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Electronic Communications Networks and Services

**Radio Spectrum Policy Group**

**RSPG Secretariat**

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## **RADIO SPECTRUM POLICY GROUP**

### **24<sup>th</sup> Progress Report of the RSPG Sub-Group**

#### **on cross-border coordination**

REPORT

RSPG SUB-GROUP

« GOOD OFFICES »

Web-meeting, 19<sup>th</sup> May 2020

The Sub-Group has held one web-meeting, 19<sup>st</sup> May, with many exchanges in advance of the meeting. This enabled overall discussion with satisfying results although a face to face meeting could have facilitated progress in certain cases.

**TV, T-DAB and FM interference around Italy**

For the details of the interference situation, please refer to the meeting report in annex 2:

- **For TV interference**, there is **no more interference to channels in operation in neighbouring countries except with Croatia**. Interference will cease when these Italian broadcaster will switch off, in accordance with the Italian migration plan.
- **For TDAB interference**, AGCOM is requested by law to develop a T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements). The prerequisite is for Italy to reach cross-border agreement with all neighbouring countries. Negotiations for the Adriatic cluster, which is the area where a plan has not yet been finalised, have progressed well since the previous RSPG Plenary but 2 additional meetings are probably necessary. The good offices encouraged to maintain the date of the next meeting (23-24 June) for the Adriatic cluster, even if it needs to be turned into a web-meeting, to ensure progress on this matter. Once the plan is developed, Italy would be in a position to migrate the existing TDAB transmissions not respecting the international rights to the agreed Italian channels. This will solve the interference to Slovenia, Croatia and other countries.
- **For FM interference**, no progress could be done, due to the Covid-19, except for one case with France. The good offices reminded Italy that solution to interference of neighbouring countries priority channels have to be found urgently. The Representative from the Commission stressed that article 9 of the Framework Directive 2002/21/EC as well as the new European Electronic Communications Code (article 45) oblige Member States to respect the international law and agreements (ie GE-84 and the RR in this context).

**Review of the progress in the implementation of the 700 MHz band within EU**

Several Members States, as well as Observers, have provided progress of implementation of the 700 MHz band (see the details in the meeting report in annex 2). In particular, Croatian Government has adopted its National Roadmap Plan on 7<sup>th</sup> May 2020.

All member states are encouraged to update the information on the RSPG website regarding the 700 MHz awards process (<https://rspg-spectrum.eu/category/awards/>).

### ***Transition issue between Italy and Croatia***

The good offices discussed the elements given by Italy on the progress for making available additional channels to enable Croatia to transition to its final plan in November.

Italy is carrying out the process for release of the local channels in the whole Italian territory on a voluntary basis, which should be finalized on 30th May. Italy will still need to analyse whether the remaining transmissions which may interfere Croatia on those channels may be migrated to other channels. **Italy has been requested to provide this analysis by the end of June and to ensure that the time-frame for this migration should take place in advance of the Croatian migration, therefore, before the end of September.**

### ***Other issues***

The representative from the Commission raised the issue of remaining interference from Belgium to Luxembourg in the 700 MHz band. Three Belgian transmitters are still using channel 57 for broadcasting, in particular on a site close to Luxembourg (Léglise, 100 kW), which may cause significant interference to terminal reception in a large part of Luxembourg territory. Discussions are ongoing in order to find a solution in a relatively short timeframe»

## **Review of the cross-border negotiation with countries outside EU**

### **Ukraine**

A web-meeting was organized with Ukrainian representatives taking into account their letter received in January and the difficulty of interference from Ukraine to EU countries (notably Romania and Hungary) which may impact 5G deployment at the border.

The representative from the Ukrainian NRA (NCCIR) and broadcasting authority (National TV and Radio Broadcasting Council of Ukraine) presented during this meeting the situation they face with a willingness to implement 5G in the 700 MHz and 800 MHz bands. The remaining analogue transmissions will be switched off before the end of 2020, but this will not significantly change the interference situation within EU, due to the large number of digital TV transmissions in the 700 MHz and 800 MHz bands.

