TRBR
Telecommunications, Radiocommunications & Broadcasting Regulator

NATIONAL TABLE OF FREQUENCY ALLOCATIONS (NTFA)

REPUBLIC OF VANUATU

November 2025

+678 27621
enquiries@trbr.vu
PO Box 3547, Port Vila, Vanuatu

Table of Contents

1. INTRODUCTION

The rapid evolution of information and communication technologies (ICTs) has transformed global socio-economic development, making robust telecommunications infrastructure a critical enabler of growth. Increasingly, ICT services rely on wireless delivery mechanisms, underscoring the importance of efficient Radio Frequency (RF) Spectrum management.

RF spectrum is a finite natural resource that must be managed at global, regional, and national levels to prevent harmful interference between systems. Since radio waves propagate without regard for national borders, harmonized spectrum policies are crucial, particularly for high-power systems (e.g., broadcasting, fixed links) and wide-area networks (e.g., mobile cellular).

The Republic of Vanuatu is a member of the International Telecommunication Union (ITU) a specialized agency of the United Nations responsible for the global regulation of radio-frequency spectrum and satellite orbits. The ITU designates frequency bands to specific radiocommunication services and categorizes the world into three ITU Regions, with Vanuatu falling under Region 3. To ensure global alignment, the ITU convenes the World Radiocommunication Conference (WRC) every three to four years. The latest conference, WRC-23 (Dubai, 20 November – 15 December 2023), reviewed and updated the Radio Regulations to accommodate emerging technologies such as:

- 5G/IMT-2020 and beyond
- Non-terrestrial networks (NTNs), including satellite and HAPS
- Space science and Earth observation
- Maritime and aeronautical mobile enhancements

WRC-23 decisions ensured the efficient and interference-free use of spectrum and orbital resources, reinforcing the need for administrations to align their national frameworks with the revised regulations. One of main outcome of the WRC-23 is the international Radio Regulations (2024 Edition) (RR-24). The Article 5 of RR-24 establish the International Table of Frequency Allocations (ITFA), which serves as the foundational framework for international, regional, and national spectrum planning.

The Telecommunications, Radiocommunications and Broadcasting Regulator (TRBR) of Vanuatu is undertook a review of its National Table of Frequency Allocations (NTFA) to ensure compliance with ITU Region 3 allocations as per RR-24. This update supports the development of a modern, interference-resistant spectrum management regime and fulfills TRBR's mandate under Section 7(2)(e) of the Telecommunications Radiocommunications and Broadcast Regulations Act No. 30 of 2009 as amended by amendment 22 of 2018.

1.1. ICT market in Vanuatu

Vanuatu is an Oceania Island nation located in the South Pacific Ocean. The archipelago is of volcanic origin and is around 1,750 kilometres east of northern Australia, 500 kilometres (310 mi) northeast of New Caledonia, west of Fiji, and southeast of the Solomon Islands, near New Guinea.

Vanuatu has been gradually expanding its ICT infrastructure[1] to bridge digital divides and support economic growth. With a population of around 320,000, the country faces unique challenges due to its geographical spread of population across 80+ islands. However, investments in mobile connectivity, broadband, and submarine cables are transforming its digital landscape. Following information provides key highlights of ICT market status of Vanuatu:

- Mobile Penetration: Vanuatu has seen steady growth in mobile subscriptions, with penetration rates estimated at ~80% (ITU, 2023).
- Dominant Providers: Digicel Vanuatu Limited (Digicel) and Vodafone Vanuatu Limited (Vodafone) are the main operators, competing in 2G/3G/4G services.
- 4G Expansion: Limited 4G coverage in urban areas (Port Vila, Luganville), but rural regions rely on 2G/3G.
- 5G Potential: Trials may begin in urban centers by 2026.
- Internet Penetration: Approximately 40-50% of the population has internet access (ITU, 2023).
- Broadband Subscriptions: Fixed broadband remains low due to high costs, while mobile data dominates.
- International digital connectivity through undersea Cables: The ICN1 (Interchange Cable Network) and Solomon Islands Submarine Cable (connecting Vanuatu to Fiji) have improved speeds, but affordability remains a barrier.
- Satellite connectivity: Partnerships with SpaceX's Starlink and or Kacific has the potential to improve rural access.
- E-Payments: Mobile money (e.g., Digicel's MyCash) is growing, but cash remains dominant.
- Government Policy Initiatives: The National ICT Policy aims to improve digital governance, cybersecurity, and rural connectivity.

