

## RESOLUTION 154 (REV.WRC-15)

**Consideration of technical and regulatory actions in order to support existing and future operation of fixed-satellite service earth stations within the frequency band 3 400-4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1**

The World Radiocommunication Conference (Geneva, 2015),

*considering*

- a)* that the frequency band 3 400-4 200 MHz is allocated worldwide to the fixed-satellite service (FSS) in the space-to-Earth direction and to the fixed service on a primary basis;
- b)* that the frequency band 3 400-3 600 MHz is allocated on a primary basis to the mobile, except aeronautical mobile, service and identified for International Mobile Telecommunications (IMT) in Region 1 countries as specified in Article 5 of the Radio Regulations;
- c)* that in Region 1, the allocation to the mobile, except aeronautical mobile, service in the frequency band 3 400-3 600 MHz is subject to technical and regulatory conditions aimed at ensuring compatibility with co-primary services of neighbouring countries;
- d)* that a number of developing countries rely, to a great extent, on FSS systems using very small aperture terminals (VSAT) in the frequency band 3 400-4 200 MHz for the provision of communications as an aid to safe operation of aircraft and reliable distribution of meteorological information;
- e)* that, in some cases, where an adequate terrestrial communication infrastructure is not available, VSAT networks referred to in *considering d)* above are the only viable option to augment the communication infrastructure in order to satisfy the overall communications infrastructure requirements of the International Civil Aviation Organization (ICAO) and to ensure distribution of meteorological information under the auspices of the World Meteorological Organization (WMO);
- f)* that the relevant ITU Radiocommunication Sector (ITU-R) studies showed a potential for interference from fixed wireless access and IMT stations into FSS receiving earth stations at distances from less than one kilometre up to hundreds of kilometres, depending on the parameters and deployment of stations of these services;
- g)* that WRC-12, taking into account the studies mentioned in *considering f)* above, decided to study technical and regulatory measures to support the FSS earth stations referred to in *considering e)* above,

## RES154-2

### *noting*

- a) that, by the date of this conference, several cases of harmful interference to the FSS VSATs used for aeronautical safety communications from fixed wireless access or IMT stations were reported;
- b) that these reported cases of interference indicated difficulties that some administrations have encountered in the coordination of frequencies between the fixed wireless access or IMT systems and frequency assignments for VSATs used for aeronautical and meteorological purposes;
- c) that, in many countries, FSS VSAT earth stations are not subject to individual licensing and not registered as specific stations in their national frequency databases and in the ITU Master International Frequency Register (MIFR) due to the considerable administrative work involved;
- d) that knowledge of the location and operational frequencies of VSAT stations used for communications as an aid to the safe operation of aircraft and/or distribution of meteorological information is critically important for ensuring compatibility with applications of other services,

### *recognizing*

- a) that ITU-R conducted comprehensive studies of compatibility between FSS on the one hand and fixed wireless access systems and IMT applications on the other hand in the frequency band 3 400-4 200 MHz, and summarized the results of the studies in Recommendation ITU-R SF.1486 as well as Reports ITU-R S.2199, ITU-R M.2109 and ITU-R S.2368;
- b) that the Recommendation and Reports identified in *recognizing a)* offer a set of mitigation techniques that could be employed for international coordination and at a national level and to facilitate coexistence of FSS, fixed service and mobile service systems;
- c) that Recommendation ITU-R S.1856 contains methodologies for verification of compliance with the relevant power flux-density (pfd) limit set forth in the Radio Regulations,

### *resolves*

1 to recommend that administrations in countries where the frequency band 3 400-3 600 MHz is allocated on a primary basis to the mobile, except aeronautical mobile, service in Region 1 and identified for IMT in Region 1 ensure compliance of IMT stations with the relevant provisions set forth in the Radio Regulations and apply the relevant coordination procedures before bringing these applications into use;

2 to urge administrations in Region 1, when planning and/or licensing fixed point-to-point, fixed wireless access and IMT systems in frequency bands referred to in *considering b)* above, to take into account the protection needs of existing and planned FSS earth stations within the frequency band 3 400-4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1;

3 to invite administrations in Region 1, taking into account the number of earth stations involved for this particular type of usage, to consider the possibility of licensing the FSS earth stations used for communications as an aid to the safe operation of aircraft and/or distribution of meteorological information on an individual basis and registering them in the MIFR as specific earth stations;

4 to encourage administrations in Region 1 to employ the appropriate mitigation techniques described in the ITU-R publications referred to in *recognizing a)* above;

5 to invite administrations to ensure that the application of these technical and regulatory measures to FSS and the mobile service does not limit the use of the frequency band 3 400-4 200 MHz by other existing and planned systems and services in other countries,

*instructs the Secretary-General*

to bring this Resolution to the attention of ICAO and WMO.

