Consultation on
Qatar National Frequency Allocation Plan (NFAP)

SUMMARY OF COMMENTS AND RESPONSE OF CRA

Background

On 13th September 2020, CRA published Qatar National Frequency Allocation Plan (NFAP) – A Consultation Document, that addresses its updates on the Frequency Allocation Plan after the latest World Radiocommunication Conference (WRC).

The NFAP document includes the updated National Frequency Allocation Table (NFAT) which reflects the outcomes of the last held World Radiocommunication Conference (WRC-19), and it also includes other important annexes and appendices (like, list of specific assignments, list of frequency bands for SRD applications, frequency allotment plans relevant to Qatar, International agreements, harmonized frequency bands/spots, etc.) and this will provide a transparent and predictable approach to spectrum management and to reserve appropriate spectrum for future innovative technologies.

The NFAP document will be updated and published after the approval from competent authorities and reflect consideration of submissions from interested parties/stakeholders.

In keeping with preceding practices and other matters concerning the radio spectrum of Qatar, and in the interest of providing a transparent and predictable approach to spectrum management, CRA invited interested stakeholders to comment about the updated National Frequency Allocation Plan for the coming four-years. Additionally, interested parties were invited to express their general views as well as their concerns on the NFAP.

This document captures the main responses submitted by interested parties and provides CRA's answers and views. The views, comments or opinions herein are not legally binding on any party.

Comments Submitted

CRA requested written comments about Qatar National Frequency Allocation Plan Consultation Document from interested parties. CRA considers "interested parties" to be any individual, company or organization with an interest in the subject at hand and the development of Qatar's telecommunications sector.

Comments were received from:

1. (2) Responses received from Government and Security Agencies
2. Ooredoo Qatar (Q.S.C)
3. Vodafone Qatar
4. Qatar Satellite Company (Es'hailSat)
5. Intel Corporation
6. Inmarsat
7. ViaSat

8. EMEA Satellite Operators Association (ESOA)
9. Huawei
10. Motorola Solutions
11. Itron
12. Dunel Europe
13. Wi-SUN Alliance
14. Qatar International First for Electro-Mechanical Company

CRA wishes to thank all of the above parties for their comments. We view participation and all comments to be a valuable part of the consultation process.

CRA allows contributors to seek confidentiality when submitting information, but publication shall be entirely at the discretion of CRA. Non-confidential versions of submissions and those deemed by CRA to be lacking commercially sensitive information will be made available on CRA's website.

CRA is publishing this summary of the major issues that were raised in response to Qatar National Frequency Allocation Plan Consultation Document. Included in this is a precis of CRA's views in relation to the comments.

Summary of Comments and Response of CRA

Part 1
General Comments

This section includes a summary of the general comments received from the Industry on the consultation document along with the CRA feedback.

General Comments
Recommends focusing on the most efficient use of spectrum according to need and benefits of new emerging technologies. Qatar should be able to get maximum economic and social benefits from the future spectrum plan aligned with the objectives of Qatar National Vision 2030.
CRA Response:
CRA undertakes this as one of its mandates with respect to the radio spectrum management.

General Comments
Qatar should get maximum benefit from Wi-Fi 6 like the other leading countries around the world.
CRA Response:
CRA will take this view into consideration while reviewing the relevant Applicable Regulatory Framework.

General Comments
Qatar can greatly benefit from Wi-Fi 6E aligned with the smart government and tourism objectives of Qatar. Wi-Fi 6E is also very important for the FIFA World Cup 2020 in Qatar, beIN SPORTS and Qatar Airways.
CRA Response:
CRA recognizes the need of the spectrum availability to support deployment of new innovative services, keeping in view the compliance to the Applicable Regulatory Framework.

General Comments
Tidy up of 'How to read the Frequency Allocations Table'. The diagram at the start of section 4 is based on the 862-890MHz band but seems to be out of date when compared to the main table. The two should be brought into line with one another.
CRA Response:
Thanks for the comment. Noted.

General Comments
Invite CRA to add most relevant references to ECC decisions and reports from the CEPT or the ITU somewhere in the plan.
CRA Response:
As the relevant recommendations, reports or decisions are subject to update, so the mentioned references in the NFAP refer to the relevant most recent version.

