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Svenska ståndpunkter WRC-23

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Post- och telestyrelsen

Postadress:
Box 5398
102 49 Stockholm

Besöksadress:
Valhallavägen 117 A
www.pts.se

Telefon: 08-678 55 00
Telefax: 08-678 55 05
pts@pts.se

Introduktion

Denna PM sammanfattar de svenska ståndpunkterna för ITU:s världsradiokonferens 2023 (WRC-23).

Förslag på svenska ståndpunkter för huvuddelen av agendapunkterna har tagits fram i enlighet med processen för framtagning av ståndpunkter för WRC (se bilaga 1).

Ståndpunkter inför världsradiokonferenser utgör Sveriges och inte PTS ställningstagande i de aktuella frågorna. Ståndpunkterna ska representera och tillvarata Sveriges intressen i ITU-sammanhang. Önskemål från intressenter och organisationer måste därför vägas samman med PTS inriktning och mål för spektrumhanteringen.

Detta arbete kommer att fortgå under tiden fram till konferensen. Den av PTS 2014 antagna strategin för spektrumområdet är en viktig komponent i detta arbete. En annan viktig komponent är återkoppling från intressenterna.

Dokumentet kommer att uppdateras fram till konferensen.

WRC-23

Tid och plats

Nästa World Radiocommunication Conference (WRC), WRC-23, planeras äga rum i Förenade Arabemiraten (Dubai), 20 nov-15 dec 2023. Officiell hemsida för WRC-23 finns här: [WRC-23 Dubai](#)

CPM23-2 är planerat att äga rum i Geneve den 27 mars – 6 april..

Agenda

Den föreslagna agendan för WRC-23 är i enlighet med det av WRC-19 framtagna förslaget till agenda i Resolution 811 (WRC-19) med vissa ändringar efter CPM23-1.

ITU-R tillhandahåller en bra sammanställning av agendan för WRC-23 där finns också direkllänkar till relevanta resolutioner samt information om förberedelsearbetet inom ITU-R för varje AI:

[ITU-R Preparatory Studies for WRC-23](#)

Information om förberedelsearbetet inom de sex regionala grupperna finns här:

[Regional preparation for WRC-23 \(itu.int\)](#)

Draft CEPT briefs och framtagna ECP:er (European Common Proposals) finns här: [draft CEPT briefs och ECP:er](#).

Agendapunkter

Generellt

Radioreglementet (RR) bör endast innehålla allokering av frekvenser för radiotjänster och inte identifiering av frekvenser för specifika tillämpningar och system. Det kan i vissa fall vara berättigat med avsteg från denna princip och att identifiera frekvenser för tillämpningar eller system i RR.

Några exempel på faktorer som bör beaktas:

- identifiering i ett frekvensband för en viss radioanvändning blir som mest betydelsefull om användningen är gränsöverskridande och efterfrågas globalt (regionalt) och att identifieringen sker på global (regional) basis. För allokering är världen indelad i tre regioner där Europa, och därmed Sverige, tillhör region 1 (R1) – för detaljer se RR Article 5.2–5.9.
- där det snarare handlar om att finna en *tuning-range* inom vilken länder kan välja lämpliga frekvenser för att hantera nationella behov bör normalt inte leda till identifieringar (jfr. RSTT, PPDR, PMSE).
- om en identifiering av ett visst frekvensband bedöms vara av betydande värde för att tillgodose svenska nationella intressen, t.ex. för att upprätthålla svensk konkurrenskraft och kompetens inom ett visst område.

Det är också viktigt att notera att det är allokering av frekvenser för radiotjänster som regleras i RR och beslutas av WRC och inte användningen av dessa allokeringar. Varje land (antingen enskilt eller tillsammans med andra länder) kan bestämma när och hur de olika allokeringarna ska användas inom landet.

En allokering innebär inte att tillstånd för radiosändarna kommer att medges.

AI 1

1 on the basis of proposals from administrations, taking account of the results of WRC 19 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the frequency bands under consideration, to consider and take appropriate action in respect of the following items:

AI 1.1

1.1 to consider, based on the results of the ITU R studies, possible measures to address, in the frequency band 4 800–4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No. 5.441B in accordance with Resolution **223 (Rev.WRC-19)**;

Prioritet

Hög

Svenska ståndpunkter

Eventuella förändringar i frekvensbandet 4 800–4 990 MHz, inkl. No 5.441B, ska inte innebära några ytterligare begränsningar eller påverkan på användning för Sveriges del, även med beaktan av sådan användning som förekommer inom ramen för svenska försvarssamarbeten. Sök klargörande om vad som gäller på internationellt luftrum och vatten.

Kommentar: Noteras bör att Ryssland är med i no. 5.441B men att PFD-gränsvärdet som ges i samma FN enligt Resolves 5 i Resolution 223 ej gäller för ett antal länder, bl.a. Ryssland. Det är inte klargjort i vilka regler som gäller för skydd i/på internationellt luftrum/vatten.

Ansvariga grupper

WP 5B & WP 5D, PT C

CEPT-ståndpunkt

CEPT is of the view that, AMS and MMS stations located in international airspace or waters and operated in the band 4 800–4 990 MHz shall be protected on the basis of the pfd limit provided in RR 5.441B which will be reviewed taking into account all detailed AMS and MMS characteristics and protection criteria.

ECP

draft ECP: MOD 5.441B (högre, PFD-gränsvärden), MOD Res 223 (bl.a. ta bort resolves 5, invites ITU-R 2 och invites the 2023 WRC)

Svenska intressenter

Onsala rymdobservatorium, FMV, Telia Company AB, Ericsson

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.1. The countries listed in No. 5.441B includes Russia and South Africa with radio astronomy observatories in Region 1. However, the two countries are excluded from the pfd limits review according

to Resolution 223 resolves 5. CRAF keeps monitoring of the agenda item at this stage for more information.

FMV: Tillse skydd för befintlig användning, EJ stöd för relaxerade pfd-kriterier.

Telia Company AB: Telia Company stödjer att bandet görs tillgängligt för mobile/IMT i länder som har möjlighet att använda bandet. Förändringar av pfd-kriteriet kan göras baserat på utförda studier.

Ericsson: Ericsson stödjer att bandet görs tillgängligt för IMT i länder som har möjlighet att använda bandet.

Pfd-kriteriet RR No.5.441B begränsa nationell IMT-användning och bör revideras eller tas bort för att undvika att användning av bandet för IMT begränsas mer än nödvändigt. Skydd av AMS/MSS-stationer i internationellt luftrum/vatten bör baseras på bilaterala överenskommelser mellan de berörda medlemsstaterna och minimera begränsning av nationell IMT-användning.

AI 1.2

1.2 to consider identification of the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **245 (WRC-19)**;

Prioritet

Hög vad avser banden 3 300–3 400 MHz, 6 425–7 025 MHz och 7 025–7 125 MHz. Låg vad avser övriga band (ej Region 1).

Svenska ståndpunkter

Sverige kan acceptera att i Region 2 banden 3 600–3 800 MHz, 3 300–3 400 MHz och 10,0–10,5 GHz allokeras för mobila tjänster på primär basis och identifieras för IMT, om delnings- och kompatibilitetsstudier visar att befintliga tjänster kan fortsätta upprätthålla sina kvalitets-, prestanda- och tillgänglighetskrav.

Sverige stödjer inte förändringar i fotnot avseende bandet 3 300–3 400 MHz som innebär allokering till mobila tjänster och identifiering till IMT i Region 1 norr om 30:e breddgraden.

Sverige stödjer inte en IMT-identifiering av frekvensbandet 6 425–7 025 (7 125) MHz som begränsar bandets flexibilitet för svensk del vad gäller dess användning, varken på kort eller på lång sikt.

Sverige är positiv till studier och är av åsikten att en eventuell identifiering av frekvensbandet 6 425–7 025 (7 125) MHz för IMT inte ska medföra begränsande villkor för befintlig användning och dess framtida utveckling. Därtill krävs att en sådan identifiering kan finna stöd i Europa.

Kommentar: Höga 6 GHz-bandet är av intresse för 5G (t.ex. Kina), RLAN (t.ex. USA) samt även för radiolänkar (t.ex. Sverige). Inom frekvensbandet finns även allokering till FSS, varav Appendix 30B gäller för en del av bandet. En del av frekvensbandet, 6 650–6 675.2 MHz är listat under No. 5.149 som gäller att administrationer starkt uppmanas att skydda RAS.

Ansvariga grupper

WP 5D, PT 1

CEPT-ståndpunkt

- 3300–3400 MHz (amend footnote in Region 1)
CEPT does not support amendments to footnotes 5.429A and

5.429B which could extend them to countries north of 30° parallel north. Thus, CEPT does not support an IMT identification for the entire Region 1. Furthermore, CEPT opposes amending the footnote to change the regulatory provisions applicable to IMT stations in the band. In particular, IMT stations shall not cause harmful interference to, or claim protection from, systems in the radiolocation service in various national and international operational environments and shall meet unwanted emission levels specified in the relevant ITU-R Recommendations. In addition, protection of FSS in the frequency band 3400-3800 MHz should also be ensured, as appropriate.

- 3300-3400 MHz (Region 2)
CEPT supports maintaining the regulatory provisions in the footnotes 5.429C and 5.429D applicable to IMT stations in this band. In particular, IMT stations shall not cause harmful interference to, nor claim protection from, systems in the radiolocation service in various national and international operational environments and shall meet unwanted emission levels specified in the relevant ITU-R Recommendations.
- 3600-3800 MHz (Region 2)
TBD
- 6425-7025 MHz (Region 1)
TBD
- 7025-7125 MHz (globally)
TBD
- 10000-10500 MHz (Region 2)
CEPT is of the view that the result of a possible identification of the frequency band 10-10.5 GHz in Region 2 under this agenda item has a global impact on EESS (active) in the band 10.0-10.4 GHz and may have a global impact on EESS (passive) in the band 10.6-10.7 GHz due to the required protection of these services on a global basis. Moreover, interference would be detrimental to airborne and shipborne radars operating in 10-10.5 GHz under the radiolocation Service operated by some CEPT countries in all Regions at 10-10.5 GHz. Sharing and compatibility studies between IMT and EESS (active) show that sharing between IMT and those services is not possible. Therefore, CEPT is of the view that the band 10 – 10.5 GHz should not be identified for IMT in Region 2 in order to ensure the protection of the radiolocation and the globally operating EESS (active) systems and in order to not impose any additional regulatory or technical constraints to these services.

ECP

draft ECP: 3300-3400 MHz (R1): Article 5 NOC 5.429A och 5.429B

draft ECP: 3300–3400 MHz (R2): Article 5 NOC 5.429C och 5.429D

draft ECP 10–10,5 GHz (R2): Article 5 NOC

Svenska intressenter

SES Astra AB, Onsala rymdobservatorium, Overhorizon AB, SMHI, FMV, Teracom, Telia Company AB, Ericsson

Svenska kommentarer

SES Astra AB: Vi stödjer i synnerhet skrivningen i den svenska ståndpunkten att ”Sverige stödjer inte en IMT-identifiering av frekvensbandet 6425–7025(7125) MHz som begränsar bandets flexibilitet för svensk del vad gäller dess användning, varken på kort eller på lång sikt” samt att ”en identifiering av frekvensbandet 6 425–7 025 (7 125) MHz för IMT inte ska medföra begränsande villkor för befintlig användning” och skulle gärna se att dessa ställningstaganden gällde som generell utgångspunkt/princip inför värdering av alla agendapunkter. I samma anda stödjer vi även skrivningen i den svenska ståndpunkten att ”Sverige kan acceptera att i Region 2 banden 3 600–3 800 MHz, (...) allokeras för mobila tjänster på primär basis och identifieras för IMT, om delnings- och kompatibilitetsstudier visar att befintliga tjänster kan skyddas” och noterar att dessa studier utfördes senast inför WRC-15 och konkluderade i svårigheter till delning. Vi stödjer även princip #4 i Annex 1 av CVC/16-2 som understryker att ITU-R-studier bör “Use, to the extent practicable and available, any sharing and compatibilities studies carried out in previous cycles. This principle is necessary to avoid repeating studies previously performed.” Vi förstår och stödjer givetvis att svensk prioritet är låg för band som inte avser Region 1.

Overhorizon AB: Overhorizon AB stödjer inte en identifiering av frekvensbandet 6425–7025 MHz för IMT.

SMHI: Den passiva observationsverksamheten från satellit, EESS och SRS behöver skyddas från störningar från IMT i de föreslagna banden 6 425 – 7 075 MHz och 7 075 – 7 250 MHz. (Ocean surface temperature)

Det passiva observationsbandet för EESS och SRS i 10,6 – 10,7 GHz måste skyddas mot emissioner från 10,0 – 10,5 GHz

Bandet 10 – 10,4 GHz används för aktiva EESS tjänster. Dessa har behov av adekvat skydd från andra tjänster.

Notera särskilt ”unwanted emissions in the spurious domain”

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.2.

- CRAF supports no change for the bands 3 300–3 400 MHz and 6 425–7 025 MHz,
- Compatibility studies will be required for the primary band 10.6–10.7 GHz for any new allocations to IMT in the 10–10.5 GHz for region 2.
- The RAS bands under RR No. 5.149 must be considered while evaluating the potential impact of new allocations to IMT in these bands.

FMV: Tillse skydd för radar i 3,3–3,4 och 10–10,5 GHz. Stöd för NOC i 3,3–3,4 och 10–10,5 GHz.

Telia Company AB: Telia Company stödjer att de föreslagna banden under AI 1.2 allokeras/identifieras för Mobile/IMT. I synnerhet bandet 6425 - 7125 MHz är av stor vikt för den fortsatta utvecklingen av 5G i Europa. Det finns ett stort behov av ytterligare ”mid-band” spektrum för att kunna erbjuda avancerade mobila tjänster till befolkningen i områden som inte kommer att täckas med mmW-banden. Bandet 6425-7125 MHz skulle i kombination med C-bandet kunna lösa det behovet och vi ser också att användningen kan samexistera med befintliga tjänster genom delning eller koordinering. Mer information om framtida spektrumbehov i ”mid-bands” finns dokumenterat i GSMA/Colleagos rapport, 5G Mid-Band Spectrum Needs - Vision 2030 – Spectrum.

Telia Company föreslår att första stycket i den svenska positionen för 6425–7025 (7125) MHz uttrycks på ett omvänt sätt. t.ex. ”Sverige kan tänkas stödja en IMT-identifiering av frekvensbandet 6425-7125 MHz ifall bandets flexibilitet för svensk del vad gäller dess användning inte begränsas, varken på kort eller lång sikt.” Dessutom föreslås texten flyttas så att den kommer efter stycket om studier.

Ericsson:

- 3300-3400 MHz R1

Ericsson stödjer R1 country footnotes i den utsträckning det är möjligt att använda bandet utan att störa andra användare med primär allokering.

- 3300-3400 MHz, 3600-2800 MHz R2

Ericsson stödjer den Svenska ståndpunkten att "acceptera att i Region 2 banden 3 300–3 400 MHz allokeras för mobila tjänster på primär basis och identifieras för IMT, om delnings- och

kompatibilitetsstudier visar att befintliga tjänster kan fortsätta upprätthålla sina kvalitets-, prestanda- och tillgänglighetskrav." Ericsson noterar att en ökning av antalet länder som använder frekvensbandet 3600-3800 MHz på ett positivt sätt påverkar ekosystemet och economy of-scale för 3.4-3.7/3.8 GHz som används i Sverige för mobilt/IMT.

- 6425-7125 MHz

Ericsson stödjer en IMT-identifiering av bandet 6425-7125 MHz. 6GHz är den sista möjligheten till ytterligare spektrum i mid-band-området. Mid-band-spektrum är nödvändigt för att leverera kombinationen kapacitet och täckning, exempelvis för 5G-täckning i städer (del inkludera t.ex. Metaverse). Det är därmed ett beslut av största strategisk vikt för Sverige.

