
To Administrations of Member States of the ITU, Radiocommunication Sector Members, ITU-R Associates participating in the work of Radiocommunication Study Group 6 and ITU-R Academia

Subject: Questionnaire on spectrum requirements for the future of sound and television broadcasting

References: Documents [6/93](#) and [6/249](#)

1 Study Group 6 (SG 6) is the ITU-R Study Group assigned to the Broadcasting service. Its scope covers radiocommunication broadcasting, including vision, sound, multimedia and data services principally intended for delivery to the general public.

2 SG 6 created a Rapporteur Group to look at the future spectrum requirements for the Broadcasting service in light of technical developments, decisions taken by WRC-03 and WRC-07 on the use of digital modulation in the HF Bands, and the changes to frequency allocations at WRC-97, WRC-07 and WRC-12, as part of the work in maintaining its catalogue of Reports and Recommendations.

3 One of the questions that needs to be addressed by SG 6 include how broadcast requirements are changing with the move to digital broadcast systems, and the introduction of new and enhanced broadcast services.

4 The following questionnaire, which is being sent to all Administrations and Sector Members, is designed to gather information on spectrum use by sound and television broadcasting in the bands allocated on a Regional¹ or global basis to terrestrial broadcasting (see Annex 1).

5 Administrations and Sector Members are also invited to make more detailed inputs addressing the matter of current and future spectrum requirements for radio and television broadcasting to the next meeting of WP 6A and SG 6.

6 Administrations and Sector Members are requested to submit responses to brsgd@itu.int by 17 October 2014.

David Barrett

Chairman SG6 Rapporteur Group on spectrum requirements
for the future of the broadcasting Service

¹ Regions 1, 2 or 3 as defined in Nos. 5.3 to 5.9 of the Radio Regulations.

QUESTIONNAIRE ON SPECTRUM REQUIREMENTS FOR THE FUTURE OF SOUND AND TELEVISION BROADCASTING

Name of the Administration:	Ministry of Trade, Tourism and Telecommunications, Republic of Serbia
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Name of the Sector Member:	
Contact person:	
E-mail address:	
Telephone number:	
What best describes your organisation? Commercial broadcaster/Public service broadcaster/ Service provider/ Other (please describe)	Government of the Republic of Serbia
The geographical area over which you operate:	

SECTION ONE – Television broadcasting

- 1)
 - a) Is your country still using analogue television?
 - b) If yes, has analogue television switch-off commenced?
 - c) If your country has any plans to switch-off analogue television:
 - i) When is the analogue switch-off process expected to be completed?
 - ii) How much extra spectrum will be required during the transition phase to digital terrestrial television broadcasting?

Reply:

a) Yes

b) No, analogue TV switch-off will start on February 28th 2015. The process of switchover will be done region by region. Switchover plan is as follows:

Allotment	Simulcast		Duration
	Beginning	End	
Avala	September 1 st 2014	February 28 th 2015	6 months
Besna kobila	October 1 st 2014	March 31 st 2015	6 months
Vrsac	September 1 st 2014	February 28 th 2015	6 months
Deli Jovan	November 1 st 2014	April 30 th 2015	6 months
Jastrebac	November 1 st 2014	April 30 th 2015	6 months
Kikinda	September 1 st 2014	February 28 th 2015	6 months
Kopaonik	November 1 st 2014	April 30 th 2015	6 months
Tornik – Ovcara	November 1 st 2014	April 30 th 2015	6 months
Rudnik – Crni Vrh (Jagodina)	September 1 st 2014	February 28 th 2015	6 months
Subotica – Sombor	September 1 st 2014	February 28 th 2015	6 months
Tupiznica	October 1 st 2014	March 31 st 2015	6 months
Cer – Maljen	November 1 st 2014	April 30 th 2015	6 months
Cot – Venac	September 1 st 2014	February 28 th 2015	6 months

c) i) Deadline for ASO is 17th of June 2015.

ii) During simulcast period, one layer will be used for digital TV broadcasting.

- 2) a) Please indicate how many analogue television transmitters are in operation in your country and in which bands.
b) What channel bandwidths are used for analogue television?
c) What is the spectrum requirement for analogue television in your country?