Vanuatu's ICT market is evolving, with wireless connectivity solutions driving connectivity of people and devices. However, affordability, infrastructure, and policy improvements are needed to ensure equitable digital access. Hence a harmonized and efficient use of national RF resource can assist in delivering the objectives of the National ICT policy of Vanuatu amongst others.

[1] Statistics from ITU data hub https://datahub.itu.int/data/?e=VUT retrieved on 3rd June 2025.

1.2. Spectrum Management practices worldwide

If not managed properly, the Radio Frequency (RF) can cross geographical borders of countries therefore a harmonization and coordination is needed in use of the national Radio Spectrum so as not to cause or receive any interference from Radio equipment outside or inside the boundary of an Administration. In actual practice, the radio frequency spectrum is managed on a number of levels:

1.2.1. International

At a worldwide level RF Spectrum is managed by Member States of the International Telecommunication Union (ITU); The international framework for the use of the radio frequency spectrum is set out in a treaty – the Radio Regulations - ratified by the Member States of the International Telecommunication Union (ITU), a specialized UN agency. The Radio Regulations govern the use of the radio-frequency spectrum and the geostationary satellite and non-geostationary-satellite orbits. Article 5 of the Radio Regulations deals with regulations for frequency allocation and contains the (international) Table of Frequency Allocations, together with various definitions concerning frequency allocation. The Table of Frequency Allocations reflects decisions made on the purpose or purposes to which particular frequencies will be put.

World radiocommunication conferences (WRC) are held every three to four years. It is the task of WRC to review, and, if necessary, revise the Radio Regulations. Revisions are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous world radiocommunication conferences.

The general scope of the agenda of world radiocommunication conferences is established four to six years in advance, with the final agenda set by the ITU Council two years before the conference, with the concurrence of a majority of Member States.

Under the terms of the ITU Constitution and Convention, a WRC can:

- revise the Radio Regulations;
- address any radiocommunication matter of worldwide character;
- instruct the Radio Regulations Board and the Radiocommunication Bureau, and review their activities;
- Identify topics to be studied by the Radiocommunication Assembly and the radiocommunication Study Groups in preparation for future Radiocommunication Conferences.

In essence, WRCs provide the required an international platform for all decisions related to frequency use based on the detailed technical studies carried out by SGs guided by RAs.

1.2.2. Regional (Asia Pacific Telecommunity)

On a lower by still international level RF Management is most commonly done by regional organizations, which act consistently within the ITU framework. Regional Telecommunication Organizations have been established (usually) by administrations to develop harmonization measures intended to facilitate free movement of telecommunication equipment and services

within the region and to offer industry and operators the economies of scale through a larger market with common requirements. Harmonization measures may include harmonization of frequency use, common technical requirements and preparation of common proposals to ITU World Radiocommunication Conferences. A detailed description of regional harmonization and regional organizations is given in ITU-R Report SM.2093. For the Asia-Pacific region, Asia Pacific Telecommunity (APT) takes the roles and responsibilities of the regional harmonization of the spectrum use. In doing so, it meets regularly to develop common positions from the regional administrations for WRCs.

1.2.3. National

1.2.3.1. Allocation Level

A national legislative framework is usually put in place to establish an administration, recognised by the ITU, as responsible entity for discharging the obligations undertaken in the Constitution of the International Telecommunication Union, in the Convention of the International Telecommunication Union and in the Administrative Regulations (CS 1002). These obligations include management of the radio spectrum. The administration may be a government ministry, or an independent regulator operating under a legislative mandate or policy guidelines.