Ericssons åsikt är att licensiering av bandet är den bästa lösningen för Sverige för att skydda fasta länkar via koordinering i den mån det behövs.

CEPT studerar för närvarande RLAN-användning, vilket riskerar att störa fasta länkar i Sverige pga okontrollerad användning, även utomhus.

Harmonisering av RLAN-användning i CEPT kommer göra det omöjligt att kontrollera interferens till fast länkar i om det rör sig om olicensierad användning. Dessutom bör det noteras att ytterligare spektrum för RLAN inte nödvändigtvis kommer svenska medborgare till godo i och med den flaskhals som finns i fråga om fixed broadband (även om 1 Gbps blir tillgängligt till svenska hem).

-10-10.5 GHz

Ericsson stödjer den Svenska ståndpunkten att "acceptera att i Region 2 ... 10-10.5 GHz allokeras för mobila tjänster på primär basis och identifieras för IMT, om delnings- och kompatibilitetsstudier visar att befintliga tjänster kan fortsätta upprätthålla sina kvalitets-, prestanda- och tillgänglighetskrav."

Därutöver föreslår Ericsson följande:

- Text till svensk ståndpunkt för 3600-3800 MHz, R2: *Sverige noterar att IMT-identifiering av 3600-3800 MHz kan expandera ekosystemet för utrustning på ett band som används i Sverige.*
- Omformulering av text för höga 6 GHz-bandet: *Sverige kan stödja IMT-identifiering av frekvensbandet 6 425-7 025 (7 125) MHz om det inte begränsar bandets flexibilitet för svensk del vad gäller dess användning, varken på kort eller på lång sikt.*

- En kommentar till svensk ståndpunkt: *Kommentar: CEPT studerar höga 6 GHz for RLAN samtidig som den pågående agendapunkten för WRC-23. Sverige stödjer inte användning av RLAN I bandet eftersom det skulle begränsa bandets flexibilitet för svensk del vad gäller dess användning på kort och på lång sikt.*

AI 1.3

1.3 to consider primary allocation of the band 3 600–3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution **246 (WRC-19)**;

Prioritet

Hög

Svenska ståndpunkter

Sverige stödjer en allokering till mobila tjänster på primär basis i frekvensbandet 3 600–3 800 MHz under förutsättning att villkoren för en allokering inte försämrar förutsättningar för mobil användning i Sverige.

Ansvariga grupper

WP 5A, PT 1

CEPT-ståndpunkt

CEPT supports the upgrade of the allocation of the frequency band 3 600–3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis in Region 1 to improve opportunities for the introduction of mobile service applications in Europe.

This support is subject to the conditions that the current use in the frequency bands 3 400–3 800 MHz and the protection of primary services, under the existing CEPT regulatory framework, can be continued, and that no undue constraints are imposed on the existing services and their future development.

In consequence, CEPT supports that the technical and regulatory conditions applicable to the band 3400–3600 MHz, in particular the pfd limit of $-154.5 \text{ dBW/m}^2/4 \text{ kHz}$ not to be exceeded for more than 20 % of time 3 m above ground at the border to protect the neighbouring countries, are one part of the technical conditions in response to WRC- 23 Agenda item 1.3, recognizing that sharing studies are required in ITU-R to ensure that the full objective of Resolution 246 (WRC-19) is met.

CEPT is of the view that consideration of an IMT identification in this band is not in the scope of Resolution 246 (WRC-19).

ECP

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Svenska intressenter

SES Astra AB, SMHI, Teracom, Telia Company AB, Ericsson

Svenska kommentarer

SES Astra AB: vi önskar på förekommen anledning (UAEs inlägg i debatten inom ITU-R R vilket märkligt nog föranlett en sådan CPM-metod) framhålla att denna agendapunkt studerar en primär mobilallokering, inte en IMT-identifiering, och skulle önska att Sverige tydligt framför skopet av denna agendapunkt eftersom förvirring tycks råda.

SMHI: Skydd av användning av FSS (space to Earth) i 3,8–4,2 GHz om en IMT-allokering i 3,6–3,8 GHz medför en förändring av användningen i frekvenser över 3,8 GHz.

Telia Company AB: Telia Company stödjer en uppgradering av den sekundära mobilallokeringen i bandet till en primär mobilallokering. En primär mobilallokering är av stor vikt för att kunna skydda den redan befintliga mobilanvändningen i bandet samt att underlätta koordinering med länder som inte använder bandet till mobila tjänster. En ny primär mobilallokering får dock inte ytterligare begränsa restriktionerna i bandet för mobil användning jämfört med idag.

Ericsson: Ericsson stödjer Svenska ståndpunkter. En primär allokering för mobilt kommer att stödja Sveriges förhandlingsmöjligheter med grannländer, t.ex. Ryssland

AI 1.4

1.4 to consider, in accordance with Resolution **247 (WRC-19)**, the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level;

Prioritet

Låg

Svenska ståndpunkter

Sverige menar att det är av stor vikt att få fram en bra definition av HIBS i radioreglementet.

Användning av HIBS i banden 694–960 MHz, 1 710–1 885 MHz och 2 500–2 690 MHz ska inte orsaka störningar eller begränsningar på befintlig användning, inklusive annan IMT-användning, i dessa band och i grannband till dessa.

Ansvariga grupper

WP 5D, PT 1

CEPT-ståndpunkt

CEPT considers the development of regulatory provisions applying to HIBS in order to protect other services and applications in the frequency bands proposed for HIBS as well as in the adjacent bands.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI, Teracom, SES Astra AB, Telia Company AB, Ericsson

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.4.

- Protection of the primary RAS band 2 690–2 700 MHz shall be ensured from possible new allocations for HIBS in the adjacent 2 500–2 690 MHz band.
- Protection of the bands 1 400–1 427 MHz (primary, passive, 5.340) 1 610.6–1 613.8 MHz and 1 660–1 670 MHz (primary, 5.149) as well as the band 1 330–1 400 MHz (secondary in some CEPT countries, 5.149) shall be ensured from second harmonics originating from systems operating in the band 694–960 MHz
- Consider the protection of the RAS bands 1 718.8–1 722.2 MHz and 2 655–2 690 MHz covered by RR 5.149 from any new

allocations for HIBS in the bands 1 710–1 885 MHz and 2 500–2 690 MHz.

- Compatibility studies will be required for the above-mentioned bands taking into account the characteristics of HIBS and their deployment.

SMHI: Skydd av Met radar i 2,7–2,9 GHz med avseende störningar från en HIBS allokering i 2,5–2,69 GHz

Skydd av MetSat (nerlänk) i 1675–1710 MHz med avseende på störningar från HIBS i 1710–1885MHz bandet

Skydd av EESS/SOS i bandet 2025–2110 MHz

Telia Company AB: Under förutsättning att befintlig terrester mobilanvändning kan skyddas samt att inga ytterligare begränsningar för den terrestra användningen tillkommer kan Telia Company stödja en framtida användning av HIBS ifall behov finns. För mobiloperatörerna skulle användningen av HIBS i redan befintliga mobilnät tänkas kunna förbättra täckningen i glesbygdsområden samt ge möjlighet till en kapacitetsökning vid tillfälliga behov.

Ericsson: Ericsson stödjer användning av HIBS på IMT-band under förutsättning att terrester IMT skyddas och HIBS kan samexistera med andra tjänster.

AI 1.5

1.5 to review the spectrum use and spectrum needs of existing services in the frequency band 470–960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470–694 MHz in Region 1 on the basis of the review in accordance with Resolution **235 (WRC-15)**;

Prioritet

Hög

Svenska ståndpunkter

Sverige stödjer en översyn av frekvensområdet 470–960 MHz vad gäller användning och behov. Sverige stödjer sådana regulatoriska förändringar i bandet 470–694 MHz, som innebär att bandet allokeras till mobila tjänster på primär basis i Region 1.

Regulatoriska åtgärder som ska föreslås på ITU-nivå i 470–694 MHz ska styras av framtida behov av frekvensanvändning men kommer sannolikt också att styras av politiska beslut på EU-nivå. Sverige bör agera på så sätt att det skapas bästa regulatoriska förutsättningar för att Sverige ska fritt kunna göra det valet av användningen som bäst motsvarar Sveriges framtida behov. Det innebär följaktligen att primär allokering av bandet 470–862 MHz till rundradio i Region 1 förblir oförändrad.

En eventuell fråga om identifiering av bandet 470–694 MHz eller delar av det för IMT kräver vidare analys.

Ansvariga grupper

ITU-R TG6/1, PT D

CEPT-ståndpunkt

- CEPT supports a complete and comprehensive overview of the existing usage and evaluation of spectrum needs of the existing services within the frequency band 470–960 MHz in Region 1 as a basis for further work on agenda item 1.5.
- CEPT is of the view that any consideration of possible regulatory action(s) in the band 470–694 MHz requires a full account of the results and impact of sharing studies including a thorough analysis.
- In line with Resolution 235 (WRC-15), CEPT acknowledges and supports that no regulatory action is required in the band 694–960 MHz.

- CEPT is of the view that the primary allocation of the 470-862 MHz band to the broadcasting service in Region 1 shall remain, in order to enable the protection and development of incumbent usage of the broadcasting service.
- CEPT is of the view that any possible regulatory action by WRC-23 in the band 470 – 694 MHz shall not be in conflict with any provision of the GE06 Agreement.
- CEPT is of the view that this agenda item seeks the long-term balance between meeting various national requirements and the challenges of effective cross-border coordination between the existing services and various services/applications wishing to access spectrum, including applications of the mobile service.
- CEPT supports the continuation and development of the incumbent usage by PMSE (SAP/SAB) (in accordance with existing RR No. 5.296).
- CEPT supports the protection of the radioastronomy service within the frequency band 606-614 MHz to ensure its continued operation. CEPT is of the view that any decision on regulatory action(s) in the band 470-694 MHz, where required, at the WRC-23 shall consider regulatory action to protect RAS, taking into account RR No. 5.149.
- CEPT is currently of the view that no changes are necessary concerning RR No. 5.291A addressing the operation of wind profiler radars.

ECP

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Svenska intressenter

Onsala rymdobservatorium, FMV, Teracom, SMHI, Telia Company AB, Ericsson

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.5.

- In order to strengthen the protection of the band in region 1 for radio astronomical observations, CRAF requests an upgrade for the secondary band 608–614 MHz to a primary allocation similar

to the situation in region 2 and the African Broadcasting Area in region 1.

- CRAF supports sharing and compatibility studies for RAS protection for the primary allocation in the band 606–614 MHz in the African Broadcasting Area and the secondary allocation in the band 608–614 MHz for the European part in Region 1.

FMV: FMV ser ökade befintliga och framtida behov för FMV och Försvarsmakten av spektrumutrymme för Mobila tillämpningar inom frekvensområdet 470 - 512 MHz, och föreslår därför att PTS verkar för en Mobile Allocation i detta frekvensband.

Bakgrund; Behovet av spektrumutrymme för försvarsändamål inom UHF-området har ökat betydligt under ett antal år, och vi ser en fortsatt trend i den riktningen på såväl lång som kort sikt. Vi ser även med hänsyn till den utvecklingen en tilltagande bristsituation inom Försvarsmaktens befintliga utrymme inom delar av 240 - 400 MHz, varför vi gärna undersöker möjliga alternativ.

470-512 MHz ingår i tuning range hos flertalet på marknaden förekommande militära mobila UHF -system, samt även många av Försvarsmaktens befintliga system. Det vore därför en för FMV och Försvarsmakten gynnsam utveckling om frekvensbandet 470 - 512 MHz på ett eller annat sätt kunde göras mer tillgängligt för försvarsändamål.

ITU-R M. 1808 har även i sin senaste version kompletterats med data för 470 - 512 MHz som motsvarar vissa MIL radiosystem.

SMHI: Skydd av vindprofilerare i bandet 470–494 MHz.

Telia Company AB: TeliaCompany en stödjer primär allokering till Mobila tjänster i hela 470-694 MHz samt en identifiering för IMT i delar av bandet. Mer spektrum i låga band är en nödvändighet för att kunna erbjuda mobila tjänster med mer prestanda och kapacitet i landsbygd och andra mer glest befolkade delar av landet. Telia Company noterar att användningen/behovet av traditionell marksänd TV minskar samtidigt som IP baserad strömmad TV via mobilnäten ökar kraftigt, det är därför lämpligt att frigöra spektrum för detta behov. En co-primär allokering skulle skapa flexibilitet för att kunna skapa en sådan förändring och en identifiering för IMT skulle hjälpa till att harmonisera användningen och fokusera den till lämpliga delar av bandet, vilket är viktigt för att få fungerande eco-system för utrustning på plats i Europa.

Ericsson: Ericsson stödjer en primär allokering till mobila tjänster på bandet 470-694 MHz i linje med vad Sverige föreslår. En primär allokering till mobilt i RR innebär en framtida flexibilitet för Sverige med möjlighet att ta hänsyn till politisk prioritet, DTT-användning, mobil användning, etc.

AI 1.6

1.6 to consider, in accordance with Resolution **772 (WRC-19)**, regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;

Prioritet

Låg

Svenska ståndpunkter

Eventuella tekniska och operationella åtgärder bör redovisas i en ITU-R Rekommendation och inte i RR.

Kommentar: Diskussion kring uppdatering av svensk ståndpunkt pågår, förslag:

Eventuella regulatoriska förändringar med anledning av *sub-orbital vehicles* ska säkerställa fortsatt skydd för befintliga tjänster i berörda och angränsande frekvensband. Inga behov av ändringar vad gäller allokering i RR.

Motivering: Sub-orbitala farkoster kan komma att flyga i luftrum som delas med konventionell flygtrafik (*shared airspace*) och skall av säkerhetsskäl (*safety purpose*) då använda samma radiokommunikationstjänster och frekvenser som används av konventionella flygfarkoster. Med anledning av att frågan berör flygsäkerhet är det mer lämpligt att *sub-orbital vehicles* regleras i en WRC-resolution istället för i en ITU-R rekommendation.

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

CEPT is of the view that a new WRC Resolution is required that:

- Defines sub-orbital flights;
- Identifies the technical and regulatory conditions for use of stations operating on such flights as appropriate, recognising that the use of aeronautical radiocommunication stations onboard sub-orbital vehicles when used to ensure safety-of-life has to be in accordance with ICAO provisions.

CEPT is also of the view that the sub-orbital vehicles shall ensure the protection and not impose any additional constraint on other services or applications operated in the same service and that the sub-orbital vehicles shall not impact the radiocommunications of satellite launchers which operate in the space operation service.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.6.

- To ensure any regulatory provisions under this agenda item will not affect the RAS operations.
- Support studies for the protection of any RAS bands that might be relevant to the regulatory provisions decided under this agenda item.

SMHI: Support av studier så att MetSat och EESS användningen erhåller ett adekvat skydd

AI 1.7

1.7 to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution **428 (WRC 19)** for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands;

Prioritet
Medel

Svenska ståndpunkter

Stöd för en ny allokering för AMS(R)S under förutsättning att det inte innebär störningar eller begränsningar på existerande tjänster i bandet eller i dess grannband, samt att en sådan förändring har stöd inom ICAO.

Ansvariga grupper
WP 5B, PT C

CEPT-ståndpunkt

CEPT supports a new primary allocation to AMS(R)S in all or part of the frequency band 117.975-137 MHz while:

- limiting the use of the new AMS(R)S allocation to non-geostationary and internationally standardised aeronautical systems;
- mandating that the use of this new primary allocation to AMS(R)S be subject to appropriate Article 9 coordination provisions, for example No. 9.11A;
- ensuring protection of services in adjacent bands and not constraining these services.