General Comments
There is a good understanding of the current mobile and microwave ("MW") bands. However, there remains limited information available regarding the allocation of certain bands. In this respect, it is recommended that the CRA make available additional information pertaining to the spectrum allocation and availability database of the country. This will assist potential spectrum users and promote efficient use and allocation of spectrum.
CRA Response:
CRA considers the frequency assignment register as classified confidential information. However, CRA welcomes any discussion with the interested eligible users before making frequency assignments.

Section 2
National Frequency Allocation Table

This section includes a summary of the comments received from the Industry on the updated National Frequency Allocation Table (NFAT) along with the CRA feedback.

335.4 - 387 MHz
Under 335.4 - 387 MHz band, propose a revision to split 335.4-380 and 380-387 MHz as separate entries to reflect the PPDR assignments in that band in accordance with ITU-R Res. 646 (rev. WRC-19). 380-387 MHz: Add PPDR / Emergency Services under "Main Use".
CRA Response:
CRA considers the frequency bands distribution as per Article 5 of the ITU-RR, while CRA will consider the 'PPDR' use for 380-387 MHz range.

387 – 399.9 MHz
• 387 - 390 MHz: Add PPDR under "Main Use". • 390 - 399.9 MHz: Add PPDR under "Main Use".
CRA Response:
Thanks for the comment. Noted.

440 – 450 MHz
Propose to identify the main use of the 440-450 MHz band as Digital Land Mobile/PMR and PPDR/Emergency Services tuning range as shown below: (Add Digital Land Mobile/PMR & PPDR / Emergency Services under "Main Use" column).
CRA Response:
This band is not considered for PPDR applications in Qatar.

450 MHz Band
450 MHz band should be made available for licensed 5G use to improve the availability of low-band spectrum and provide 5G connectivity also in rural areas
CRA Response:
This band is not identified for 5G (IMT-2020) services in Qatar.

694 – 790 MHz & 790 – 862 MHz
• 694 - 790 MHz: Add PPDR (Broadband option) under "Main Use". • 790 - 862 MHz: Add PPDR (Broadband) under "Main Use".
CRA Response:
As per ITU-R M.2015, part of 790-862 MHz is considered for Broadband PPDR, so this only can be added under “Main Use”.

600/700 MHz Bands
600/700 MHz should be made available for licensed 5G use to improve the availability of low-band spectrum and provide 5G connectivity also in rural areas. In addition to 700 MHz, there is also an existing 600 MHz FDD 3GPP Band 71/n71 ecosystem with 2x 35 MHz which would allow immediate access to mass-market available terminals and infrastructure.
CRA Response:
600 MHz band is not yet identified for 5G services in Qatar, while 700 MHz band is considered.

862 – 890 MHz
The entry for 862-890MHz shows some sub-band detail, but it is incomplete, especially for SRDs. So would recommend enhancing the table with additional data (consistent with the SRD allocation details in Appendix 2), as set out below: - Non-specific SRD applications (868-870MHz) - Wireless Audio Applications (863-865MHz) - Radio Frequency Identification Equipment (865.6 MHz – 867.6 MHz)

- M2M Applications (870-876MHz)
CRA Response:
Thanks for the comment. Noted.

890 – 942 MHz & 942 - 960 MHz
Encourage CRA to allow technology neutrality and open the 900 MHz band (FDD band 880-915 UL/925-960MHz DL) to all IMT technologies (including GSM, UMTS, IMT2000 and IMT2020) instead of limiting it to GSM. Technology neutrality is key to maximize spectrum potential and offers MNOs necessary flexibility in deploying the latest technologies available.
CRA Response:
Thanks for the comment. Noted.

1 427 – 1 518 MHz
In order to facilitate future deployment of IMT in L-Band at national level between 1427-1518 MHz, it is recommended to: Remove Low capacity fixed links from 1427-1452 MHz in the NFAP to avoid new fixed links deployments in this range and To start clearing 1427-1452 MHz from any existing Fixed links operation and relocating the Low capacity fixed links from this band to higher microwave bands (e.g. 7-8GHz, 10-11GHz, 13GHz, 15GHz, 18GHz, 23 GHz, 32GHz and E-Band). This is essential to allow smooth deployment of IMT in this band. IMT/FS coexistence is difficult even in adjacent bands. Co-channel coexistence/sharing is not possible.
CRA Response:
CRA contemplates protection of incumbent services while allocating or assigning spectrum for any new services.

