)**

❑ 1427-1518 MHz and 3300-3400 MHz

- **Allocated for IMT services at WRC-15 (Res 223)**
- **Development of frequency channeling plans underway at CRASA and SADC level**
- **To be submitted to ITU RA-19 (Nov 2019)**

Frequency channeling plans until 2020

Broadcasting services

- **87.5-108 MHz (FM analogue broadcasting)**
 - Review of frequency channeling plan (GE84)
 - Attempt to identify more spectrum in congested areas due to high demand for analogue radio spectrum
- **174-230 MHz, 148.5-200 kHz and 535.5-1606.5 kHz (digital radio broadcasting)**
 - Two standards (DAB and DRM) approved for implementation
 - DAB allows for 12 channels utilising 1 frequency
 - DRM allows for 4 channels utilising 1 frequency
 - More efficient use of spectrum, better audio quality, lower energy requirements

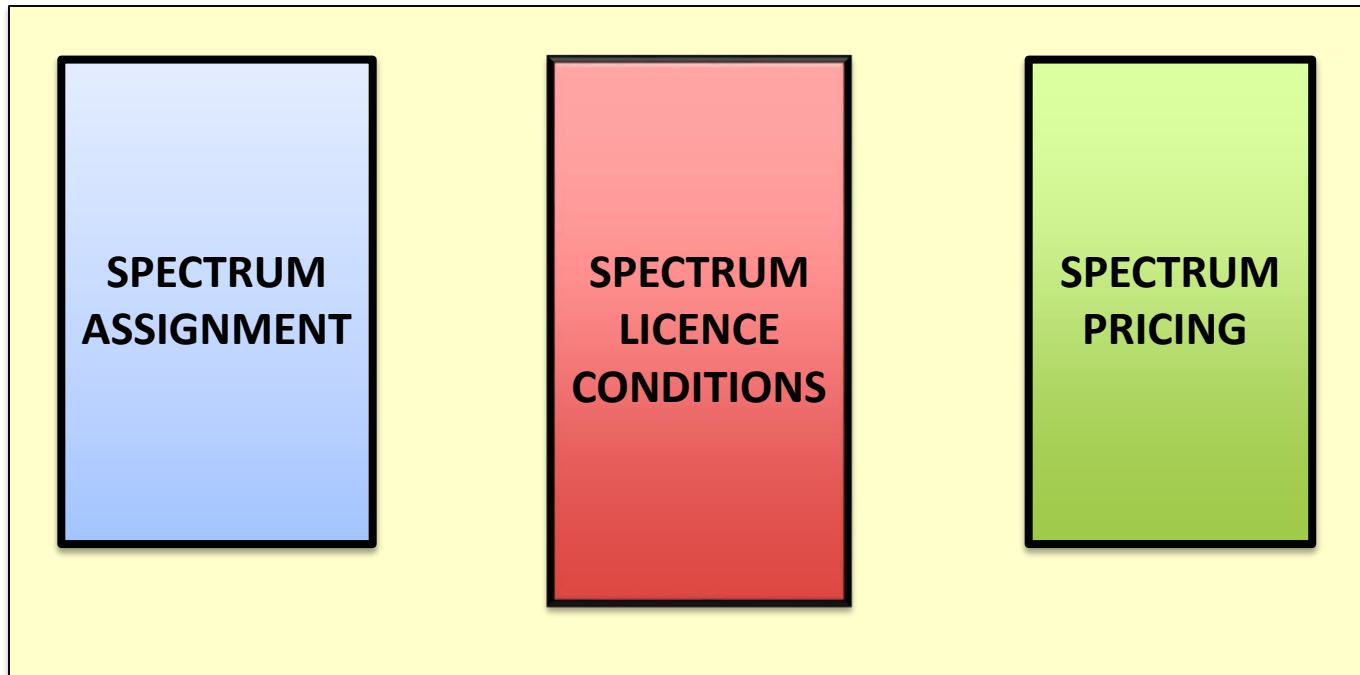
Spectrum bands to be released for assignment 2019

- ❑ Current moratorium on 694-790 MHz (700 band) and 790-862 MHz (800 band) allocated to IMT services at WRC-12 and WRC-15 respectively**
- ❑ The Authority does not accept applications in these bands**
- ❑ Studio links operated by broadcasters to be migrated out of the 800 band**
- ❑ 3 analogue TV transmitters to be migrated out of 700 band**
- ❑ The Authority will publish a notice in the Gazette when the bands are ready for assignment setting out the method of assignment, spectrum fees and spectrum licence conditions that will apply to the 700 and 800 band.**

Use of spectrum licence exempt bands

- ❑ The Regulations regarding Licence Exempt Spectrum indicate the spectrum bands, services that may be provided subject to the specified technical requirements and other regulatory provisions for the use of these bands

Focus Areas



Spectrum Assignment (1)

- **Spectrum assignment is based on the principles of independent decision-making and is thus considered impartially with respect to all market players with the aim to promote competition-**
 - **To ensure that sufficient spectrum is available to provide services highly valued by end users**
 - **Meet public safety and security requirements**
 - **Enforce the efficient use of a scarce resource**

Spectrum Assignment (2)

□ Spectrum assignment will be concluded as follows-

- Any spectrum band which is vacant or has become vacant as a result of migration to other spectrum bands at the instruction of the Authority will not be open for application until so designated by the Authority.
- A spectrum licence is awarded on a right-to-use basis in accordance with the Communications Act and does not confer ownership rights to the recipient of a spectrum licence.
- No service licensee will be assigned more spectrum than necessary and the Authority may impose caps on the amount of spectrum to be assigned to a single licensee to ensure fair and equitable assignment of spectrum to all service licensees.
- The award of spectrum licences will be done in strict adherence to the Frequency Band Plan of Namibia

Spectrum Assignment (2)(cont.)