CEPT is of the view that in-band coexistence between AM(R)S and AMS(R)S and adjacent-band coexistence with ARNS below 117.975 MHz need to be ensured through frequency planning and coordination work, taking into account the current ICAO frequency management framework.

CEPT is of the view that the provisions above will also ensure compatibility between AMS(R)S systems and AM(OR)S assignments in the band 132-137 MHz of countries listed in RR Nos. 5.201 and 5.202.

CEPT is of the view that the protection of adjacent band services operating above 137 MHz from AMS(R)S emissions can be ensured:

- through the 1 MHz guard band in 136-137 MHz and RR Appendix 3 limits for spurious emissions for AMS(R)S systems operating in 117.975-136 MHz,
- through 62.5 kHz guard band and RR Appendix 3 limits for spurious emissions for the band 136-136.9375 MHz and
- through a limit on the level of unwanted emissions above 137 MHz for AMS(R)S emissions from systems operating in 136.9375-137 MHz,

CEPT is of the view that the allocation to AMS(R)S should be protected as a safety service, recognizing that the required protection of AMS(R)S satellite receivers shall not adversely impact planned usage of MSS, SOS, SRS and MetSat systems above 137 MHz.

ECP

draft ECP: Article 5 MOD (ny primär allokering till AMS(R)S i 117,975-136 MHz och 136-137 MHz), MOD 5.208, MOD 5.209, ADD 5.A17, ADD 5.817. Appendix 5, Annex 1 MOD 1.1. SUP Res 428.

Svenska intressenter

TBD

Svenska kommentarer

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AI 1.8

1.8 to consider, on the basis of ITU-R studies in accordance with Resolution **171 (WRC-19)**, appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution 155 (Rev.WRC-19) and No. 5.484B to accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems;

Prioritet
Medel

Svenska ståndpunkter

Satellitssystem som avses användas för UAS:er, ska inte ges någon rätt till utökad regulatorisk status, vid koordinering eller vid framtida användning, jämfört med de rättigheter som skulle råda om satellitssystemet inte skulle användas för UAS:er.

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

- CEPT acknowledges the opportunities of the use of networks of the FSS for UAS CNPC links and CEPT is of the view that UAS CNPC links using FSS in non-segregated airspace shall operate:
 - in accordance with ICAO SARPs;
 - under successfully coordinated assignments for FSS applications notified with class of earth station “UG”.
- CEPT is of the view that the safety aspects of UAS CNPC shall not have any impact on:
 - the existing terrestrial services and their current and expected applications;
 - the relevant existing agreements reached during FSS satellite coordination process;
 - the future coordination of FSS networks during the application of provisions of Articles 9 and 11 of the RR;
 - all cases which fall under RR 11.41.
- CEPT is of the view that in order to ensure safety-of-flight operation of UAS, the administrations responsible for the operation of UAS CNPC links under the ICAO SARPs shall:
 - take the required measures to ensure freedom from harmful interference to earth stations on board UA;
 - act immediately when their attention is drawn to any such harmful interference;
 - thus, the cases where harmful interferences could not be mitigated by the administration responsible for operating UAS CNPC links and which lead to a loss of

the UAS CNPC links would need to be addressed by airworthiness and flight operational procedures defined within ICAO.

- CEPT is of the view that the pfd mask labelled as example b in Annex 2 of Resolution 155 (Rev. WRC-19) is appropriate to protect the terrestrial services.
- CEPT is of the view that the RR No. 5.149 for the protection of Radioastronomy from harmful interference in the frequency band 14.47-14.5 GHz has to be taken into account.
- CEPT recognises that ICAO is responsible for the safe operation of aircraft including UAS and is developing appropriate SARPs covering all aspects of safe operation of UAS including the required communication systems.
- CEPT recognises that RR 4.10 does not apply to the use of networks of the FSS for the UAS CNPC links between Earth stations on board the UA and the satellites. This implies that any administration notifying FSS network as well as any administrations authorising the operation of stations of the terrestrial services in accordance with the RR in the frequency bands identified in resolves 1 of Resolution 155 (Rev. WRC-19) have no responsibility for the safety of life for these links.
- CEPT is of the view that if the conditions for the safety operation of CNPC established by ICAO cannot be met with the existing FSS link as it stands, then this link should not be used by the UAS operator.

ECP

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Svenska intressenter

SES Astra AB, Onsala rymdobservatorium

Svenska kommentarer

SES Astra AB: Vi instämmer till fullo i den svenska ståndpunkten, liksom CEPTs preliminära position, att denna användning bör hanteras inom den gängse regleringen utan extra införd särskild status. Vi noterar att denna risk tydligt kvarstår då CPM-textens regulatoriska lösning tyvärr fortfarande är vidöppen.

Onsala rymdobservatorium: OSO/CRAF preliminary position on agenda item 1.8.

Studies will be required for the protection of the RAS secondary allocation 14.47–14.5 GHz from possible use of the band 14–14.47 GHz by earth-to-space UAS CNPC links.

AI 1.9

1.9 to review Appendix 27 of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with Resolution **429 (WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

Sverige stöder effektivt nyttjande av befintliga frekvenser genom digital teknik och möjlighet till bredare kanaler och effektiv frekvensanvändning, under förutsättning att samexistens med andra HF-system är möjligt.

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

CEPT is of the view that the current version of RR Appendix 27 does not preclude the use of wideband digital HF communication by using multiple channels simultaneously.

CEPT is of the view that relevant parts of the current text of the Rules of Procedures need to be introduced in RR Appendix 27 and make adjustments to make explicit the use of wideband emissions.

ECP

draft ECP: Appendix 27 ADD 27/18A, MOD 27/57, MOD heading of 1.2, MOD 27/58, MOD 27/60, SUP Res 429

Svenska intressenter

TBD

Svenska kommentarer

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AI 1.10

1.10 to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution **430 (WRC-19)**;

Prioritet

Medel

Svenska ståndpunkter

Sverige stödjer en ändring av allokeringen för mobile service i bandet 22–22,21 GHz, till att inkludera aeronautical mobile service, under förutsättning att det inte innebär några begränsningar för fixed service inklusive dess framtida utveckling, samt att skyddet av Radioastronomi kan säkerställas.

En eventuell ny primär allokering till mobile service i bandet 15,4–15,7 GHz ska inte orsaka störningar på andra tjänster till vilket bandet är allokerat och inte heller orsaka (oskäligen) begränsningar eller på något sätt påverka säkerheten vad gäller tillämpningar inom luftfarten (inklusive mil).

Kommentar: Att revidera allokering i 15,4–15,7 GHz samt att få en ny allokering i 22,0–22,21 GHz för aeronautical MS i syfte att få frekvenser för "non-safety aeronautical mobile applications" verkar bli svårt, givet RR samt situationen i Sverige. En rekommendation kan vara en bra lösning.

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

CEPT acknowledges the need for additional spectrum to fulfil the increasing demand for non-safety aeronautical mobile applications. Therefore, CEPT supports a new allocation to AMS for non-safety application in the whole range or a part of the frequency band 15.4–15.7 GHz, and considers the possibility of a new allocation to AMS for non-safety application in the whole range or parts of the frequency band 22–22.21 GHz while:

- ensuring protection of the EESS/SRS (passive), and the RAS from unwanted emissions of the AMS;
- ensuring protection of the primary allocations to radiolocation, aeronautical radionavigation and fixed-satellite (Earth-to-space) services in the relevant parts of the frequency band 15.4–15.7 GHz;

- ensuring protection of the primary allocations to the fixed and mobile services in the frequency band 22-22.21 GHz noting that the frequency range 21.2-23.6 GHz is allocated to the fixed service;
- considering that RR No. 5.149 applies, also recognizing that some CEPT administrations operate RAS under their National regulation with a primary or secondary status in the frequency band 22.00-22.21 GHz.

Noting that some CEPT Administrations operate water vapour radiometers in the frequency range 22-22.5 GHz utilized in a variety of environmental applications, including weather forecasting and nowcasting, as well as climate monitoring for meteorology, CEPT will also ensure their necessary protection.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF Preliminary position on agenda item 1.10.

Protection of the primary RAS bands 22.21-22.5 GHz and 15.35-15.4 GHz shall be ensured from possible new allocations to aeronautical services in the adjacent bands. Furthermore, the protection of the band 22.01-22.21 GHz (RR No. 5.149, also secondary in some CEPT countries) will be necessary.

Compatibility studies will be required for the above-mentioned bands taking into account the characteristics of aeronautical mobile services under this agenda item.

SMHI: Support till studier för att skydda intilliggande frekvensband avseende EESS 22,21-22,5 GHz och 15,35-15,4 GHz från störningar.

AI 1.11

1.11 to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation, in accordance with Resolution **361 (Rev.WRC-19)**;

Prioritet
Medel

Svenska ståndpunkter

Stöd för ett eventuellt införande av e-navigering och modernisering av GMDSS inom ramen för existerande frekvensband för *maritime mobile service* (inklusive *maritime mobile satellite service*), kopplat till eventuella beslut inom IMO.

Stöd för borttagande av NBDP (Narrowband Direct Printing). Stöd för införande av NAVDAT (Navigational Data) i MF och HF i radioreglementet.

Nya allokeringar för *maritime mobile* eller utpekande av ytterligare (befintliga) satellitsystem för GMDSS ska inte medföra begränsningar för annan allokerad användning i samma eller angränsande band.

Kommentar: Kandidatfrekvensband anges inte i resolutionen, viktigt att redan i början av studieperioden identifiera spektrumbehov dels för att frekvensmässigt avgränsa studiearbetet och dels för att undvika ny spektrumallokering för maritima tjänster. Behov av frekvenser bör först kunna lösas under befintliga allokeringar.

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

Issue A: Modernisation of GMDSS

CEPT supports regulatory actions needed to implement the GMDSS modernisation in the Radio Regulation based on decisions taken in IMO.

CEPT supports in particular:

- the removal of narrow band direct printing from the GMDSS and introduction of an automatic connection system for MF and selected HF bands;
- the introduction of NAVDAT as a component of the GMDSS;

- to accommodate Automatic Identification System search and rescue transmitters (AIS-SARTs) as homing equipment for survival craft stations, as an alternative to Radar-SARTs;
- the removal of 1.6 GHz satellite EPIRBs from the GMDSS.

Issue B: e-navigation

CEPT is of the view that no change to the Radio Regulations is required as a consequence of no decision taken by IMO regarding spectrum requirements to implement e-navigation.

Issue C: Regulatory action due to the introduction of additional satellite systems into the GMDSS by IMO

CEPT does not support at this stage the introduction of the satellite system BEIDOU in the Radio Regulations in order to be part of the GMDSS, even if the IMO were to recognize BEIDOU as a GMDSS service provider. The reasons are the lack of justification of the frequency requirement, the incompatibility with the current usage of the 1610-1626.5 MHz and 2483.5-2500 MHz bands in which BEIDOU would like to operate and the non-achievement of the frequency coordination with the other MSS systems present in these frequency bands.

ECP

Note: It should be considered to split the ECP in separate ECPs for each of the issues because it could be possible that the issues are dealt with separately by WRC-23.

draft ECP:

issue A: Article 5 ADD 5.A111 (NAVDAT), MOD 5.110 (include ref to Rec ITU-R M.541), MOD 5.132 (ref. to App 15 and 17), ADD 5.B111(NAVDAT), MOD 5.228C(include AIS-SART), [MOD 5.375 (EPIRBs)], MOD 19.11, MOD 31.7, MOD 32.7, MOD 32.7.1, MOD 32.12, MOD 32.21A, MOD 32.23, SUP 32.24, MOD 32.31, MOD 32.34A, SUP 32.38, SUP 32.43, SUP 32.44, MOD 32.47, SUP 32.48, MOD 32.52, SUP 32.53, MOD 32.56, MOD 32.57, MOD 32.59, MOD 32.61, MOD 33.8, MOD 33.12, SUP 33.13, SUP 33.17, SUP 33.18, MOD 33.20, MOD 33.31, MOD 33.35, SUP 33.36, SUP 33.37, SUP 33.38, ADD 33.40bis, MOD 33.41, MOD 33.43, ADD33.46A1, ADD 33.46A2, MOD 33.47, MOD 33.48, MOD 33.49, MOD 33.50, MOD Table 47-1, MOD 51.40, MOD 51.41, MOD 51.44, MOD 51.49, ADD 51.64A1, ADD 51.64A2, ADD 51.64A3, ADD 51.64A4, ADD 51.64A5, MOD 52.6, ADD 52.13A, MOD 52.97, MOD 52.103, ADD 52.262A1, MOD 52.263, MOD 52.264, MOD 52.265A1, MoD Appendix 14 (editorial), MOD Table 15-1, [MOD Table 15-2], MOD Appendix 17 Part A, MOD Appendix 17 Part B, MOD Res 18, MOD Res

349, MOD Annex to Res 354, ADD Res [EUR-A111-NAVDAT-COORDINATION], SUP Res 361.

Issue B: NOC Article 5, SUP Res 361

Issue C: NOC Articles, NOC Appendices, MOD Res 361

Kommentar: Ologiskt att SUP Res 316 i Issue b och MOD Res 316 i Issue c.

Svenska intressenter

Onsala rymdobservatorium

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF Preliminary position on agenda item 1.11.

- According to the RR No. 5.372, harmful interference shall not be caused to stations of the radio astronomy service using the frequency band 1 610.6–1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (RR No. 29.13 applies). Studies will be required for RAS protection from possible interference that could be caused by additional GSO systems.
- Studies will be required for the protection of the RAS band 4 950–5 000 MHz from second harmonics in the downlink band 2 483.5–2 500 MHz.
- Regulatory provisions for the GMDSS modernization and e-navigation under this agenda item will be monitored for more information.

AI 1.12

1.12 to conduct, and complete in time for WRC 23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution **656 (Rev.WRC-19)**;

Prioritet

Medel, låg?

Svenska ståndpunkter

Sverige kan acceptera en allokering till jordutforskning på sekundär basis i frekvensområdet 40-50 MHz, under förutsättning att kompatibilitet med befintliga tjänster är möjligt.

Ansvariga grupper

WP 7C, PT A

CEPT-ståndpunkt

CEPT supports a new secondary allocation to the Earth exploration-satellite service (active) in the 40-50 MHz band while ensuring the protection of incumbent services already allocated to the 40-50 MHz band or adjacent frequency ranges.

ECP

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Svenska intressenter

SMHI

Svenska kommentarer

SMHI: Support till studier för att säkra kompatibilitet med andra tjänster och skapa en allokering för aktiv EESS vid WRC-23.

AI 1.13

1.13 to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with Resolution **661 (WRC-19)**;

Prioritet

Medel

Svenska ståndpunkter

I första hand behålla den sekundära allokeringen. Om en primär allokering är aktuell måste befintliga användningar i frekvensbandet såväl som i angränsande frekvensband skyddas.

Ansvariga grupper

WP 7B, PT A

CEPT-ståndpunkt

CEPT is supporting upgrade of space research service (SRS) allocation from secondary to primary while ensuring protection for in-band FS/MS and for radioastronomy service in the adjacent band 15.35-15.4 GHz. Upgrading of the allocation of the frequency band 14.8-15.35 GHz to the SRS should not impose constraints on existing systems of FS and MS in the frequency band 14.8-15.35 GHz.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI, Ericsson

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF Preliminary position on agenda item 1.13.

- Protection of the primary RAS band 15.35–15.4 GHz shall be ensured from the possible upgrade of SRS in the adjacent band.
- Compatibility studies will be required for the protection of the RAS passive band taking into account the characteristics of SRS defined under this agenda item.