1 492 – 1 518 MHz
Since IMT is identified as a main use for this band, and since the band 1518 MHz and above is a critical band for Mobile Satellite Services (MSS) which are land based, maritime and aeronautical. These services are offered globally, including in Qatar, and include safety related services. So, any consideration of the band 1492-1518 MHz for IMT/5G should include a clear mandate to protect MSS and ensure their continued operations. This includes sufficient guard band below 1518 MHz, out of band emissions limits on IMT emissions falling into the MSS band, reducing the EIRP limits on IMT operations in the frequencies adjacent to the MSS band, and applying PFD limits in specific areas where the most sensitive and critical mobile satellite terminals operate (e.g. airports and ports). Accordingly, CRA is kindly

requested not to consider this band for IMT at this point and remove its identification as a main use for IMT from the NFAP.
CRA Response:
CRA contemplates protection of incumbent services while allocating or assigning spectrum for any new services.

1 518 – 1 525 MHz
Mobile satellite applications are not mentioned as main use in this band. This band is identified globally for MSS (space to earth). The use of this portion of the band for MSS is crucial to relieve the congestion observed in the upper part of the band (1525MHz and above). Accordingly, CRA is kindly requested to include Mobile Satellite applications as a main use for this band in the updated NFAP.
CRA Response:
Thanks for the comment. Noted.

1 710 – 1 930 MHz
It is limited in the NFAP to DCS and UMTS. It is recommended to allow IMT technology neutrality in 1800MHz band (1710-1785 UL/1805-1880MHz DL) in order to allow operators to evolve use any of them (including GSM/DCS, UMTS, IMT2000 and IMT2020) and remove obstacles for evolving networks to newer technologies.
CRA Response:
Thanks for the comment. Noted.

2 300 – 2 400 MHz
Recommend authorizing IMT usage in this band in NFAP and to ensure that the band is clean from any other system which coexistence with IMT is not possible. Currently, IMT is missing in NFAP. The operation of ISM/DECT Cordless Phones /WLAN/SRD should not be allowed in the same portion to be used by IMT. It is also suggested to mention that these systems cam operate only starting from 2400MHz. Sharing (co-channel) between these unlicensed systems and IMT systems is not possible. It is indeed not possible to control unlicensed systems locations or densities and not possible to coordinate with them.
CRA Response:
The 2300 – 2400 MHz band is identified for IMT applications, while the short-range devices applications are allowed mainly in the range 2400 – 2483.5 MHz.

3 300 – 3 400 MHz
The 3300-3400 MHz band is an important part of the most important 3300-4200 MHz mid-band 5G tuning range and is being utilized by many countries around the world based on the IMT identifications in the Radio Regulations.
CRA Response:
This band is heavily used by fixed service applications, and it is not identified for IMT services.

3 400 – 3 600 MHz
This is pioneer 5G band in Qatar. Looking to the NFAP, it is seen in this band Airborne Radars limits are defined up to 3410 MHz. Studies have been performed in CEPT region and concluded that coexistence between 5G and these radars is not recommended/feasible in co-channel. In Europe, the full band from 3400-3800 MHz have been harmonized for IMT operation (please refer to ECC DEC (11)06). The out of band limits for the 5G BS were defined with the assumption that radar operation is limited to frequencies below 3400MHz (with possible need for coordination). Therefore, it is recommended that CRA, unless radar protection is not required, not to allow Radar operation in Qatar above 3980 MHz (no need for coordination) or 3400 MHz (with need for coordination). If the protection of radar systems is required, radars operation should be kept ideally below 3980 MHz to avoid coordination with 5G deployments.
CRA Response:
CRA contemplates protection of incumbent services while allocating or assigning spectrum for any new services.

