



Agenda Item 3: VHF Com Simulation for 2030**PREPARATION FOR IMPLEMENTATION OF VHF COM 8.33 kHz CHANNEL SPACING REQUIREMENTS IN ASIA-PACIFIC REGION**

(Presented by DGCA Indonesia)

SUMMARY

This paper provides a summary of Indonesia's preparations for the implementation of VHF COM 8.33 kHz channel spacing.

1. INTRODUCTION

1.1 Regarding to the plan of 8.33 kHz VHF COM channel spacing implementation in Asia-Pacific region, ICAO Regional Office has collected data from States in APAC Region related to VHF COM Simulation for 2030 stated on letter from Acting Regional Director Ref.: T8/8.6 - AP058/21 (CNS) subject to Simulation of VHF Frequency requirement for next 10 years that should have been replied before July 15th 2021.

1.2 In accordance with the agenda, in order to make the simulation success be required the data from user both from ground station operators and aircraft operators. In this paper, Indonesia has tried to collect and analyze the existing used of VHF COM. The scope data collection focusing on frequencies used by the Air Navigation Service Provider (ANSP).

2. DISCUSSION

2.1 The band 117.975–137 MHz is used for VHF air-ground and air-air communications and VHF air-ground and air-air data. In aviation, this band is used as a main communications band for all airports, for en-route, approach and landing phases of flight and a variety of activities relating to general aviation.

2.2 Indonesia has accommodated the use of 8.33 kHz channel spacing in national regulation and will be updated regarding the actual event. Furthermore, the implementation of this policy directly impacts the ANSP, airline operators, ground service (e.g., ground handling, VHF data link frequencies), heliport operators as main users of the VHF COM Frequency.

2.2 In accordance with the letter from the Acting Director of Air Navigation Ref: AU.306/5/5/DNP-2021 dated July 13th, 2021, subject to response for simulation of VHF COM Frequency

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requirements for next 10 years, Indonesia has reported 405 frequencies allocated that have also registered with Frequency Finder.

2.3 Based on the VHF COM frequency range from 117.975–137 MHz, there are around 761 channels which are categorized into 4 forms: non-decimal, 1 digit decimal, 2 digits decimal, and 3 digits decimal. Based on the total number of channel frequencies, without taking into account the number of channels re-used, Indonesia has already used 378 channel frequencies, as shown in the Figure 1 down below.

