

**QUESTIONNAIRE ON SPECTRUM REQUIREMENTS FOR TERRESTRIAL
TELEVISION BROADCASTING IN CONNECTION WITH
WRC-15 AGENDA ITEM 1.2**

Name of the Administration: **MOROCCO**

Contact person: **DRISSI MELYANI Sidi Mohammed**

E-mail address: **drissi@anrt.ma**

Telephone number: **+212 537 718 500**

- 1**
- a) What standards have you adopted for digital terrestrial television broadcasting?
 - b) Have you started introduction of digital terrestrial television services?
 - c) If yes, please provide further detail on the number of multiplexes in use, their technical specifications, the percentage of geographic area or population they are intended to cover and the total spectrum use to inform WP 6A.

A proposed format for detailed responses is provided in Annex 1.

Reply:

- a) **DVB-T**
- b) **Yes**

c) In use :

Admin	Country	No of multiplexes	System & modulation	FEC	GI	Reception mode ¹	Capacity per multiplex (Mb/s)	Current percentage population coverage	Intended percentage population coverage	Content per multiplex	Total capacity (Mb/s)	Total spectrum bandwidth used or intended for implementation (MHz) ²	Any additional comments (e.g. duration of licences)
MRC	MRC & AOE	1	DVB-T, 64-QAM	3/4	1/8	Fixed	24.25	75%	95%	5 SD MPEG2	24.88	280 MHz	Public service multiplex
MRC	MRC & AOE	2	DVB-T, 16-QAM	2/3	1/4	Fixed	9.4	75%	95%	2 SD MPEG2	13.27	320 MHz	Public service multiplex

¹ E.g. fixed, portable outdoor/mobile, portable indoor.

² Refer Sections 2 and 3 on page 1 of this circular.

- 2
- a) Have you commenced analogue television switch-off?
 - b) If you have any such plans, when do you expect to have completed the analogue switch-off process?

Reply:

- a) No, Not yet**
- b) - TV analog UHF: June 2015**
- TV analog VHF: June 2020

- 3
- a) What is the percentage of viewer uptake of terrestrial television in your country, including those whose service provider uses terrestrial broadcast re-transmission (e.g. in cable networks)?
 - b) If possible, please also provide details of the number or proportion of users who receive television primarily by terrestrial means.

Reply:

- a) 95 %**
- b) - 1.16% TV ADSL**
- 4.20% TNT
- 26.51% Terrestrial Analogue
- 68.13% Satellite

- 4
- a) Indicate how many analogue television transmitters use channels in the frequency sub-band 694-790 MHz (as indicated in Resolution **232 (WRC-12)**).
 - b) How many are in the remaining part of the UHF band.

Reply:

- a) 75 channels are in use in the 694-790 MHz band**
- b) 262 channels are in use in the remaining part of UHF band**

- 5
- a) What frequencies/channels are currently used or intended to be used by digital terrestrial television broadcasting in your country? Please distinguish between those in use and those intended to be used.
 - b) If allotments/SFNs are in use, a sketch map of frequency allocations could be included, with an accompanying table of allocations, as shown in Annex 2. Otherwise, it might be possible to show main transmitters and channels, grouped in layers, in a table.

- c) Please indicate how many digital television assignments/allotments use channels in the frequency sub-band 694-790 MHz (as indicated in Resolution **232 (WRC-12)**), and
- d) How many are in the remaining part of the UHF band.

Reply:

- a) **Used : 470 – 790 MHz (channels 21-60)**
- b) **The SFN is used in some stations.
Morocco started an optimization of Geneva 2006 Plan based on MFN/SFN architecture and hasn't finished this optimization yet.
So, results aren't available at this stage.**
- c) **31 channels are in use in the 694-790 MHz band :**
 - **5 SFN**
 - **22 MFN**
- d) **190 channels are in use in the UHF band:**
 - **16 SFN**
 - **111 MFN**

- 6**
- a) Are those frequency bands also shared with other primary services?
 - b) If yes, please give details of those systems and their spectrum use.

Reply:

- a) **Yes (See answer b) below).**
- b) **According to the National Plan of Frequency, the band 470 – 862 MHz is allocated as following :**
 - **470 – 790 MHz: BROADCAST.**
 - **790 – 806 MHz: FIXE and MOBILE (excluding aeronautical mobile), allocated according to RR 5.316A, 5.316B, 5.317A.**
 - **806 – 862 MHz: FIXE and MOBILE (excluding aeronautical mobile), allocated according to RR 5.316A, 5.316B, 5.317A.**

- 7**
- a) Are those frequency bands also shared with secondary services such as PMSE (Programme Making and Special Events), radio astronomy or wind-profile radar?
 - b) If yes, please give details of those systems and their spectrum use.

Reply:

- a) **Yes**

b) According to the National Plan of Frequency, the secondary services are allocated in the 470 – 862 MHz as following :

- **470 – 790 MHz: Terrestrial Mobile services in secondary allocations, according to 5.312A.**
- **790 – 806 MHz: NO.**
- **806 – 862 MHz: NO.**

- 8**
- a) Do you foresee the adoption or expansion of television services broadcast using second-generation systems such as DVB-T2?
- b) If yes, please give indicative details of the planned transition, including any simulcast period.

Reply:

- a) **Yes, the subject is under discussion.**
- b) **Under study.**

- 9**
- a) Do you foresee a requirement for new and enhanced services, including HD and 3D television, on the terrestrial television platform?
- b) If yes, please give indicative details of the number and nature of services planned, and if known, the expected timeframe for their introduction.

Reply:

- a) **Yes, especially HD.**
- b) **Under study.**

- 10**
- a) Are there plans in your country to launch more multiplexes in the future?
- b) If yes, how many more and when? Please also indicate the expected timeframe for their introduction.

Reply:

- a) **Yes**
- b) **It depends on the demands expressed.**

- 11**
- a) What is the amount of spectrum you foresee that will be required for terrestrial television broadcasting, if plans in Questions 8, 9 and 10 are to be supported, and services identified in Questions 6 and 7 are to be taken into account? Please indicate the modes of transmission that will be used, and timeframes. If appropriate, a suggested form to express these requirements is shown in Annex 3.

Reply:

- a) **Under study.**