SMHI: En uppgradering av SRS till primär tjänst i 14,8–15,35 GHz är ok ur ett meteorologiskt perspektiv under förutsättning att användningen av bandet 15,2–15,4 GHz inte påverkas negativt.

Ericsson: Ericsson stödjer Sveriges åsikt om att behålla sekundär allokering. Ett beslut om primär allokering skall innefatta skydd av nuvarande och framtida mobil och fast radio.

AI 1.14

1.14 to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5–252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution **662 (WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

Nya allokeringar på primär basis för EESS(passiv) inom frekvensbandet 231,5–252 GHz ska vara baserat på visat behov och inte medföra begränsningar för befintliga tjänster till vilket bandet är allokerat.

Kommentar: Uppdatering av svensk ståndpunkt övervägs.

Ansvariga grupper

WP 7C, PT A

CEPT-ståndpunkt

CEPT supports to cover relevant requirements of passive microwave sensor measurements within the frequency range 231.5–252 GHz with frequency allocations to EESS (passive) without unduly constraining the other primary services currently allocated in this frequency range, specifically:

- In line with the scientific observation requirements identified so far, CEPT supports a new primary allocation to the EESS (passive) in the frequency bands 239.2–242.2 GHz and 244.2–247.2 GHz;
- In order to avoid undue constraints to the primary services to which the bands 239.2–242.2 GHz and 244.2–247.2 GHz are currently allocated and subject to the outcome of the relevant sharing and compatibility studies with the services to which these and the adjacent bands are already allocated, CEPT is also proposing a shift of existing allocations to the FS and MS in the frequency band 239.2–241 GHz into the frequency band 235–238 GHz.
- In order to ensure that there will be no potential future impact to FS and MS in the frequency band 235–238 GHz, CEPT proposes to limit the existing allocation to EESS (passive) in this frequency band for use by limb sounding passive sensors only.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF Preliminary position on A.I 1.14
Studies will be required to review the impact that any change to the
EESS (passive) allocations in the frequency range 231.5–252 GHz
might have on RAS in this band.

CRAF supports the possibility of including the RAS if allocations to
passive services are created or altered in the frequency range 231.5–
252 GHz.

SMHI: Stöder studier för allokering av EESS passiv i 231,5–252 GHz.
Stöder också en allokering för nya vetenskapliga instrument för is-
moln-mätningar i 239,2–242,2 GHz och 244,2–247 GHz.

AI 1.15

1.15 to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally, in accordance with Resolution **172 (WRC-19)**;

Prioritet

Medel

Svenska ståndpunkter

Sverige kan acceptera åtgärder inklusive regulatoriska, som möjliggör användning av GSO FSS jordstationer ombord på flyg och fartyg i frekvensbandet 12,75–13,25 GHz (E->s) under förutsättning att frekvensbanden även fortsättningsvis ska kunna användas för mobil radio, och fast radio (både existerande och framtida) utan ytterligare begränsningar.

Ansvariga grupper

WP 4A, PT B

CEPT-ståndpunkt

CEPT supports establishing a regulatory framework and technical requirements for operation of earth stations on aircraft and vessels in the frequency band 12.75-13.25 GHz (Earth-to-space) with conditions that protect the services currently allocated in this frequency band and bands adjacent to it, taking into account ECC Decision (19)04.

CEPT considers that earth stations on aircraft and vessels in the frequency band 12.75-13.25 GHz shall operate consistent with the Appendix 30B procedures, protect the Appendix 30B allotments in the Plan, assignments in the List and in the new proposed Appendix 30B ESIM List (if adopted at WRC-23) and respect Resolution 170 (WRC-19).

CEPT supports the operation of these earth stations in the territories (air space and territorial waters) of administrations which have given agreement under No. 6.6 of Article 6 of Appendix 30B and have authorised such operation within their territories. The characteristics of these earth stations should remain in the envelope of notified earth station characteristics.

CEPT supports the use of power flux density (PFD) limits on the earth surface for earth stations on aircraft to ensure the protection of Mobile and Fixed Services, and also supports the development of a

methodology to verify compliance with PFD limits by GSO earth stations on aircraft or of adequate transitional measures in case WRC-23 could not finalise the methodology.

CEPT is of the view that the notifying administration of the GSO network with which the earth stations on aircraft and vessels communicate should be identifiable to address the potential cases of harmful interference caused by any earth station on aircraft and vessels to fixed and mobile services. This identification could be done thanks to i) the license issued by / authorization of the administration for the operation of the earth station on aircraft and vessels on its territory; ii) the assistance of the flag nation of aircraft/vessel; iii) the on-board radio license of the aircraft or vessel equipped with an earth station. CEPT is of the view that the receiving part of these earth stations in the associated frequency bands shall not claim protection from terrestrial services having allocations in the same frequency bands and operating in accordance with the Radio Regulations.

ECP

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Svenska intressenter

SES Astra AB, Overhorizon AB, SMHI, Ericsson

Svenska kommentarer

SES Astra AB: Vi stödjer generellt utökade möjligheter till användandet av befintliga allokeringar så länge studier visar att det inte negativt påverkar andra tjänster eller annat användande inom samma allokering. I detta fall är det knappast kontroversiellt så länge regleringen inte påverkar plantilldelningarna vars reglering bör förbli orörd. Fler möjligheter att tillgodose det erkänt ökande behovet av ESIM via satellittjänster i enlighet med klagjord reglering är sannerligen välkommet och välbehövligt. Vi stödjer därmed den svenska positionen samt CEPTs preliminära position men vi skulle såklart gärna se att den svenska ståndpunkten styrks till att Sverige stödjer åtgärder, istället för ”kan acceptera åtgärder”.

SMHI: Support av studier för att skydda EESS (aktiv) 13,25–13,72 GHz.

Ericsson: Ericsson anser att en eventuell användning av GSO FSS jordstationer ombord på flyg och fartyg i frekvensbandet 12,75–13,25 GHz (E->s) måste garantera att både mobil och fast radio skyddas samt inte begränsa deras framtida utveckling.

AI 1.16

1.16 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-GSO FSS earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with Resolution **173 (WRC-19)**;

Prioritet

Hög

Svenska ståndpunkter

Sverige kan acceptera åtgärder inklusive regulatoriska, som möjliggör en användning av jordstationer i rörelse för kommunikation med N-GSO inom FSS, under förutsättning att frekvensbanden även fortsättningsvis ska kunna användas för primärallokerad mobil radio, fast radio och fixed-satellite service (både existerande och framtida) utan ytterligare begränsningar.

Ansvariga grupper

WP 4A, PT B

CEPT-ståndpunkt

CEPT supports the development of a regulatory framework for the operation of aeronautical and maritime ESIMs communicating with non-GSO satellite systems in the FSS in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space). CEPT also supports the operations of land ESIMs in the frequency bands above and recognises that they are subject to national regulations. CEPT also supports that such operations shall not cause unacceptable interference to terrestrial services in neighbouring countries.

CEPT supports that the technical and operational requirements for the use of non-GSO ESIM shall ensure the protection of GSO networks and other services operating in the same frequency bands and in adjacent bands.

- CEPT is of the view that the protection of GSO networks in the fixed-satellite service operating in the frequency bands 17.8-18.6 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz and 29.5-30 GHz from non-GSO ESIM can be achieved by requiring that links involving non-GSO ESIM comply with efd limits referred to in Nos. 22.5C, 22.5D and 22.5F and that the methodology included in

Recommendation ITU-R S.1503 for determination of compliance with epfd limits in Article 22 is applicable to ESIM communicating with non-GSO FSS systems.

- CEPT is of the view that to protect GSO networks – in those bands where epfd limits do not apply – and non-GSO systems in the FSS:
 - non-GSO ESIM characteristics shall remain within the envelope characteristics of typical earth stations associated with the non-GSO satellite system with which the ESIM communicates;
 - non-GSO ESIM shall not cause more interference and shall not claim more protection than typical earth stations in this non-GSO system;
 - the operation of non-GSO ESIM shall comply with the coordination agreements obtained following the application of provisions under No. 9.11A.

CEPT supports that the technical and operational requirements for the use of non-GSO ESIM shall ensure the protection of fixed and mobile services with allocations in the frequency bands considered in this agenda item:

- CEPT is of the view that non-GSO ESIM operating in the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz (space-to-Earth) shall not claim protection from stations in the fixed and mobile services operating in the same frequency bands in accordance with the Radio Regulations;
- CEPT supports the use of pfd (power flux density) limits on the Earth's surface for aeronautical ESIMs to ensure the protection of fixed and mobile services. CEPT supports also the use of the methodology under development to examine compliance with the pfd limits by non-GSO aeronautical ESIM or transitional measures in case WRC-23 could not agree on the methodology;
- CEPT supports the applicability of the limits contained in Annex 3 to Resolution 169 (WRC-19) to aeronautical and maritime ESIMs communicating with non-GSO systems operating in the frequency band 27.5-29.1 GHz; such ESIMs shall not cause unacceptable interference to fixed and mobile services operating in the same frequency band;
- CEPT supports the use of the limits contained in Annex 3 to Resolution 169 (WRC-19) to protect stations in the fixed and mobile services operating in the frequency band 29.5-30 GHz on the entire territories of administrations mentioned in No. 5.542;

- CEPT is of the view that the notifying administration of the non-GSO system with which the ESIMs communicate should be identifiable to address the potential cases of harmful interference caused by any ESIM to fixed and mobile services. This identification could be done thanks to: i) the license issued by / authorization of the administration for the operation of the ESIM on its territory; ii) the assistance of the flag nation of aircraft/vessel; iii) the on-board radio license of the aircraft or vessel equipped with the ESIM.

CEPT supports the protection of EESS (passive) sensors in the frequency band 18.6-18.8 GHz, and compatibility studies with related non-GSO systems to define necessary protection measures. In particular, CEPT is of the view that enabling the operations of non-GSO ESIM should not result in an increase of the interference to EESS (passive) sensors operating in the 18.6-18.8 GHz band. Any measure on non-GSO space stations communicating with aeronautical ESIM and maritime ESIM that may be needed to limit the interference to EESS (passive) sensors operating in the 18.6-18.8 GHz band shall be applicable only to those non-GSO systems notified/brought into use after the last day of WRC-23.

ECP

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Svenska intressenter

SES Astra AB, SMHI, Telia Company AB, Ericsson, Swedish Space Corporation (SSC)

Svenska kommentarer

SES Astra AB: Vi stödjer generellt utökade möjligheter till användandet av befintliga allokeringar så länge studier visar att det inte negativt påverkar andra tjänster eller annat användande inom samma allokering. Vi ser därför gärna att den svenska ståndpunkten styrks till att Sverige stödjer åtgärder, istället för "kan acceptera åtgärder" i enlighet med CEPTs preliminära position som inleds med "CEPT supports the development of a regulatory framework for the operation of ESIM communicating with non-GSO satellite systems in the FSS..." för att därefter givetvis följas upp med den lämpliga, vanliga skivningen " under förutsättning att..." såsom ovan. Vi har svårt att förstå varför den svenska ståndpunkten för denna agendapunkt inleds på annat sätt än agendapunkt 1.17 med sitt "Sverige stödjer...". I detta fall är denna utveckling knappast kontroversiell utan snarare en naturlig fortsättning på tidigare WRC-19 AI 1.5 avseende ESIM för GSO. Fler möjligheter att tillgodose det erkänt ökande behovet av

ESIM via satellittjänster i enlighet med klargjord reglering är som bekant välkommet, särskilt som dessa tjänster redan erbjuds idag via NGSO.

SMHI: Support av studier för att säkerställa att icke GSO system inte förorsakar störningar mot MetSat i 18,6 – 18,8GHz

Telia Company AB: Telia Company anser att användningen av non-GSO system för ESIM´s endast kan accepteras ifall befintliga mobila och fasta tjänster kan skyddas fullt ut och inga begränsningar i deras fortsatta utveckling införs.

Ericsson: Ericsson anser att en eventuell användning av ESIM med N-GSO inom FSS ska garantera skydd av både mobil och fast radio och inte begränsa deras framtida utveckling.

SSC: 1.16 berör två för SSC viktiga frekvensband, nämligen 26 GHz bandet (25.5 – 27 GHz) och 28 GHz bandet (27,5 – 30 GHz). Både 26 GHz och 28 GHz banden har nyligen varit föremål för PTS efterfrågeanalys.

26 GHz

SSC tillhandahåller tjänster inom områden SPACE OPERATION, EARTH EXPLORATION-SATELLITE och SPACE RESEARCH

Den tjänsten som kräver mest bandbredd är EARTH EXPLORATION-SATELLITE (space-to-Earth), där ett tilldelat frekvensband för datamottagning 25.5 – 27.0 GHz, överlappas av frekvenstilldelningen för 5G (24.25 – 27.5 GHz).

Allt fler satellitoperatörer intresserar sig för det bandet för dess högre datahastighet. SSC använder i dagsläget delar av 26 GHz (25.5 – 27.0 GHz) bandet för data nedlänk av Jordobservationssatellit (Earth Observation). Från 2025 så kommer satellitsystem i drift som använder hela bandbredden och behovet ser ut bara att öka. Dessa satellitsystem omfattar enstaka satelliter, konstellationer med 50 – 100 och även enstaka system med fler än 1 000 satelliter.

ITU SRS databas i april 2022 visar på en fördubbling inom tre år av publicerade satellitnätverk inom frekvensbandet 25.5 – 27.0 GHz

Med tanke på det nuvarande geopolitiska läget, kan en internationell osäkerhet leda till ökat intresse för satellit-baserad säkerhetsövervakning inom EU, som kan medföra etablering av fler jordstationer.

28 GHz bandet

De flesta satellit-operatörer använder bandet (27,5–30 GHz) för globalt eller regionalt bredband och Internet. Den första förfrågan till SSC kom redan år 2018 och ITU får allt fler publiceringar inom bandet. Satellitlösningar kommer även att vara avgörande för att nå regeringens bredbandsmål. Den bedömningen gör Post- och

telestyrelsen (PTS) i sin rapport: Satellit viktig pusselbit för
bredbandsmål, 2022-03-31 ([Satellit viktig pusselbit för bredbandsmål
| PTS](#))

Med tanke på det nuvarande geopolitiska läget, kan en internationell osäkerhet leda till ökat intresse för satellit-baserad säkerhetsövervakning inom EU, som kan medföra etablering av fler jordstationer.

AI 1.17

1.17 to determine and carry out, on the basis of the ITU-R studies in accordance with Resolution **773 (WRC-19)**, the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate;

Prioritet

Medel

Svenska ståndpunkter

Sverige stödjer klargjord reglering för FSS avseende ISS-aspekter i de aktuella banden, under förutsättning att de regulatoriska förutsättningarna utformas så att användning i banden (existerande och framtida), inklusive FSS, inte begränsas.

Kommentar: De frekvensband som berörs är: 11,7–12,7 GHz, 18,1–18,6 GHz, 18,8–20,2 GHz och 27,5–30 GHz. Enligt RR kan FSS omfatta ISS.

Ansvariga grupper

WP 4A, PT B

CEPT-ståndpunkt

CEPT supports that the introduction of satellite-to-satellite transmissions must ensure the same level of protection for GSOs and non-GSOs as currently provided in the RR and must not impose new constraints on GSOs and non-GSOs to protect satellite-to-satellite links from interference.

CEPT supports that the introduction of satellite-to-satellite transmissions must ensure the same level of protection for terrestrial services as currently provided in the RR and must not impose new constraints on terrestrial services to protect satellite-to-satellite links from interference.

