

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

This questionnaire can be completed online at the following web page:

<https://extranet.itu.int/rsg-meetings/sg6/wp6a/Lists/DTTB%20Questionnaire/overview.aspx>

Login as: **Username:** (your TIES username)@ties.itu.int
 Password: (your TIES password)

NOTE - Electronic versions of Annexes 1, 2 & 2 can be found under QUESTIONNAIRE in the WP 6A Share Folder on the WP 6A Sharepoint site.

Name of the Administration/Sector Member: Pologne

For sector members please indicate the geographical area over which you operate:

Contact person: Michal Polzun, Ministry of Administration and Digitization, Poland

E-mail address: michal.polzun@mac.gov.pl Telephone number: +48 22 522 50 41

- 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:

See Annex 1

- 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
- b) June 31st, 2013

- 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) approx. 35%
- b) 27% (14% - digital terrestrial TV)

- 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) 150
- b) 388

- 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) channels currently used: 21-25; 28-39; 41-58; 60-62; 64
- b) see annex 2
- c) 40
- d) 127 (including 790-862 MHz band); 114 (without 790-862 MHz band)

- 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) No
- b) -

- 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) Programme Making and Special Events

- 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, depending on results of tests
- b) To be determined

- 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, HD already in two MUXes
- b) see answer to question 1

- 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) 3 more MUXes after 2014 (see also answer to question 11 given in annex 3)

- 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) See annex 3

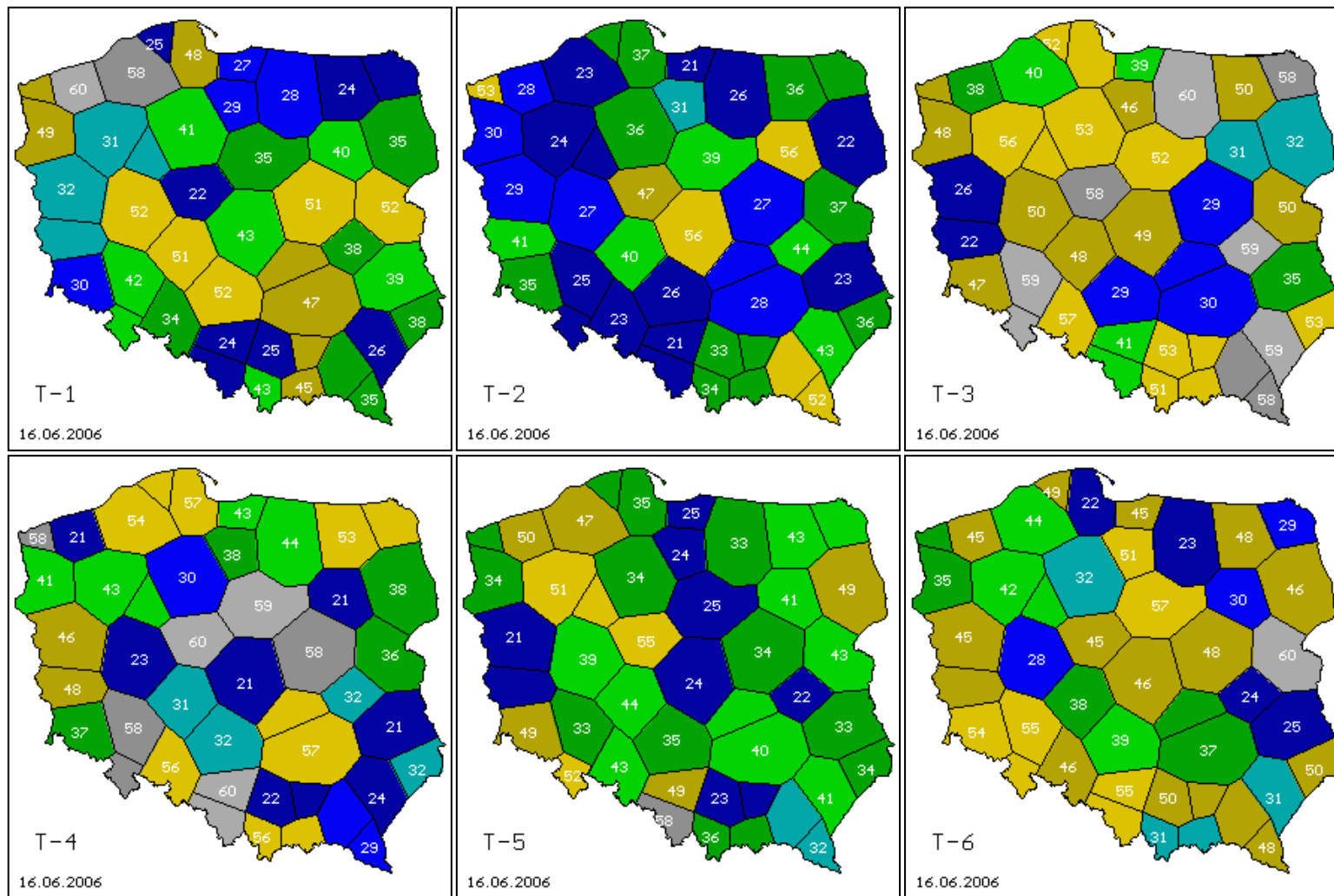
ANNEX 1

| 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) |
|---------|-------------------|---------------------|-----|-----|-----------------------------|-------------------------------|--|---|--------------------------|-----------------------|---|---|
| POL | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | 96.0% | 95% | 1 HD MPEG4 6 SD MPEG4 | 74,64 | 245 | MUX1 - 3 slots for public FTA programmes licensed until April 2014 Beauty contest planned to select its users after that date 4 slots for commercial FTA programmes licensed until 2024 |
| | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | 95% | 97% | 8 SD MPEG4 | | | MUX2 - Commercial FTA programmes licensed until 2024 |
| | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | 58% | 98% | 1 HD MPEG4 6 SD MPEG4 | | | MUX3 - Public FTA programmes licensed until 2024 |

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

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

ANNEX 2



ANNEX 3

| Country | No of multiplexes | System & modulation | FEC | GI | Reception mode ³ | Capacity per multiplex (Mb/s) | Intended percentage population coverage | Content per multiplex | Total capacity (Mb/s) | Total spectrum bandwidth needed (MHz) ⁴ | Any additional comments including time frames |
|---------|-------------------|--|------------|------------|----------------------------------|-------------------------------|---|-----------------------|-----------------------|--|---|
| POL | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | >95% | MPEG4 SD + HD | 74,64 | Approx. 160 | These rows represent multiplexes shown in the table in annex 1 (currently in use), use of which will be continued but for rearranged channels after ASO (see annex 2). Their content might be subject to change (i.e. introduction of new HD channels apart of two existing ones) as well as: modulation scheme, FEC and GI. Consequently capacity per multiplex will change. Also they might migrate to DVB-T2 (see questions 8 & 9). |
| | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | 97% | MPEG4 SD + HD | | | |
| | 1 | DVB-T, 64-QAM | 3/4 | 1/8 | Fixed | 24.88 | 98% | MPEG4 SD + HD | | | |
| | 2 | <i>To be determined; possibly DVB-T2</i> | <i>tbd</i> | <i>tbd</i> | <i>Fixed</i> | <i>tbd</i> | <i>tbd</i> | MPEG4 SD + HD | <i>tbd</i> | Approx. 160 | After 2014 |
| | 1 | <i>To be determined; possibly DVB-T2</i> | <i>tbd</i> | <i>tbd</i> | <i>Portable outdoor / mobile</i> | <i>tbd</i> | <i>tbd</i> | MPEG4 SD | <i>tbd</i> | | After 2014 |

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

⁴ Refer Sections 2 and 3 on page 1 of this circular.