A proposed format for responses to question 2a) and 2b) is provided in Annex 1

Reply:

a) There are 85 analogue television transmitters in VHF and 657 analogue television transmitters in UHF band.

a) and b)

Country	Band		Number of Transmitting Stations*			
			Analogue Radio (Q11b & Q11c)	Digital Radio (Q13d & Q13h)	Analogue TV (Q2a & Q2)b	Digital TV (Q5b & Q5c)
	Channel bandwidth (MHz)				7 MHz in VHF and 8 MHz in UHF band	
XX	LF	148.5-283.5 kHz				
	MF	525-526.5 kHz				
	MF	526.5-1606.5 kHz				
	MF	1606.5-1705 kHz				
	HF	2.3-26.1 MHz**				
	VHF I	47-50 MHz				
		50-54 MHz				
		54-68 MHz				
		68-72 MHz				
		76-87.5 MHz				
	VHF II	87.5-108 MHz				
	VHF III	174-216 MHz			60(12 main)	
	VHF III	216-230 MHz			25(5 main)	
	UHF IV	470-694 MHz			448(135 main)	
	UHF V	694-790 MHz			144(80 main)	

	UHF V	790-890 MHz			65(59 main)	
	UHF V	890-960 MHz				
		1452-1492 MHz				
		11.7-12.5 GHz				
		12.5-12.7 GHz				
		40.5-42.5 GHz				
		74-76 GHz				

c) Analogue TV in Serbia is broadcasted in VHF (174-230MHz) and UHF(470-862MHz) frequency bands.

- 3) a) What is the percentage of viewer uptake of terrestrial television in your country?
b) If possible, please also provide details of the number or proportion of users who receive television primarily by terrestrial means by:
i) Fixed roof top antenna, or
ii) Portable indoor antenna.

Reply:

a) According to electronic communications market analysis provided by RATEL (Regulatory Body for Electronic Communications and Postal Services) in 2013, the percentage of viewer uptake of terrestrial television was 38%.

b) /

- 4) If your country has switched or is considering switching to digital terrestrial television broadcasting
a) What system standard is your country using or considering adopting (as specified in Recommendations ITU-R BT.1306 and BT.1877)?
b) When did your country start or when is it proposing to start the introduction of digital terrestrial television services?
c) Please provide further detail on the number of multiplexes in use, their technical specifications, the percentage of geographic area or population they cover or are intended to cover and the total spectrum use.

A proposed format for detailed responses is provided in Annex 2

Reply:

a) The chosen system is DVB-T2 (8 MHz multi-carrier (OFDM))

b) The Initial digital network was launched on 21 March 2012. Digital signal was broadcasted from 15 locations all around the country. This network made a digital test signal accessible to approximately 50% of citizens across Serbia. It was used for test purposes.

c)

Country	No of multiplexes	System & modulation	FE C	GI	Reception mode ²	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)	Any additional comments (e.g. duration of licences)
SRB	1	DVB-T2, 256-QAM	2/3	1/16	Fixed	36,9	94.69%	>95%	11 SD + 1 HD	36.9	8 MHz	until 17 th of April 2015

- 5)
- 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?
 - Please indicate how many digital terrestrial television transmitters are currently used or intended to be used and in which bands.
 - What channel bandwidth is used or intended to be used for digital terrestrial television in your country?

A proposed format for responses to question 5b) and 5c) is provided in Annex 1

Reply:

- The locations and frequencies used for the simulcast are as follows:**

Locations	UHF channel	Allotment
AVALA	28	AVALA
ARILJE - KLIK	56	OVČAR - TORNIK
BABUŠNICA - BERDUJ	31	TUPIŽNICA
BAJINA BAŠTA - OSLUŠA	56	OVČAR - TORNIK
BALJEVAC	32	KOPAONIK
BELA PALANKA - ŠPAJ	31	TUPIŽNICA
BEOGRAD - KANAREVO BRDO	32	AVALA
BEOGRAD - KRNJACA	54	AVALA
BEOGRAD - STOJIČINO BRDO	28	AVALA
BESNA KOBILA	59	BESNA KOBILA
BITOVIK	59	OVČAR - TORNIK
BRUS	23	KOPAONIK
BUKOVA GLAVA	54	BESNA KOBILA
VALJEVO - PEČINA	42	CER - MALJEN
VLADIĆIN HAN	32	BESNA KOBILA
SVETI ILIJA	59	BESNA KOBILA
VRŠAC	49	VRŠAC
GADŽIN HAN - MOSOR	32	JASTREBAC
GOČ	33	JASTREBAC
GRADAC - RAŠKA	47	KOPAONIK
GRDELICA	25	JASTREBAC
GUČEVO	52	CER - MALJEN

² E.g. fixed, portable outdoor/mobile, portable indoor.