CEPT proposes that space stations that plan satellite-to-satellite transmissions should be governed by the following preliminary guiding principles:

- Satellite-to-satellite link transmissions will comply with the same directionality indicators as in the existing FSS allocations (Earth-to-space = from user space station to service provider space station, space-to-Earth = from service provider space station to user space station);

- Non-GSO user space stations will operate in a manner that should resemble typical Earth stations of the FSS service provider system;
- The equivalent power flux-density, $epfd_{\uparrow}$, produced at any point in the geostationary-satellite orbit by emissions from all combined operations of space-to-space and typical Earth station transmissions shall not exceed the limits given in Table 22-2;
- The equivalent power flux-density, $epfd_{\downarrow}$, at any point on the Earth's surface visible from the transmitting satellite system, produced by emissions from all the space stations of the non-geostationary-satellite system shall not exceed the limits given in Tables 22-1A to 22-1E, where applicable;
The higher altitude to lower altitude link transmissions in 11.7-12.7 GHz, 18.1-18.6 GHz and 18.8-20.2 GHz from the GSO or non-GSO FSS service provider space station to the non-GSO user space station would be identical in technical characteristic to the transmissions from GSO or non-GSO service providers to any ground-based user in the service provider's network.
- Enabling the operation of satellite-to-satellite links should not result in an increase of the interference to EESS (passive) sensors operating in the 18.6-18.8 GHz band. CEPT supports the development of provisions to ensure EESS (passive) protection in the 18.6-18.8 GHz frequency band. Any provision on non-GSO service provider space stations providing satellite-to-satellite links that may be needed to limit the interference to EESS (passive) sensors operating in the 18.6-18.8 GHz shall be applicable only to those non-GSO service provider systems notified/brought into use after the last day of WRC-23.

ECP

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Svenska intressenter

SES Astra AB, SMHI, Telia Company AB, Ericsson

Svenska kommentarer

SES Astra AB: Vi stödjer generellt utökade möjligheter till användandet av befintliga allokeringar så länge studier visar att det inte negativt påverkar andra tjänster eller annat användande inom samma allokering. Såsom påpekas i kommentaren ovan att "Enligt RR kan FSS omfatta ISS" redan, vilket klargör att agendapunkten innebär

välbehövliga klargöranden för FSS-allokeringar eftersom det är högst oklart hur denna typ av användande kan optimeras, effektiviseras och säkras idag. Agendapunkten bör därmed helst inte omfatta en ny ISS-allokering. Om sådana studier framhålls (med sändningar utanför ”cone-of-coverage”) bör de hållas helt separat för att inte äventyra hela agendapunktens förutsättningar. Vi stödjer därmed den svenska ståndpunkten, inklusive kommentaren, jämte CEPTs preliminära position.

SMHI: Support av studier för att säkerställa att FSS satellit – satellit inte förorsakar störningar mot MetSat i 18,6–18,8 GHz.

Telia Company AB: Regulatoriska förändringar för de berörda banden får inte innebära begränsningar för den nuvarande användningen av fasta och mobila tjänster eller deras framtida utveckling.

Ericsson: Ericsson anser att regulativa förändringar ska accepteras endast om mobil och fast radio kan skyddas och deras framtida utveckling inte begränsas.

AI 1.18

1.18 to consider studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems, in accordance with Resolution **248 (WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

En ny allokering för MSS i bandet 2010–2025 MHz ska inte begränsa möjligheten att använda bandet för den i Europa harmoniserade användningen, i första hand video PMSE i 2010–2025 MHz samt MSS (UL) i grannbandet 1980–2010 MHz.

Kommentar: Gäller följande frekvensband: 1695–1710 MHz (Region 2), 2010–2025 MHz (Region 1), 3300–3315 MHz (Region 2), 3385–3400 MHz (Region 2)

Ansvariga grupper

WP 4C, PT B

CEPT-ståndpunkt

CEPT supports “No Change” to the Radio Regulations for the frequency bands 1695–1710 MHz, 2010–2025 MHz, 3300–3315 MHz and 3385–3400 MHz.

CEPT considers further the possibility for a global allocation for narrowband MSS to be addressed by WRC-27.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI, FMV, Rymdstyrelsen, Telia Company AB, Ericsson

Svenska kommentarer

FMV: Tillse skydd för radar i 3,3–3,4 GHz.

Rymdstyrelsen: I direkt anslutning till det ett av de berörda frekvensbanden ligger upplänk vid Esrange (2025–2110 MHz). En störningsfri miljö för upplänk vid Esrange bör tillgodoses.

SMHI: Support kompatibilitetsstudier för att skydda MetSat i 1695 – 1710 MHz och i det närliggande bandet för EESS i 2025–2110 MHz.

Telia Company AB : Nya smalbandiga satellitsystem bör i första hand använda redan befintliga MSS allokeringar om möjligt. En eventuell ny MSS-allokering måste fullt ut skydda befintliga tjänster och inte begränsa deras utveckling.

Ericsson: Ericsson anser att en ny allokering för MSS ska accepteras endast om mobil och fast radio kan skyddas och deras framtida utveckling inte begränsas.

AI 1.19

1.19 to consider a new primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2, while protecting existing primary services in the band, in accordance with Resolution **174 (WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

Gäller endast Region 2.

Region 1 har redan allokering FSS (s>E).

Sverige kan acceptera en primär allokering FSS (s-E) i Region 2 – med lämpliga villkor (se t.ex. 5.516 A)

Ansvariga grupper

WP 4A, PT B

CEPT-ståndpunkt

CEPT supports a new FSS (space-to-Earth) allocation in Region 2 in the frequency band 17.3-17.7 GHz, which facilitates the use of spectrum available to networks and systems in the FSS across Regions.

ECP

draft ECP: Metod B, MOD – införa samma reglering i R2 som gäller i R1.

Svenska intressenter

SES Astra AB

Svenska kommentarer

SES Astra AB: Vi förstår och stödjer givetvis att svensk prioritet är låg för agendapunkter som inte avser Region 1 och stödjer den svenska ståndpunkten jämte CEPTs preliminära position. Vi ser inte denna agendapunkt som kontroversiell utan förutser snarare en tidig överenskommelse baserad på redan överenskomna studier.

AI 2

2 to examine the revised ITU R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with further resolves of Resolution **27 (Rev.WRC-19)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in resolves of that Resolution;

Prioritet

Medel

Svenska ståndpunkter

Stöd för uppdatering av referenser i RR till ITU-R rekommendationer under förutsättning av att det inte påverkar nuvarande eller planerad användning negativt.

Ansvariga grupper

PT A

CEPT-ståndpunkt

- CEPT supports updating the reference(s) in relevant RR provisions of the following ITU-R Recommendation(s): ITU-R M.585-8 to M.585-9, TBD.
- CEPT resumes examining the compliance with the principles of Annex 1 to Resolution 27 (Rev.WRC 19) of the references to ITU-R Recommendations in the Radio Regulations.
- CEPT supports update of the RR Volume 4 cross-reference list.

ECP

draft ECP: MOD 19.99, MOD 19.102, MOD 19.111 (update referense from ITU-R M.585-8 to ITU-R M.585-9)

Svenska intressenter

TBD

Svenska kommentarer

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AI 3

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the conference;

Prioritet

Låg

Svenska ståndpunkter

TBD - beslut under WRC baserat på andra konferensbeslut.

CEPT-ståndpunkt

TBD

ECP

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Svenska intressenter

TBD

Svenska kommentarer

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AI 4

4 in accordance with Resolution **95 (Rev.WRC-19)**, to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

Prioritet

Medel

Svenska ståndpunkter

Stöd för strykning av ”överspelade” resolutioner och rekommendationer samt uppdatering av dessa om förändringar beslutas av konferensen som har betydelse för innehållet.

Stöd för uppdatering av referenser i resolutionerna och rekommendationerna till ITU-R rekommendationer under förutsättning av att det inte påverkar nuvarande eller planerad användning negativt.

Ansvariga grupper

PT B

CEPT-ståndpunkt

CEPT encourages the constant review of Resolutions and Recommendations from previous conferences and will follow activities, in particular of ITU, associated with this effort.

- CEPT proposes to suppress Resolutions: RES 160 (WRC-15), RES 161(WRC-15), TBD
- CEPT proposes to modify Resolutions: RES 76 (WRC-15), RES 99 (WRC-19), RES 731 (Rev WRC-19), RES 804 (Rev.WRC-19), TBD
- CEPT proposes to suppress Recommendations: TBD
- CEPT proposes to modify Recommendations: REC 34 (Rev. WRC-12), TBD

ECP

Draft ECP: SUP Res 75, Res 160 och Res 161. MOD Res 731 och Rec 34,

Svenska intressenter

SES Astra AB

Svenska kommentarer

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AI 5

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

Prioritet

Låg

Svenska ståndpunkter

TBD – Beslut tas under WRC när resultatet av RA är klart.

CEPT-ståndpunkt

TBD

ECP

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Svenska intressenter

TBD

Svenska kommentarer

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AI 6

6 to identify those items requiring urgent action by the radiocommunication study groups in preparation for the next world radiocommunication conference;

Prioritet

Låg

Svenska ståndpunkter

TBD – Beslut tas under WRC baserat på andra konferensbeslut.

Ansvariga grupper**CEPT-ståndpunkt**

TBD

ECP

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Svenska intressenter

TBD

Svenska kommentarer

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AI 7

7 to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with **Resolution 86 (Rev.WRC-07)**, in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit

Prioritet

Medel

Svenska ståndpunkter

Övergripande: Sverige stöder att frågor tas upp under Res 86 (Rev.WRC 07) under förutsättning att de kan förväntas leda till signifikanta förbättringar, förenklingar eller tydliggörande i RR samt att frågorna initieras i tid enligt gällande tidsramar.

Topic A: Tolerances for non-GSO orbital characteristics

Sverige stödjer framtagande av:

- toleranser för NGSO-orbitkaraktäristik i FSS, BSS, MSS
- nödvändiga temporära avsteg (p.g.a. *collision avoidance* / omplacering)
- konsekvenser för de fall operation sker utanför de definierade värdena

Topic B: Non-GSO BIU post-milestone procedure

Sverige stödjer framtagande av:

- post-milestone procedurer för utbyggnad
- nödvändiga temporära avsteg
- konsekvenser för de fall operation sker utanför de definierade procedurerna

Topic C: Protection of GSO MSS from non-GSO emissions in 7/8 and 20/30 GHz

Sverige stödjer identifiering / framtagande av:

- kriterier för skydd av GSO MSS från NGSO-system i 7 250–7 375 MHz (s-E), 7 900–8 025 MHz (E-s), 20.2–21.2 GHz (s-E), och 30–31 GHz (E-s).

Topic D: Modifications to Appendix 1 to Annex 4 of AP 30B

Sverige stöder nödvändiga korrigeringar av App 1 till Ann 4 av Ap30B, i kölvattnet på ändringar beslutade av WRC-19.

RoP finns redan på plats för att adressera frågan fram till Rev av RR.

Topic E: Improved procedures under AP 30B for new ITU member States

Stöd ev. revidering av procedurerna, givet att revideringen resulterar i proportionerlig och hållbar reglering.

Topic F: Excluding uplink service area in AP 30A for R1&3 and AP 30B

Stöd ev. revidering av procedurerna, givet att revideringen resulterar i proportionerlig och hållbar reglering.

Topic [X New]: Modification of Article 4.1.24 of AP 30 & 30A

Sverige stödjer identifiering under AI 7 av studie avseende möjligheten att öka livstiden för AP 30/30A-tilldelningar bortom nuvarande 15+15 år.

Topic G: MOD Res 770 (WRC-19) – Application of RR 22 for GSO protection from single entry non-GSO in Q/V bands

Sverige stödjer:

- framtagande av verktyg / metodologi för implementering av Res 770
- uppdatering av generiska GSO-referenslänkar i Annex 1 i Res 770

CG#6 Task 1A: Resolution 769 (WRC-19) GSO protection from non-GSO in QV bands

Sverige stödjer framtagande av:

- metodologi för kvantifiering av aggregerad interferens från NGSO
- metodologi för validering av tilläggs-länkar, och för identifiering av tillhörande C/N.

CG#6 Task 3: Article 21 scaling factor equations in No.21.16.6

Stöd översyn av 21.16.6, inför justering av ekvationerna, givet att justeringen inte försämrar skydd av FS och MS.

Ansvariga grupper

WP 4A, PT B

CEPT-ståndpunkt

Övergripande

CEPT supports retaining the current process of continuing evolution at successive WRCs of the regime governing space services. CEPT also favours a stable and predictable regulatory framework for efficient use of spectrum and orbit resources. CEPT intends to develop specific positions susceptible to bring improvement to the regulatory process.

CEPT favours the review of any RR provision which can bring accurate solutions to specific detected inconsistencies and develop new improved provisions with emphasis on solving the most urgent issues, i.e. well characterized issues whose improvement is urgent and impacting.

Per topic/item

Topic/ item	Title	CEPT position
A	Tolerances for non-GSO orbital characteristics	<ul style="list-style-type: none"> ▪ CEPT supports the development of the definition of tolerances limited to the four orbital characteristics of non-GSO space stations in FSS, BSS and MSS identifying a “notified orbital plane”. ▪ CEPT does not support the development of tolerances under this topic for the orbital characteristics of non-GSO space stations whose frequency assignments belong to services other than the FSS, BSS and MSS. ▪ CEPT supports the development of these tolerances in the context of ITU regulatory procedures such as BIU and the milestone-based approach. In the absence of such tolerances it is unclear whether the requirements of Resolution 35 (WRC-19) are met. ▪ To avoid collision with another non-GSO space station or to permit reorganisation of satellites in an orbit-plane after a launch of new non-GSO space stations, CEPT supports specific regulatory measures to temporary exceed the defined

Topic/ item	Title	CEPT position
		<p>tolerances if final tolerances definition could not address such operational requirements.</p> <ul style="list-style-type: none"> ▪ CEPT supports the development of appropriate regulatory consequences for frequency assignments to non-GSO space stations that do not maintain these to-be-developed orbital tolerances.
B	Non-GSO BIU post-milestone procedure	<ul style="list-style-type: none"> ▪ CEPT supports the adoption of a new Resolution to replace resolves 19 of Resolution 35 (WRC-19) at WRC-23 suppressing resolves 19 of Resolution 35 (WRC-19) and leaving the rest of the Resolution 35 (WRC-19) as is otherwise. ▪ CEPT supports a regulatory solution aligning the post milestone procedures in this new Resolution with No. 11.49 and Resolution 35 (WRC-19) allowing some operational flexibilities: ▪ Possibility to operate a minimum [95%] of the number of satellites notified in the MIFR without regulatory impact. ▪ Possibility to operate less than [95%] of the number of satellites notified in the MIFR for a maximum period of 3 years without regulatory impact. (A suspension process analogue to the GSO case is proposed.) ▪ Considering the process to duly notify the Bureau based on similar regulatory mechanism as in No. 11.49. ▪ CEPT supports a reduction in the number of satellites notified in the MIFR if the deployed number of satellites falls below [95%] of that which was notified in the MIFR for a continuous period exceeding 3 years. ▪ CEPT considers that the application of No. 13.6 by the BR is not an adequate solution for Topic B.
C	Protection of GSO MSS from non-GSO emissions in 7/8 and 20/30 GHz	<p>CEPT supports the identification and definition of criteria, extensions and additions of provisions in order to quantify the protection of GSO networks operating in the MSS from interference caused by non-GSO networks or systems operating in the same frequency bands 7250-7750 MHz (space-to-Earth), 7900-8025 MHz (Earth-to-space), 20.2-21.2 GHz (space-to-Earth) and 30-31 GHz (Earth-to-space) and in identical directions.</p>
D1	Modifications to Appendix 1 to Annex 4 of AP 30B	<p>CEPT supports correcting the values of the coordination arc in the aggregate C/I calculation in</p>

Topic/ item	Title	CEPT position
		Appendix 1 to Annex 4 of RR Appendix 30B based on the coordination arc reductions decided at WRC-19.
D2	New AP 4 parameters for Rec. S.1503 updates	<ul style="list-style-type: none"> ▪ CEPT supports making modifications to Appendix 4 in consequence to the update to Recommendation ITU-R S.1503. ▪ CEPT acknowledges the existence of other methods that could allow administrations to provide the additional parameters required by updates to Recommendation ITU-R S.1503, e.g. by defining new fields in the.xml file that describes a non-GSO system operating parameters.
D3	BR reminders for BIU and BBIU	<ul style="list-style-type: none"> ▪ CEPT supports to establish reminders for confirming the bringing into use or bringing back into use of a satellite network or system under Nos. 11.44B, 11.44C, 11.44D and 11.44E.
E	Improved procedures under AP 30B for new ITU member States	<ul style="list-style-type: none"> ▪ CEPT supports the possibility to grant new ITU Member States the same conditions as those granted to administrations having no assignments in the Appendix 30B List, or assignments listed under 6.1, as adopted in Resolution 170 (WRC-19). ▪ CEPT supports that a comprehensive understanding of the interference scenarios for new ITU Member States can be achieved through additional technical analysis. ▪ CEPT encourage new ITU Member States and the resulting affected administrations to actively undertake and cooperate in coordination discussions to resolve any interference cases in addition to consider RR changes.
F	Excluding uplink service area in AP 30A for R1&3 and AP 30B	<ul style="list-style-type: none"> ▪ CEPT supports exploring if bilateral coordination solutions or national licensing conditions can address encountered problems on a case-by-case basis. ▪ CEPT supports developing specific measures, if needed, to avoid creating obstacles to establish satellite networks by other countries over their territories considering implementable regulatory and technical solutions that will not unduly restrict operations of other satellite networks, in particular satellite networks already in operation. ▪ CEPT notes that, as an example, aligning the coverage area with the service area is not always technically feasible. ▪ CEPT supports developing specific measures taking into account the required roll-off of the space station receive beam to be fully protected.