As an essential part of this legislative framework, the Spectrum Management Authority establishes a National Table of Frequency Allocations, which sets out what radio services can use which frequency bands and under what conditions. The NTFA should be based on the Table of Frequency Allocations in Article 5 of the Radio Regulations. Over time, in all countries, changes in technology and user needs require changes to the NTFA. If it is not possible to accommodate these changes in conformity with the allocations of the current International Table, it is necessary for the administration to seek changes to the International Table at a World Radio Conference, which may be added as, footnote to the Article 5 of the Radio Regulations during the WRC. In practice, it is normal for administrations to co-operate with other (neighbouring and/or regional) administrations in WRC preparations at regional and global (ITU) level to enable their changing requirements to be coordinated and developed in an organised framework. With the current pace of technology development, this is an on-going task and the administrations establish a national consultative procedure to prepare national requirements and positions for presentation at regional preparation meetings and radiocommunication conferences.

1.2.3.2. Assignment Level

Assigning a particular frequency (or groups of frequencies) to users (stations) is the detailed level of national spectrum management. The methods used may be administrative, market-based or some spectrum may be reserved for licence-exempt[2] use that satisfies certain technical or operational conditions, for example restricted power levels and geographic range. For licensed use, this detailed level usually includes establishing policies for technical conditions for frequency use. Conditions of use may vary widely, from reserving particular frequencies for specific uses with detailed technical requirements (for example: channel plans, equipment standards and assignment criteria), to allowing considerable flexibility in spectrum use for particular bands or services with light technical requirements (e.g. a simple spectrum mask). This information on detailed frequency use can be published either as part of the NTFA (e.g. in referenced annexes to the NTFA) or as a separate National Table of Frequency Use.

[2] It should be noted that RR No 18.1.1 mandates that: *"No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject*". Hence, "*license-exempt*" and similar expressions (e.g. "*unlicensed*", etc.), refers to radio devices with transmitting capabilities (emitting radio waves) that can be operated by any person, without previously obtaining a particular authorization for it (particular license). This particular licensing waiving is only possible because of operation of such devices has been previously authorized to all public through a Generic Use Authorization, GUA (also named General License, or equivalent names). GUA always includes a set of detailed technical and operational specifications that must be strictly obeyed when operating such devices, in order to guarantee they can be used with a very low risk of causing interference to other similar devices or other services. Then, when a NTFA includes these license-exemptions, the pertinent GUA (or equivalent) should also be included or referenced.

1.3. ITU Radio Regulations

International Telecommunication Union (ITU) is the United Nations specialized agency for information and communication technologies – ICTs. It is the prime agency of the UN dealing with the issues related to international frameworks of regulating the limited Spectrum and orbital resources.

With the mandate of its member states, ITU undertakes activities related to Spectrum Management by defining different levels of Administration of Spectrum as Allocation, Allotment and Assignment. As per Section II of the Article 1 and Article 5.1 of the Radio Regulations the definition of these terms are as under

Table 1: Definitions of Allocation, Allotment and Assignment

	Allocation	Allotment	Assignment
Definition	*Allocation (of a frequency band): Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned.*	*Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radiocommunication service in one or more identified countries or geographical areas and under specified conditions.*	*Assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions.*
Frequency Distribution to	Services	Areas or Countries	Stations

In order to achieve this ITU-R, the Radiocommunication Sector of ITU, has divided the world into three Regions as shown on the in Figure 2,

