

MAY. 2024

# Spectrum Pricing Study

VALIDATION WORKSHOP



Session	Time
Introductory remarks	9:30 – 10:00
Team introduction	10:00 – 10:05
Overview	10:05 – 10:30
Focused session: Mobile	10:30 – 11:30
Break	11:30 – 12:00
Aero/Maritime/PMR/Amateur/Paging & Satellite	12:00 – 13:00
Lunch Break	13:00 – 13:45
Focused session: Fixed	13:45 – 14:45
Focused session: Broadcasting	14:45 – 15:45
Interactive session / Q&A	15:45 – 16:15
Vote of thanks and closing remarks	16:15

## ADVATECH & LS TELCOM

Advatech Group has been at the forefront of technological innovation in Africa, specializing in offering Software as a Service and Compliance as a Service across the continent. Our core business revolves around three key pillars: policy framework development, bespoke solution deployment, and robust management.

LS telcom is a globally renowned spectrum management organisation providing technical expertise, products and services for over 30 years. In particular, LS telcom and its experts have experience in conducting spectrum pricing studies for regulators around the world. LS telcom together with its partner Advatech provide the Authority with a well-informed, experienced and expert team with the required expertise and local knowledge.

Our experts have the extensive knowledge and experience to deliver against CA's requirements with some team members being involved in conducting spectrum pricing studies globally.





**Newton KUNG'U**

PROJECT MANAGER

Newton is a seasoned international development and project management specialist with a strong background in fostering partnerships between government, civil society, and the private sector. With academic training in Business Administration, a postgraduate in Strategic Management from Jack Welch Management Institute, and professional training in Leadership and Communications from Harvard X, Newton's work has included impactful roles at organizations such as the Kenya Red Cross, UNDP, Toyota Kenya Foundation, and most recently, the Microsoft ATO (Africa Transformation Office) where he is at the forefront of utilizing technology and innovation to empower African governments, civil society, and businesses. Newton is a partner at Advatech Group and is the project manager leading the charge to deliver this project as well as the focal point on Finance and Administration.



**DR. Andy HUDSON, Ph.D**

LEAD CONSULTANT

Our Lead Consultant Dr. Andy is the current CEO of Spectrivity and specializes in spectrum auctions and spectrum pricing. Andy has over 30 years' experience in the mobile industry including working for Vodafone, GSMA and Ofcom at Senior Management Levels. Andy is a world-renowned expert in supporting auctions on both the operator and regulator side. He understands the complexities and intricacies of auction design and in particular participation as an operator. He has provided the necessary expertise and experience regarding spectrum pricing but also understands the impact any future changes to pricing will have on the industry. He will also be able to provide his extensive knowledge and transfer this to staff within CA, so they will be able to continue the implementation of the recommendations that will be made for the study.

Andy has been supported by an excellent team of experts in spectrum management, spectrum pricing and delivery including:



**Martin SIMS**

SPECTRUM PRICING LEAD

Martin SIMS is the current CEO of Policy Tracker, and our spectrum pricing lead. Martin specializes in analyzing spectrum issues, writing extensively on the subject and producing research reports for a range of clients. He has delivered spectrum pricing projects for different clients and also delivered a spectrum auction for the Nigerian regulator. Martin has set up and delivered training courses on auctions and spectrum management generally as well as delivering bespoke training for many regulators. Martin has over 30 years of experience working in spectrum management and like Dr. Andy, understands the needs of regulators when developing a new market-based approaches to spectrum allocation and assignment. Martin also collects data on global operators so has very current knowledge of mobile spectrum pricing.



**Saul FRIEDNER**

SPECTRUM REGULATORY  
EXPERT

Our Spectrum Regulatory Expert Saul is the Director of LS telcom UK, with responsibility for delivering and directing consulting projects in spectrum management. Saul has the necessary relevant experience on optimal spectrum management having delivered many similar projects in the past for regulators, governments and other entities around the world. Saul has spent 16 years working in a consulting environment and has advised senior and C-level executives on spectrum strategies including valuation and award of spectrum. Prior to this Saul worked for the Ofcom the UK regulator. He was recently involved in a relevant study for the European Commission examining the efficiency of spectrum awards that is highly relevant to this study.



**DR. Kennedy RONOH, Ph.D**

LOCAL SPECTRUM  
REGULATORY EXPERT

Dr. Kennedy Ronoh is our local spectrum regulatory expert, Dr. Ronoh currently works in Strathmore University as a Lecturer. He holds a PhD in Computer Science from University of Nairobi. Dr. Ronoh also serves an expert trainer for the Internet Society for a number of courses for a number of courses including Mutually Agreed Norms for Routing Security (an Internet Routing Security course), Encryption, Building Wireless Community Networks, and Designing and Deploying Computer Networks. Ronoh has expertise in spectrum management, computer networks, data communications, communication systems, computer systems security, algorithms and electronics. He currently teaches Computer Networks, Data Communication, Communication Systems, Cryptography and Mobile/Wireless Security. His current research interests include Dynamic Spectrum Access, Spectrum Management, TV White Spaces, WiFi6, Metaheuristic Algorithms, Digital Divide, Community Networks, Internet of Things and telecommunication policy.

# Meet the Team



**Manuel Marti RASCADO,**  
SPECTRUM POLICY ANALYST

Manuel Rascado, our potent firebrand spectrum policy analyst. Manuel's insights and expertise provides a detailed overview of the study, guiding us through its complexities with clarity and precision. With a deep understanding of spectrum policy, Manuel manages complex projects and client relationships and provides strategic guidance as a Spectrum Policy Consultant at LS telcom UK. Prior to this role, he played a pivotal role in fostering collaboration across industries as the head of the UK Spectrum Policy Forum, a high respected body with participation from Ofcom and the UK government. With over 5 years of experience in telecoms and spectrum, Manuel has actively followed developments in the field, attending key UN ITU conferences like WRC-19 and WRC-23. Additionally, he holds a Master's degree in International Politics from School of Oriental and African Studies (SOAS).

## Part I

- Focus review on current spectrum pricing schedule
- Benchmarking on spectrum pricing best practices
- Recommendations on the aligning with int'l best practices
- Stakeholder engagement
- Financial Analysis



### Outputs

- Consultation report & benchmarking reports (Progress reports)
- Spectrum pricing model

## Part II

- Training session (s)
- Spectrum pricing report
- Stakeholder consultation on proposed fee schedule
- Final recommendations