3 600 – 4 200 MHz
Recognized the intention by the CRA to allocated IMT terrestrial 5G services in the 3600-4200 MHz band. However, this band is also allocated in the ITU Region 1 to FSS services on co-primary status. The frequency band 3 600-4 200 MHz is extremely important for FSS operation and for providing wide-area coverage. Therefore, requesting CRA consider retaining the FSS allocation on a co-primary basis with the FS in this frequency band. Should the CRA introduce IMT in this band, it is essential that FSS services be grandfathered and not mandated to migrate form this band.
CRA Response:
CRA will ensure co-existence between different radiocommunication services sharing the same spectrum band.

3 600 – 4 200 MHz
Currently the NFAP shows the following usage is included this band: • Coordinated earth stations in FSS and, • Medium/high capacity fixed links (3800 – 4200 MHz). In order to facilitate coexistence between 5G and FSS/FS in this band and to allow smooth 5G deployment in Qatar with no obstacles at national level, it is recommended that CRA plan and implement a progressive relocation/clearing of FSS/FS usage from any portion of this band that is either already used or to be used by 5G. Revision of the NFAP will be needed to ensure that FS and FSS are not operating in co-channel with IMT. Possible other alternatives to ensure coexistence between FSS/FS and 5G in different portions of this band (e.g. frequency separation and any geographical separation) can be studied once accurate information are available regarding current FSS/FS usage in Qatar and its nature.
CRA Response:
CRA will ensure co-existence between different radiocommunication services sharing the same spectrum band.

3 600 – 4 200 MHz
This band is allocated to the Fixed Satellite (Space to earth) and to the Mobile (IMT) services. However, as per the CRA 5G band plan, the band 3 400 - 3 800 MHz is allocated to the IMT services. Hence, clarification from the CRA is advised regarding the band 3 800 - 4 200 MHz spectrum allocation.
CRA Response:
CRA considers the 3 800 – 4 200 MHz band for satellite service especially for VSAT terminals.

3 800 – 4 200 MHz
The 3800-4200 MHz band is an important extension band for IMT services in the 3400-3800 MHz band to ensure that sufficient mid-band spectrum is available also in the mid- to long-term. The band is already supported by an existing ecosystem based on 3GPP band n77 (3300-4200 MHz).
CRA Response:
This band is not identified for IMT services in Qatar.

1.5, 2 & 3.8 – 4.2 GHz Bands
1.5 GHz, 2 GHz and 3.8-4.2 GHz should be made available for licensed 5G use to improve the availability of mid-band spectrum and provide sufficient capacity for mid-band 5G services in addition to 3.4-3.8 GHz. Furthermore, existing IMT bands like 1.8 GHz, 2.3 GHz and 2.6 GHz should be enabled for 5G use to contribute the mid-band 5G spectrum capacity.
CRA Response:
The above-mentioned bands are not identified for 5G services in Qatar. On the other hand, 1.8, 2.3 & 2.6 GHz bands are identified and considered for 4G LTE networks.

4 500 – 5 000 MHz
The 4500-5000 MHz band is another tuning range of growing importance for mid-band 5G licensed use, starting from the 4800-4990 MHz portion for which a large number of countries have joined the IMT footnote at WRC-19. Based on work in response to WRC-23 Agenda Item 1.1, this band will become an important licensed 5G band in the mid- to long-term
CRA Response:
CRA will follow the related agenda items for WRC-23 to safeguard the interest of the country.

4 800 – 4 990 MHz
Propose that text is added to reference the level of harmonization in Recommendation ITU R. M 2015 and ECC Recommendation (08)04 "The identification of frequency bands for the implementation of broadband disaster relief (BBDR) radio applications in the 5 GHz frequency range".
CRA Response:
This band is not considered for BBDR applications in Qatar.

5 925 – 7 125 MHz
5925-7125 MHz should be made available for license-exempt use by technologies such as Wi-Fi and 5G NR-U to address the urgent need for more spectrum and capacity for unlicensed applications. 5925-7125 MHz band for Wi-Fi applications on a license-exempt basis is necessary and critically important to ensure that sufficient spectrum is available for such unlicensed technologies which are an important part of 5G,
CRA Response:
CRA will consider this as part of future consultation and will welcome any contribution from the industry.