Topic/ item	Title	CEPT position
		<ul style="list-style-type: none"> ▪ CEPT encourages administrations involved in Resolution 559 (WRC-19) coordinations to make utmost efforts to communicate with requesting administrations and to timely reply in order to complete coordination.
G	Resolution 770 (WRC-19) GSO protection from single entry non-GSO in Q/V bands	<ul style="list-style-type: none"> ▪ CEPT supports Method 3 of the draft CPM text in ITU-R WP 4A in which Annex 2 of Resolution 770 (WRC-19) is included in a ITU-R Recommendation.
H	Enhanced protection of AP 30/30A in Regions 1 and 3 and RR AP 30B	<ul style="list-style-type: none"> ▪ CEPT supports to enhance the protection of Appendices 30 and 30A in Regions 1 & 3 and Appendix 30B for networks in the Plan and the List. ▪ CEPT supports to replace the implicit agreement in case of no comments in due time of affected Regions 1 and 3 BSS Plan assignments or Appendix 30B allotments on an additional use/system, with a new regulatory solution allowing the administration of the additional use/system to operate until the national assignment/allotment is brought into use. ▪ CEPT supports to not consider mutual interference between Regions 1 and 3 BSS Plan assignments or Appendix 30B allotments and additional use/system networks using this new regulatory solution, since they will not operate the same frequency range over the same area simultaneously. ▪ CEPT does not support to reduce the EPM degradation tolerance in Appendices 30 and 30A without any technical studies supporting the reasoning behind such a modification.
I	Special agreements under AP 30B	<ul style="list-style-type: none"> ▪ CEPT supports the development of a regulatory solution based on a specific agreement, on a voluntary basis, allowing an administration suffering from low reference protection margin for its national allotment in Appendix 30B due to agreements under § 6.15 to retrieve adequate reference protection margin. ▪ CEPT supports the possibility to sign a specific agreement between an additional system and a national allotment in Appendix 30B permitting the additional system to cover the territory of the national allotment in Appendix 30B until the bringing into use of this national allotment in Appendix 30B. ▪ CEPT supports the adaptation of the additional system operations to not create harmful interference and to fully protect the operations of the national allotment with which the specific agreement was signed.

Topic/ item	Title	CEPT position
		<ul style="list-style-type: none"> CEPT encourages administrations for which § 6.15 of Appendix 30B has been applied with respect to a national allotment, to cooperate and consider signing such a specific agreement.
J	MODs to Res 76 (Rev. WRC-15)	<ul style="list-style-type: none"> CEPT supports the modification of Resolution 76 (Rev.WRC-15) to introduce the concept of “consultation process/meetings” and to clarify the non-GSO systems which are eligible to participate in the consultation meetings. CEPT supports that the technical work, such as methodologies to be used to evaluate aggregate EPFD limit compliance, as well as the process and procedures for the consultation meeting, should be addressed in separate relevant documents such as in a new ITU-R Recommendation, in line with <i>invites</i> 1, 2 and 3 of Resolution 76 (Rev. WRC-15).
K	MODs to Res. 553 (Rev. WRC-15)	<ul style="list-style-type: none"> CEPT supports the possibility to apply the special procedure of Resolution 553 (Rev. WRC-15) again if the requesting administration fails to bring into use a network even if the special procedure of Resolution 553 (Rev. WRC-15) was previously requested. CEPT considers supporting the possibility to also apply the special procedure of Resolution 553 (Rev. WRC-15) once if the requesting administration has at maximum one network successfully examined under No. 9.34 and published under No. 9.38 for the frequency band 21.4-22 GHz and at the same orbital position(s) as the network to which the special procedure is to be applied.
Item CG#6 Task 3	Article 21 scaling factor equations in No. 21.16.6	<ul style="list-style-type: none"> CEPT considers that the current equations contained in RR No. 21.16.6, for the scaling function X, dependent on the number of satellites in the constellation, N, leads to inaccurate scaling calculations when applied to satellite constellations composed of a number of satellites greater than at least 288 satellites (with the final number of satellites still to be decided). CEPT supports the development of adequate scaling factor for large non-GSO constellations, while ensuring the same level of protection to Fixed and Mobile Services as they have today. Updates of the scaling factor equations should focus primarily on the maximum potential visibility of the non-GSO system’s space stations visible to any single point on the surface of the Earth. CEPT supports that this item may only modify the X value, excluding any other part of the computation of the pfd limit in RR Table 21-4 for systems with the

Topic/ item	Title	CEPT position
		<p>number of satellites greater than at least 288 (with the final number of satellites still to be decided).</p> <ul style="list-style-type: none"> ▪ CEPT supports that future treatment of non-GSO systems is consistent among non-GSO systems. ▪ CEPT supports that changes to the X value do not create differences in terms of examination by the BR of the non-GSO systems, or affect the priority of the non-GSO systems, based on their filing date. ▪ CEPT supports that the modification of RR No. 21.16.6 should be based on single-entry pfd per system.

ECP

Draft ECP, topic 7B: MOD 11.51, MOD Res 35, ADD Res [EUR-7(B)-NGSO-POST-MILESTONE-PROCEDURE] (WRC-23)

Svenska intressenter

SES Astra AB, Overhorizon AB, SMHI

Svenska kommentarer

SES Astra AB: Vi stödjer samtliga preliminära CEPT-positioner (enligt senaste PTB-mötet 2022). Vi stödjer även samtliga ännu formulerade svenska ståndpunkter och hoppas att Sverige genomgående följer CEPT-linjen där svenska ståndpunkter ännu inte definierats även om Sverige inte leder frågornas utveckling. Vi noterar att Topics H, I, J och Kockså har etablerats men saknas i den svenska ståndpunktlistan ovan samt att listan för Topics nu stängts inom WP4A vilket innebär att Briefens lista bör uppdateras.

SMHI: Ej stöd för ändringar som medför begränsningar för MetSat och EESS.

AI 8

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

I princip ska endast strykningar av fotnoter eller namn i fotnoter accepteras under denna agendapunkt för att minska avvikelserna i tabellen för frekvensallokeringar (Artikel 5).

I vissa fall kan det dock accepteras att fotnoter utökas med ytterligare länder, detta gäller speciellt om detta ökar harmoniseringen i en region eller del av region.

Nuvarande praxis som den tillämpats vid WRC-15 och WRC-19 bör behållas.

Ansvariga grupper

PT A

CEPT-ståndpunkt

Issue A – Deletion of country footnotes or country names from footnotes

- CEPT supports Administrations taking the initiative to review their footnotes and to propose the deletion of their country names or the deletion of country footnotes, if no longer required.

Issue B – Addition of country names into existing footnotes

- CEPT is of the view that this agenda item is not intended for adding country names into existing footnotes.
- CEPT is of the view that Conferences may continue to deal with requests to add country names to existing footnotes on a case by case basis, subject to the principle that proposals for the addition of country names to existing footnotes can be considered but their acceptance is subject to the express condition that there are no objections from the affected countries.

Issue C – Addition of new country footnotes

- CEPT is of the view that this agenda item is not intended for addition of new country footnotes and therefore proposals for the addition of new country footnotes which are not related to agenda items of this Conference should not be considered.

Issue D – Availability of proposals

- CEPT supports Administrations bringing their proposals on Agenda item 8 to the attention of other Administrations with a view to avoid any potential difficulties well before a WRC.
- CEPT is of the view that the current practice on establishment of submission deadlines should be kept by the WRC-23 with regard to additional proposals for deletion of country names from footnotes and for addition of country names to existing footnotes.

Issue E – Possible revision of Resolution 26 (Rev. WRC-19)

- CEPT supports retaining Resolution 26 (Rev. WRC-19).

ECP

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Svenska intressenter

SES Astra AB

Svenska kommentarer

SES Astra AB: vi stödjer den svenska positionen jämte CEPT att den försiktiga praxis för tillägg till fotnoter bör fortgå och att de måste lyftas på förhand inom CEPT för att få stöd, i enlighet med CEPT-positionen Issue D.

AI 9

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention;

AI 9.1

9.1 on the activities of the Radiocommunication Sector since
WRC-19:

9.1 topic a

In accordance with Resolution **657 (Rev.WRC-19)**, review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;

Prioritet

Låg

Svenska ståndpunkter

TBD

Ansvariga grupper

WP 7C, PT A

CEPT-ståndpunkt

CEPT supports that the following definition for space weather is included in Article 1, section VIII, of the Radio Regulations:

space weather: information relating to the characteristics of natural phenomena occurring beyond the major portion of Earth's atmosphere that impact Earth's environment and human activities.

CEPT also supports the:

- Designation of space weather observations (active and receive-only) as an application of the MetAids service, operated under a subset of this service called MetAids (space weather);
- Recognition in the Radio Regulations of specific usage through Article 4 (space weather sensors) in order to extend MetAids applications to space weather;
- Identification of priority frequency bands used for providing data critical for space weather forecasting/warnings that will require protection.

In addition, CEPT supports the further processing of the related work under an agenda item of WRC-27 - see preliminary agenda item. 2.6 in Resolution 812 (WRC-19).

Finally, CEPT supports the development of ITU-R Recommendation(s) to provide the relevant protection criteria for receive-only and active space weather sensors.

ECP

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Svenska intressenter

Onsala rymdobservatorium, SMHI, Institutet för rymdfysik (IRF).

Svenska kommentarer

Onsala rymdobservatorium: OSO/CRAF Preliminary position on agenda item 9.1 topic a). CRAF will contribute to any sharing studies involving the common frequency bands used by RAS and the receive-only space weather sensors for appropriate protection.

SMHI: Support studier för skydd av rymdväderssensorers radiofrekvensanvändning

9.1 topic b

Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240 - 1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service operating in the same band in accordance with Resolution **774 (WRC-19)**;

Prioritet

Låg

Svenska ståndpunkter

TBD

Kommentar: Det pågår arbete inom CEPT

Ansvariga grupper

WP 5A, PT C

CEPT-ståndpunkt

- CEPT supports the protection of the RNSS
- CEPT supports the development of a new ITU-R Recommendation based on the ITU-R Reports to provide guidance towards the implementation of technical and operational measures for the continued use of the frequency band 1 240-1 300 MHz by the Amateur and Amateur-satellite services in accordance with the RR in order to protect the RNSS.
- CEPT supports that above mentioned measures to be applied on the use of secondary Amateur and Amateur-satellite services, should be based on the results of co-existence studies and measurement campaigns.

ECP

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Svenska intressenter

SES Astra AB, SMHI, Sveriges sändareamatörer (SSA), Rymdstyrelsen

Svenska kommentarer

Sveriges sändareamatörer (SSA): Amateur and amateur satellite services has successfully coexisted with other radio services for long

time in different frequency bands, which also includes the band 1240-1300MHz and its primary allocated services. To our knowledge, there has only been two identified interference issues between RNSS and amateur radio in recent years, involving wide-band and high duty-cycle amateur radio traffic. After introduction of national regulations, further issues has successfully been avoided.

Amateur and amateur satellite services are based upon experimentation and knowledge building. It is fundamental that access to frequency bands over radio spectrum is maintained for future developments. Introduction of 5G mobile and mobile data services have resulted in discontinuation of the 2.3 and 3.4 GHz amateur bands in many countries. Unlike other countries in Europe, amateur and amateur satellite services in Sweden may use only low power applications in the 2.4 GHz band, which is a severe limitation. Due to loss of access to spectrum in the frequency range, is vital for amateur and amateur satellite services to continue to have access to the 1240 to 1300MHz range.

From ITU Radio Regulations amateur and amateur satellite services are clearly defined as secondary services. It is also clear what the requirement is for a secondary service. However, It is our understanding that spectrum policies shall be based upon well founded facts using reasonable levels of interference. Use of excessive risk estimations will prevent efficient use of spectrum and may limit services unnecessarily.

After CEPT SE40 decided to study co-existence between RNSS and amateur radio, WRC-19 resolution 774 has been decided with a similar scope. As amateur and amateur satellite services already are clearly defined in ITU RR, it is our view that any recommendations resulting from studies under Resolution 774 can be applied on a national basis and should be based on realistic assumptions, proportionate in scope and carefully justified so as not to unnecessarily inhibit development of the amateur services.

SMHI: Skydd av vindprofileringsradar.

Rymdstyrelsen: Rymdstyrelsen stödjer att behovet av ytterligare skydd för radionavigering i frekvensbandet utreds. Frekvensbandet 1260 - 1300 MHz planeras att utnyttjas av det Europeiska radionavigeringssystemet Galileo för att sända navigationsmeddelanden för High Accuracy Service (HAS), som möjliggör kommersiella applikationer med en positioneringsprecision på ner till 20 cm, samt Public Regulated Service (PRS), som kommer att tillgodose statliga aktörer med säker krypterad positionering och

navigering. PRS kan i framtiden bli viktigt för samhällskritiska funktioner.

9.1 topic c

Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution **175 (WRC-19)**;

Prioritet

Medel/Hög

Svenska ståndpunkter

Agendapunkten ska inte leda till förändringar i ITU-RR. Viktigt med skydd av fixed services.

Ansvariga grupper

WP 5A & WP 5C, PT A

CEPT-ståndpunkt

CEPT supports suppression of Resolution 175 (WRC-19) and opposes any other changes to the Radio Regulations in response to WRC-23 Agenda item 9.1, topic c including any draft new or revised Resolution on this topic, aligned with Alternative 2 of the draft CPM text..

CEPT is further of the view that:

- the usage of IMT systems in the fixed service is not compliant with the Radio Regulations;
- the work under this topic should focus on consideration of broadband fixed wireless access (BFWA) that use IMT technologies under the existing regulatory framework of the fixed service;
- given the existing provisions of the Radio Regulations and taking a technology neutral approach there is no need to consider/study specific frequency bands under this topic;
- BFWA that use IMT technologies as well as other technologies in the frequency bands allocated to the fixed service can be adequately addressed, if necessary, through an update of appropriate existing ITU-R Recommendations/Reports/Handbooks aligned with Approach 2 of the draft CPM text;

- the development of new ITU-R Recommendations/Reports should only be considered, if necessary, based on the outcome of a review of existing ITU-R deliverables;
- discussions on fixed wireless broadband applications that use IMT technologies, as any other technologies, should take place in ITU-R WPs 5A and 5C (not other ITU-R WPs) to avoid fragmentation of work and to ensure efficient working within ITU-R.