The main issue for Ukraine is financial, ie which mechanism should be implemented to compensate the release by the two main broadcasters (Zeonbud and ETER) with a cost of approximately 8.35 M€. The broadcasters are unwilling to wait for one or two years to recover such costs after completion of tenders and they are doubts that the State Budget will be able to bear all of these costs against the background of ongoing heavy financial situation, incl. "corona" breakdown.

Some negotiations are ongoing between the Commission and Ukraine government about such financing. The Ukrainian representatives were invited to provide later some feedback on whether

their government expects that it will enable to move fast on making available the 700 and 800 MHz band for MFCN.

### **Russian Federation and Belarus**

Although there is no decision yet, the agreed principle in Russia is that the 700 MHz will be for mobile services. Therefore, it is not yet clear when broadcasting will be moved out of the 700 MHz band.

Belarus, which is a significant issue for Lithuania, has a preliminary plan for a migration starting in 2021 up to 2023, but has difficulties in terms of financing the cost of migration.

### **North Africa**

Portugal and Morocco have reached an agreement. Morocco is not expected to be an issue since the 700 MHz is allocated to ECS in the NFTA.

No progress for Italy and Malta regarding Libya, Tunisia and Algeria.

### **Balkan area**

Cooperation with all countries (e.g. Bosnia, Serbia, Albania, etc.) works well.

### **Turkey**

Cyprus indicated that they managed to have a unified Cypriot plan (having in mind the Greek Cypriot and the Turkish Cypriot needs). However, this Plan could not be registered in GE-06 ITU Plan, because of Turkey 's objection. Therefore, its status is "non-interference and no-protection", which is very unfair (no equal access) situation.

### **Situation regarding cross-border coordination in the 3.4-3.8 GHz band**

Several Members States, as well as Observers, have provided progress regarding cross-border coordination in the 3.4-3.8 GHz band (see the minutes of the meeting in annex 2 for the detailed elements).

A questionnaire was drafted to gather information regarding the cross-border coordination issues in this band and modified during the meeting. This questionnaire will be issued to the RSPG representatives immediately after this Plenary.

### **Next meeting**

The next meeting is planned as a web-meeting on 15th September (morning)

**ANNEX 1**

**Questionnaire on cross-border agreements (EU and non EU) in the 3.4-3.8 GHz band**

**5G / MFCN cross-border agreements:**

- Do you have some MFCN use which is not in conformity with EU decision (xx) and when this legacy use is expected to switch-off?
- What are the status of cross-border agreements applicable to 5G/MFCN in the 3.4-3.8 GHz with each of neighbouring countries (EU and non EU)? Do these agreements include elements regarding synchronization and frame structures? Is there a difficulty regarding the synchronisation with legacy MFCN networks (e.g. WiMax)?
- How the risk of interference from 5G base station to 5G base station at the border is addressed? Is there any procedure for the case when real interference occurs (e.g. method of measurement, exchange of information, common measures, etc)?

**5G / others services cross-border agreements:**

- Could you describe the elements of cross-border agreements regarding the coexistence between 5G and other services in the 3.4-3.8 GHz band, (concerned services, coexistence method, expected impact on 5G deployment ...)?

**Cross border negotiation difficulties (EU and non EU)**

- Do you meet any difficulty in current cross border negotiations (EU and non EU)?
- Could such difficulty impact 5G deployment and why?

ANNEX 2

REPORT

RSPG SUB-GROUP

« GOOD OFFICES »

Web-meeting, 19<sup>th</sup> May 2020

**1. Situation regarding interference around Italy**

**TV interference issues**

**Actual interference from Italy to Croatia**

As reported in an update of the response to the questionnaire, Italy has already switched off the channels 50-52 in the provinces of Oristano, Sassari (Sardinia), Imperia, Savona, Genova, La Spezia (Liguria), while in Tuscany and Lazio the process started but will be concluded at the end of May 2020.

Regarding the channels 51-53, the process started at the beginning of May 2020 and will be ended at the end of May 2020.