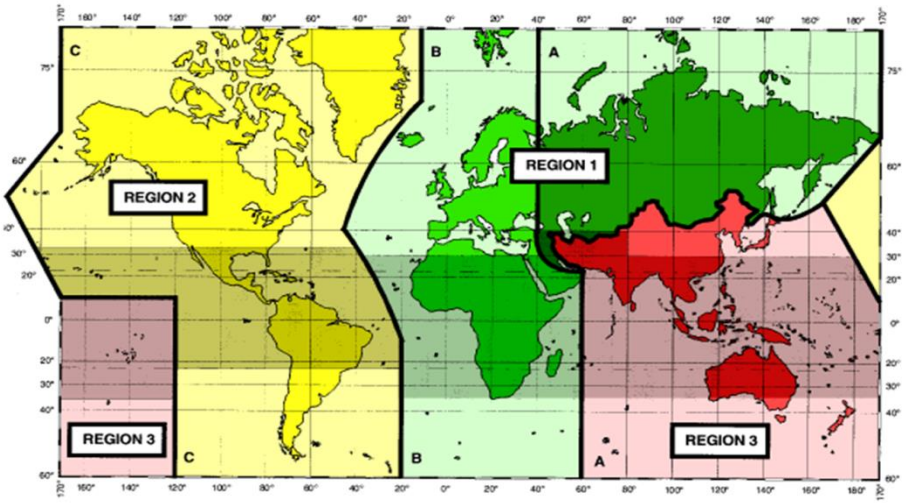


Figure 1: ITU - R World Regions for Frequency Allocation

The Republic of Vanuatu is signatory to International Telecommunication Union (ITU) convention and situated geographically in Region 3. Region 3 includes the area limited on the east by line C and on the west by line A, except any of the territory of Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Turkey and Ukraine and the area to the north of Russian Federation. It also includes that part of the territory of the Islamic Republic of Iran lying outside of those limits. Whereas the lines A, B and C are defined as follows:

Line A: Line A extends from the North Pole along meridian 40° East of Greenwich to parallel 40° North; thence by great circle arc to the intersection of meridian 60° East and the Tropic of Cancer; thence along the meridian 60° East to the South Pole.

Line B: Line B extends from the North Pole along meridian 10° West of Greenwich to its intersection with parallel 72° North; thence by great circle arc to the intersection of meridian 50° West and parallel 40° North; thence by great circle arc to the intersection of meridian 20° West and parallel 10° South; thence along meridian 20° West to the South Pole.

Line C: Line C extends from the North Pole by great circle arc to the intersection of parallel 65° 30 North with the international boundary in Bering Strait; thence by great circle arc to the intersection of meridian 165° East of Greenwich and parallel 50° North; thence by great circle arc to the intersection of meridian 170° West and parallel 10° North; thence along parallel 10° North to its intersection with meridian 120° West; thence along meridian 120° West to the South Pole. 2.

The shaded areas near around equator line in the above map are the defined as tropical areas.

2. SPECTRUM MANAGEMENT IN VANUATU

The Telecommunications Radiocommunications and Broadcasting Regulator (TRBR) is an independent statutory body established under Vanuatu's Telecommunications, Radiocommunications and Broadcasting Regulations Act 30 of 2009 (as amended in 2018). TRBR regulates telecommunications, radiocommunications, and broadcasting services, ensuring compliance with the law while advising the responsible Minister on policy and regulatory matters.

A core function of TRBR is spectrum management, guided by the Telecommunications and Radiocommunications Regulation Act (2009) as amended and the Radio Apparatus Licence and Spectrum Licence (Fees) Regulation Order No. 153 of 2012. The regulator has developed Spectrum Management Principles to ensure transparent, fair, and efficient allocation and use of radio frequencies. These principles align with Vanuatu's National ICT Policy, which mandates that spectrum resources be managed for the public good, supporting economic and social development.

TRBR's detailed spectrum management practices are outlined in the Spectrum Planning, Allocation and Assignment Practices (2011), which covers planning, licensing, monitoring, and international coordination. The regulator's overarching goal is to promote a competitive and sustainable telecommunications sector while safeguarding the interests of Vanuatu's citizens and residents.

3. PREPARATION OF NATIONAL TABLE OF FREQUENCY ALLOCATIONS (NTFA)

A National Table of Frequency Allocations is a method for presenting the national spectrum plan in an easily understandable (tabular) format. NTFA is a national-level document guiding the frequency assignment procedures in the country, preparing or updating the NTFA requires giving due regard to the requirements of the Government, Industry, public, and other users of the radio frequency. Therefore, while developing an NTFA table, due consideration has been given to:

a. The current Telecommunications Law;

b. The efficient use of radio frequency spectrum while accommodating all requirements of national spectrum users;

c. The impact on existing licensees and users of radio frequency; and

d. The applicable international conventions, standards and agreements concerning frequency spectrum including the management of radio frequency issues with neighbouring countries and within Pacific Islands community itself.

