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ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 18: Capacity Development and Implementation Support – Policy and Activities

**CAPACITY DEVELOPMENT AND ENHANCEMENT FOR AERONAUTICAL
METEOROLOGICAL SERVICES**

(Presented by China on behalf of Kyrgyzstan, Lao People's Democratic Republic,
Mongolia, Sri Lanka and Thailand)

EXECUTIVE SUMMARY

This paper presents the implementation of capacity development and enhancement activities by China to improve the international aeronautical meteorological service capabilities under the ICAO “No Country Left Behind Initiative (NCLB)” and the World Meteorological Organization (WMO) Competency Frameworks. It introduces China's efforts in carrying out aeronautical meteorological services training to support the aeronautical meteorological (MET) personnel (AMP) competency enhancement in developing and least developed countries (especially in Asia), as well as in providing and building meteorological detection equipment to enhance the capacity of hazardous weather monitoring and warning in countries lacking detection equipment.

The purpose of this paper is to, by providing an overview of the current practices in the training of AMP to improve their competencies, and activities in equipment support to improve aeronautical MET service capacity, invite the Assembly to give attention to AMP competency as well as the weather detection and warning capability enhancement involved in the provision of services for international air navigation.

<i>Strategic Goals:</i>	This working paper relates to the Strategic Goals of <i>Every Flight is Safe and Secure</i> and <i>No Country Left Behind</i> .
<i>Financial implications:</i>	No financial implications.
<i>References:</i>	DOC 7475 - <i>Working Arrangements Between the International Civil Aviation Organization and the World Meteorological Organization</i>

¹ The English and Chinese versions provided by China

1. INTRODUCTION

1.1 The aeronautical meteorological personnel (AMP) competency and other aeronautical MET service capacity building and their continuous enhancement have a significant impact on the future pace of progress in air transport modernization and/or the quality of products of the aeronautical meteorology community, and on the safety and efficiency of aviation operations.

1.2 The International Civil Aviation Organization (ICAO) and the World Meteorological Organization (WMO) have been coordinating, collaborating and cooperating with one another in international air navigation meteorological services through their long-standing working arrangements (refer to ICAO Doc 7475 and WMO-No.60), and have been conjointly promoting the education, training and competency enhancement of AMP in line with aviation development needs to support the implementation of the Global Air Navigation Plan (GANP), through the WMO Voluntary Cooperation Programme (VCP) and WMO Education and Training Programme (ETP).

1.3 The ICAO “No Country Left Behind (NCLB) initiative” highlights ICAO’s efforts to assist States in implementing ICAO Standards and Recommended Practices (SARPs) and to resolve Significant Safety Concerns (SSCs), as well as to attain the United Nations Sustainable Development Goals.

1.4 ICAO, as the entity responsible for developing aviation needs associated with meteorological services for international air navigation, has rarely organized and carried out activities to enhance AMP competency or other aeronautical MET service capacity building. For example, there are a few courses on meteorology in ICAO’s portfolio of training courses for 2025 published on the ICAO official website: <https://igat.icao.int/ated/TrainingCatalogue/Sessions>. In addition, the ICAO Regional Offices have done less in respect of activities for aeronautical MET service capacity building.

1.5 Under the frameworks of ICAO and WMO in related aeronautical MET service capacity development, China has been making efforts for many years to provide training courses, workshops or on-the-job training aimed at enhancing the AMP competency and to provide equipment support involved in the provision of improved MET services for international air navigation in developing countries and least developed countries (especially in Asia).

2. DISCUSSION

2.1 To help improve the AMP competency in developing countries and least developed countries or regions (especially in Asia), and to help improve the capacity and level of aeronautical meteorological services in these countries or regions, the Civil Aviation Administration of China (CAAC) has been cooperating with the China Meteorological Administration (CMA), Chinese Academy Sciences (CAS), Hong Kong Observatory (HKO), WMO Regional Training Center and other units to provide training courses, workshops and on-the-job training at different levels covering different aspects of aeronautical meteorological services over the years, and has provided financial support (covering travel, training, food and accommodation) for some participants from developing countries and least developed countries.

- a) CAAC, CMA and WMO Beijing Regional Training Center have jointly organized 13 international training courses or workshops on aeronautical meteorological services since 2007, where experts from home and abroad were invited to give lectures to over 1000 people from more than 80 countries or regions. Due to the impact of the pandemic, several international training courses on aeronautical meteorological services were held online during the pandemic. A two-week face-to-face international

training on hazardous weather forecasts and lightning data application was held in Wuhan, China in October 2024.

- b) CAAC has also provided on-the-job training for Cambodian aeronautical meteorological personnel, and offered internships for AMP from some countries to provide special technical training.
- c) HKO organized international online training workshops for capacity building on SIGMET coordination and aviation hazardous weather forecasting in 2021, 2022 and 2023. In December 2024, HKO cooperated with the ICAO APAC Office to organize an international workshop on "Aviation Meteorological Science and Service Development" under the VCP of WMO, attended by over 90 participants from more than 45 ICAO APAC States and WMO Members either online or in person. HKO also conducted dedicated on-site training workshops and knowledge sharing sessions on aeronautical meteorological services for AMPs in Cambodia, the Philippines, the Sultanate of Oman and Thailand during 2023-2025.

2.2 Besides, in recent years, under the WMO Early Warnings for All (EW4All) initiative, in order to improve the capabilities of monitoring, warning services concerning aeronautical hazardous weather in some countries, China has helped several countries in building equipment for detecting hazardous weather. For example, China has built several sets of lightning detectors and lightning warning/forecasting systems for Cambodia, Sri Lanka, Laos, Maldives, Pakistan and Bangladesh.

2.3 China is willing to be continuously committed to support or cooperate with ICAO in aeronautical MET service capacity development and enhancement activities, such as to organize international training courses related to aeronautical meteorological services, to enhance the capabilities of monitoring and warning services concerning aeronautical hazardous weather in some countries, as well as to provide assistance in the construction of meteorological detection equipment such as lightning detectors to countries in need.

2.4 At present, due to the limited notification and contact channels, there are limited scales in terms of the organization and implementation of such aeronautical MET service capacity building activities. ICAO's more direct assistance, more active coordination between States, support in pooling resources, participating in regional efforts and earmarking voluntary funds or co-organizing such kind of activities are needed to enable more capacity development and enhancement.

3. CONCLUSION

3.1 The Assembly is invited to note the information in the paper.

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