

**PCC.III/RES.24(III-95)**

**AGENDA ITEM 3d  
ALLOCATION OF ADDITIONAL SPECTRUM AT WRC-95  
FOR USE BY NON-GSO MSS BELOW 1 GHz<sup>1</sup>**

The Third Meeting of the Permanent Consultative Committee III: Radiocommunications,

**Considering:**

That agenda item 3(d) of WRC-95 provides that the Conference will consider requirements for the Mobile-Satellite Service and, if necessary, adopt limited allocations;

That the CPM-95 Report provides that, "given the time required to develop and construct satellite systems, to meet the MSS requirements below 1 GHz, a range of an additional 7-10 MHz will be required in the near future";

That, due to the significant interest in Region 2 for non-GSO MSS below 1 GHz services, a number of CITELE administrations have identified frequency bands for additional allocation to non-GSO MSS below 1 GHz, as set forth in the "Annex" to this Resolution;

That developing countries have expressed interest in the types of services offered by non-GSO MSS below 1 GHz systems; and further, that the technology being developed for non-GSO MSS below 1 GHz will be useful to these countries as they seek to implement satellite networks; and,

That CITELE member administrations recognize the work of the ITU-R in determining recommendations for sharing between non-GSO MSS below 1 GHz and terrestrial systems, specifically recommendations ITU-R M.1039 & M.1087.

**Recognizing:**

That there exists a common interest among CITELE member administrations in identifying additional frequencies for worldwide allocation to non-GSO MSS below 1 GHz at WRC-95; and,

That Region 2 countries have undertaken studies and analyses on the feasibility of non-GSO MSS shared operations in a number of bands between 100 and 500 MHz;

That there exist some common bands among the frequency bands being investigated by CITELE member administrations for allocation to non-GSO MSS at WRC-95.

**Resolves:**

1. That the CITELE member administrations request WRC-95 to allocate additional worldwide spectrum for use by the non-GSO MSS below 1 GHz,

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<sup>1</sup> Published as PCC.III-223/95 rev.3.

2. That CITELE member administrations should continue to examine frequency bands, including those in the "Annex", with the objective of proposing common frequency bands for worldwide allocation to non-GSO MSS at WRC-95.

### ANNEX

The following CITELE administrations have submitted information that describes the frequency bands proposed or under consideration:

**Brazil:** The administration of Brazil was unable to identify substantive new bands but believes that the MSS below 1 GHz is an important service and is open to discussions during WRC-95 that may lead to the identification of new bands for MSS below 1 GHz at WRC-95.

Brazil has proposed to allocate the entire 137-138 MHz band for MSS on a co-primary basis.

**Canada:** The administration of Canada continues to investigate additional spectrum for non-GSO MSS below 1 GHz.

Consideration is being given for parts of the following bands:

216-218 MHz (s-E)  
420-422 MHz (E-s)  
450-470 MHz (E-s)

The administration of Canada has conducted sharing analyses between non-GSO MSS uplinks and land mobile in the 148-149.9 MHz band and believes sharing is feasible. It is expected that technical constraints similar to those in the bands presently allocated to MSS below 1 GHz would be applicable in order to facilitate sharing with land mobile and fixed services in future allocations. Further, it is expected that there will be consideration given to designating part of the spectrum for feeder links.

Canada has proposed to allocate 399.9-400.05 MHz (s-E) for MSS.

**Guatemala:** Guatemala has identified the following frequency bands as possible candidates for sharing with non-GSO MSS below 1 GHz:

216-216.5 MHz  
217.5-218.0 MHz  
399.9-400.05 MHz  
401-404 MHz\*  
450-470 MHz\*

\* Systems with fixed and mobile characteristics exist in these bands, so it is considered to be prudent to condition the

availability of these bands on the relocation of many of the services found in these bands to the 800-900 MHz bands intended for trunked systems.

**Mexico:** Mexico has conducted field tests and determined the following bands may be suitable for sharing:

137-138 MHz  
216-218 MHz  
312-315 MHz  
387-390 MHz  
401-404 MHz  
420-422 MHz  
450-470 MHz

Mexico has already proposed to raise to co-primary existing MSS allocations at 312-315 MHz and 387-390 MHz, subject to Resolution 46.

On a complimentary basis, an additional 4 to 6 MHz could be allocated to MSS below 1 GHz in the frequency bands 138-144 MHz, 401-404 MHz, 420-422 MHz, and 450-470 MHz.

In addition to the low portion of the spectrum currently assigned to non-GSO MSS below 1 GHz, a determining factor for competitive development of the market lies in the size or bandwidth of assigned spectrum blocks, the ideal size of such blocks being 2.5 to 4 MHz for space-Earth and Earth-space transmissions: these are therefore the most recommended block sizes for accommodating a large number of systems and sharing the spectrum efficiently. The scattered assignment of small portions of the radio spectrum would have a significant impact on the price of terminal equipment.

The Delegation of Mexico expresses an interest in selecting, by consensus, the most suitable bands for these additional allocations, taking into account the opinions of other administrations, and if possible, suggests that a joint proposal be made by the Delegations that wish to do so.

**United States:** The US administration has proposed that 6.15 MHz be allocated to MSS below 1 GHz systems at WRC-95. The bands are:

216-216.5 MHz (s-E)  
217.5-218 MHz (s-E)  
399.9-400.05 MHz (E-s)  
401-404 MHz (s-E)  
455-456 MHz (s-E)  
459-460 MHz (E-s)

The proposed allocations were carefully selected and accompanying footnotes were developed to insure that existing users of the bands can continue to provide services. In particular, downlink bands were selected to insure that FDMA and CDMA systems could operate consistent with existing users through power flux density limitations on the MSS or through band segmentation. Uplink bands were selected in which existing users are intermittent and accompanying footnotes were developed allowing the assignment of vacant channels through dynamic channel assignment or low power CDMA.

**Uruguay:**

The following bands have been identified for possible use by non-GSO MSS below 1 GHz:

a) Without any restrictions:

137-138 MHz

312-315 MHz

399.9-400.05 MHz

b) Subject to establishing sharing criteria that will protect

existing users:

216-218 MHz

387-390 MHz

401-403 MHz

c) The following bands are heavily used and it is considered that sharing is not viable:

138-144 MHz

403-422 MHz

450-470 MHz

**Venezuela:**

Studies have found that the bands set forth below could be utilized for non-GSO MSS below 1 GHz, so long as sharing criteria are established which protect existing services that use these bands. It is recommended that the new allocations are made in the broadest possible segments.

138-144 MHz

216-216.5 MHz

217.5-218 MHz

312-315 MHz

387-390 MHz

399.9-400.05 MHz

401-404 MHz

420-422 MHz