



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
WESTERN AND CENTRAL AFRICA OFFICE
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**Sixth Meeting of the CASAT Network Management Committee (CNMC/6)
(Lisbon, Portugal, 06-07 June 2016)**

Agenda Item 5:- Outcome of ITU WRC-15 pertaining to VSAT networks

**Resolution 154 (Rev. WRC 15) and challenges for the safe operation of AFISNET
in the 3 400-4 200 C-band
(Presented by the secretariat)**

SUMMARY

The purpose of this paper is to provide the meeting with a summary of the Finals Acts of ITU World Radiocommunication Conference (**ITU WRC**) held in Geneva from 03 to 27 November 2015, in particular those related to the protection of the down link Fixed Satellite Service (**FSS**) C-Band operated by Aeronautical satellite based networks (**AFISNET, CAFSAT, NAFISAT, SADC2**).

Reference:

Report on ACP Working Group F Meetings
Finals Acts of ITU WRC-15
ITU Recommendation 724-WRC-07
ITU Resolution 154 (COM6/24)-WRC 12
ITU Resolution 154 (Rev. WRC-15)
Report on APIRG/18 Meeting
Report on APIRG/19 Meeting
Report on APIRG/20 Meeting

Action by the meeting see paragraph 3

1. Introduction

1.1 The threat on the operation of FSS C-band encountered by aeronautical VSAT networks from the International Mobile Telecommunication (**IMT, WIMAX**) was earlier identified by the AFI Region and appropriate actions have been conducted with evolving results during the ITU World Radiocommunication Conferences (WRC-07; WRC-12). The outcome of these Conferences such as Recommendation **724 WRC-07**; **Resolution 154 WRC-12** were widely shared during SNMC previous sessions.

1.2 It may be recalled that Resolution **154 WRC-12** resolves “to invite ITU-R to provide **after studies**, for next WRC-15 a set of “**possible technical and regulatory measures in some countries in Region 1 to support the existing and future FSS earth stations in the 3 400-4 200 MHz band used for satellite communications related to safe operation of aircraft and reliable distribution of meteorological information**” and invited States and ICAO and WMO to participate in these studies.

2. Discussion

2.1 In order to carry out the implementation tasks called up by this Resolution, the Secretariat coordinated the participation of SNMC members to attend various regional African Telecommunication Union (ATU) preparatory meetings (APM) amongst which, the 1st APM held in Dakar Senegal from 18 to 20 March 2013; the 3rd APM, Abuja, Nigeria, 26 – 30 January 2015, the 4th APM, Nairobi, Kenya, 20-23 July 2015 and the ECOWAS last preparatory meeting held in Lomé, Togo from 19 to 21 August 2015.

2.2 The ITU World Radiocommunication Conference 2015 (WRC-15) was held in Geneva, Switzerland from 2 to 27 November 2015. In total, about **3 300** delegates from **162** ITU Member States and **130** other entities, including international organizations and industry, participated in the work of the conference. Over **40** topics related to frequency allocation and frequency sharing for the efficient use of spectrum and orbital resources were discussed.

2.3 The ICAO delegation to the conference included the Director of the Air Navigation Bureau (D/ANB) for the first day, two Technical Officers (CNS) from ICAO Headquarters for full time, the Regional Officer CNS, ICAO ESAF Office for the third week and the Regional Officer ICAO WACAF Office and Secretary of SNMC for the first two weeks.

2.4 As the result of the regional coordination, Civil Aviation experts were included in some African States delegation (Cote d'Ivoire, Ghana, Kenya, Nigeria, Tanzania, Togo, Uganda...). Delegates of Air Navigation Service providers (ANSPs-ASECNA, GCAA, ATNS, KCAA, UCAA...) attended the Conference.

2.5 Two aviation coordination meetings were organized by the ICAO delegation during the conference. The pace of attendance to this meeting was satisfactory as well as the debates conducted to clarify ICAO position. Coordination and promotion of the ICAO policy during the conference were also performed on a more bilateral basis, including individuals, various industry groups and representing spectrum administrations.

At the end ICAO position for WRC 15 was successfully promoted although some agenda items of high importance to civil aviation required lengthy debate, continuous time consuming and strategic coordination.

2.6 Under ITU WRC 15 **Agenda item 5 (Sub-item 9.1.5):** *Consideration of technical and regulatory actions in order to support existing and future operation of fixed-satellite service earth stations within the 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 (Resolution 154 (WRC-12))* the civil aviation community was looking for Resolution 154 WRC-12 to be strengthened in order to reinforce the protection of the C-Band spectrum.

After intense discussion and continuous coordination on this agenda item, the conference agreed on a revision of Resolution **154** fully in line with the ICAO Position. The revised resolution is attached as **Appendix** to this Working Paper.

2.7 This important result is justified by the involvement of C-band FSS industry and users in the debates and coordination activities undertaken before and during the conference. During this conference, ASECNA, GCAA (Ghana), Kenya, ATNS (South Africa), Togo and industry partners provided useful support to the initiative and this should be recognized and encouraged.

2.8 As a follow up measure the next steps will be to share for implementation, this resolution with CNMC stakeholders in particular with CAAs and National Telecommunication Regulation Authority. Aviation service providers operating VSAT stations should be encouraged to have their stations licensed and registered in the ITU Master International Frequency Register (MIFR). In this regard APIRG/30 has already adopted a conclusion for the implementation of Resolution 154(Rev.WRC 15).

2.9 The experience gained during this conference shows that an earlier and good preparation for the forthcoming Conference must be taken through dialogue with these stakeholders and the industry.

2.10 ICAO Regional Offices WACAF and ESAF will continue the necessary coordination actions with partners (Industry, ANSPS, Regional Economic Integration Communities, Regional Association of Telecommunication Regulators, ATU, ITU....) and with the AFI neighboring ICAO regions (MID, SAM, EUR, and APAC) to populate and share Resolution 154 (Rev. WRC15) that addresses the issues of safe operation of satellite based VSAT networks supporting Aeronautical Fixed Services between these regions.

3. Action by the meeting

The meeting is invited to:

- a) Take note of the information given above
- b) Encourage CNMC Sates/Organizations to share WRC-15 outcome on issues related to the provision of spectrum for civil aviation;
- c) Implement Resolution 154 (Rev. WRC 15) by licencing the CAFSAT and other C-band VSAT Stations and by ensuring their Registration in the ITU Master International frequency Register (MIFR)
- d) Reinforce their collaboration with their National Authority of Regulation of Telecommunication in order to submit and support the position of ICAO for the future WRC-19