Croatia has not measured any progress regarding TV interference from Italian TV stations in relation to the HRV channels listed in the January report of “Good Office” meeting, which are necessary for the interference free TV migration and operation below 694MHz.

All these channels being used by local programme, interference will cease when the broadcaster will have to switch off, in accordance with the future migration plan.

**Request from Croatia to Italy to make available additional channels to enable transition to the final plan**

The meeting discussed the elements given by Italy on the progress for making available these channels

- On 5th of February 2020, the Ministry of Economic Development (MISE) in Italy issued a public advise (see <https://www.mise.gov.it/index.php/it/normativa/notifiche-e-avvisi/2040745-avviso-pubblico-rilascio-anticipato-delle-frequenze-televisive-in-ambito-locale> ) about the anticipated release of the local channels in the whole Italian territory on a voluntary basis, asking to present an expression of non-binding interest. At the end of the deadline, about 200 broadcasters for 666 sites/channels presented interest to this process.
- On 30 April 2020 MISE issued a public advise (see <https://www.mise.gov.it/index.php/it/33-comunicazioni/televisione/2041033-rilasci-anticipati-delle-frequenze-televisive-ai-sensi-dell-art-4-comma-9-del-dm-19-giugno->

2019 ), regarding the effective release of the frequencies in the time frame 4 - 30 May 2020. Each broadcaster must communicate to MISE the real switched off of the transmitters. MISE will check every case and will start the process of refunding as foreseen by Law.

Therefore, Italy will know precisely only after 30<sup>th</sup> May the exact situation. Italy is requested to send to the good offices the list of transmitters which have effectively switched off before 1<sup>st</sup> July.

Since the same channel can be used by several transmitters, this information will not be sufficient to understand the possibility to protect the first Croatian MUX operating on channels 21, 22, 23, 43 at the Croatian coast and the second MUX including transition of other multiplexes in operation (e.g. Pay TV) on the channels 27, 34, 41, 29 and 35.

Croatia indicated that the process of migration of pay TV will be carried out in November 2020.

Therefore, Italy is requested to analyse rapidly whether the remaining transmissions which may interfere Croatia on those channels may be migrated to other channels:

- Italy is requested to provide this analysis by the end of June.
- The time-frame for this migration should take place in advance of the Croatian migration, therefore, before the end of September.

### **Other countries**

Other countries confirmed that they currently do not experience any television interference problems.

### **TDAB interference issues**

As discussed in previous meetings, the development by AGCOM of a T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements) can be carried out only after the successful conclusion of ongoing negotiations, which aims to optimize the GE-06 initial plan, taking into account that the original planning was sometimes based on allotments and on DTV rather than DAB. After the adoption of the new T-DAB frequency plan, Italy will migrate the current TDAB transmitters not respecting the international rights, causing interference to Slovenia, Croatia and other countries, in order to resolve the interference and insure future interference free operation in VHF III for referred countries. The migration of the interfering TDAB transmitters should factor in the span of time needed for the additional meetings of the Adriatic cluster to be held (see below), the time for Agcom to adopt the DAB plan and the time for the Italian Ministry (MISE) to take all the implementing measures for the DAB plan.

With regard to the Adriatic negotiation rounds, a multilateral meeting took place in Italy on 18-19 of February 2020 between ITA-SVN-HRV-MNE-BIH-ALB-GRC (Adriatic cluster). Good progress was obtained regarding the definition of the coordination areas and the distribution of the blocks. The next meeting has been planned for 23-24 June in Montenegro and it is

expected that a further meeting may be needed before the agreement can be finalized and signed.

The meeting discussed the risk of additional delays if the June meeting is cancelled. Adriatic cluster participants were encouraged to maintain the date of the meeting, even if it needs to be a web-meeting, to ensure progress on this matter.