3.1. Objectives while developing NTFA

In light of fore-mentioned principle legal documents and the consideration that "*Radio frequency spectrum shall be recognized as a strategic national public resource*", the core objectives while developing NTFA in connection includes the following:

a. A transparent, non-discriminatory approach to spectrum management

b. Promote economic and societal benefits for all spectrum users through optimizing the value of scarce radio spectrum resources and ensure its efficient use through the utilization of market-based mechanisms including international tenders.

c. Ensure public safety communications needs are met

d. Ensure interoperability of all available communications technologies

e. Support and promote innovation and competition

f. Reduce regulatory barriers to radio frequency access

g. Reserve appropriate spectrum for future innovative technologies

h. To charge user fees for services that provide identifiable recipients with direct benefits beyond those received by the general public thereby promoting an equitable approach to financing government and regulatory programs.

4. HOW TO READ THE FREQUENCY ALLOCATION TABLE

The frequencies listed in the Allocation table are allocated for use on Primary, Co-Primary or Secondary basis provided that (if applicable):

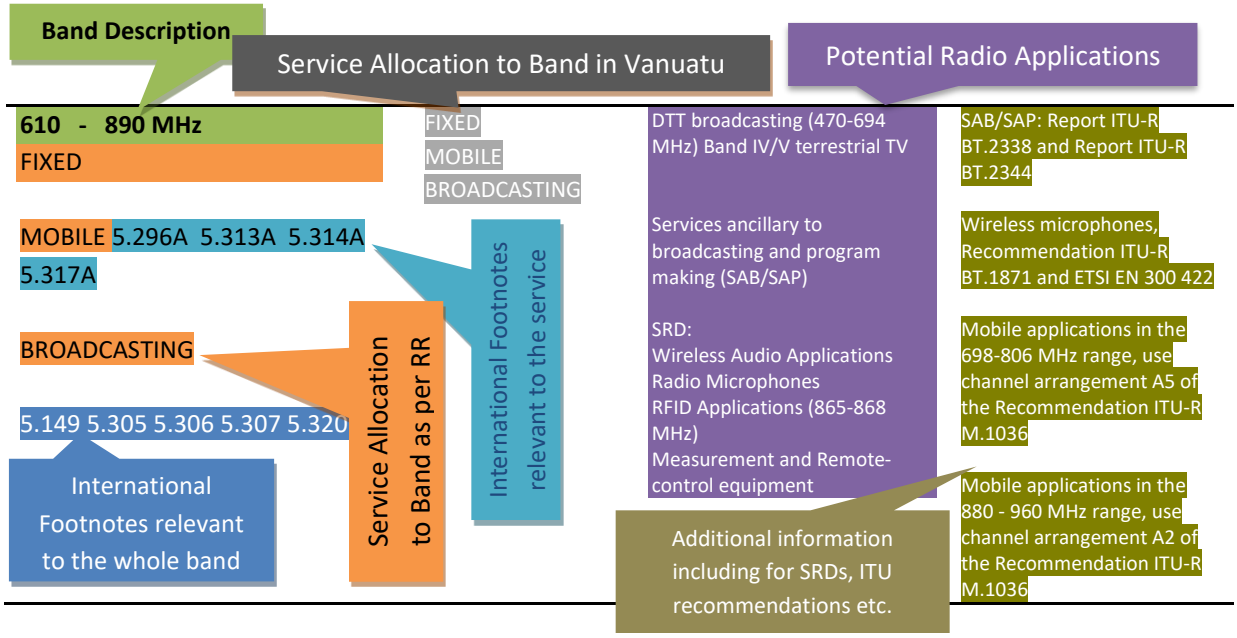
(a) **Primary Basis**: means that in accordance with the nature of a right granted to the assignee of a particular spectrum (band or spot frequency), the assignee is the only entity to use the identified spectrum and is entitled to protection from:
   i. harmful interference caused by any other spectrum user who may be authorized to use same spectrum on secondary basis; and
   ii. claims of harmful interference by any such spectrum user