DELI JOVAN	52	DELI JOVAN
DIMITROVGRAD - GOSEN	31	TUPIŽNICA
DONJI MILANOVAC - GLAVICA	52	DELI JOVAN
ZAGUBICA	44	DELI JOVAN
IVANJICA - BOŽAC	56	OVČAR - TORNIK
IVANJICA - ŠUTELJ	56	OVČAR - TORNIK
JAGODINA - CRNI VRH	38	RUDNIK - CRNI VRH JAGODINA
JASTREBAC	33	JASTREBAC
KIKINDA - TELEKOM	67	KIKINDA
KLADOVO - KULMA	52	DELI JOVAN
KOPAONIK - GOBELJA	32	KOPAONIK
KOSJERIC	56	OVČAR - TORNIK
KRUPANJ - ĐULIM	32	CER - MALJEN
KRUPANJ - JAGODNJA	32	CER - MALJEN
KURŠUMLIJA - SAMOKOV	31	JASTREBAC
KUČEVO	44	DELI JOVAN
LEBANE	22	JASTREBAC
LUČANI	56	OVČAR - TORNIK
LjUBOVIIA - NEMIĆ	32	CER - MALJEN
MAJDANPEK - STARICA	52	DELI JOVAN
MALI ZVORNIK - GRAD	52	CER - MALJEN
MALJEN	32	CER - MALJEN
MEDVEĐA - ĐOREVICA	24	JASTREBAC
NERESNICA - ZIMAN	44	DELI JOVAN
NOVA VAROŠ - CVETNJAK	34	OVČAR - TORNIK
NOVI PAZAR - ŠUTENOVAČKO BRDO	32	KOPAONIK
OVČAR	56	OVČAR - TORNIK
OSEČINA	32	CER - MALJEN
PIROT - CRNI VRH	31	TUPIŽNICA
PREDEJANE	35	BESNA KOBILA
PRIBOJ - BIĆ	66	OVČAR - TORNIK
PRIJEPOLJE - GRADINA	42	OVČAR - TORNIK
PRIJEPOLJE - KOŠEVINE	42	OVČAR - TORNIK
PROKUPLJE - HISAR	43	JASTREBAC
RUDNIK (1)	60	RUDNIK - CRNI VRH JAGODINA
SVRLJIG- BELOINJSKI VRH	29	TUPIŽNICA
SEVOJNO	56	OVČAR - TORNIK
SJENICA - RADIŠIĆA BRDO	28	OVČAR - TORNIK
SMEDEREVO	28	AVALA
SOKOBANJA - RUJEVICA	46	JASTREBAC
SUBOTICA	59	SOMBOR - SUBOTICA
SURDULICA	43	BESNA KOBILA
TORNIK	59	OVČAR - TORNIK
TUPIŽNICA	31	TUPIŽNICA
TUTIN	32	KOPAONIK
UŽICE - ZABUČJE	57	OVČAR - TORNIK
CRVENI ČOT	30	ČOT - VENAC
ČAJETINA	59	OVČAR - TORNIK
ŠLJIVOVICKI VIS	31	TUPIŽNICA
ŠTUBEJ	44	DELI JOVAN

The frequencies which are going to be used for the final network are:

Allotment	Channels per MUX's		
	1 MUX	2 MUX	3 MUX
Avala	22	28	45
Besna Kobila	35	39	43
Vršac	25	31	37
Deli Jovan	23	43	41
Jastrebac	27	38	42
Kikinda	32	55	29
Kopaonik	24	32	34

Tornik – Ovčar	23	36	39
Rudnik – Crni vrh (Jagodina)	26	29	35
Sombor	40	43	34
Subotica	40	43	29
Tupižnica	22	25	28
Cer – Maljen	32	34	37
Čot – Venac	24	30	41

After the decision on use of 700MHz band (afterwards the WRC-15 conference), replacement of the channel for MUX2 in Kikinda with another channel (outside of the 700MHz band) will be carried out, through the international coordination process.

b) There are currently 79 digital transmitters in operation. As for the final network, the intention is to use 386 transmitters for 3 MUX (all of them working in UHF IV band, except MUX2 in Kikinda, until WRC-15).

Country	Band		Number of Transmitting Stations*			
			Analogue Radio (Q11b & Q11c)	Digital Radio (Q13d & Q13h)	Analogue TV (Q2a & Q2)b	Digital TV (Q5b & Q5c)
	Channel bandwidth (MHz)					8MHz
XX	LF	148.5-283.5 kHz				
	MF	525-526.5 kHz				
	MF	526.5-1606.5 kHz				
	MF	1606.5-1705 kHz				
	HF	2.3-26.1 MHz**				
	VHF I	47-50 MHz				
		50-54 MHz				
		54-68 MHz				
		68-72 MHz				
		76-87.5 MHz				
	VHF II	87.5-108 MHz				
	VHF III	174-216 MHz				
	VHF III	216-230 MHz				
	UHF IV	470-694 MHz				52- simulcast (385 planned for the final network)
	UHF V	694-790 MHz				25 - simulcast (1 planned for the final network until WRC-15)
	UHF V	790-890 MHz				2 - simulcast
	UHF V	890-960 MHz				

		1452-1492 MHz				
		11.7-12.5 GHz				
		12.5-12.7 GHz				
		40.5-42.5 GHz				
		74-76 GHz				
* Transmitting stations please include “main stations” and “relay stations.” Please use parenthesis to indicate stations that have still to be brought into use ** The bands 3900-3950^D, 3950-4000^D kHz; the bands for tropical broadcasting: 2300-2498, 3200-3400^D, 4750-4995^D, 5005-5060^D kHz and the Article 12 Bands 5 900-5 950^D, 5 950-6 200, 7 200-7 300, 7 300-7 400^D, 7 400-7 450, 9 400-9 500^D, 9 500-9 900, 11 600-11 650^D, 11 650-12 050, 12 050-12 100^D, 13 570-13 600^D, 13 600-13 800, 13 800-13 870^D, 15 100-15 600, 15 600-15 800^D, 17 480-17 550^D, 17 550-17 900, 18 900-19 020^D, 21 450-21 850, 25 670-26 100. ^D Resolution 517 (Rev.WRC-07) applies. In the HF bands subject to Article 12 see also No. 5.134.						

c) The channel bandwidth is 8 MHz.

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

Reply:

a) The only band shared with other primary services (mobile and fixed, except aeronautical mobile services) is 790-862MHz band.

b) Allocation plan of radio-frequencies foresees that, after ASO and the latest till 17. June 2015, part of the spectrum which corresponds to this band will be used for Digital Dividend 1 and it will be based on service and technology neutrality.

- 7) a) Are the terrestrial television frequency bands also shared with secondary services used for the support of broadcasting such as SAB/SAP (services ancillary to broadcasting/production), or other types of services such as radio astronomy or wind-profile radar?
- b) If yes, please give details of those systems and their spectrum use.

Reply:

a) and b) Secondary services in these bands are assistance for the hearing impaired (in line with ERC/REC 70-03), SAP/SAB, wind profile radar, aeronautical radio navigation and radio microphones and hearing aids (in line with ERC/REC 70-03).

- 8) a) Does your country foresee a requirement for new and enhanced services, including multimedia and data applications, HD, 3D, and UHD 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) **We will have SD and HD programmes within the MUX1. Also, HD programme is already one of the programmes broadcasted within the multiplex in the Initial network.**
- b) **Other planned enhanced services include, for example, Pay TV, e-banking, e-shopping, services for disabled people (audio description for the blind or partially sighted as well as subtitles), and automatic network and service updates.**

- 9) 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) **MUX1 and MUX2 will be launched until 17th of June 2015 the latest. MUX3 will be launched after ASO.**
- b) **Additional multiplexes shall be launched and filled only if there is a market need and if it is financially feasible to do so.**

- 10) a) What is the amount of spectrum your country foresees will be required for terrestrial television broadcasting, taking into consideration the responses to Questions 5, 6, 7, 8, and 9? Please indicate the modes of transmission that will be used, and timeframes.

Reply: a) Already answered (questions 5, 6, 7, 8 and 9).

SECTION TWO – Sound broadcasting

- 11) a) What analogue sound broadcasting standards are used in your country and what bands are they operating in?
- b) Please indicate how many analogue radio transmitters are in operation in your country and in which bands.
- c) What channel bandwidths do they use?

A proposed format for responses to question 11b) and 11c) is provided in Annex 1

Reply:

- a) The standards used for analogue sound broadcasting in Serbia are: FM in VHF II (87.5-108 MHz) and AM in MF band (525 – 1605 kHz).
- b) and c)

Country	Band		Number of Transmitting Stations*			
			Analogue Radio (Q11b & Q11c)	Digital Radio (Q13d & Q13h)	Analogue TV (Q2a & Q2)b	Digital TV (Q5b & Q5c)
	Channel bandwidth (MHz)		MF- 9kHz VHF II 300kHz			
XX	LF	148.5-283.5 kHz				
	MF	525-526.5 kHz				
	MF	526.5-1606.5 kHz				
	MF	1606.5-1705 kHz	11			
	HF	2.3-26.1 MHz**				
	VHF I	47-50 MHz				
		50-54 MHz				
		54-68 MHz				
		68-72 MHz				
		76-87.5 MHz				
	VHF II	87.5-108 MHz	483			
	VHF III	174-216 MHz				
	VHF III	216-230 MHz				
	UHF IV	470-694 MHz				
	UHF V	694-790 MHz				
	UHF V	790-890 MHz				
	UHF V	890-960 MHz				
		1452-1492 MHz				
		11.7-12.5 GHz				
		12.5-12.7 GHz				
		40.5-42.5 GHz				

		74-76 GHz				
* Transmitting stations please include “main stations” and “relay stations.” Please use parenthesis to indicate stations that have still to be brought into use ** The bands 3900-3950^D, 3950-4000^D kHz; the bands for tropical broadcasting: 2300-2498, 3200-3400^D, 4750-4995^D, 5005-5060^D kHz and the Article 12 Bands 5 900-5 950^D, 5 950-6 200, 7 200-7 300, 7 300-7 400^D, 7 400-7 450, 9 400-9 500^D, 9 500-9 900, 11 600-11 650^D, 11 650-12 050, 12 050-12 100^D, 13 570-13 600^D, 13 600-13 800, 13 800-13 870^D, 15 100-15 600, 15 600-15 800^D, 17 480-17 550^D, 17 550-17 900, 18 900-19 020^D, 21 450-21 850, 25 670-26 100. ^D Resolution 517 (Rev.WRC-07) applies. In the HF bands subject to Article 12 see also No. 5.134.						

- 12) a) Is additional spectrum required for growth in the analogue sound broadcasting platform in your country?
- b) If yes, how much additional spectrum is required?

Reply:

- a) **No**
- b) **/**

- 13) a) Is your country considering introducing, or has it already introduced digital sound broadcasting?
- b) If yes, which system standards are used or are being considered for adoption (as specified in Recommendations ITU-R BS.1114, BS.1514, BS.1615)?
- c) When did your country start or when does it propose to start digital sound broadcasting?
- d) What channel bandwidths is your country using or considering using?
- e) What frequencies are currently used or intended to be used by digital sound broadcasting in your country? Please distinguish between those in use and those intended to be used.
- f) What is the percentage of the population that is covered by digital sound broadcasting by direct reception in your country?
- g) What additional spectrum was required or is considered to be required for the transition to digital sound broadcasting?
- h) Please indicate how many digital radio transmitters are currently used or intended to be used and in which bands.
- i) What is the spectrum requirement for digital sound broadcasting in your country?
- j) If your country has introduced digital sound broadcasting, how long will it continue to use analogue sound broadcasting?

A proposed format for responses to question 13d) and 13h) is provided in Annex 1

Reply:

a) We are considering introducing digital sound broadcasting, but the standard is still not chosen because the existing ones are obsolete. We are waiting for the new standard for digital audio broadcasting to appear.

b) /

c) /

d) /

e) /

f) /

g) /

h) /

i) /

j) /

14) a) Are the terrestrial sound broadcasting bands also shared with other primary services in your country?

b) If yes, please give details of those systems and their spectrum use.

Reply:

a) No.

b) /

15) a) Are the terrestrial sound broadcasting bands also shared with secondary services e.g., used for the support of broadcasting such as SAB/SAP (services ancillary to broadcasting/production), or other types of services such as radio astronomy or wind-profile radar?

b) If yes, please give details of those systems and their spectrum use.

Reply:

a) No.

b) /

16) a) What is the amount of spectrum your country foresees will be required for terrestrial sound broadcasting, taking into consideration the responses to the previous questions? Please indicate the modes of transmission that will be used, and timeframes.

Reply: /

SECTION THREE –Multimedia broadcasting

- 17)
- a) Is your country considering introducing or has already introduced multimedia broadcasting?
 - b) If yes which system standards is your country using or considering using (as specified in Recommendations ITU-R BT.1833 and BT.2016)?
 - c) In which Bands?
 - d) When did your country start or when does it propose to start digital multimedia broadcasting?
 - e) What are the current and proposed population coverages for digital multimedia broadcasting in your country?
 - f) What is the spectrum requirement for multimedia broadcasting in your country?
 - g) If your country has introduced digital multimedia broadcasting, please provide further information to describe the system, its implementation and any limitations on its operation.

Reply:

- a) **We are considering introducing multimedia broadcasting.**
- b) /
- c) **Multimedia broadcasting will be introduced in Digital Dividend 1 band, and also Digital Dividend 2 band, after the decision is made at the WRC-15 conference.**
- d) /
- e) /
- f) /
- g) /

ANNEX 1

Suggested form of presentation of reply to Questions 2, 5, 11, and 13:

Country	Band		Number of Transmitting Stations*			
			Analogue Radio (Q11b & Q11c)	Digital Radio (Q13d & Q13h)	Analogue TV (Q2a & Q2)b	Digital TV (Q5b & Q5c)
	Channel bandwidth (MHz)		VHF II 300kHz		8 MHz	8MHz
XX	LF	148.5-283.5 kHz				
	MF	525-526.5 kHz				
	MF	526.5-1606.5 kHz				
	MF	1606.5-1705 kHz				
	HF	2.3-26.1 MHz**				
	VHF I	47-50 MHz				
		50-54 MHz				
		54-68 MHz				
		68-72 MHz				
		76-87.5 MHz				
	VHF II	87.5-108 MHz				
	VHF III	174-216 MHz				
	VHF III	216-230 MHz				
	UHF IV	470-694 MHz				
	UHF V	694-790 MHz				
	UHF V	790-890 MHz				
	UHF V	890-960 MHz				
		1452-1492 MHz				
		11.7-12.5 GHz				
		12.5-12.7 GHz				
		40.5-42.5 GHz				
		74-76 GHz				

* Transmitting stations please include “main stations” and “relay stations.” Please use parenthesis to indicate stations that have still to be brought into use

** The bands 3900-3950^D, 3950-4000^D kHz; the bands for tropical broadcasting: 2300-2498, 3200-3400^D, 4750-4995^D, 5005-5060^D kHz and the Article 12 Bands 5 900-5 950^D, 5 950-6 200, 7 200-7 300, 7 300-7 400^D, 7 400-7 450, 9 400-9 500^D, 9 500-9 900, 11 600-11 650^D, 11 650-12 050, 12 050-12 100^D, 13 570-13 600^D, 13 600-13 800, 13 800-13 870^D, 15 100-15 600, 15 600-15 800^D, 17 480-17 550^D, 17 550-17 900, 18 900-19 020^D, 21 450-21 850, 25 670-26 100.

^D Resolution 517 (Rev.WRC-07) applies. In the HF bands subject to Article 12 see also No. 5.134.

ANNEX 2

Suggested form of presentation of reply to Question 4: *If your country has switched or is considering switching to digital terrestrial television broadcasting, what system standards is it using or considering adopting? When did your country start, or when is it proposed to start the introduction of digital terrestrial television services? Please provide further detail on the number of multiplexes in use, their technical specifications, the percentage of geographic area or population they cover or are intended to cover and the total spectrum use.*

A sample response is shown in *italics* for guidance only.

Country	No of multiplexes	System & modulation	FEC	GI	Reception mode ³	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)	Any additional comments (e.g. duration of licences)
Serbia	<i>3</i>	<i>DVB-T, 64-QAM</i>	<i>2/3</i>	<i>1/32</i>	<i>Fixed</i>	<i>24.10</i>	<i>98.0%</i>	<i>99.2%</i>	<i>9 SD MPEG2</i>	<i>153.6</i>	<i>256</i>	<i>Public service multiplexes licensed until 2025</i>
	<i>3</i>	<i>DVB-T, 64-QAM</i>	<i>3/4</i>	<i>1/32</i>	<i>Fixed</i>	<i>27.10</i>	<i>75.0%</i>	<i>90.0%</i>	<i>11 SD MPEG2</i>			<i>Licensed until 2030</i>
	<i>1</i>	<i>DVB-T2, 64-QAM</i>	<i>2/3</i>	<i>1/4</i>	<i>Portable indoor</i>	<i>22.6</i>	<i>-</i>	<i>60%</i>	<i>3 HD MPEG4</i>	<i>22.6</i>		<i>From 2017</i>

³ E.g. fixed, portable outdoor/mobile, portable indoor.