### **T-DAB interference between Italy and Slovenia**

Slovenia did not detect any changes in the situation and stressed that measurement values are providing real situations (in contrary to simulations). They noted that the main problem are DAB stations operating on frequencies that do not respect the GE06 agreement - some stations (e.g. Porzus) are located close to the border with Slovenia. T

The meeting discussed discrepancies between simulation and measurement. M.Zilinskas confirmed that simulations using ITU-R Recommendation P.1812 are giving results close to 39 dB $\mu$ V/m that would confirm those made by Italy, well below the measured level of 67 dB $\mu$ V/m.

Slovenia stressed that in order to simulate measured signal levels the actual antenna pattern needs to be used. Slovenia confirmed that the signals measured at various locations are made correctly and, even further, the signal from Monte Porzus can be received on a commercial DAB radio on board car. For Slovenia, the only solution is that Italy switches to a coordinated channel.

It was suggested that the explanation is probably in relation with the real antenna which is used, noting that the 35 dB attenuation of the project in the direction of Slovenia is hardly realistic.

Italy is therefore asked to measure the antenna diagram of the station's in Porzus on channel 12C as early as the pandemic allows it.

### **T-DAB interference between Italy and Croatia**

Croatia reported that there was no progress regarding DAB interference on DAB blocks 12A, 12B, 12C, 12D and 10A. There are repeated requests from the HRV network operator and broadcasters for commercial operation of DAB in Croatia, so resolving of the Italian DAB interference is a prerequisite for commercial introduction and development of digital terrestrial radio in Croatia.

Italy stated that the issue of interferences is likely to be overcome, because the process triggered by the signature of the agreement with the concerned Adriatic countries, coupled with the adoption of both the T-DAB Agcom's plan and its implementing measures, could make available new frequencies to be allocated to the interfering DAB stations. (Therefore, the latter could be moved out of the interfering channels see above).

### **FM interference issues**



Due to the Covid-19 pandemic issue, Italy stressed that no progress could be done except with France.

The meeting discussed the discrepancies between the propagation model and the measurements. It was concluded that ITU-R Recommendation P.1546 is systematically underestimating the field strength and should not be used in assessing the interference. The recommendation ITU-R P.1812 provides results which are consistent with the use of Fresnel-Deygout model and with the measurement results, so that this recommendation should be used for assessing interference.

### **FM interference between Italy and Croatia**

Croatia reported that there was no progress regarding FM interference situation, in particular to the HRV stations presented in the priority list at the last “Good Office” meeting.

The meeting reminded that solutions on FM priority interference cases have to be found urgently, starting with the co-channel interferers. In that respect, Italy is requested to proceed with solutions to eliminate or decrease interference level of the Italian stations affecting these priority programmes especially long standing interference problem with the station from priority list Biokovo 89.7 MHz.

The only solution to protect Biokovo would be to find other channels for Play Capital and Radio Kiss transmitters (co-channel), even if this is at the expense of other Italian FM programmes, in order to protect this priority Croatian programme. Therefore, Italy is requested to analyse the situation and to inform the good offices of the solution, 15 days before the next good offices meeting.

### **FM interference between Italy and Slovenia**

Slovenia reported that there was no progress regarding FM interference situation

### **FM interference between Italy and Malta**

Malta informed the meeting about a new Italian project on the 91.6 MHz transmitter which was interfering the Maltese programme on 91.7 MHz. The latest measurements undertaken by Malta indicate an improvement to the interference situation since the Italian interfering signal on 91.6 MHz was not received. However, Malta will be carrying out further measurements to determine whether this improvement is due to exceptional propagation conditions or otherwise. For other interference cases, measurements are showing that the situation has not improved.

### **FM interference between Italy and France**

France informed the meeting that the Italian project consisting in changing the location and antenna of the FM site in Bonifacio (Nostalgie 88.3 MHz) would not really improve the situation, with still be a significant loss of coverage for the programme due to the Italian interference (Radio DJ 88.2 MHz). It was also clarified that the antenna currently used in Bonifacio is fully compliant with the GE-84 right (1 kW with 10 dB attenuation in the direction of Sardegna).

Italy stated that some clarifications regarding the comments raised by France will be sent in the next days.

Italy considered that the French alternative solution, to shift Nostalgie to 88.4 MHz to Monte Corbu would severely interfere RAI (88.4 MHz Sassari from M.Oro). France objected to this conclusion since there is a need to take also into account existing interference from other Italian FM programmes like Badde Urbara (88.350 MHz) and Monte Limbara (88.6 MHz). According to France, these Italian sites seem to reduce a lot the M.Oro Sassari coverage in 88.4 MHz, so that the RAI's coverage loss linked to the moving to (88.4 MHz) in Bonifacio seems negligible.

Italy and France are invited to exchange technical information such as antenna diagram for all stations which influence the coverage of 88.4 MHz Sassari from M.Oro, in order to check the alternative proposal from France.

To have a clear picture, Italy asked France to provide the real antenna pattern of Monte Corbu, because the previously one was an omnidirectional antenna.

The Representative from the Commission stressed that article 9 of the Framework Directive 2002/21/EC as well as the new European Electronic Communications Code (article 45) oblige Member States to respect the international law and agreements (ie GE-84 and the RR in this context).

## **2. Update of the situation regarding the 700 MHz band**

Updated information was received from Italy, Portugal, Cyprus, Croatia, Greece, Turkey.

**Italy:** See above (Italy/Croatia)

**Portugal:** A letter has been sent on 2<sup>nd</sup> of April to the European Commission (Mr. Roberto Viola) referring the suspension of the DTT network process for releasing the band 694-790 MHz, for reasons of force majeure, and the decision of postponing the deadline of 30th of June of 2020 for allowing the use of the 694-790 MHz (and other bands, namely 900 MHz, 1800 MHz, 2100 MHz, 2600 MHz and 3.6 GHz) by ECS.

In relation to the intra-EU cross-border situation, Portugal and Spain signed a bilateral agreement for the 700 MHz, 1500 MHz and 3.6 GHz bands, using as reference the revision of ECC/REC/(15)0. The migration of broadcasting below 694 MHz will have delay due to Covid-19 and is expected by the end of this year.

**Cyprus:** Unfortunately, due to COVID-19 crisis, migration and authorization process of the 700 MHz has been postponed

**Croatian** Government has adopted National Roadmap Plan on 7 May 2020. The document is published on the official web site of the Ministry of the Sea, Transport and Infrastructure (<https://mmpi.gov.hr/promet/elektronicke-komunikacije-126/126> ; [https://mmpi.gov.hr/UserDocImages/dokumenti/PROMET/Promet%205\\_20/MMPI%20Nacionalni%20plan%20djelovanja%202020VRH%206-5\\_20.pdf](https://mmpi.gov.hr/UserDocImages/dokumenti/PROMET/Promet%205_20/MMPI%20Nacionalni%20plan%20djelovanja%202020VRH%206-5_20.pdf))

Transition from DVB-T to DVB-T2 system and TV migration below 694MHz in Croatia was postponed until November, due to the pandemic COVID-19 virus and strong earthquake in the densely populated area of Zagreb (22 March 2020).