(b) **Co-primary basis** means that nature of the right granted to the assignee of a particular spectrum (band or spot frequency), to use the specified frequency bands is subject to the condition that:
   i. The entity must coordinate with other co-primary licensees to limit harmful interference to existing links and services operating in the relevant frequency bands, and to facilitate the introduction of additional links and services in the relevant frequency bands.
   ii. Co-primary user must refrain from causing harmful interference to and may not require protection from operations of another co-primary user in relevant band.
   iii. Co-primary usage of band is subject to protection from:

a. harmful interference caused by any other spectrum user that may be authorized to use the same spectrum on secondary basis,
b. claims of harmful interference by holders of licenses granting secondary status with respect to frequency bands covered

(c) **Secondary basis:** means the nature of a right granted to the assignee of a particular spectrum (band or spot frequency), is subject to the condition that the entity does not cause any harmful interference to, or claim protection from any harmful interference caused by, other licensees who have been granted the right to use same frequency bands on primary or co primary basis. Stations of a secondary service:

- Shall not cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date.
- Cannot claim protection from harmful interference from stations of a primary service to which frequencies are already assigned or may be assigned at a later date.
- Can claim protection, however, from harmful interference from stations of the same or other secondary service(s) to which frequencies may be assigned at a later date.



WHERE, in a box of Table of Frequency Allocations a band is indicated as allocated to more than one service, either on a worldwide or Regional basis, such services are listed in the following order:

a) Services the names of which are printed in “capitals” (example: FIXED); these are called “primary” services.

b) Services the names of which are printed in “normal characters” (example: Mobile); these are called “secondary” services.

c) Additional remarks shall be printed in normal characters (example: MOBILE except aeronautical mobile).

d) At instances the table may also contain a different allocation than those in the ITU RR Allocations table (Art. 5) basically these may be categorized as:

- Additional allocation (adding more services)
- Different (alternative) allocations (allocating to other different services instead)
- Change categories to allocated services (different categories)

A designated footnote e.g. *5.149* number indicates the differences were accepted by the competent WRCs and included in the RR, they enjoy international recognition (*with the details of limitations/conditions are in the respective footnote*).

Note:

I. Where a band is indicated in an International footnote of the Table as allocated to a service "on a secondary basis" in an area smaller than a Region, or in a particular country, this is a secondary service.
II. Where a band is indicated in an International footnote of the Table as allocated to a service "on a primary basis", in an area smaller than a Region, or in a particular country, this is a primary service only in that area or country.
III. Where a band is indicated in an International footnote of the Table as "also allocated" to a service in an area smaller than a Region, or in a particular country, this is an "additional" allocation, i.e. an allocation which is added in this area or in this country to the service or services which are indicated in the Table.
IV. If the international footnote does not include any restriction on the service or services concerned apart from the restriction to operate only in a particular area or country, stations of this service or these services shall have equality of right to operate with stations of the other primary service or services indicated in the Table.
V. If restrictions are imposed on an additional allocation in addition to the restriction to operate only in a particular area or country, this is indicated in an International footnote of the Table.
VI. Where a band is indicated in an International footnote of the Table as "allocated" to one or more services in an area smaller than a Region, or in a particular country, this is an "alternative" allocation, i.e. an allocation which replaces, in this area or in this country, the allocation indicated in the Table.
VII. If the footnote does not include any restriction on stations of the service or services concerned, apart from the restriction to operate only in a particular area or country, these stations of such a service or services shall have an equality of right to operate with stations of the primary service or services, indicated in the Table, to which the band is allocated in other areas or countries.
VIII. If restrictions are imposed on stations of a service to which an alternative allocation is made, in addition to the restriction to operate only in a particular country or area, this is indicated in the International and National footnote.
IX. Where it is indicated that a service or stations in a service may operate in a specific frequency band subject to not causing harmful interference to another service or to another station in the same service, this means also that the service which is subject to not causing harmful

interference cannot claim protection from harmful interference caused by the other service or other station in the same service.

X. Where it is indicated that a service or stations in a service may operate in a specific frequency band subject to not claiming protection from another service or from another station in the same service, this means also that the service which is subject to not claiming protection shall not cause harmful interference to the other service or other station in the same service.