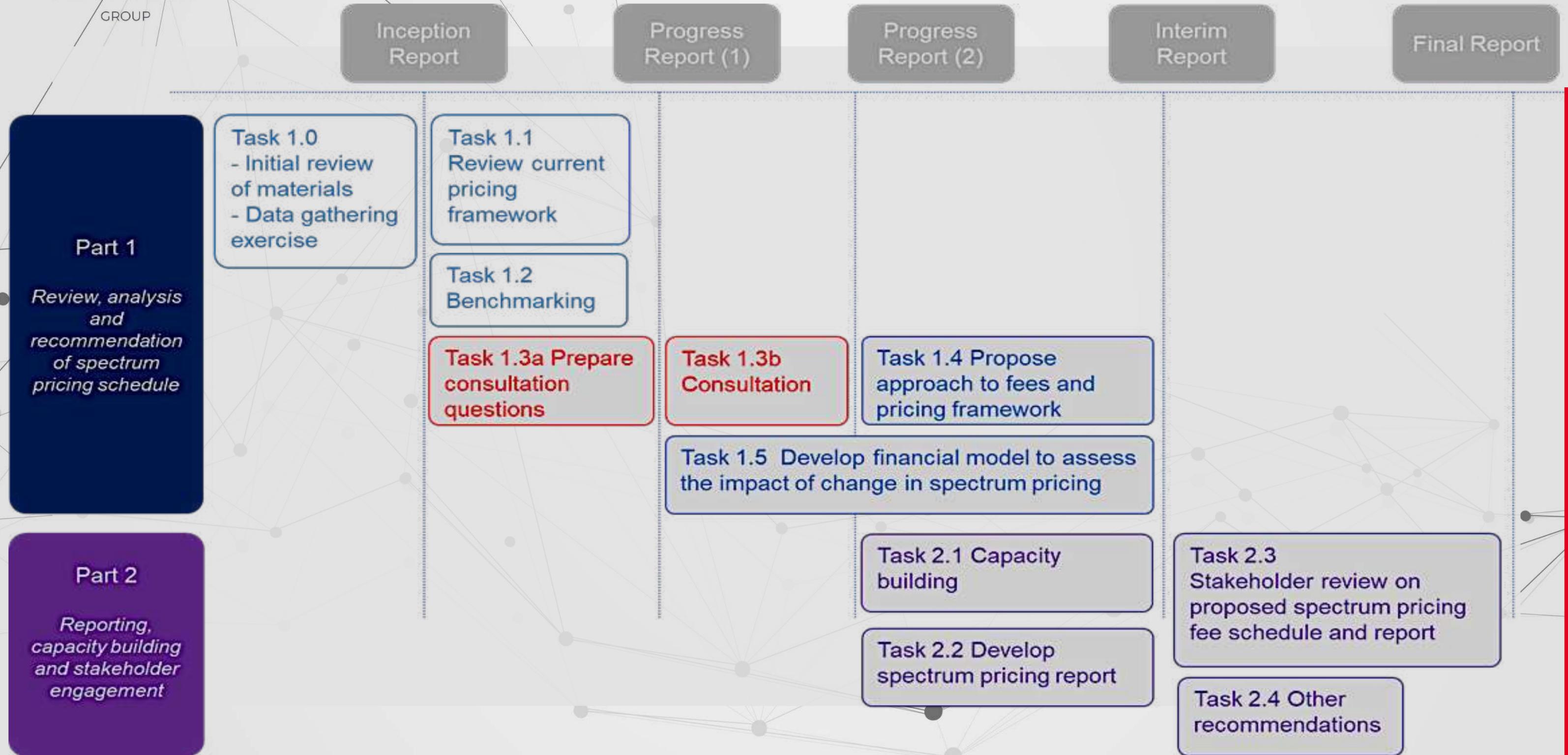


### Outputs

- Spectrum Pricing Study Report
  - Revised fee schedule



# Project Plan



Scope: to engage with stakeholders to understand the broader context, perceived issues with the current process and to invite suggestions that would support deliver of their wireless services

## Stakeholders

All stakeholders were given opportunity to respond.

Invitations were sent to all licensees on the Authority's database who will be affected by spectrum pricing

We received a total of 26 responses across the various licence categories, including:

- 2 MNOs
- 1 Fixed Link (non-including MNOs)
- 7 Broadcasters
- 1 Satellite Operator
- 5 Aeronautical
- 2 Amateur
- 5 Alarms
- 3 Other

## Format and Timing

As part of the consultation exercise, the team engaged face-to-face with some key stakeholders in October 2023.

Consultation took place over Google Forms and it contained two subsets of questions:

- a) General questions aimed at all stakeholders
- b) Questions aimed at specific sectors/services to fully understand the impact of their business.

The consultation was launched on Monday 13th November 2023 and concluded on Monday 27th November 2023. An additional two-week period was granted for delayed responses.

# Public Consultations | Key Findings

- **Spectrum pricing** has highest impact for almost half of stakeholders (MNOs and broadcasters) and lower for (private aircraft licences) and minimal impact for others, such as non-profit
- Over **45 per cent** of respondents expressed some level of **satisfaction** with current methodology
- Strengths of current framework: **availability** of frequencies, **price determination**, variable window of payment
- Best **pricing considerations**: pricing be guided by **economic/market dynamics**, reflect **social value** of spectrum, need for more technical assistance

## Key Stakeholder Concerns

- I. TRXs is not preferred method for calculating mobile fees
- II. Fixed links in low frequencies are considered too expensive
- III. FM Broadcasting current formula with a factor of  $(2^n - 1)$  thought to be unfair by some stakeholders
- IV. Process-related such as slow invoicing, admin overhead
- V. Digital divide in underserved areas



## Suggested Response

- I. New simpler structure based on access to spectrum bands
- II. Revised, more granular, band factor to encourage migration to higher bands
- III. Carefully assessed, we recommend the formula to be reviewed long-term
- IV. To be further reviewed by the Communications Authority
- V. Addressed across new pricing schedule for mobile/fixed links and incentivisation of new technologies such as LEO

## Benchmark countries

Egypt

UK

USA

Australia

Germany

South Africa

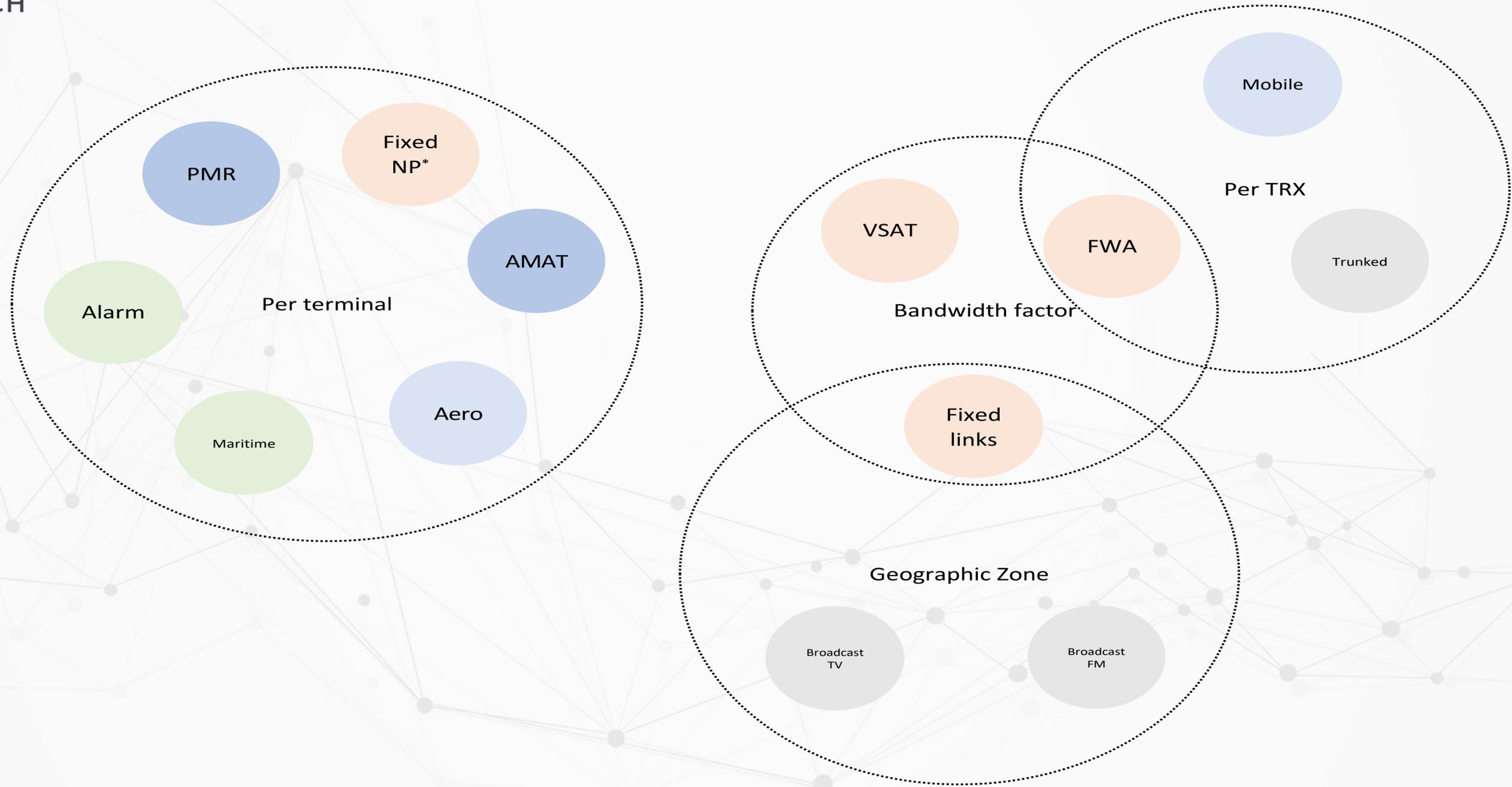
Nigeria

UAE

Tanzania

Saudi Arabia

- Compared spectrum fees and calculation methodology in 10 countries
  - Sample includes regional players and leading global economies
- Where fees not directly comparable we benchmarked costs for specimen licence e.g. a small PMR network of 10 portable radios
- The annual fees were all converted to USD using World Bank Purchasing Power Parity (PPP) figures.
  - These are based on the actual cost of goods in a country so are less subject to exchange rate fluctuations
- For mobile licences we also benchmarked annual fees as a proportion of award fees (where used)
  - Award fees were adjusted for PPP, licence length, inflation, population and bandwidth used



*\* Note: Fixed (non-protected) is per terminal/sector*

*New fee schedule in line with a set of recommendations based on the different options & analysis from the benchmark data, current and historic market data and input/feedback from CA and stakeholders*

The study includes review of spectrum fees for the following:

- Mobile Wireless Access Systems
- Terrestrial Fixed Links
- Broadcasting Stations
- PMR
- All other services

- The current fees for mobile spectrum bands consist of:
  - Mobile Spectrum Initial Fee (for a 10 to 25 year licence term)
  - Exclusive Spectrum Assignment Bandwidth

$$F_n(\text{Kshs.}) = \frac{\text{Assigned Bandwidth} \times \text{Weighting Factor} \times 1043.65}{8.5}$$