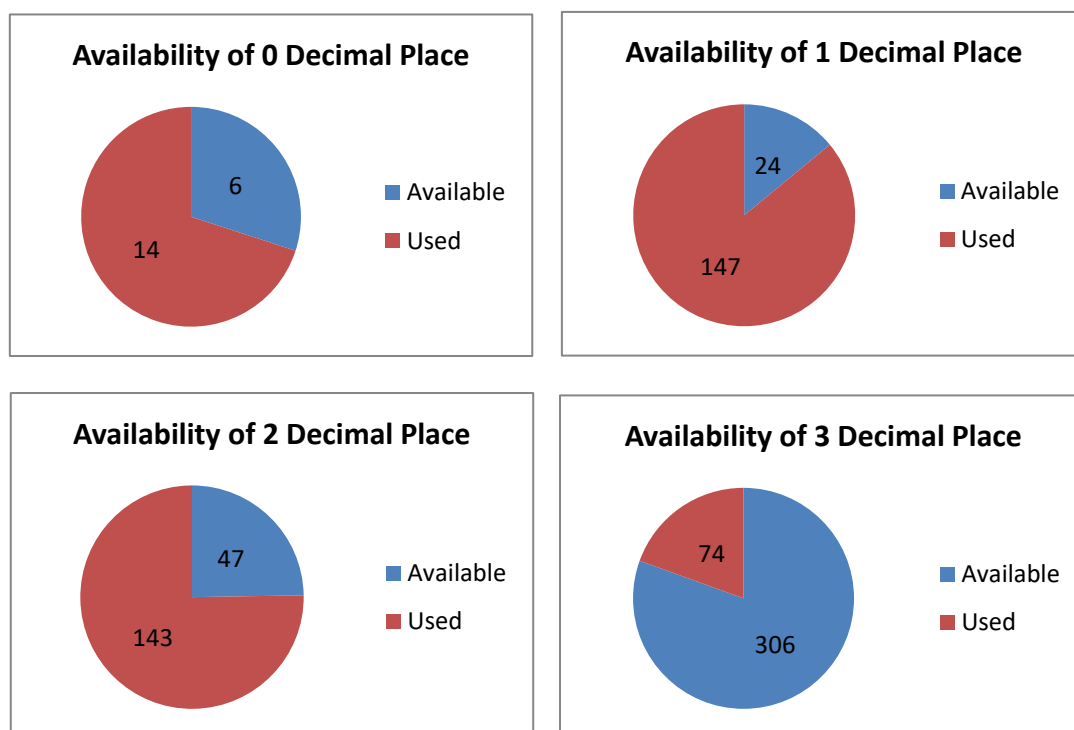


Figure 1: The availability channel frequency

2.4 In Indonesia, recorded during the period of 2019–21, nearly 672 frequencies were assigned (from all of stakeholders). Those numbers actually decreased every single year, where in 2019 there were 357 frequencies assigned, 205 in 2020, and 110 in 2021. Projecting the number of frequency assignments has become more complex since the need to consider the COVID-19 pandemic as a contributing factor to the operational of VHF COM users.

2.5 Based on a survey conducted by DGCA in ANSP regarding the ability of the existing VHF COM facilities to operate, of all the 864 types of facilities operated, 680 can operate at 8.33 kHz channel spacing and the rest can't be changed. The fact that it could have happened due to technical issues makes us realize if the implementation of 8.33 kHz will impact the replacement of all of the incapable facilities.

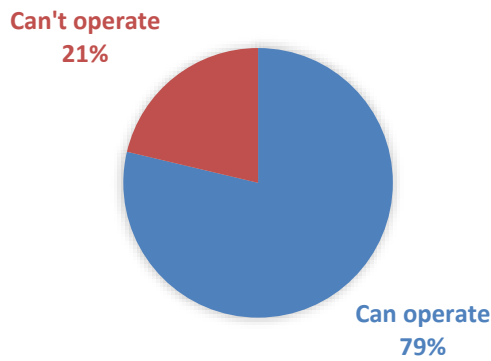


Figure 2: The ability of VHF COM Facilities to operate in 8.33 kHz channel spacing

2.6 We also collected the data of civil aircraft registered in Indonesia. There are 1.497 aircraft registered in total. In detail, 152 types of aircraft were registered, with 108 types of aircraft for commercial purposes, and 44 types of aircraft for non-commercial purposes, such as agricultural operation, forest and wildlife conservation, aerial surveying, patrolling, pilot school, and etc. To ensure all the aircraft operating in Indonesia are capable of operating at 8.33 kHz, we will conduct a further survey.

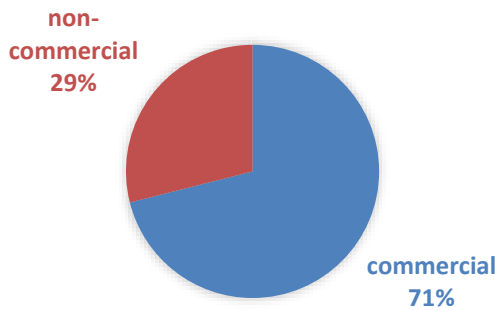


Figure 3: Types of aircraft based on purposes

2.7 At the end of the day, the use of 25 kHz is considered still relevant to current conditions and for the next few years. However, when 8.33 kHz has already been implemented, some issues have been identified. There are

- a. Operational use will have an impact on the ATC load (phraseology) when using the 3 decimal place;
- b. Implementation of 8.33 kHz channel spacing will impacted to ANSP on replacing all the VHF COM facilities which incapabale working on that channel space;
- c. It is necessary to consider the impact on airlines;
- d. Need to update national regulation of the use 8.33 kHz if it has been recommended by ICAO APAC next future.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate