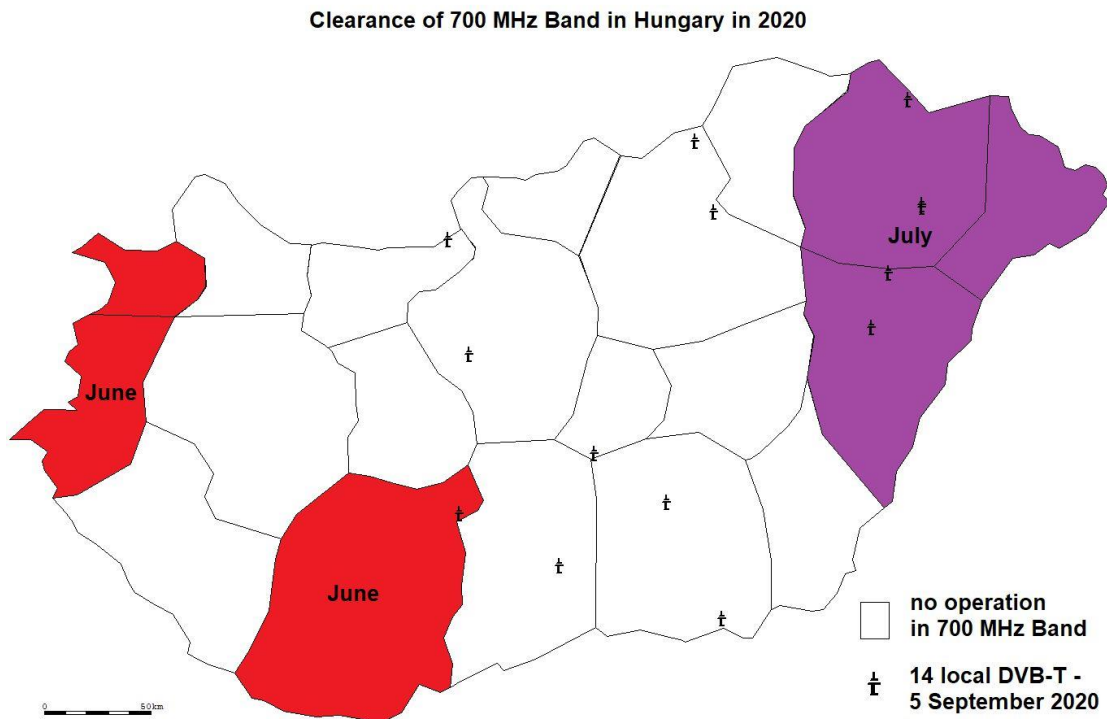
**Greece** continues the cross-border coordination process with both EU and non-EU neighbouring countries. The alignment of transitional plans among neighbouring countries is an ongoing process. The initial planning was reassessed, under the light of the overall common Union timeframe according to Decision (EU) 2017/899 (i.e. by mid-2022) and in reasonable and realistic terms the availability of 700 MHz frequency band is expected by the 3rd quarter of 2021. Awarding procedure for the 700MHz is expected to take place by the end of this year in a multiband auction.

**Turkey** : 694 – 790 MHz band (700 MHz) has been planned to be used for terrestrial systems capable of providing electronic communication services. There is no rigid schedule to auction the spectrum for this service at the moment. However, the 700 MHz has been released from TV broadcasting services and this band is extracted from Turkey Digital Television Frequency Plan. In Turkey, terrestrial digital broadcasting has not started yet. But, it is decided to use DVB-T2 as digital terrestrial TV standard and HEVC as video coding standard.

Within the frame work of SEDDIF and/or BSDDIF, for 470-694 MHz;

- With Administrations of Bulgaria, Greece and Ukraine, necessary coordination is completed and bilateral agreements are signed.
- With Georgian Administration, general principles have been discussed and new plans of both sides have mostly been agreed.
- With Romanian Administration, new plans of both sides have been agreed with a few exception.

**Hungary** : The NMHH effectively closed the auction for frequency use entitlements related to wireless broadband services specially supporting the introduction of 5G on 26th March. As result of the auction, 3 MNO acquired frequency blocks in the 700 MHz, 2100 MHz and 3600 MHz frequency bands. NMHH issued its decision on the auction on 1st April. NMHH has issued all three radio licenses too. The switch off the broadcasting service is underway by the plans due to the contract of the Antenna Hungária and the NMHH (see the map below on the status and the plans of usage for broadcasting service in the 700 MHz band).



The Commission representative stressed that the Commission will continue to ensure that all the obligations of the decision have been met including the obligation to minimise any harmful interference resulting from any delay in implementation.

All member states are encouraged to update the information on the RSPG website regarding the 700 MHz awards process (<https://rspg-spectrum.eu/category/awards/>)

The representative from the Commission mentioned two areas where some interference issues have been reported:

- Potential interference from Croatia to 5G in Slovenia: the two administrations indicated that they do not have elements to respond and stressed out good cross border cooperation. In any case, the situation should be solved in November when the migration of TV broadcasting below 694 MHz will take place.
- Interference from Belgium to 5G in Luxembourg: the good offices chairman will contact these administrations to know better about the situation.