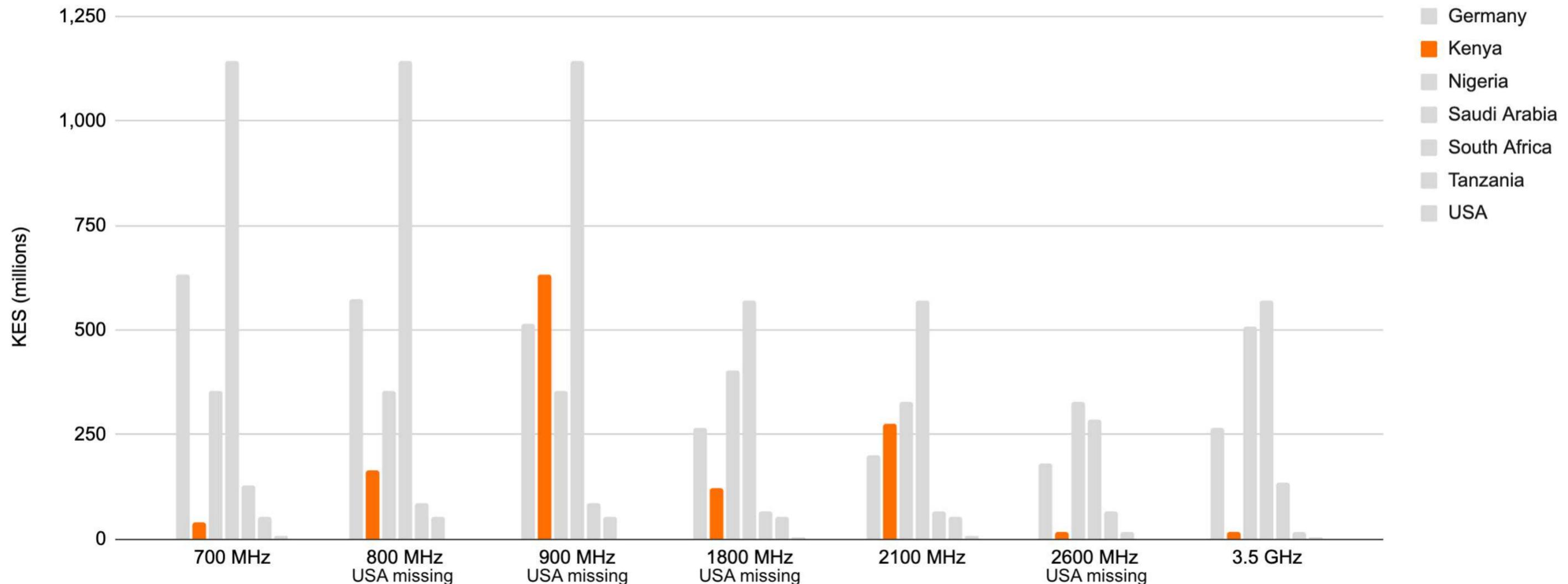
- Spectrum Usage Fees

$$F_u(\text{Kshs.}) = 43,000 \times \text{Number of TRXs} \times \text{Rate}$$

- Typically almost all (95-97%) of the current annual fee structure, is based on the number of TRXs deployed:
  - Discourages efficient use of spectrum and influences network decisions negatively
  - All stakeholders we talked to, or replied to the consultation, dislike to current approach

- The overall level of fees seems reasonable
- No other countries in the benchmarking study charge based on TRXs deployed

Annual fee for specimen licence (KES)



## Recommendations for update to mobile fee schedule

- We propose fees for mobile should be simplified into (i) an upfront fee for access to a band for perhaps 10-15 years to provide certainty, followed by (ii) an annual licence fee (ALF)
  - Where a new band is being assigned for mobile use for the first time the initial fee should be determined by an auction or other market-based assignment mechanism
  - For bands which are already being used for mobile the ALF should be charged
  - Before licences expire, they may be renewed through auction or administrative renewal process
- Considering best practice around the world, we believe this simple fee structure based on access to spectrum in a band provides:
  - Certainty and more predictable pricing, while removing the negative impacts of TRX pricing
- We recommend a pricing model based on low (<1 GHz), mid (1 to 4 GHz) and high (future mmWave bands) bands to reflect 5G and beyond

# Setting the ratio between band factors

- Based on Policy Tracker Auction Database:

Band	Average \$/MHz.pop	Normalised Ratios	Recommendation for Kenya (2024)
Low Band	600	0.5871	
	700	0.4204	
	800	0.4599	
	850	0.4495	
	900	0.6007	
<b>Average</b>	<b>0.50352</b>	<b>1</b>	<b>1</b>
Mid Band	1800	0.2293	
	2.1	0.3932	
	2.6	0.1283	
	3.3 - 3.8	0.1693	
<b>Average</b>	<b>0.230025</b>	<b>0.46</b>	<b>0.4</b>
High Band	26	0.0032	
	28	0.0046	
	40	0.0071	
<b>Average</b>	<b>0.0050</b>	<b>0.01</b>	<b>0.01</b>

*Note: we have not included the US 3.7 - 4.2 spectrum in the benchmark as limited supply pushed prices*

- The existing formula would be changed to:

$$F_{H,M,L}(\text{Kshs.}) = \text{Unit Fee} \times \text{Band Factor}_{H,M,L} \times \text{Assigned Bandwidth}_{H,M,L}$$

# Recommendations For Update to Mobile Fee Schedule

- Applying these ratios to Kenya and assuming that the overall annual fees paid across the industry remain similar to those paid currently, would give the following breakdown:

Unit Fee: 17,000,000

$$F_{H,M,L}(\text{Kshs.}) = \text{Unit Fee} \times \text{Band Factor}_{H,M,L} \times \text{Assigned Bandwidth}_{H,M,L}$$

Band Factor:

Low band spectrum: 1

Mid band spectrum: 0.4

- To finalise:
  - Transition arrangements to the new fees (timing and impact on specific operators)
  - Treatment of companies with assignments that are not nationwide.

Note: Assuming a population of 54m (2022),  $F_L$  of Kshs. 0.32 per MHz.pop (~0.0024 \$/MHz.pop). This equates to  $F_M$  of Kshs. 0.13 per MHz.pop (~0.001 \$/MHz.pop).

*We believe an appropriate general increase to recognise the impact of inflation since the last fee review in July 2018 is around 20%, which is less than the full amount given the challenging economic conditions faced by all sectors during this time*



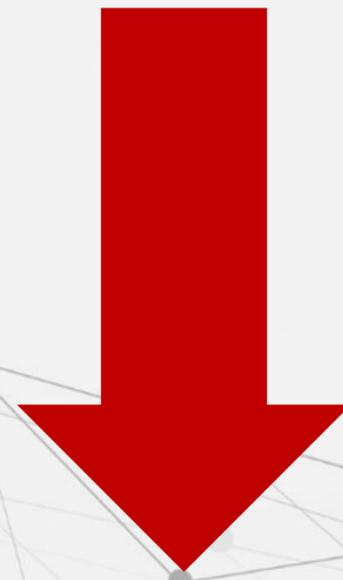
Year	Annual Average Inflation (%)	Corrected for inflation since 2013	Corrected for inflation since 2019
2024	7.5	2.00	1.37
2023	7.95	1.85	1.27
2022	6.08	1.74	1.18
2021	5.74	1.65	1.11
2020	5.29	1.57	1.05
2019	4.68	1.50	1.00
2018	7.79	1.39	
2017	6.26	1.31	
2016	6.77	1.22	
2015	6.74	1.15	
2014	6.01	1.08	
2013	8.2	1	

**No Change in Methodology**

## Aeronautical

- Simple fee structure for both **aeronautical** [KES 4,800 (MF/HF/ VHF/UHF)] and **aircraft station licences** [4,800 (MF/HF/ VHF/UHF)]
- Benchmarking shows Kenya's **methodology similar** to other key markets
- **Aeronautical station licences** typically range from USD 1 to around USD 420 – Kenya is towards **higher end** when PPP adjusted
- **Aircraft station** licences range from around USD 1 to USD 925.
- Consultation suggests that **stakeholders** seem **neutral/satisfied** with current approach but some expressed concern over level of fees
- Some stakeholder suggested to eliminate the charges to grounded aircraft due to maintenance
- Vibrant sector: **small and medium size companies** constitute majority of licence holders

**Recommendation:** Keep the same pricing model (charging fixed flat fee to both aeronautical station and aircraft station), but to apply an inflationary 20 per cent adjustment