5. UPDATED NTFA OF VANUATU AND FUTURE ACTIONS

While considering the primary (*Telecommunications Radiocommunications and Broadcasting ACT No 30 0f 2009 as amended*) and secondary (*Spectrum Policy and Guidelines*) National Legal and policy framework currently in-force in Vanuatu and taking into account the best practices of the objectives while developing and/or updating the NTFA globally, including the outcomes of the WRC-23, these are details in the Annexures as follows:

Appendix A: **Frequency allocation table for Vanuatu**

Chapter I. Preliminary
Chapter II. Definitions
Chapter III. Structure of the National Table of Frequency Allocations
Chapter IV. National Table of Frequency Allocations
Chapter V. International ITU Radio Regulations Footnotes Applicable to ITU Region 3

Appendix B: **Frequency allocation chart for Vanuatu**

The chart gives a quick reference of service allocations in Vanuatu. For complete details of frequency allocations, reference should be made to any latest amended Band Plans, National Table of Frequency Allocations of Vanuatu and related footnotes.

Annex-A

National Table of Frequency Allocations (NTFA)

2025

Note: attached the file here or make a like to the actual document. (pdf version)

+678 27621
enquiries@trbr.vu
PO Box 3547, Port Vila, Vanuatu
www.trbr.vu

Annex-B

Frequency allocation chart for Vanuatu

2025

Note: attached the file here or make a like to the actual document. (pdf version)

+678 27621
enquiries@trbr.vu
PO Box 3547, Port Vila, Vanuatu
www.trbr.vu

Acronyms & Abbreviations

Item	Explanation
ASDE	Airport Surface Detection Equipment
AID	Automatic Identification
AM	Amplitude Modulation
AM(OR)S	Aeronautical Mobile (OR) Service
BC	Broadcasting Station, Sound
BSS	Broadcast - Satellite Service
BT	Broadcasting Station, Television
CB	Citizens' Band
CBRS	Citizens' Band Radio Service
COSPAS	Space System for Search of Distress Vessels (CosmicheskayaPoiskaAvariynykhSudor)
CTS	Cordless Telepoint Service
DME	Distance Measurement Equipment
DSC	Digital Selective Calling
EIRP	Effective Isotropic Radiated Power
ENG	Electronic News Gathering
EPIRB	Emergency Position Indicating Radio Beacons
EESS	Earth Exploration Satellite Service
FDD	Frequency Division Duples
FDMA	Frequency Division Multiple Access
FM	Frequency Modulation
FSS	Fixed - Satellite Service
FWA	Fixed Wireless Access
GLONASS	GLObal Navigation Satellite System
GPS	Global Positioning System

HDFSS	High Density Fixed-Satellite Service
HDTV	High Definition TV
ICAO	International Civil Aviation Organization
GMDSS	Global Maritime Distress and Safety System
GSO	Geostationary Satellite Orbit
ILS	Instrument Landing System
IMT	International Mobile Telecommunication
ISM	Industrial Scientific and Medical
LEO	Low Earth Orbit
LORAN	Long range radio navigation (system)
LPD	Low Power Device
MDS	Multipoint Distribution System
MLS	Microwave Landing System
MMDS	Multi-channel Multi-point Distribution Service
MS	Mobile Station
MSI	Maritime Safety Information
MSS	Mobile Satellite Service
NAVID	Navigational Identification
NAVTEX	Navigational Telex
NBDP	Narrow Band Direct Printing
NDB	Non-Directional radio Beacon
OBTS	Outside Broadcast Television Service
PMR	Private Mobile Radio
RACON	Radar Beacon

RTP-COM	Radio Telephony Communication
RTSS	Rural Telephone Subscriber Service
RTTT	Road Transport and Traffic Telematics
SAB	Service Ancillary to Broadcasting
SAP	Service Ancillary to Program making
SAR	Search and Rescue
SARSAT	Search and Rescue Satellite-Aided Tracking
SART	Search and Rescue Transponder
SFSC	Single Frequency Single Channel
SIT	Satellite Interactive Terminal
SNG	Satellite News Gathering
SOBL	Sound Outside Broadcast Link
SSB	Single Sideband
SSR	Secondary Surveillance Radar
STL	Studio-to-Transmitter Link
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TFSC	Two Frequency Single Channel
TLMRS	Trunked Land Mobile Radiocommunication Service
TX	Transmitter
VOR	VHF Omni-Directional Range
WAS	Wireless Access System