5 925 – 7 125 MHz
In the NFAP, in the 'notes' column a new mention of: • PMSE usage between 6700-7450MHz and, • FSS applications within the band 6725 – 7025 MHz in accordance with ITU - R Appendix - 30B It is re commended to wait for studies and decision from WRC-23 AI 1.2 regarding 6GHz (6425-7125MHz) before making any changes to 6GHz band status in the NFAP and before authorizing any new systems (e.g. PMSE, new FSS systems) to be deployed in Qatar in this band. It is also recommended not add/not authorize PMSE usage/systems in any portion of the range 5925-7125GHz and in any band with IMT usage or large FS usage. Sharing in 6/7GHz bands between PMSE and any future mobile systems including IMT usage is not possible due to the fact that such applications are mobile and ubiquitous. If PMSE are authorized today in this band, they will be an obstacle to the future introduction of other mobile services e.g. IMT and to add considerable constraints to FS deployments.
CRA Response:
CRA will follow the related agenda items for WRC-23 to safeguard the interest of the country.

10 – 10.5 GHz
10-10.5 GHz should be made available for licensed 5G use to improve the availability of mid-band spectrum, bridging the gap to mmW spectrum
CRA Response:
CRA will follow the related agenda items for WRC-23 to safeguard the interest of the country.

13.75 – 14 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band.
CRA Response:
Thanks for the comment. Noted.

14.5 – 14.75 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band.
CRA Response:
The major utilization in this band is fixed point-to-point links.

14.75 – 14.8 GHz
1) FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band. 2) It is mentioned in the "Notes" column that FSS application is in accordance with Appendix 30A, however, WRC-15 made an allocation to regular FSS, i.e. other than Appendix 30A feeder-link.
CRA Response:
The allocation made to regular FSS was in 14.5 – 14.75 GHz as per Resolution 163 (WRC-15) and footnote 5.510

17.7 – 19.7 GHz
Highly appreciate and support the action taken by CRA to include Earth Stations in Motion (ESIMs) operating in accordance with Resolution 169 (WRC-19) as a main use of these bands. This will enable the concerned satellite operators to continue providing innovative and high-quality services to Qatar airlines and ship companies using this band which offers higher capacity to complement the upper 500 MHz (19.7-20.2 GHz (Space to Earth)) portion already identified in WRC-15.
CRA Response:
Thanks for the comment. Noted.

19.7 – 20.1 GHz
Earth stations in motion (ESIMs) should be added in the "Main Use" column, as this band also allocation for ESIMs.
CRA Response:

Thanks for the comment. Noted.

19.7 – 20.2 GHz
Suggest adding to the Main Use column a reference to the use of this band by: "Earth stations in motion (ESIM)", which would be consistent with what's mentioned for the 17.7-19.7 GHz band and would recognize that ESIM is a major usage of the whole 19.7-20.2 GHz band. For the same band, suggest adding to the Notes column the text: "The operation of ESIM shall be subject to the application of Resolution 156 (WRC-15)", which again would be consistent with the reference to Resolution 169 (WRC-19) mentioned for the 17.7-19.7 GHz band.
CRA Response:
Thanks for the comment. Noted.

20.2 – 21.2 GHz
Earth stations in motion (ESIMs) should be added in the "Main Use" column, as this band also allocation for ESIMs.
CRA Response:
This band is not considered for ESIMs.

21.4 – 22 GHz
It is assumed that "Wide band high definition television" has been mentioned in the "Main Use" column in the context of Broadcasting Satellite Service, however, it would be better to also explicitly mention "BSS applications" under this column.
CRA Response:
Thanks for the comment. Noted.

24.65 – 24.75 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as it has been elaborated in the "Notes" column.
CRA Response:
This band is identified for IMT Systems in Qatar.

24.75 – 25.25 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as it has been elaborated in the "Notes" column.
CRA Response:
This band is identified for IMT Systems in Qatar.

26.5 – 29.5 GHz
Recommend considering the 28 GHz range (26.5-29.5 GHz), together with the 26 GHz band (24.25-27.5 GHz) to get maximum benefit from the existing ecosystem of these two spectrum bands.
CRA Response:
The 28 GHz range is not identified for 5G (IMT-2020) services in Qatar.