### **3. Cross border negotiations with countries outside EU**

According to the representative from the Commission announced that, by December, a regional spectrum agreement is expected to be signed under the East European Partnership (EaP) between Georgia, Azerbaijan, Armenia, Moldova, Belarus and Ukraine among others

regarding the use of the EU and CEPT technical harmonisation measure in 700 MHz and 3.4-3.8 GHz bands.

Financial and technical support for the release of the 700 MHz band is being prepared from the Commission side concerning Belarus and Ukraine. Finalisation depends on political and financial commitment by these two countries.

### **Russian Federation and Belarus**

Although there is no decision yet, the agreed principle in Russia is that the 700 MHz will be for mobile services. Therefore, it is not yet clear when broadcasting will be moved out of the 700 MHz band.

Belarus has a preliminary plan for a migration starting in 2021 up to 2023, but has difficulties in terms of financing the cost of migration

Lithuania reminded that Belarus is a significant problem for them with broadcasting transmitters which may interfere a large part of Lithuania.

### **Ukraine**

A specific good offices meeting was organized with Ukrainian representatives taking into account their letter received in January and the difficulty of interference from Ukraine to EU countries which may impact 5G deployment at the border.

The representative from the Ukrainian NRA (NCCIR) and broadcasting authority (National TV and Radio Broadcasting Council of Ukraine) presented during this meeting the situation they face with a willingness to implement 5G in the 700 MHz and 800 MHz bands. The remaining analogue transmissions will be switched off before the end of 2020, but this will not significantly change the interference situation within EU, due to the large number of digital TV transmissions in the 700 MHz and 800 MHz bands.

The main issue for Ukraine is financial, ie which mechanism should be implemented to compensate the release by the two main broadcasters (Zeonbud and ETER) with a cost of approximately 8.35 M€. The broadcasters are unwilling to wait for one or two years to recover such costs after completion of tenders and they are doubts that the State Budget will be able to bear all of these costs against the background of ongoing heavy financial situation, incl. "corona" breakdown.

Some negotiations are ongoing between the Commission and Ukraine government about such financing. The Ukrainian representatives were invited to provide later some feedback on whether their government expects that it will enable to move fast on making available the 700 and 800 MHz band for MFCN.

The Ukrainian representatives also informed us that the CDMA system licence in the 800 MHz will be converted into an LTE licence.

## North Africa

Portugal indicated that, concerning DTT and the use of the frequency band 470-694 MHz Portugal and Morocco have already reached an agreement that still needs however to be signed. The work on the agreement with Morocco to the future use of the 700 MHz band is ongoing, however, no significant issue is expected given that the Morocco NTFA indicates that the frequency band is already allocated to ECS.

Malta and Italy indicated that there is no development regarding Libya, Tunisia and Algeria.

## Balkan area

Italy reminded that Albania will make all effort to sign the agreement for the UHF band. The Commission representative confirmed that Albania expressed willingness to cooperate and that they will be invited to the next RSPG Plenary.

Hungary and Croatia confirmed that the cooperation with Bosnia/Serbia works well and that these two countries committed to solve any case of harmful interference. Hungary initiated some measurement and will provide results when it will be completed over the whole border.

## Turkey

Cyprus indicated that they managed to have a unified Cypriot plan (having in mind the Greek Cypriot and the Turkish Cypriot needs). However, this Plan could not be registered in GE-06 ITU Plan, because of Turkey 's objection. Therefore, its status is "non-interference and no-protection", which is very unfair (no equal access) situation.

The EC representative informed about negotiation on some financial support for freeing the 700 MHz band in the territory of Cyprus where the Government of Cyprus is prevented from exercising effective control.

## **4. Situation regarding cross-border coordination in the 3.4-3.8 GHz band**

Updated information was received from Lithuania, Italy, Portugal, Cyprus, Croatia, Greece, Turkey.

