



ICAO

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The First Meeting of the South Asia, Indian Ocean and Southeast Asia ATM Coordination Group (SAIOSEACG/1)

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Agenda Item 8: ANSP Coordination and Civil/Military Cooperation

ANALYSIS OF THE IMPACT OF THE PANDEMIC IN SANYA FIR

(Presented by China)

SUMMARY

This paper presents traffic data from Sanya FIR to reflect the impact of the pandemic on air traffic services. Due to the outbreak of COVID-19 and the consequent drop in traffic volume, air traffic services in Sanya ACC have been greatly affected in the past two years. In view of the recovery of traffic demand in 2022, Sanya ACC has developed a post-pandemic work plan in order to provide better air traffic services for stakeholders. The paper also encourages joint efforts on cross-border ATM collaborations to help airlines and stakeholders recovering from the pandemic.

1. INTRODUCTION

1.1 It has been more than two years since the COVID-19 outbreak from the end of 2019. Moreover, the pandemic has had a huge impact on human society, especially for tourism and aviation industries. International flights have been greatly affected by the differences in response to pandemic policies in different States. Civil aviation has experienced the most difficult two years in the past.

1.2 The ATM world along with civil aviation industries have experienced two years of cold winter, and the spring has ushered in the dawn. Throughout the past two years, low traffic demand has delayed the rapid development of ATM capability in Southeast Asia. ATC personnel capabilities, ATFM collaborations, and route structure optimization have remained at or even lower than before.

1.3 In 2022, as the impact of new variants decreases, more and more States adjust their policies to accommodate more international flights, and Asia-Pacific States gradually open their borders. ATM capabilities will recover as traffic demand increases, so analyzing deficiencies and preparing for the future is our new priority.

2. DISCUSSION

Characteristics of traffic flow in Sanya FIR

2.1 The major traffic flow in Sanya FIR is mainly composed of two parts. One is the East-West international overflight traffic, including the main routes over the South China Sea such as A202, A1, L642 and M771, which are the important trunk traffic flows in the South China Sea region. The other one is inbound and outbound flights of major airports on Hainan Island.

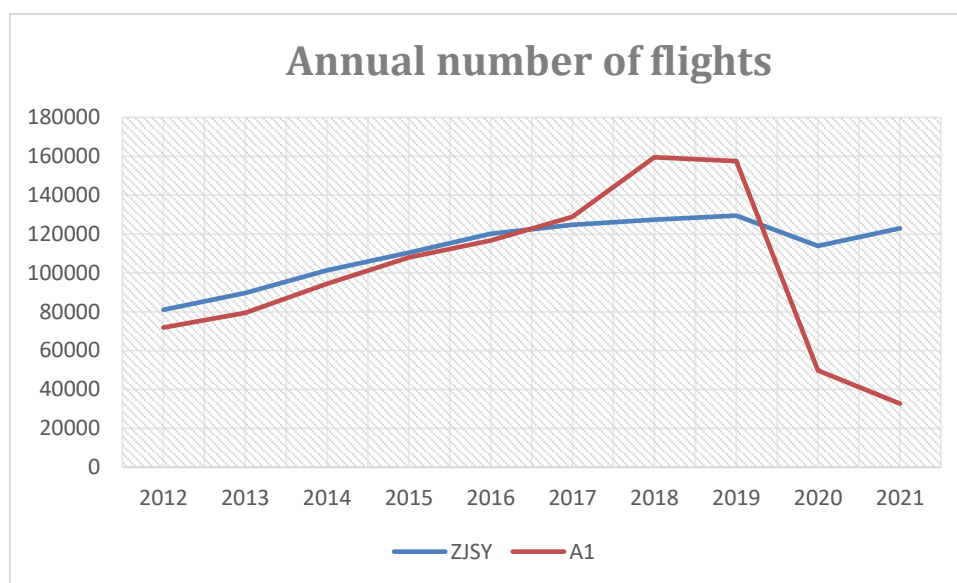


Figure 1: Annual number of flights on route A1 and Sanya airport

2.2 Figure 1 shows the traffic volume over route A1 (representing international traffic flows) and Sanya Phoenix Airport (representing domestic traffic flows) in the past decade. Before 2019, traffic volume had a significant increase, especially the traffic volume of route A1 had an explosive growth after 2017. At the year 2018, the traffic volume had fully doubled compared to 2013.