ECP

Approved ECP (31 avser att signera):

NOC – Articles, NOC – Appendices, NOC – Recommendations, SUP – Res 175

Svenska intressenter

SES Astra, Onsala rymdobservatorium, SMHI, Telia Company AB

Svenska kommentarer

SES Astra AB: Vi stödjer till fullo den högst okontroversiella, och av RA-19 och WRC-19 ännu tydligare bekräftade, positionen att "Agendapunkten ska inte leda till förändringar i ITU-RR." vilket också bekräftas av den preliminära CEPT-position som vi givetvis stödjer till fullo, men tyvärr noterar att dessa beslut inte avse följas av alla inom WP5A&B. Lyckligtvis står CEPT enat, men behöver ändå att Sverige agerar tydligt vid WP5A&C och inte bara hävdar NOC till RR utan även suppressande av WRC Resolution 175 för att frågan inte ska kvarstå som en WRC-agendapunkt. Vi betraktar denna fråga som hög prioritet eftersom den är helt öppen med många väntade, sena initiativ.

Onsala rymdobservatorium: OSO/CRAF Preliminary position on agenda item 9.1 topic c). As there are several frequency bands allocated to the fixed services that are adjacent or shared with RAS bands, the use of IMT systems in these bands will require compatibility studies for RAS protection in any relevant bands. CRAF is monitoring the A.I for more information on specific spectrum usage.

SMHI: Beakta skyddet av EESS, MetSat och MetAids.

Telia Company AB: Telia Company stödjer fortsatta studier avseende användandet av IMT teknologi för FWA i FS band. Användandet IMT teknologi för FWA existerar redan och ökar kraftigt i band allokterade till MS. Utökade möjligheter att i framtiden även kunna använda FS band för detta ändamål skulle förbättra möjligheterna att erbjuda mer kapacitet samt mer avancerade tjänster över FWA. Ytterligare studier

och en harmonisering inom ITU skulle kunna öka möjligheterna att skapa ett eco-system för utrustning i berörda band. Detta bör i första hand kunna ske inom ITU-R´s normala arbete utan förändringar i radioreglementet t.ex. genom nya ITU-R Rapporter, Rekommendationer eller handböcker.

9.1 topic d

Protection of EESS (passive) in the frequency band 36–37 GHz from non-GSO FSS space stations; WRC-19 **Document 535**, 2nd section of the Annex

Prioritet

Låg

Svenska ståndpunkter

TBD

Ansvariga grupper

WP 7C, PT A

CEPT-ståndpunkt

CEPT supports the protection of EESS (passive) sensors operating in the frequency band 36–37 GHz from NGSO FSS systems operating in the band 37.5–38 GHz. Specifically CEPT supports an unwanted emission power limit of -29 dBW/100 MHz in the band 36–37 GHz for FSS non-GSO space stations operating in the frequency band 37.5–38 GHz with constellations of more than 1000 satellites for the protection of EESS (passive) measurements and cold calibration channels.

ECP

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Svenska intressenter

SES Astra AB, SMHI

Svenska kommentarer

SMHI: Skydd av EESS i 37,5–38GHz

AI 9.2

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations; and¹

Prioritet

TBD

Svenska ståndpunkter

TBD

Ansvariga grupper

PT B

CEPT-ståndpunkt

TBD

ECP

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Svenska intressenter

SES Astra AB

Svenska kommentarer

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¹ This agenda sub-item is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. Administrations are invited to inform the Director of the Radiocommunication Bureau of any difficulties or inconsistencies encountered in the Radio Regulations.

AI 9.3

9.3 on action in response to Resolution **80 (Rev.WRC-07)**;

Prioritet

TBD

Svenska ståndpunkter**Ansvariga grupper**

PT B

CEPT-ståndpunkt

TBD

ECP

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Svenska intressenter

SES Astra AB

Svenska kommentarer

AI 10

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution **804 (Rev.WRC-19)**;

Agendapunkter föreslagna för WRC-27 (Res 812, där agendapunkterna AI 2.1, 2.4, 2.5, 2.6, 2.11 och 2.12 föreslogs av CEPT till WRC-19):

2.1 to consider, in accordance with Resolution 663 (WRC-19), additional spectrum allocations to the radiolocation service on a co-primary basis in the frequency band 231.5-275 GHz and an identification for radiolocation applications in frequency bands in the frequency range 275-700 GHz for millimetre and sub-millimetre wave imaging systems;

2.2 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 37.5-39.5 GHz (space-to-Earth), 40.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by aeronautical and maritime earth stations in motion communicating with geostationary space stations in the fixed satellite service, in accordance with Resolution 176 (WRC-19);

2.3 to consider the allocation of all or part of the frequency band [43.5-45.5 GHz] to the fixed satellite service, in accordance with Resolution 177 (WRC-19);

2.4 the introduction of power flux-density (pfd) and equivalent isotropically radiated power (e.i.r.p.) limits in Article 21 for the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution 775 (WRC-19);

2.5 the conditions for the use of the frequency bands 71-76 GHz and 81-86 GHz by stations in the satellite services to ensure compatibility with passive services in accordance with Resolution 776 (WRC-19);

2.6 to consider regulatory provisions for appropriate recognition of space weather sensors and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies reported to WRC-23 under agenda item 9.1 and its corresponding Resolution 657 (Rev.WRC-19);

2.7 to consider the development of regulatory provisions for non-geostationary fixed-satellite system feeder links in the frequency

bands 71-76 GHz (space-to-Earth and proposed new Earth-to space) and 81-86 GHz (Earth-to-space), in accordance with Resolution 178 (WRC-19);

2.8 to study the technical and operational matters, and regulatory provisions, for space-to space links in the frequency bands [1 525-1 544 MHz], [1 545-1 559 MHz], [1 610-1 645.5 MHz], [1 646.5-1 660.5 MHz] and [2 483.5-2 500 MHz] among non-geostationary and geostationary satellites operating in the mobile-satellite service, in accordance with Resolution 249 (WRC-19);

2.9 to consider possible additional spectrum allocations to the mobile service in the frequency band 1 300-1 350 MHz to facilitate the future development of mobile-service applications, in accordance with Resolution 250 (WRC-19);

2.10 to consider improving the utilization of the VHF maritime frequencies in Appendix 18, in accordance with Resolution 363 (WRC-19);

2.11 to consider a new Earth exploration-satellite service (Earth-to-space) allocation in the frequency band 22.55-23.15 GHz, in accordance with Resolution 664 (WRC-19);

2.12 to consider the use of existing International Mobile Telecommunications (IMT) identifications in the frequency range 694-960 MHz, by consideration of the possible removal of the limitation regarding aeronautical mobile in IMT for the use of IMT user equipment by non-safety applications, where appropriate, in accordance with Resolution 251 (WRC-19);

2.13 to consider a possible worldwide allocation to the mobile-satellite service for the future development of narrowband mobile-satellite systems in frequency bands within the frequency range [1.5-5 GHz], in accordance with Resolution 248 (WRC-19);

Prioritet

Hög

Svenska ståndpunkter

Stöd för principerna för agendapunkter som finns i Resolution 804.

Detta innebär bl.a. att de studier som föreslås ska inte vara mer omfattande än vad som kan genomföras med oförändrade resurser inom medlemsstaterna och ITU.

Varje förslag till agendapunkt ska åtföljas av en analys av resursåtgången.

Studierna ska i normalfallet kunna slutföras under en studieperiod. I undantagsfall kan en agendapunkt studeras under två perioder. Preliminära agendapunkter inför WRC-27 bör särskilt beaktas.

Förslagen till agendapunkter bör tas fram tidigt i processen och kopplas till pågående arbete inför WRC-23. Detta för att undvika att beslut under WRC-23 förhindrar eller försvårar beslut vid nästa WRC.

Endast frågor som kräver en reglering i RR ska tas upp på agendan för kommande WRC.

Frågor av studiekaraktär eller rekommendationer ska hänvisas till det ordinarie arbetet inom ITU-R.

Ansvariga grupper

PT A

CEPT-ståndpunkt

CEPT is developing position on preliminary Agenda items as included in Resolution 812 (WRC-19) as well as considering new Agenda items.

CEPT is currently supporting the following preliminary Agenda items :

- 2.1 Radiolocation service 275 - 700 GHz. Resolution 663 (WRC-19) to be modified
- 2.2 Aeronautical and Maritime ESIM. Resolution 176 (WRC-19) to be modified to cover also NGSO
- 2.4 PFD and EIRP limits for 71-76 GHz/81-86 GHz. Resolution 775 (WRC-19) to be modified
- 2.5 Satellite services and passive services at 71-76 GHz/ 81-86 GHz. Resolution 776 (WRC-19) to be modified or new Resolutions to be developed to expand the scope of the agenda item.
- 2.6 Space weather sensors. Follow-up on Resolution 657 (WRC-19).
- 2.11 EESS (Earth-to-space) 22.55-23.15 GHz. Resolution 664 (WRC-19) to be modified
- 2.12 694-960 MHz removal of limitation of aeronautical mobile. Resolution 251 (WRC-19) to be modified.

ECP

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Svenska intressenter

SES Astra AB, Onsala rymdobservatorium, Overhorizon AB, SMHI, Teracom, Ericsson

Svenska kommentarer

SMHI: Resolution 812 (WRC-19) med intresse för Meteorologi

- agenda item 2.1: Radiolocation in the band 231.5-275 GHz and above 275 GHz
- agenda item 2.2: ESIMs with GSO satellites in the range 37.5-51.4 GHz
- agenda item 2.4: pfd and e.i.r.p. limits for the bands 71-76 GHz and 81-86 GHz
- agenda item 2.5: Prot. of passive services from satellites in the 71-76 GHz and 81-86 GHz
- agenda item 2.6: Space weather
- agenda item 2.7: non-GSO FSS feeder links in bands 71-76 GHz and 81-86 GHz
- agenda item 2.11: new EESS (Earth-to-space) allocation in the band 22.55-23.15 GHz
- agenda item 2.13: narrowband MSS in the range 1.5-5 GHz

SES Astra AB: Vi anser att det är viktigt att CEPT ännu tar försiktiga steg framåt inom agendapunkt 10, även om vissa länder har kommit längre i sina nationella bedömningar. Vi anser vidare att satellitkompetens behövs tillföras till CEPTs koordinatorteam framgent.

Ericsson: Ericsson stödjer Agendapunkt 2.4. att skydda fasta länkar i band 71-76 och 81-86 GHz från interferens från satellitanvändning.

Ericsson stödjer en Agendapunkt för WRC-27 för IMT-identifiering med syftet att uppnå harmonisering av spektrum för 6G/IMT-2030. Ericsson anser att spektrum inom 7-15 GHz är essentiellt för 6G och kan kompletteras med sub-THz spektrum (i.e. 92-200 GHz) för specifika niche-scenarier.

Other issues: Article 21

As a result of discussions by WRC-19 on the applicability of the limit specified in No. 21.5 of the Radio Regulations to IMT stations that use an antenna that consists of an array of active elements, ITU-R was invited to study this issue and to report the results of the studies to the Director of the Radiocommunication Bureau to be considered as the Director deems appropriate.

Note: The task was segmented internally into the following issues, which are covered by relevant sections of the background.

1) Interim solution: Notification and verification of stations in the fixed and mobile service, including IMT stations, that use an array of active elements

The ITU-R is invited to study, as a matter of urgency, verification of No. 21.5 regarding the notification of IMT stations that use an antenna that consists of an array of active elements, as appropriate. This solution does not require changes to the RR.

2) Long-term solution: Review of No. 21.5 and possible actions by a WRC

This will encompass the following elements, set out in WRC-19 document 550:

- the applicability of the limit specified in No. 21.5 of the Radio Regulations to IMT stations that use an antenna that consists of an array of active elements
- to recommend ways for the possible replacement or revision of No. 21.5 for such stations

3) Long-term solution: Review of RR Table 21-2 and possible actions by a WRC

Any necessary updates to Table 21-2 related to sharing with terrestrial and space services

Kommentar: Frankrike har börjat kalla den här frågan för AI 9.1 topic 21.5. Det är mycket aktivitet på många håll förutom i PT 1 och WP 5D även i PT B och WP 4C.

Prioritet

Hög

Svenska ståndpunkter

Sverige ser för närvarande inte behov av att RR behöver uppdateras vad gäller No. 21.5.

Viktigt att inte ta ett förhastat beslut om ändring av No. 21.5 vilket kan få oönskade konsekvenser över lång tid.

Ansvariga grupper

WP 5D, PT 1

CEPT-ståndpunkt

In response to the invitation of CPM23-1 regarding Doc. 550 of WRC-19:

2.1 INTERIM SOLUTION: PROPOSED APPROACH FOR NOTIFICATION AND VERIFICATION OF STATIONS IN THE MOBILE SERVICE, INCLUDING IMT STATIONS, AND THE FIXED SERVICE THAT USE AN ARRAY OF ACTIVE ELEMENTS IN THE FREQUENCY RANGE 24.45-29.5 GHZ

For the purpose of verification of RR No. 21.5 in the notification of stations in the mobile service, including IMT stations, and the fixed service, that use an array of active elements in the frequency range 24.45-29.5 GHz, CEPT is of the view that the notification field 8AA ("power delivered by a transmitter to the antenna of a station") in RR No. 21.5 can be considered as the "total radiated power" (TRP), which is defined as the integral of the power transmitted from all antenna elements in different directions over the entire radiation sphere (noting it is mathematically equivalent to the sum of conducted powers from all internal transmitters, minus ohmic losses) For this interim solution, the limit $8AA \leq 10$ dBW for notification of base stations that use an array of active elements would remain unchanged. The following other fields would have to be documented in every notification

$9G$ = maximum gain of the AAS

$8B = 8AA + 9G$

$7AB$ = necessary bandwidth of the IMT transmission (currently 50, 100, 200 or 400 MHz)

A remark could be added in the assignment record to indicate the need to review the finding with the WRC-23 decision.

CEPT is of the view that no change to RR No. 21.5 is needed in order to implement the above interim solution; instead, a rule of procedure should be developed.

2.2 REVIEW OF NO. 21.5 AND POSSIBLE ACTIONS BY A WRC

Två optioner finns på bordet men är ännu inte slutdiskuterade:

2.2.1 Option 1: Refinement of the TRP approach, taking bandwidth and array size into account

2.2.2 Option 2: Limit to the radiated power in the direction of satellite receivers

2.3 Long-term solution: Review of RR Table 21-2 and possible actions by a WRC

CEPT considers to develop the updates of Table 21-2 of RR Article 21 to include the following frequency bands, where reception by space stations is to be protected when these bands are shared with equal rights with the fixed and mobile services:

24.45-27.5 GHz, 40-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-48.2 GHz, 66-71 GHz, which are identified for IMT and might be used by stations with AAS, and

43.5-45.5, 48.2-50.2, 50.4-51.4 GHz

CEPT will assess whether the limit in 21.5 has to be adapted for the frequency bands above 29.5 GHz (see Issue A).

ECP

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Svenska intressenter

SES Astra AB, SMHI, Telia Company AB, Ericsson

Svenska kommentarer

SES Astra AB: Vi stödjer studier samt lämplig modifiering av Art. 21.5 som kan rendera i ett klargörande för terrestra stationer med aktiva antensystem att korrekt applicera 21.5 för ett bibehållet skydd av satellitmottagare. Vi stödjer även en uppdatering av Tabell 21-2 för att inkludera band identifierade för IMT av WRC-19 som också är allokerade till satellittjänster för upplänk som ännu inte är inkluderade i 21-2. Vi förstår att beslut inte bör tas i hast men klargöranden behövs.