**Lithuania:** The initial draft agreement from Russia would have impacted half of the country and is based on extremely low protection level which would be unacceptable. Russia indicated they would propose soon a new coordination proposal for the whole band 3.4-3.8 GHz. Since 5G is also fixed service, Lithuania intends to notify stations under this RR service to avoid difficulties with the low status of mobile service in the RR.

**Italy:** In Italy the available frequencies in all the three pioneer spectrum bands for 5G development (i.e. 700 MHz, 3.4-3.8 GHz and 26 GHz bands) have been already awarded in 2018. The 3.6-3.8 and 26 GHz bands are already available for 5G from the 1st of January 2019. In the band 3.4-3.6 GHz Italy issued a right of use to WIMAX services and the licenses will expire on 31st of December 2023. Within the WIMAX licenses validity, the 5G NR on 3.6-3.8 must protect the WIMAX services in the band below. Italy is working to amend the ECC Recommendation “Frame structures to facilitate cross-border coordination of TDD MFCN in the frequency band 3400 3800 MHz”. It is clear that we need to reach an agreement with the neighboring countries regarding the synchronization between different technologies during the transitional period (Symbol blanking, common phase clock reference, antenna tilting, ecc..)

**Croatia:** 2x35 MHz is regionally allocated for WIMAX in the band 3.4-3.6 GHz but it is planned to change the WIMAX license conditions before the end of 2020, in order to achieve large contiguous blocks for 5G. Regarding existing cross border coordination, it is planned to start updating existing agreements during this year, after relevant ECC cross-border coordination recommendation is finalized.

**Slovenia:** No issue identified. The activities to award the licenses will start soon, it is expected the process shall finish by the first quarter of 2021

**Greece:** 2x30 MHz allocated for WIMAX and 2 x 30 MHz regionally allocated for Rural Broadband services (via a fixed wireless wholesale network) in the band 3.4-3.6 GHz. A lot of effort is being put, to change the frequency zones used by WIMAX and Rural Broadband under their respective license conditions before the end of 2020, in order to achieve large continuous blocks for 5G. Regarding cross border coordination, it is planned to start the procedures in order to achieve the relevant agreements, after ECC cross-border coordination recommendation is finalized. Awarding procedure for the band is expected to take place by the end of this year in a multiband auction.

**Romania:** Regarding the band 3.4-3.8 GHz, currently, this band is used in Romania by both civil operators, their licenses being granted in a technology-neutral manner and valid until the end of 2025, and governmental institutions. After refarming the spectrum in the 3400 – 3600 MHz band, 90 MHz became available for the next auction in this band, until 2025. Given that the use is not intensive in the border areas, for the time being, there was no need for border coordination agreements until now. There is a request from Hungary for such an agreement which will be considered this year, taking into account the new version of the CEPT Recommendation ECC/REC(15)01. In the next period, we will analyze the possibility of concluding agreements with other neighbouring countries, including non-EU countries, bearing in mind that the mobile service in the 3600-3800 MHz band has a secondary allocation, according to the Art. 5 of ITU Radio Regulations in force.

**Turkey:** The draft Mobile Broadband Spectrum Strategy of Turkey plans for the 3.4-3.8 GHz frequency band an auction for MFCN/5G by 2023. Nevertheless, the use of this band by MFCN in Turkey requires the cross border agreements for the protection of earth station taking into account the low status of mobile in non-EU neighbouring countries. The allocation is on a secondary basis of 3600-3800 MHz for mobile services which could affect the deployment of 5G as the region carries some ambiguities in this respect. As for 3400-3600 MHz band, the allocation of this band to mobile services (identification for IMT) is subject to agreement under 9.21 of ITU RR. The cross-border agreements applicable to 5G/MFCN in the 3.4-3.8 GHz with neighbouring countries have not been initiated yet.

A draft questionnaire was drafted to gather information regarding the cross-border coordination issues in this band and modified during the meeting.

The questionnaire will be annex to the report to the RSPG Plenary and issue to the RSPG representatives immediately after this Plenary.

**5. Date of next meeting**

The next RSPG “good offices” meeting is planned as a web-meeting on 15<sup>th</sup> September (morning)