27.5 – 29.5 GHz
Highly appreciate and support the action taken by CRA to include Earth Stations in Motion (ESIMs) operating in accordance with Resolution 169 (WRC-19) as a main use of these bands. This will enable the concerned satellite operators to continue providing innovative and high quality services to Qatar airlines and ship companies using this band which offers higher capacity to complement the upper 500 MHz (29.5-30 GHz (Earth to Space)) portion already identified in WRC-15.
CRA Response:
Thanks for the comment. Noted.

17.7 – 19.7 GHz (18 GHz) & 27.5 – 29.5 GHz (28 GHz)
Recommend that the CRA license GSO ESIM in the 28 and 18 GHz bands within Qatar, without unnecessarily constraining the power density that they emit on the Earth and without otherwise imposing altitude or distance limits. Also recommend that the CRA apply the technical constraints in Annex 3 of Resolution 169 only to address the rare cross border cases involving GSO ESIM operating on the very same frequencies as terrestrial services in adjacent countries. Those limits should not apply to domestic ESIM service within Qatar. Above in view, GSO ESIM operations in the entire 27.5-30 GHz and 17.7-20.2 GHz bands should be widely permitted, without limitation, across Qatar, bringing the benefits of such services to the people and businesses of the country.
CRA Response:
CRA recognizes the need of the spectrum availability to support deployment of new services and applications, keeping in view the compliance to the Applicable Regulatory Framework.

29.5 – 29.9 GHz
Earth stations in motion (ESIMs) should be added in the "Main Use" column, as this band also allocation for ESIMs.
CRA Response:
Thanks for the comment. Noted.

29.5 – 30 GHz
Suggest adding to the Main Use column a reference to the use of this band by: "Earth stations in motion (ESIM)", which would be consistent with what's mentioned for the 27.5-29.5 GHz band and would also recognize that ESIM is a major usage of the 29.5-30 GHz band. There again, for the same band, suggest adding to the Notes column the text: "The operation of ESIM shall be subject to the application of Resolution 156 (WRC-15)", which would be consistent with the reference to Resolution 169 (WRC-19) in the 27.5-29.5 GHz band.
CRA Response:
Thanks for the comment. Noted.

29.9 – 30 GHz
Earth stations in motion (ESIMs) should be added in the "Main Use" column, as this band also allocation for ESIMs.
CRA Response:
Thanks for the comment. Noted.

37.5 – 40.5 GHz
ITU Resolution 243 encourages "administrations of Region 1 to consider implementing IMT in the frequency band 40.5-43.5 GHz in order to better accommodate the need of other services below 40.5 GHz, taking into account the protection of FSS within 37.5-40.5 GHz in Region 1." In this regard, noting that the 39.5-40.5 GHz band is identified for HDFSS in Region 1 (No. 5.516B), it would be inappropriate at this time to include "Terrestrial IMT" as a Main Use for the 37.5-40.5 GHz band
CRA Response:
ITU-R Resolution 243 and Footnote 5.550B apply which govern the protection of FSS applications in the said bands.

37 – 43.5 GHz
The 37-43.5 GHz range is an important tuning range for 5G mmWave deployments in the medium term, following the initial deployments of those systems in the 26/28 GHz band. An ecosystem for this band is currently developing based on 3GPP band classes n259 and n260.
CRA Response:
This band is identified for Terrestrial IMT applications.

50.4 – 51.4 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band.
CRA Response:

Thanks for the comment. Noted.

66 – 71 GHz
66-71 GHz should be made available for multi-gigabit wireless systems on a license-exempt basis to complement the 57-66 GHz part as outlined in Recommendation ITU-R M.2003. 66-71 GHz is an important extension of the 57-66 GHz band for licensed-exempt use by MGWS/WiGig technologies.
CRA Response:
This band is identified for Terrestrial IMT applications, as per ITU-R Resolution 241 (WRC-19).

71 – 74 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band.
CRA Response:
This band is heavily used by fixed service applications.

71 – 76/ 81 - 86 GHz
71-76/81-86 GHz should be made for high-capacity backhaul of traffic from 5G base stations that cannot be connected to fiber to ensure that there is no bottleneck in the backhauling and the full 5G performance can be delivered.
CRA Response:
These bands are mainly considered for fixed point-to-point links on light-license basis.

71 – 76/ 81 - 86 GHz
It is noted that this band is tagged for other applications like future civil systems, SRD's, space science services. It is requested that the following bandwidth within this band 71 – 75 and 81 – 85 GHz be reserved exclusively for fixed point-to-point. This is a critical band for point-to-point.
CRA Response:

These bands are mainly considered for fixed point-to-point links on light-license basis (non-interference and non-protection basis).

74 – 76 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in this band.
CRA Response:
This band is heavily used by fixed service applications.

81 – 84 GHz & 84 – 86 GHz
FSS earth stations / FSS applications should be added in the "Main Use" column, as Fixed Satellite Service has primary allocation in those bands.
CRA Response:
These bands are heavily used by fixed service applications.

Section 3
Part 4- Appendices and Annexes

This section includes a summary of the comments received from the Industry on the Appendices and Annexes part along with the CRA feedback.

Appendix 1- List of Specific Assignments
Suggest adding an entry for the frequency band **694-790 MHz** and include a reference to Mobile LTE/NR in this band.
CRA Response:
Thanks for the comment. Noted.

Appendix 1- List of Specific Assignments
Propose to revise the band **876 – 925 MHz** [frequency range 876 - 880 MHz paired with 921 - 925 MHz for railway applications (GSM-R)] to cover 874.4-880 paired with 919.4-925.0 MHz for Railway Mobile Radio (RMR) applications and be technology neutral and include the success of GSM-R known as Future Railway Mobile Communication System (FRMCS) in accordance with recent ECC Decision (20)02.
CRA Response:
Thanks for the comment. Noted.

Appendix 1- List of Specific Assignments
For the frequency band 790 – 862 MHz, the mentioned uplink and downlink frequency ranges should be swapped
CRA Response:
Thanks for the comment. Noted.

Appendix 2- List of frequency bands for SRD applications
To make available spectrum in 870-876 MHz according to technical parameters as recommended in the ERC Recommendation 70-03 and to keep 500mW transmit power available due to its high importance to the industry, and to ensure harmonization with other countries implementing this recommendation.
CRA Response:
CRA will consider this suggestion when updating the Class License for Short Range Devices. CRA believes that there are new elements to be included in the Class License. CRA will conduct a public consultation in due course to ensure contributions of the industry in this process.

Appendix 2- List of frequency bands for SRD applications
It was noticed that UWB (Ultra-Wide Band) systems are allowed in almost all bands between 960MHz all the way to 10.68GHz (excluding only GMDSS and some EESS frequencies). If maximum UWB IEEE power limits are applied in some of these bands with no additional regulatory constraints, this might cause interference to other radio systems including IMT/FS systems. IEEE standard does neither study nor ensures coexistence with other systems in particular those under licensed regime. In some of the bands, regulatory limits in terms of lower power than IEEE standard one, limitation to indoor usage, low duty cycle AND/OR DAA mechanism (Detect and Avoid) are necessary to protect other systems including IMT licensed systems. UWB systems are unlicensed systems with unknown location (ubiquitous) and densities and therefore in case of interference, not only it is impossible to identify the source of interference, but it is also impossible to coordinate and impossible to retrieve related products from the market once authorized in some bands. Therefore, CRA is invited to avoid introduction of the UWB systems in bands used by IMT/FS and study first their introduction on a band by band manner to secure coexistence with licensed IMT systems before authorization on the market.
CRA Response:
As per the Class License for Short Range Devices, the operation of UWB devices is restricted to the maximum field strengths/ output power limits set out in the said Class License along with the applicable harmonized ETSI standards, this will ensure safe operation of any other radio services/ applications.

Annex 3- Useful Abbreviations
Propose the following additions: to Annex 3 "Useful Abbreviations" FRMCS: Future Railway Mobile Communications system NR: NewRadio IMT-2020 radio interface IMT-2020: International Mobile Telecommunications-2020 TMR: Trunked Mobile Radio P. 25: Project 25 Digital/Trunked Mobile Radio standard BBDR: Broadband Disaster Relief
CRA Response:
Thanks for the comment. Noted.

Annex 3- Useful Abbreviations
It would be useful if some of the abbreviations or acronyms mentioned under Annex 3: "Definition of Terms". (i.e. ESIM, ESV, GMDSS, GSO, NGSO, etc.)
CRA Response:
Thanks for the comment. Noted.