Telia Company AB: Telia Company stödjer fortsatta studier för att klarlägga ifall Artikel 21.5 är tillämplig för aktiva antenssystem. Den nuvarande begränsningen av effekt per sändare är inte direkt tillämplig som en TRP begränsning. Studierna bör begränsas till 26 GHz bandet i enlighet med dokument 550. Eventuella ändringar eller tolkningar av Artikel 21 bör heller inte begränsa användningen av IMT mer än vad som beslutades vid WRC-19 då detaljerade studier låg till grund för beslutet.

Ericsson: Ericsson anser att arbetet med Artikel 21 bör begränsas till frekvensbandet 26 GHz, i enlighet med vad som definierats i Doc 550 från WRC-19. No. 21.5 bör dessutom inte användas för skydd av satellittjänsters upplänk från interferens från stationer som använder AAS eftersom den utvecklats för helt andra interferensscenarier och för annan utrustning. Notifiering/verifiering kan som observerats under arbetet i ITU-R hanteras redan nu utan uppdatering av 21.5. En eventuell uppdatering av tekniska villkor för satellitskydd kräver en mer grundlig analys än en direkt tillämpning av No. 21.5 genom att exempelvis tolka metriken som TRP.

Other issues: Res 427 Aeronautical provisions

WRC-19 through Resolution 427 (WRC-19) resolves to invite the ITU Radiocommunication Sector:

to study the Articles, limited to Chapters IV, V, VI and VIII of Volume I, of the Radio Regulations and their associated Appendices, as appropriate, in order to identify outdated aeronautical provisions with respect to ICAO standards and recommended practices and to develop examples of regulatory texts for updating these provisions, while ensuring that potential changes to such provisions will not impact any other systems or services operating in accordance with the Radio Regulations,

Prioritet

TBD

Svenska ståndpunkter

TBD

Ansvariga grupper

WP 5B, PT C

CEPT-ståndpunkt

CEPT proposes for WRC-23 no change to Chapters IV, V, VI and VIII of Volume I of the Radio Regulations.

ECP

Draft ECP: NOC

Svenska intressenter**Svenska kommentarer**

Other issues: Res 655 time scale

Definition of time scale and dissemination of time signals via radiocommunication systems.

Kommentar: CPG23-plenar ska besluta om och när en PT A ska börja arbeta med att ta fram en CEPT brief för den här frågan.

Prioritet

TBD

Svenska ståndpunkter

TBD

Ansvariga grupper

WP 7A, PT A

CEPT-ståndpunkt

CEPT recognises strictly that:

- the UTC is produced by BIPM and is not a task of spectrum regulation; and
- the general definition of international reference time scale UTC is provided in Resolution 2 of the 26th General Conference on Weights and Measures.
- UTC is addressed in RR 1.14, Resolution 655 (WRC-15) and Recommendation ITU-R TF.460-6

ECP

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Svenska intressenter**Svenska kommentarer**

Other issues: CS Article 48

to contribute to the consideration of the question by Com-ITU regarding the invocation of Article 48 of the ITU Constitution in relation to the Radio Regulations, as raised at WRC-19, and prepare relevant deliverables and liaisons to Com-ITU for CPG.

Kommentar: Article 48 var på agendan för WRC-19 under AI 9.3. Då kom man fram att det i första hand var en fråga för ITU Plenipotentiary (PP). Nästa PP äger rum 2022. PT B ska stödja COM-ITU i den här frågan. Från PP kan sedan frågan hamna på agendan för WRC-23. Men det är inte klart i nuläget.

Prioritet

TBD

Svenska ståndpunkter

Sverige är för ett klagörande vad gäller aktivering av Artikel 48 i ITU:s konstitution.

Ansvariga grupper

PT B

CEPT-ståndpunkt

TBD

ECP

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Svenska intressenter

SES Astra AB

Svenska kommentarer

SES Astra AB: Vi stödjer till fullo den svenska ståndpunkten och Sveriges agerande i frågan såhär långt.

CEPT-koordinatorer och PTS AI-ansvariga

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
<p>1.1 to consider, based on the results of the ITU R studies, possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No. 5.441B in accordance with Resolution 223 (Rev.WRC-19);</p>	<p>Didier Chauveau (France)</p>	<p>Johan Litzén</p>
<p>1.2 to consider identification of the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 245 (WRC-19);</p>	<p>Robert Cooper (United Kingdom)</p> <p>Ines Ortega (Germany) (10,5 GHz)</p>	<p>Erik Ferngren</p>
<p>1.3 to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution 246 (WRC-19);</p>	<p>Claudia Carciofi (Italy)</p>	<p>Ola Wimo</p>
<p>1.4 to consider, in accordance with Resolution 247 (WRC-19), the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already</p>		

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
identified for IMT, on a global or regional level;		
1.5 to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 (WRC-15);	Kenneth Concannon (Ireland)	Amela Hatibovic Sehic
1.6 to consider, in accordance with Resolution 772 (WRC-19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;	Gerlof Osinga (Netherlands)	Per Werner
1.7 to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution 428 (WRC-19) for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands;	Benoit Louvet (France)	Johan Litzén
1.8 to consider, on the basis of ITU R studies in accordance with Resolution 171 (WRC-19), appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution 155 (Rev.WRC 19) and No. 5.484B to accommodate the	Martin Weber (Germany)	Per Werner

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems;		
1.9 to review Appendix 27 of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with Resolution 429 (WRC-19);	Raffi Khatcherian (Switzerland)	Johan Litzén
1.10 to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution 430 (WRC-19)	Jérôme André (France)	Per Werner
1.11 to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation , in accordance with Resolution 361 (Rev.WRC-19);	Till Rettberg (Germany)	Johan Litzén

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
1.12 to conduct, and complete in time for WRC-23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution 656 (Rev.WRC-19);	Bruno Espinosa (ESA) as acting coordinator	Jeanette Wännström
1.13 to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with Resolution 661 (WRC-19);	PT A CM	Jeanette Wännström
1.14 to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution 662 (WRC-19);	Markus Dreis (Germany)	Jeanette Wännström
1.15 to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally, in accordance with Resolution 172 (WRC-19);	Miia Mustonen (Germany)	Kiamal Akperov

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
1.16 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-GSO FSS earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with Resolution 173 (WRC-19);	Soraya Contreras (Switzerland)	Kiamal Akperov
1.17 to determine and carry out, on the basis of the ITU-R studies in accordance with Resolution 773 (WRC-19), the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate;	Yves Piriou (France)	Kiamal Akperov
1.18 to consider studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems, in accordance with Resolution 248 (WRC-19);		Kiamal Akperov
1.19 to consider a new primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2, while protecting existing primary services in the band, in		Kiamal Akperov

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
accordance with Resolution 174 (WRC-19);		
2 to examine the revised ITU R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with further resolves of Resolution 27 (Rev.WRC-19), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in resolves of that Resolution;	Karel Antousek (Czech Republic)	Jeanette Wännström
3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the conference;		
4 in accordance with Resolution 95 (Rev.WRC-19), to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;	Karel Antousek (Czech Republic)	Jeanette Wännström
5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;		
6 to identify those items requiring urgent action by the radiocommunication study groups		

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
in preparation for the next world radiocommunication conference;		
7 to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev.WRC-07), in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit	<p>Anna Marklund (Sweden)</p> <p>supported by</p> <p>Thomas Weber (Germany)</p> <p>Kjersti Thomassen Hamborgstrøm (Norway)</p> <p>Samuel Blondeau (Luxembourg)</p> <p>John Pahl (United Kingdom)</p>	Jonas Medbo
8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC-19);		
<p>9.1 on the activities of the Radiocommunication Sector since WRC-19:</p> <p>a) In accordance with Resolution 657 (Rev.WRC-19), review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing</p>	<p>Bharat Dudhia (United Kingdom)</p> <p>&</p> <p>Katharina Andersen (Germany)</p>	Jeanette Wännström

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;		
<p>9.1 on the activities of the Radiocommunication Sector since WRC-19:</p> <p>b) Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240 - 1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation satellite (space-to-Earth) service operating in the same band in accordance with Resolution 774 (WRC-19);</p>	<p>Hans Blondeel Timmerman (The Netherlands)</p> <p>Jean Chenebault (France)</p>	Ola Wimo
<p>9.1 on the activities of the Radiocommunication Sector since WRC-19:</p> <p>c) Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution 175 (WRC-19);</p>	Nasarat Ali (United Kingdom)	Jeanette Wännström
<p>9.1 on the activities of the Radiocommunication Sector since WRC-19:</p> <p>d) Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations; WRC-19</p>	Thibaut Caillet (France)	Jeanette Wännström

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
Document 535, 2nd section of the Annex		
9.3 on action in response to Resolution 80 (Rev.WRC-07);	Thomas Weber (Germany)	
10 to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution 804 (Rev.WRC-19),	Pasi Toivonen (Finland) supported by Karsten Buckwitz (Germany) Emmanuel Faussurier (France)	Jeanette Wännström
Art 21: As a result of discussions by WRC-19 (see doc 550) on the applicability of the limit specified in No. 21.5 of the Radio Regulations to IMT stations that use an antenna that consists of an array of active elements, ITU-R was invited to study this issue and to report the results of the studies to the Director of the Radiocommunication Bureau to be considered as the Director deems appropriate.	PT 1 TBD PT B (Table 21-2): Florence Magnier (France)	Erik Ferngren
Res 427 Aeronautical provisions: WRC-19 through Resolution 427 (WRC-19) resolves to invite the ITU Radiocommunication Sector: to study the Articles, limited to Chapters IV, V, VI and VIII of Volume I, of the Radio Regulations and their associated Appendices, as appropriate, in order to identify		

WRC-23 Agenda Item	CEPT Coordinator	PTS AI-ansvarig
<p>outdated aeronautical provisions with respect to ICAO standards and recommended practices and to develop examples of regulatory texts for updating these provisions, while ensuring that potential changes to such provisions will not impact any other systems or services operating in accordance with the Radio Regulations,</p>		
<p>Res 655 time scale: Definition of time scale and dissemination of time signals via radiocommunication systems.</p>		
<p>CS Article 48: to contribute to the consideration of the question by Com-ITU regarding the invocation of Article 48 of the ITU Constitution in relation to the Radio Regulations, as raised at WRC-19, and prepare relevant deliverables and liaisons to Com-ITU for CPG.</p>	<p>Thomas Weber (Germany)</p>	<p>Kiamal Akperov</p>

Konferensstruktur

TBD

Agenda for the 2023 world radiocommunication conference

The World Radiocommunication Conference ([TBD], 2023),

considering

a) that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for a world radiocommunication conference should be established four to six years in advance and that a final agenda shall be established by the ITU Council two years before the conference;

b) Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;

c) the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

recognizing

a) that this conference has identified a number of urgent issues requiring further examination by WRC-23;

b) that, in preparing this agenda, some items proposed by administrations could not be included and have had to be deferred to future conference agendas,

resolves

to recommend to the Council that a world radiocommunication conference be held in 2023 for a maximum period of four weeks, with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC-19 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the frequency bands under consideration, to consider and take appropriate action in respect of the following items:

1.1 to consider, based on the results of the ITU-R studies, possible measures to address, in the frequency band 4 800-4

990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No. **5.441B** in accordance with Resolution **223 (Rev.WRC-19)**;

1.2 to consider identification of the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **COM6/2 (WRC-19)**;

1.3 to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with **Resolution COM6/3 (WRC-19)**;

1.4 to consider, in accordance with Resolution **COM6/4 (WRC-19)**, the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level;

1.5 to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution **235 (WRC-15)**;

1.6 to consider, in accordance with Resolution **COM6/5 (WRC-19)**, regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;

1.7 to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution **COM6/6 (WRC-19)** for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands;

1.8 to consider, on the basis of ITU-R studies in accordance with Resolution **COM6/7 (WRC-19)**, appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution **155 (Rev.WRC-19)** and No. **5.484B** to accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems;

1.9 to review Appendix **27** of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU-R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with Resolution **COM6/8 (WRC-19)**;

1.10 to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution **COM6/9 (WRC-19)**;

1.11 to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of enavigation-, in accordance with Resolution **361 (Rev.WRC-19)**;

1.12 to conduct, and complete in time for WRC-23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution **656 (Rev.WRC-19)**;

1.13 to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with Resolution **COM6/10 (WRC-19)**;

1.14 to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution **COM6/11 (WRC-19)**;

1.15 to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally, in accordance with Resolution **COM6/12 (WRC-19)**;

1.16 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-GSO FSS earth stations in motion, while ensuring due

protection of existing services in those frequency bands, in accordance with Resolution **COM6/13 (WRC-19)**;

1.17 to determine and carry out, on the basis of the ITU-R studies in accordance with Resolution **COM6/14 (WRC-19)**, the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate;

1.18 to consider studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems, in accordance with Resolution **COM6/15 (WRC-19)**;

1.19 to consider a new primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2, while protecting existing primary services in the band, in accordance with Resolution **COM6/16 (WRC-19)**;

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with *further resolves* of Resolution **27 (Rev.WRC-19)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in *resolves* of that Resolution;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the conference;

4 in accordance with Resolution **95 (Rev.WRC-19)**, to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

6 to identify those items requiring urgent action by the radiocommunication study groups in preparation for the next world radiocommunication conference;

7 to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and

recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)**, in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-19)**;

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention;

9.1 on the activities of the Radiocommunication Sector since WRC-19:

- a) In accordance with Resolution **657 (Rev.WRC-19)**, review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;
- b) Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 2401 300 MHz to determine if additional measures are required to ensure protection of the radionavigation--satellite (space-to-Earth) service operating in the same band in accordance with Resolution **COM6/17 (WRC-19)**;
- c) Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution **COM6/18 (WRC-19)**;
- d) Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations; WRC-19 Document 535, 2nd section of the Annex

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations; and¹

9.3 on action in response to Resolution **80 (Rev.WRC-07)**;

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution **804 (Rev.WRC-19)**,

invites the ITU Council

to finalize the agenda and arrange for the convening of WRC23, and to initiate as soon as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

1 to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a report to WRC-23;

2 to submit a draft report on any difficulties or inconsistencies encountered in the application of the Radio Regulations referred in agenda item 9.2 to the second session of the CPM and to submit the final report at least five months before the next WRC,

instructs the Secretary-General

to communicate this Resolution to international and regional organizations concerned.

¹ This agenda sub-item is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. Administrations are invited to inform the Director of the Radiocommunication Bureau of any difficulties or inconsistencies encountered in the Radio Regulations.

Table of contents of the draft CPM Report to WRC-23

Chapters:

1. FS, MS, BS: AI 1.1, 1.2, 1.3, 1.4, 1.5
2. Aeronautical, maritime: AI 1.6, 1.7, 1.8, 1.9, 1.10, 1.11
3. Science: AI 1.12, 1.13, 1.14
4. Satellite: AI 1.15, 1.16, 1.17, 1.18, 1.19, 1.19, 7
5. General: AI 2, 4, 9.1 topic a), b), c), d)

Struktur per Chapter (CH) och per AI (AI) (gäller ej topics under AI 9)

1. CH/AI/1 Executive summary
2. CH/AI/2 Background
3. CH/AI/3 Results of ITU-R studies
4. CH/AI/4 Methods
5. CH/AI/5 Regulatory and procedural considerations

Bilaga 1 Process för framtagande av svenska ståndpunkter

Process för WRC-ståndpunkter