2.3 Both the movements at Sanya airport and on route A1 have decreased significantly after 2019. Especially the international flights on route A1 are falling off a cliff. The total number of flights in 2020 is only 49,782, 31.6% compared with 2019. The traffic volume of Sanya Phoenix Airport shows different situations with the international flights on route A1. The decline of flights at Sanya airport is not dramatic, the number of flights rebounded in 2021 and gradually approached the original volume. The number of flights on route A1 continued to decline in 2021. The total number of flights in the whole year was only 32,736, which was 20.8% of the normal year before the pandemic.

Characteristics on typical traffic flow

2.4 Among the traffic flows through Sanya FIR, four typical traffic flows have been selected to analyze the specific changes since the second half of 2018 based on the monthly average daily flight volume.

2.5 The first flow is the flights enter Sanya FIR via BUNTA along route A1 from Thailand. Thailand is one of the world's famous tourist attractions as a growing economy. Thailand's flights to and from East Asia have always been the main traffic flow of route A1 in Sanya FIR and have maintained a stable growth.

2.6 The second flow is the flights taking off and landing at Da Nang International Airport through BUNTA. Da Nang is a famous tourist city. The route A1 is a major route for Da Nang to travel to Japan, Republic of Korea, China, etc. In recent years, the number of flights taking off and landing in Da Nang via route A1 has increased rapidly before pandemic, from single-digit flights per day in 2012 to more than 100 flights per day in early 2020.

2.7 The remaining two traffic flows are domestic flights taking off and landing at Haikou and Sanya airports. The first two traffic flows represent the international flights, and the last two represent the domestic flights.

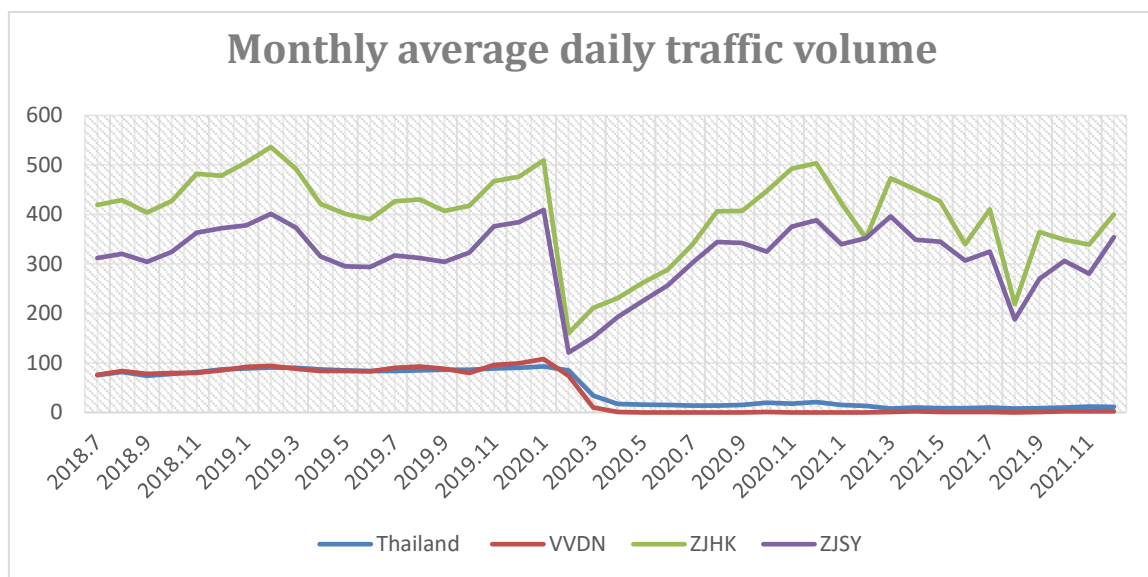


Figure 2: Monthly average daily traffic volume on four typical traffic flows

2.8 Before the pandemic outbreak, the traffic flow from Thailand and Da Nang in Sanya FIR had been growing steadily. After the outbreak of COVID-19, the two traffic flows began to decline gradually, reaching the lowest level by April 2020. Especially in Da Nang, there are few international flights via A1 from April 2020. As can be seen from the figure, the number of domestic flights reached its lowest point in February 2020.