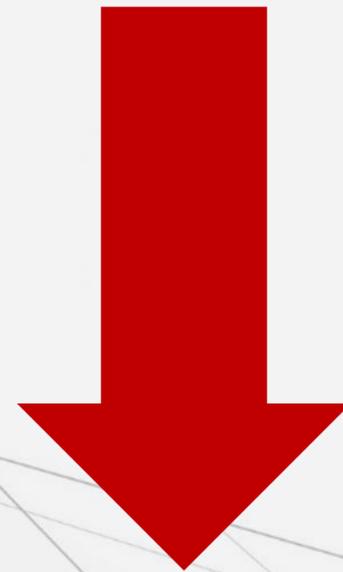
**New fee:**

- **Aeronautical station licence:** 6,000 (MF/HF, VHF/UHF)
- **Aircraft station licence:** 6,000 (MF/HF, VHF/UHF)

## Findings Overview

- **Trunked networks** are calculated **separately** from other PMR licences despite sharing similarities
- **Benchmarking** shows there a variety of approaches to PMR fee frameworks – **most countries do not use a formula**
- Kenyan fees (when PPP adjusted) are more expensive than in most of comparison countries
- A **respondent noted prices are relatively high**, increasing the costs of doing business
- Indication **better pricing** can prompt companies to adopt **new and emerging technologies**

**Recommendation:** Provide a trunked radio fee alternative for organisations currently using PMR; also add additional 20 per cent inflationary adjustment



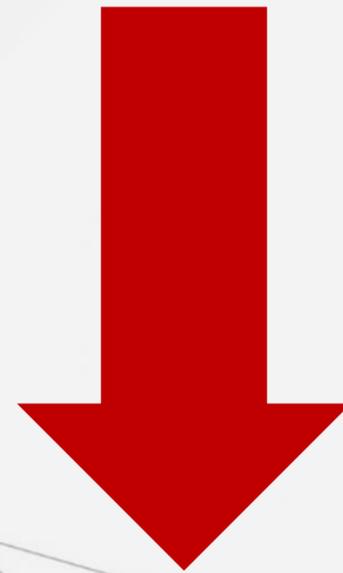
**New fee:**

- **Mobile station licence:** 7,000 (MF/HF) and 3,500 (VHF/UHF)
- **Portable station licence:** 7,000 (MF/HF) and 3,500 (VHF/UHF)
- **Trunked Unit Fee** from 1043.65 to 1250

## Findings Overview

- Two licences: **coast station licence** [18,700 (MF/HF) and 5,000 (VHF/UHF) ] and **ship station licence** [5,610 (MF/HF) and 2,900 (VHF/UHF) ]
- Benchmarking shows **half countries** – unlike Kenya - **use formula** for coast station licence
- **No countries** use **formula** for calculating **ship station** licence
- Coast and ship station licence prices are towards the higher end of the benchmark
- **Ship station** licence fees seem closely **aligned** with regional comparison country **Nigeria**.
- **No stakeholder feedback** to public consultation
- **No issue** besides fees being not updated in over 5 years

**Recommendation:** Keep the same pricing model (charging fixed flat fee to both aeronautical station and aircraft station), but to apply an inflationary 20 per cent adjustment



**New fee:**

**Coast station licence:** 22,500 (MF/HF) and 7,000 (VHF/UHF)

**Ship station licence:** 7,000 (MF/HF) and 3,500 (VHF/UHF)

## Findings Overview

- Amateur fee stands at KES 2,000
- Benchmarking shows Kenya charges an average fee compared to regional markets
- However, some regulators like UK only charge a one-time fee
- Majority of licence holders have already paid for their licence five years in advance
- Very active and engaging community

**Recommendation:** Maintain the current pricing model and to implement a freeze on fees for amateur stakeholders



**Fee:**

- 2,000

## Findings Overview

- Single licence: **Fixed satellite earth stations**, fee varies dependent on bandwidth used
- Benchmarking shows
  - **half of countries** – unlike Kenya - **use fixed fee** per earth station
  - **Three countries** – like Kenya – use a formula varying by bandwidth, power or band.
- **Stakeholder feedback** was not concerned about current price but urged CA to accommodate new bands
- **No issues** besides fees being not updated in over 5 years

## Recommendations:

1. Keep the same pricing model for earth stations (charging unit fee X bandwidth multiplier) but apply an inflationary 20 per cent adjustment to unit fee
2. Bring in measures to support providers of innovative new satellite services, but the details would need to be discussed with industry players



**New fees:**

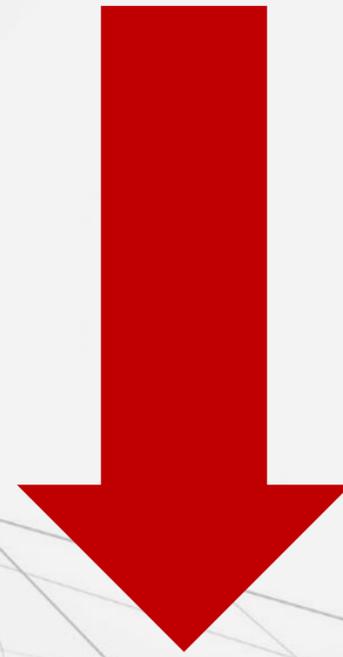
**Earth station:**

Unit fee up from 100,000 KES to KES 120,000

### Findings Overview

- Single licence: **Alarms**, with a basic charge for each alarm unit
- Benchmarking shows that it is most common to use '**general authorisation**' bands such as 433 MHz, 868 MHz or 2.4 GHz, or 5.8 GHz and not used licensed bands
- Kenya currently charges 1250 KSh for a single Alarm licence however applies specific charges for each particular customer's needs that is determined by using the maximum value in each grouping of 5; 5 for 1-5, 10 for 6-10, 15 for 11-15 etc
- **Stakeholder feedback** was not concerned about current pricing
- **No sensitive issue** besides fees being not updated in over 5 years

**Recommendations:** Keep the same pricing model (charging fixed flat fee), but to apply an inflationary 20 per cent adjustment



**New fees:**

- Alarm licence: 1500

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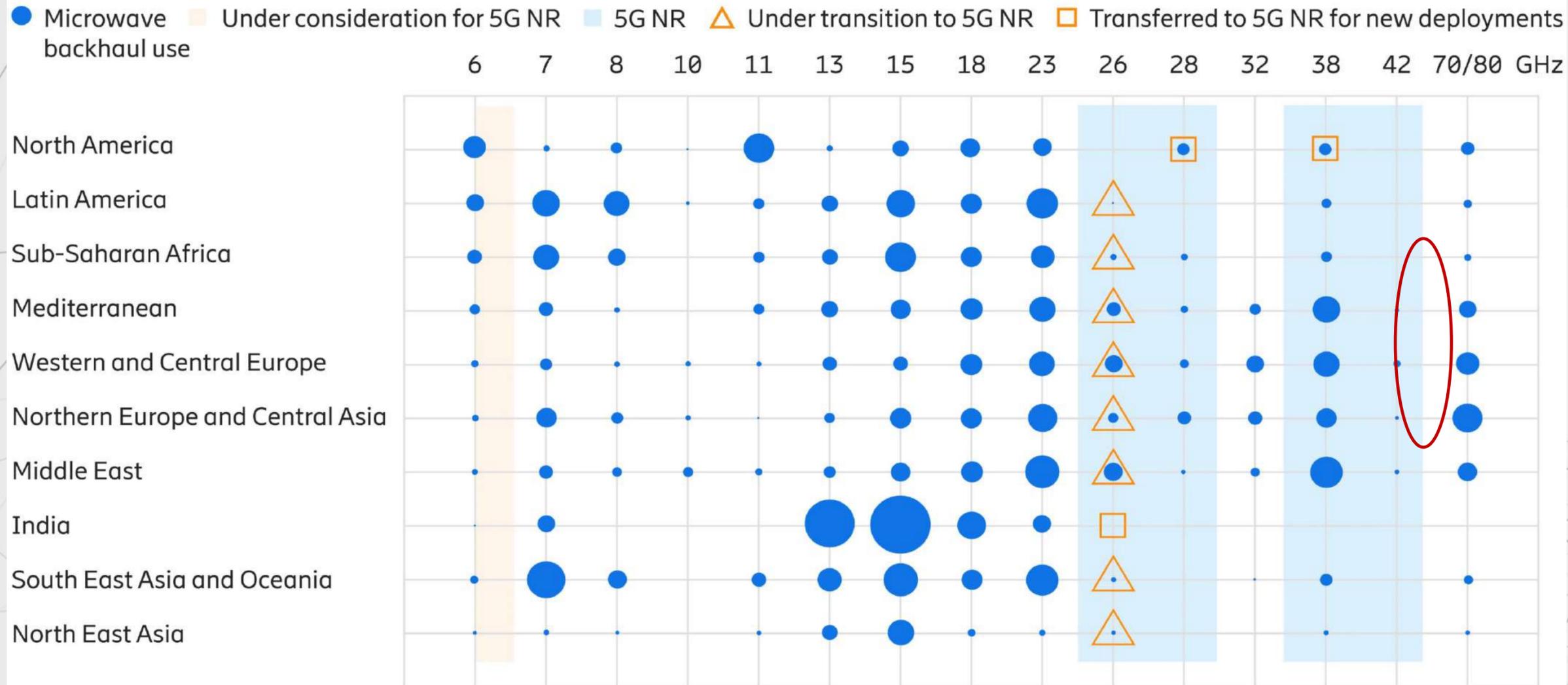
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# Lunch Break



- The Fixed service is split into Fixed (non-protected), Fixed (microwave links) and Fixed Wireless Access
- Since the current fee schedule was designed there have been significant changes in the use-cases and users of these bands, which are driving our recommendations
  - **Fixed (non-protected)**
    - The E-band (70-80 GHz) is now becoming an increasingly significant band around the world for fixed links to backhaul 5G services
  - **Fixed (microwave links)**
    - Increasing use of links to support backhaul by mobile operators (generally lower bands for longer hops and in rural areas, 15 and 23 GHz for capacity in urban areas)
  - **Fixed Wireless Access**
    - Fixed Wireless Access in the 3.5 GHz band has decreased significantly (FWA fees are now 50% of the level 5 years ago), and this is now a core band used around the world for 5G services
    - Most of the Fixed Wireless Access fees (88%) are now associated with LMDS services in the 23 GHz band

# Fixed Links | Global Assessment and Impact of 5G



Source: Ericsson 2022

*A trend globally to move towards more E-band (70/80 GHz) to provide the capacity needed for 5G NR, in urban and sub-urban areas particularly.*

Source: <https://www.ericsson.com/en/reports-and-papers/microwave-outlook/articles/spectrum-in-a-dynamic-market>  
<https://www.ericsson.com/4a8056/assets/local/reports-papers/microwave-outlook/2023/ericsson-microwave-outlook-report-2023.pdf>  
[https://www-file.huawei.com/-/media/corp2020/pdf/tech-insights/1/2022\\_microwave\\_industry\\_white\\_paper.pdf?la=en](https://www-file.huawei.com/-/media/corp2020/pdf/tech-insights/1/2022_microwave_industry_white_paper.pdf?la=en)

- The current fees for terrestrial fixed links

Unit fee: 574.1

FZ: 2 for Zone A, 1 for Zone B

$$F \text{ (Kshs.)}, \text{ per transmitter} = \frac{\text{Bandwidth} \times \text{Band Factor} \times \text{Unit Fee} \times \text{Frequency Zone}}{8.5}$$

Band	Current (2018)
$\leq 1$ GHz	0.9
$1 < fb \leq 10$	0.3
$10 \leq fb < 20$	0.21
$20 \leq fb < 30$	0.15
$> 30$	0.1

## ➤ Fixed Links (including Wireless NP & SSPAL)

70-80 GHz

Terrestrial links in the E-band go into the Fixed (non-protected) service

38 GHz

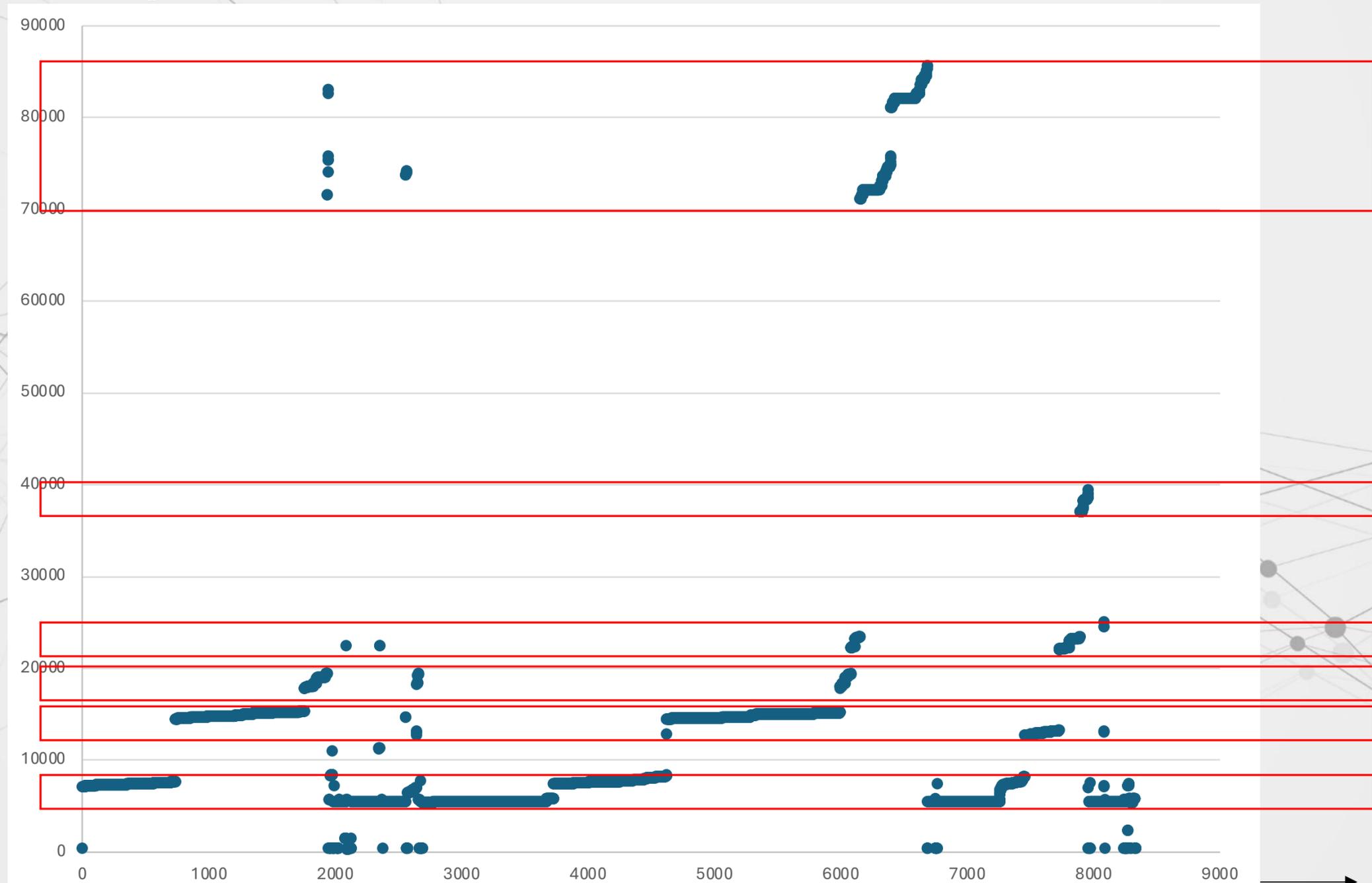
23 GHz

18 GHz

12 & 15 GHz

6 & 7 GHz

Frequency  
(MHz)



Fees

Kshs. 10,000  
per terminal

Band Factor

0.1

0.15

0.21

0.3

0.9

Airtel

Safaricom

Telkom

Number of licences

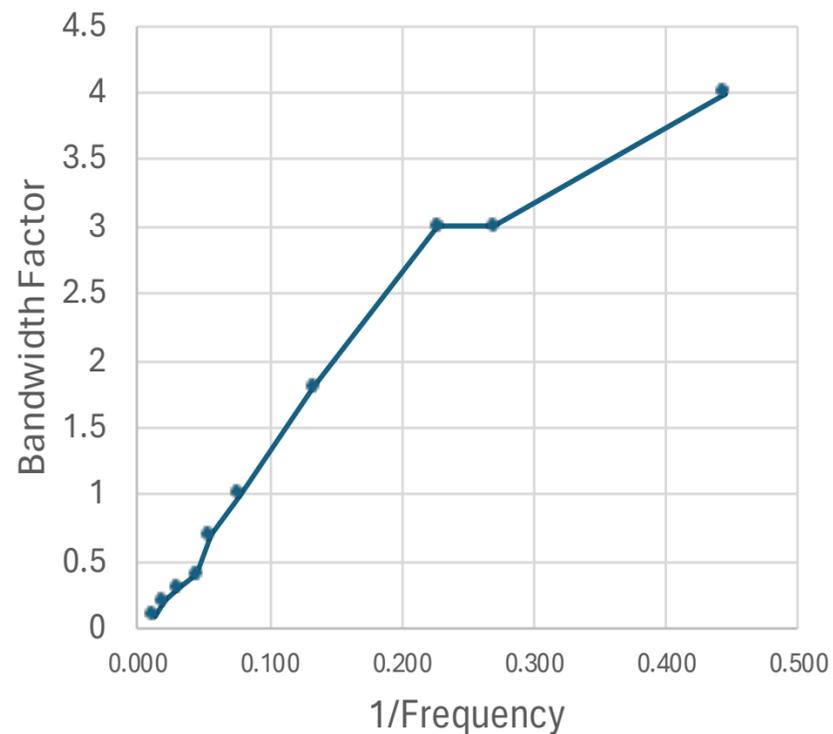
# Recommendations For Revised Band Factors for Fixed Links

Band	Mid freq (GHz)	1/f	Bandwidth Factor
1.35 ≤ fb < 3.6	2.25	0.444	4
3.6 ≤ fb < 3.8	3.7	0.270	3
3.8 ≤ fb < 5	4.4	0.227	3
5 ≤ fb < 10	7.5	0.133	1.8
10 ≤ fb < 16	13	0.077	1
16 ≤ fb < 20	18	0.056	0.7
20 ≤ fb < 24	22	0.045	0.4
24 ≤ fb < 40	32	0.031	0.3
40 ≤ fb < 57	48.5	0.021	0.2
57 ≤ fb < 100	78.5	0.013	0.1

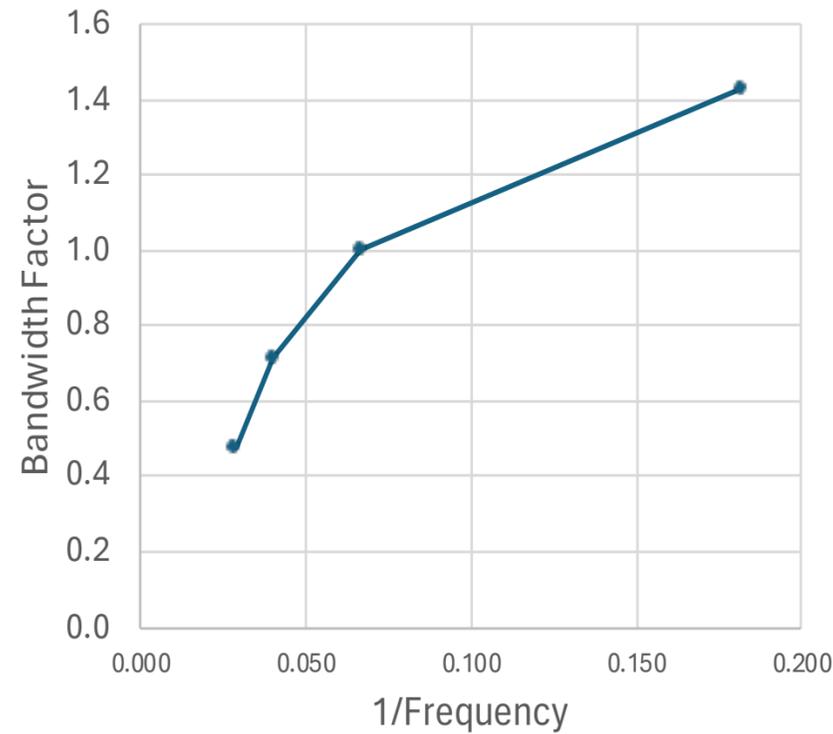
Band	Mid freq (GHz)	1/f	Current normalised	Current (2018)
≤ 1 GHz	0.5	2.000	4.3	0.9
1 < fb ≤ 10	5.5	0.182	1.4	0.3
10 ≤ fb < 20	15	0.067	1.0	0.21
20 ≤ fb < 30	25	0.040	0.7	0.15
> 30	35	0.029	0.5	0.1

Band	Mid freq (GHz)	1/f	Proposed normalised	Proposed
≤ 1 GHz	0.5	2.000	4.50	0.9
1 < fb ≤ 10	5.5	0.182	2.00	0.3
10 ≤ fb < 16	13	0.077	1.00	0.15
16 ≤ fb < 20	18	0.056	0.80	0.12
20 ≤ fb < 24	22	0.045	0.67	0.1
24 ≤ fb < 40	32	0.031	0.33	0.05
40 ≤ fb < 100	70	0.014	0.01	0.001

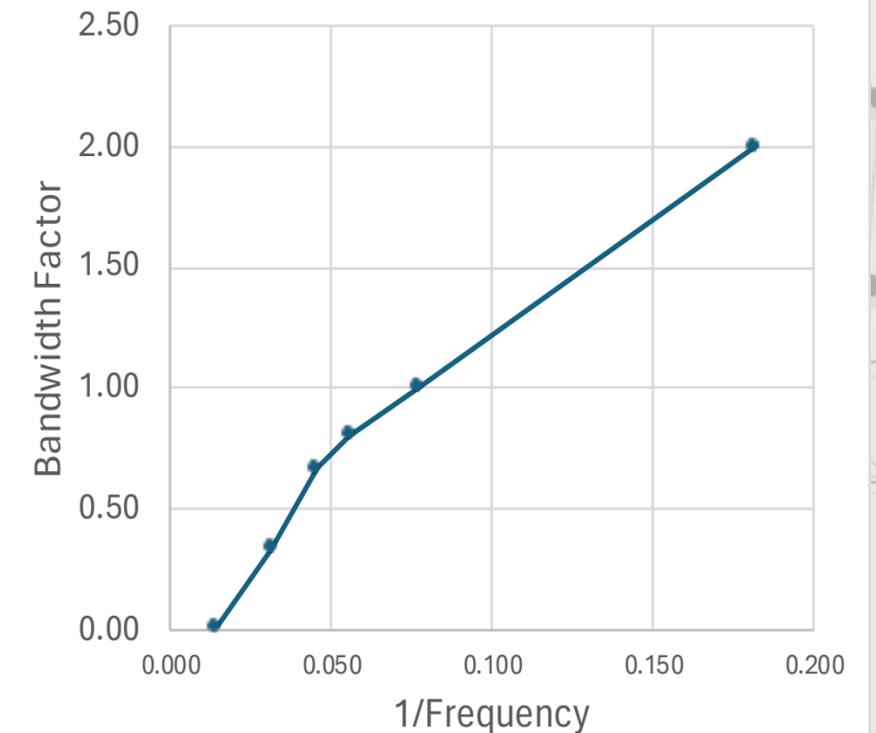
Ofcom Fixed Link Fees



Kenya Fixed Link Fees (2018)



Kenya Fixed Link Fees (Proposed)



- For Fixed (microwave links) we recommend changing the band factor to encourage an overall migration to the higher bands for 5G capacity\*
  - This enables more granular pricing decisions for specific bands
- For Fixed (non-protected) service we propose retaining the current system of pricing by terminal/sector for the 5 GHz band with an increase of 20% to reflect inflation
  - We would also suggest moving the E-band fixed links into the fixed link framework pricing\*\*, given how important this band will be for 5G and beyond
- For Fixed Wireless Access
  - Given the importance of the 3.3 GHz and 3.5 GHz bands for 5G, we support the movement of this spectrum into the mobile fee structure, while protecting existing users if their licences do not expire in the short-term
  - On balance we recommend retaining the current fee schedule for LMDS use in the 26 GHz band, with an increase of 20% to acknowledge the impact of inflation

\* Also assumes an increase in U to 675 (approx. 20%) plus a change in the Band Factors shown in the previous slide

\*\* The formula for fixed links has been reviewed to mitigate the very high fee resulting from the bandwidth in the E-band

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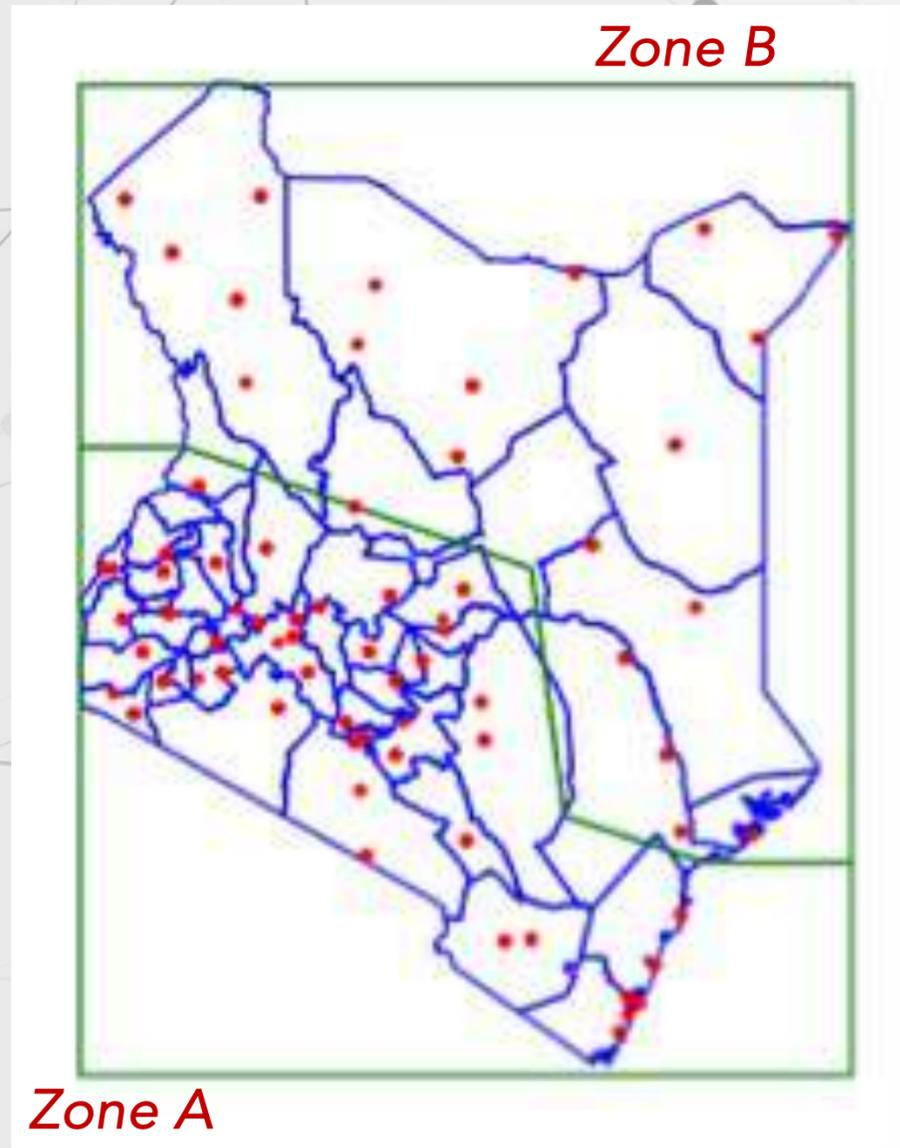
Let's take a break!



- Overview of findings (benchmarking, consultation and analysis)
- Key issues
- Recommendations

- Maintain a **diverse and sustainable** broadcasting sector
- Increase **access** to content, particularly for local language and cultural programmes
- Deliver **economic benefits** of a strong broadcast sector
- Increase **efficiency** of spectrum use
- Encourage deployment of latest generation of broadcast **technologies**

- 2023 data shows 352 frequency assignments issued to Broadcast Signal Distributors



- Current Fee structure:

$$FF = U \times FZ$$

— FZ: 2 for Zone A, 1 for Zone B

Unit fee:

Kshs. 45,000 for community broadcast

Kshs. 180,000 for commercial broadcast

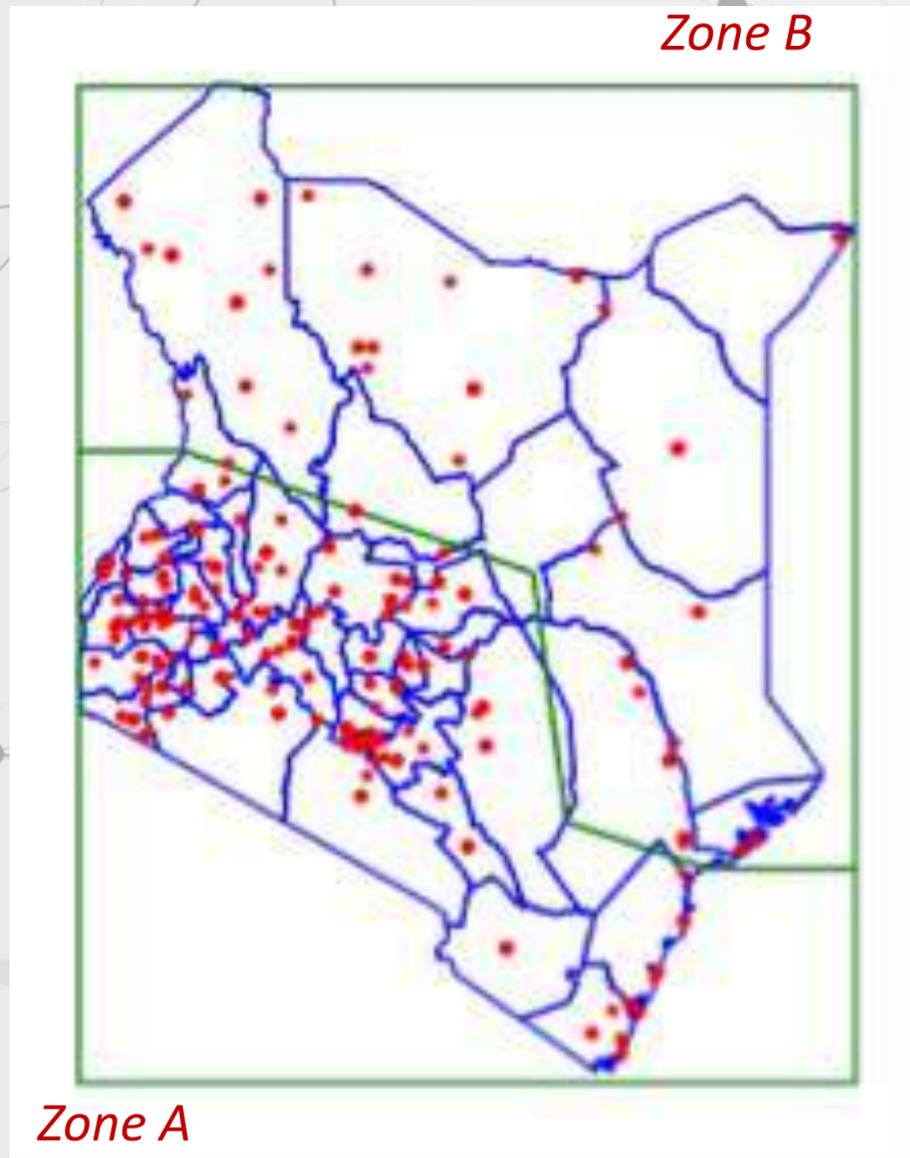
➤ Generally, for most benchmarked countries

- There is some variation in the way this is achieved, with some charging based on population covered, or with transmitter fees that vary by region
- Kenya is similar to UAE, Saudi Arabia and Tanzania in that it charges per transmitter, but this approach is not followed in the UK, USA, Australia, South Africa or Nigeria

➤ We created typical scenarios to allow meaningful comparison

- Kenya is towards the lower end on the international benchmarks

- 2023 data shows 921 active frequencies across 172 locations



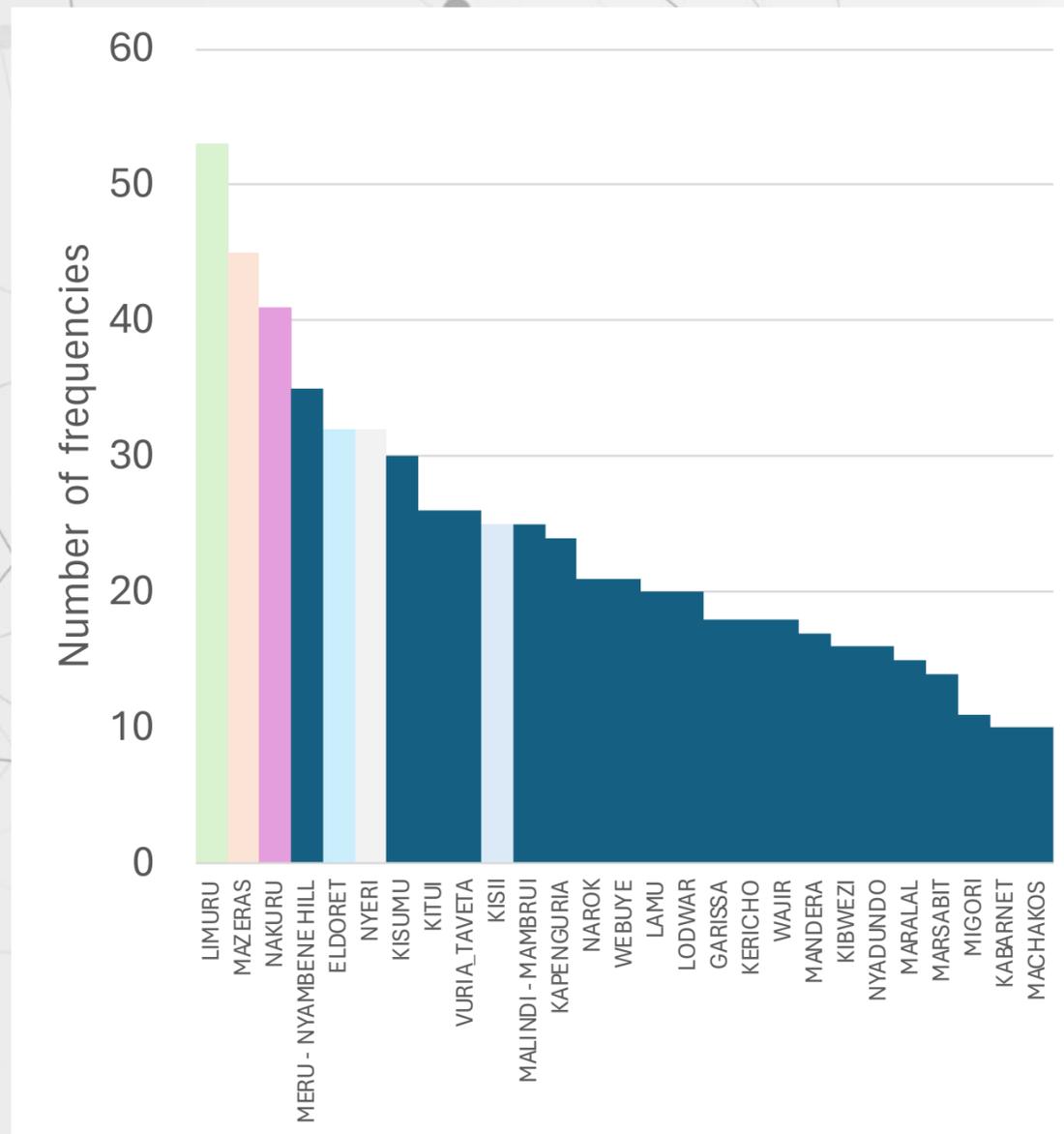
## Current Fee structure:

$$FF = (2^n - 1) \times U \times FZ$$

*n*: number of frequencies at a site  
 FZ: 2 for Zone A, 1 for Zone B  
 Unit fee:  
 Kshs. 15,000 for community broadcast  
 Kshs. 65,000 for commercial broadcast

- Fees are charged on slightly different basis in benchmark countries
  - Some do not charge based on geographical area or service type, for example, but include population covered and power levels
- We created typical scenarios to allow meaningful comparison
  - Generally levels are within the benchmark ranges, but Kenya is the only country which applies an exponential factor based on the number of frequencies at a site

- The frequencies are concentrated on a few locations, with only 33 holdings of three or more frequencies by a single company shown, and all but two of them are in Zone A



Company	Position	Zone	f
ROYAL MEDIA SERVICES LIMITED	ELDORET	A	5
ROYAL MEDIA SERVICES LIMITED	KISII	A	4
ROYAL MEDIA SERVICES LIMITED	KISUMU	A	4
ROYAL MEDIA SERVICES LIMITED	LIMURU	A	7
ROYAL MEDIA SERVICES LIMITED	MAZERAS	A	5
ROYAL MEDIA SERVICES LIMITED	MERU - NYAMBENE HILL	A	3
ROYAL MEDIA SERVICES LIMITED	NAKURU	A	5
ROYAL MEDIA SERVICES LIMITED	NYADUNDO	A	3
ROYAL MEDIA SERVICES LIMITED	NYERI	A	3
THE STANDARD GROUP PLC	ELDORET	A	3
THE STANDARD GROUP PLC	KISII	A	3
THE STANDARD GROUP PLC	LIMURU	A	3
THE STANDARD GROUP PLC	MAZERAS	A	3
THE STANDARD GROUP PLC	NAKURU	A	3
THE STANDARD GROUP PLC	NYERI	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	ELDORET	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	EMBU	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	GARISSA	B	3
TV AFRICA - KENYA HOLDINGS LIMITED	KIBWEZI	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	KISII	A	4
TV AFRICA - KENYA HOLDINGS LIMITED	KISUMU	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	KITUI	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	LAMU	B	4
TV AFRICA - KENYA HOLDINGS LIMITED	LIMURU	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	MALINDI - MAMBRUI	A	4
TV AFRICA - KENYA HOLDINGS LIMITED	MAZERAS	A	5
TV AFRICA - KENYA HOLDINGS LIMITED	MERU - NYAMBENE HILL	A	4
TV AFRICA - KENYA HOLDINGS LIMITED	NAKURU	A	4
TV AFRICA - KENYA HOLDINGS LIMITED	NANYUKI	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	NAROK	A	4
TV AFRICA - KENYA HOLDINGS LIMITED	NYADUNDO	A	3
TV AFRICA - KENYA HOLDINGS LIMITED	NYERI	A	5
TV AFRICA - KENYA HOLDINGS LIMITED	VURIA_TAVETA	A	5

## Recommendations to update Fee Schedule for Broadcast

### ➤ Update the fees for TV:

- We recommend increasing the Unit Fee by 20% to Kshs. 54,000 for community TV broadcast and Kshs. 220,000 for commercial TV broadcast to take into account inflation
- The fee for each low power transmitter should also increase from Kshs. 10,000 to Kshs. 12,000

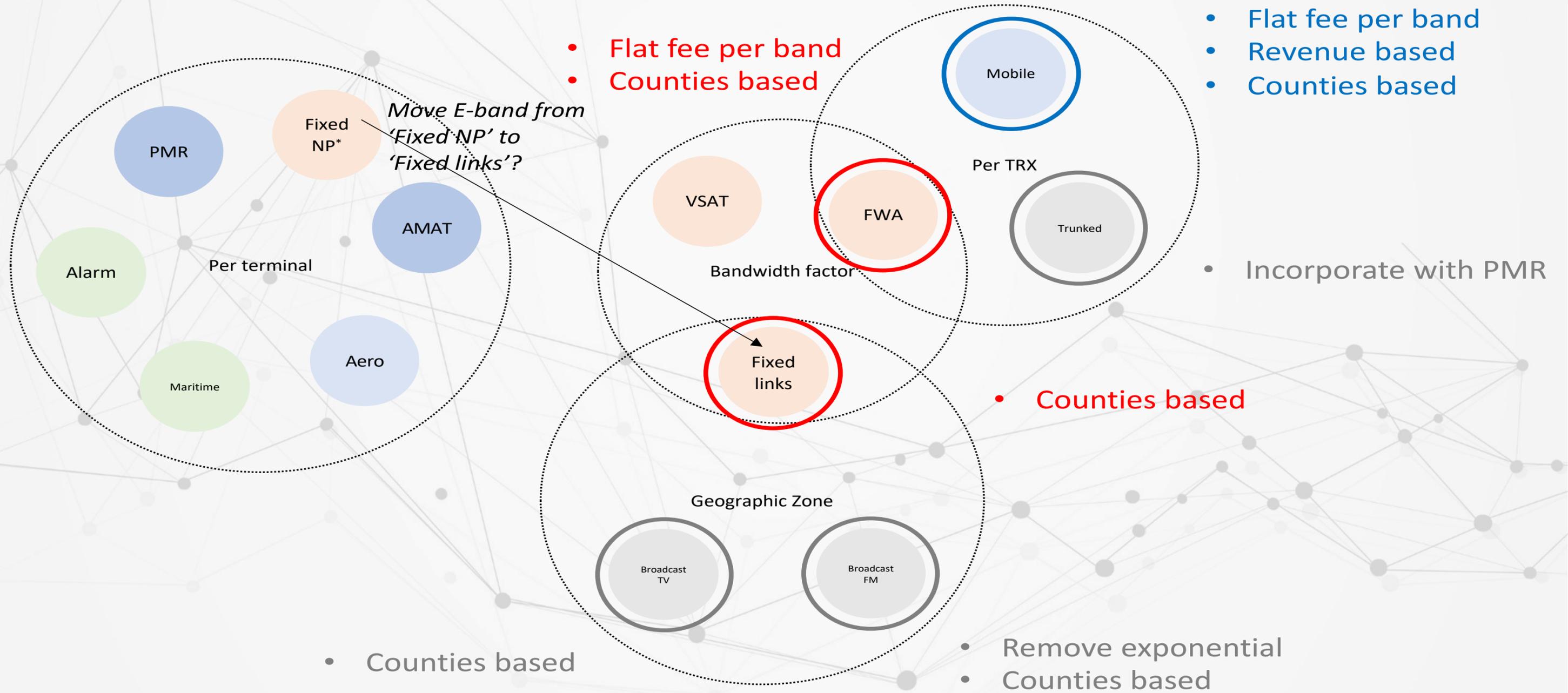
### ➤ The fee formula for FM:

- Recognising the concerns over congestion and availability of new frequencies, we are unable to recommend changing the fee structure until all relevant authorities have assessed the potential impact
- We also recommend that the formula is revisited in the long term as part of a wider review of FM broadcasting, including competition, ownership, cultural diversity, listener choice and changing patterns of media consumption
- One option may be to consider encouraging the use of community radio stations with reduced power

### ➤ We also recommend increasing the Unit Fee by 20% to Kshs. 18,000 for community radio broadcast and Kshs. 78,000 for commercial radio broadcast to take into account inflation

- Summary and next steps:
  - More detailed feedback needed from stakeholders
  - Final decisions still to be made on the final fee schedule

## ➤ Summary (alternative fee structures)



\* Note: Fixed (non-protected) is per terminal/sector

VALIDATION WORKSHOP

MAY. 2024

Thank You!