- **Regulations and/or notices in regard to spectrum licences are published in the Government Gazette following pre-described regulatory processes and public consultations as and when required**
- **Applications for spectrum licences submitted by entities that does not require a telecommunications or broadcasting service licence will be considered on a first-come-first-serve basis**
- **Application for spectrum licences by service licences to be utilised for provision of telecommunications and broadcasting services will be considered through the application of a hybrid model allowing the Authority to follow an administrative and/or flexible-rights of use approach to consider the spectrum licence based on the spectrum band applied for, the conditions to be attached to the spectrum licence**
- **The Authority may award a spectrum licence limiting the utilisation thereof to a specific geographical area or to implement licensed shared access allowing for sharing of spectrum**

Spectrum Licence Conditions

- All spectrum licences awarded by the Authority will be subject to conditions as set out in the licensing conditions attached to the spectrum licence which may include-
 - Efficient use of spectrum;
 - Duration of spectrum licence;
 - Spectrum licence area;
 - Technical Conditions;
 - Exclusive or shared utilisation of spectrum
 - Payment of spectrum fees;
 - Roll Out Obligations to ensure universal access;
 - Prohibition of trading or sub-leasing of spectrum licences;
 - Prohibition of hoarding of spectrum;
 - Reporting, monitoring and compliance matters in respect of the spectrum licence awarded;
 - Regulatory offenses and penalties;
 - Amendment, renewal or modification of spectrum licences; and
 - Revocation of spectrum licences

Spectrum Pricing

- **The Authority will base spectrum fees taking into consideration-**
 - **The availability or scarcity of spectrum for assignment in a specific spectrum band;**
 - **The market value of spectrum made available for assignment by the Authority;**
 - **Utilise spectrum pricing to enforce the efficient use of spectrum through deployment of more spectrally efficient equipment by licensees;**
 - **The level of demand for spectrum in a given spectrum band;**
 - **Consumer demand for services;**
 - **Impact of inflation based on annual consumer price indexes as published from time to time;**
 - **Prevention of spectrum hoarding resulting in a negative impact on the competition and growth of the ICT sector; and**
 - **Full cost recovery of costs incurred by the Authority in executing its mandate as set out in the Communications Act given that the Authority is not funded in any way by the Namibian Government.**
- **Spectrum fees in respect of spectrum assigned through a spectrum auction will be determined through the outcome of the bidding process**

Spectrum Fees

- ❑ **No upfront application fees**
- ❑ **Administrative spectrum fees –**
 - Amateur radio services, aeronautical services, maritime services and inmarsat satellite services
 - Charged an annual flat fee payable in advance
- ❑ **Incentive-based spectrum fees-**
 - All other services not listed above
 - Formula based allowing to the Authority to set spectrum fees based on factors such as-
 - Bandwidth assigned to a licence;
 - Increasing or decreasing coverage areas;
 - High demand or low demand for spectrum band;
 - Reflect the physical characteristic of different frequency bands;
 - Exclusive or shared utilisation of spectrum assigned;
 - Duration of the spectrum licence
 - Rural or urban utilisation of assigned spectrum; and
 - Transmitter effective radiated power.

Spectrum Fees cont.

□ Spectrum Auctions

- In the event that the Authority determines that spectrum will be assigned to interested licensees through an auction process, the applicable spectrum fees will be determined by the outcome of the bidding process

Re-assignment of Spectrum

- ❑ Spectrum licences are awarded on a “right-to-use” basis in accordance with the Communications Act

- ❑ The Authority reserves the right to re-assign spectrum based on-
 - Changes to allocations of international spectrum bands following the decisions of the ITU WRC
 - Efficient use of spectrum by license holder in terms of actual frequency usage and occupancy; and
 - To ensure the fair and equitable distribution of spectrum between telecommunications service licensees providing similar services through the imposition of spectrum caps. Spectrum caps will limit the amount of spectrum assigned to a single telecommunications service licence to allow for the promotion of competition and efficient use of spectrum by the aforementioned licensees.

Re-farming of Spectrum

- ❑ **Spectrum licences are awarded in accordance with the frequency band plan and subject to the conditions attached to each spectrum licence.**

- ❑ **Thus the operator may re-farm its existing use of a frequency band to ensure higher efficiency in spectrum usage or occupancy to the benefit of the end user by implementing new technologies to provide new services provide that-**
 - **The change in service and/or technology complies with the spectrum allocations as set out in the frequency band plan of Namibia; and**
 - **That the licensee has applied for amendment of the licence conditions attached to its spectrum licence and approval from the Authority in this regard prior to deployment of the new service and/or technology.**
 - **The Authority will charge spectrum fees in direct correlation with the utilisation of the spectrum licence e.g. spectrum is re-farmed and fixed links are replaced with international mobile communications (IMT) such as LTE the Authority will charge spectrum fees as applicable for IMT services as from the date the amendment of spectrum licence conditions**

Thank you!