2.9 Subsequently, countries around the world pay more attention to COVID-19 and have issued relevant preventive and control measures. In particular, the management requirements for entry and exit have been strengthened. This makes the international traffic flow unable to pick up and run at a low volume for a long time.

The impact of the pandemic on Sanya ACC

2.10 Due to the outbreak of COVID-19 and the consequent drop in traffic volume, Sanya ACC has also been greatly affected, mainly in the following aspects:

2.11 *Changes in major conflict points.* The change of traffic flow also brings the change of conflict points (Take ATC sector above Hainan Island as an example). There are two main traffic flows, international flights over route A202 and the flights of Sanya Phoenix airport. Before the outbreak of pandemic (taking 2019 as an example), there were 106,320 and 129,448 flights respectively, accounting for 43.8% and 53.3% of the total flights in the sectors. At present, the number of flights on A202 has decreased significantly. In 2021, the number of inbound and outbound flights of Sanya Phoenix airport in these sectors were 122,948, while the number of international flights on A202 was only 21,778, accounting for 78.0% and 13.8% of the sector respectively. The traffic on the proportion of A202 has been greatly reduced affected by the pandemic, which has gradually been affecting the working habits of controllers in these sectors. They are used to pay less attention on the route A202. Once the demand on A202 resumes, the conflict caused by A202 flights will be a potential safety risk that can't be ignored.

2.12 *Insufficient international cooperation.* In the Asia-Pacific region, different operation conditions among each FIR make the integrated ATM operation more and more important. According to the Seamless ANS Plan, the integrated ATM operation is also the development trend in the region. Affected by the pandemic, cross-border collaborations have been affected, especially face-to-face meetings. The operational differences among different FIRs have gradually harmonized with the efforts from all stakeholders before the pandemic, which could provide airlines with better services in the Asia-

Pacific region. However, after the pandemic outbreak, communications between FIRs are decreasing, and the integrated ATM operation were affected.

Post-pandemic work plan

2.13 *Application of complementary technology.* The pandemic has caused a serious impact on the ATM operations of Sanya FIR, but every coin has two sides, it is also an opportunity that can be used. Some complementary technologies and some international collaboration can be carried out during this period. For example, to promote AIDC with neighboring ATC units and CPDLC and so on. Based on existing air traffic flow, changes will not bring great potential risks, which can bring a more stable operational trial period, to lay the foundation for the recovery of traffic flows in the future.

2.14 *Strengthening international collaboration.* On December 20, 2021, WHO Director General said on his speech that “2022 must be the year we end the pandemic, but it must also be the year that all countries invest in preventing a future disaster on this scale and in accelerating efforts to achieve the sustainable development goals.” With the decreasing impact of the COVID-19 on the Asia-Pacific region and the changes of national policies, pandemic will gradually transition to endemic. The recovery of traffic volume will bring new opportunities and challenges to the operation of ATM in Southeast Asia. It is the common vision of all States to strengthen international collaboration to improve air traffic service level. Therefore, it is necessary to resume and strengthen cross-border collaboration, improve the integrated air traffic service capacity in the Asia-Pacific region under the leadership of ICAO to help airlines, airports and other stakeholders to better recover from the impact of the COVID-19.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) encourage stakeholders engaged in the information sharing about the impact of the pandemic;
- c) recommend strengthening collaboration to promote the rapid recovery of the civil aviation from pandemic;
- d) discuss any relevant matters as appropriate.

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