



ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 21: Next Generation of Aviation Professionals (NGAP) Initiative

EFFORTS TO SECURE AND UTILIZE AVIATION HUMAN RESOURCES IN JAPAN

(Presented by Japan)

EXECUTIVE SUMMARY

In Japan, while the aviation workforce decreased during the COVID-19 pandemic, the government has set a goal of increasing the number of foreign visitors to Japan to 60 million by 2030 in order to promote economic growth and realize the vision of Japan as a tourism-oriented country. As a result, further growth in aviation demand is expected. For this reason, the Japan Civil Aviation Bureau (JCAB) has been making efforts to secure and utilize aviation human resources.

As global aviation demand is expected to continue growing significantly, this paper highlights that securing skilled aviation personnel is a global challenge. It emphasizes the need for collaboration with relevant stakeholders and international coordination through the ICAO Next Generation of Aviation Professionals (NGAP) Programme and the Global Aviation and Aerospace Skills Taskforce (GAAST), as well as through the sharing of best practices.

Action: The Assembly is invited to:

- a) Note the content of this paper; and
- b) Encourage Member States to share their best practices to support other Member States in promoting the attraction, retention, and development of aviation personnel.

<i>Strategic Goals:</i>	This working paper relates to the following strategic goals: a) Every flight is safe and secure; b) Seamless, accessible, and reliable mobility; c) No Country Left Behind; and d) Economic Development.
<i>Financial implications:</i>	This paper has no significant financial implications.
<i>References:</i>	ICAO Strategic Plan 2026-2050

1. INTRODUCTION

1.1 A skilled workforce is the foundation of the aviation sector. However, various occupations across global aviation—including aircraft mechanics, pilots, ground handling personnel, and air traffic controllers—are facing workforce shortages. Moreover, demand for aviation services is expected to grow. According to ICAO, passenger traffic is projected to reach 12.4 billion passengers, and cargo traffic is

expected to rise to 638 billion freight tonne-kilometres (FTK) by 2050. Furthermore, advances in new technologies have brought new challenges to the traditional system.

1.2 To achieve sustainable growth and ensure the safety of aviation, enhancing the attraction, retention, and development of aviation personnel is critically important. Collaboration and knowledge-sharing across the globe through the ICAO Next Generation of Aviation Professionals (NGAP) Programme and the Global Aviation and Aerospace Skills Taskforce (GAAST) are essential for raising awareness of the issue and identifying solutions.

1.3 In Japan, while the aviation workforce decreased during the COVID-19 pandemic, the government has set a goal of increasing the number of foreign visitors to Japan to 60 million by 2030 in order to promote economic growth and realize the vision of Japan as a tourism-oriented country. As a result, further growth in aviation demand is expected. For this reason, the Japan Civil Aviation Bureau (JCAB) has been making efforts to secure and utilize aviation human resources by considering measures that are best appropriate for each occupation—including aircraft mechanics and pilots, ground handling personnel, security inspectors, and personnel in air navigation services.

2. DISCUSSION

2.1 As global aviation demand is expected to continue growing significantly, JCAB recognizes that ensuring a stable supply of skilled aviation personnel is a common challenge faced by all countries. This paper introduces JCAB's efforts to secure and effectively utilize human resources across various occupations in the aviation sector.

Aircraft mechanics and pilots

2.2 Since the COVID-19 pandemic, enrolment in aviation technical schools for training aircraft mechanics has continued to decline, and the demand for pilots is expected to increase due to a wave of upcoming retirements. These challenges concerning aircraft mechanics and pilots prompted JCAB to establish a study group in February last year. Based on the premise of ensuring safety, the study group has been discussing measures necessary for securing and utilizing aircraft mechanics and pilots in the future.

2.3 In March this year, the study group compiled its final report. The final report outlined the future direction of various initiatives, including necessary reforms to domestic systems and the establishment of public-private cooperative frameworks, from the three perspectives: "effective use of resources," "improving training and operational efficiency," and "expansion of the base." In this paper, JCAB will specifically introduce efforts to "expand the scope of work for aircraft mechanics" and "standardize type-specific licenses" from the perspective of "effective use of resources," as well as efforts to "increase the number of female pilots and aircraft mechanics" from the perspective of "expansion of the base."

a) **Expansion of the scope of work for aircraft mechanics and standardization of type-specific licenses**

Japan's aircraft mechanic system is divided into two categories: "**aircraft line maintenance mechanics**," who perform line maintenance, and "**aircraft maintenance engineers**," who perform base maintenance. Each category requires a type-specific license.

While **aircraft maintenance engineers** are responsible for the overall maintenance of aircraft, the scope of work for **aircraft line maintenance mechanics** is limited to minor tasks, allowing them to be trained in a relatively short period. However, the tasks these **aircraft line maintenance mechanics** are authorized to perform cover only about 60% of actual line maintenance operations.

As a result, **aircraft maintenance engineers** ultimately need to be dispatched to the site, and the current system does not meet the field needs for utilizing **aircraft line maintenance mechanics** effectively.

In addition, for the maintenance of large aircraft, a separate license is required for each aircraft type, covering everything from minor to advanced maintenance tasks. However, in light of the standardization of maintenance procedures due to the digitization of aircraft systems and improvements in maintenance manuals, there is a growing demand to eliminate the requirement for type-specific licenses for minor maintenance work, such as daily pre-flight inspections.

Based on these on-site realities, JCAB plans to undertake a major revision of Japan's aircraft mechanic licensing system and promote the more effective use of maintenance personnel.

b) Increasing the number of female pilots and aircraft mechanics

In Japan, the ratio of female pilots is 1.95%, which is below the global average of 4.69%. The ratio of female aircraft mechanics is 5.12%, which is higher than the global average of 3.11%, but still relatively low. In October 2024, JCAB established the "Working Group for Promoting Women's Participation in Pilots and Aircraft Mechanics," with members including academic experts, current female pilots and aircraft mechanics, as well as former air traffic controllers.

The summary published in February 2025 sets a goal of raising the proportion of women to 10% —one of the highest levels globally—within the next 10 years. It also outlines the direction of initiatives to promote women's participation in the workforce from two key perspectives: **Expanding the pool of prospective candidates** by increasing the ratio of female students at the Civil Aviation College through measures such as revising admission requirements (e.g., height restrictions and advanced science subjects) and introducing a women's quota; and **Retaining those already employed** through measures including a review of the national qualification system in terms of maternity leave.

2.4 JCAB and airlines, among others, will continue to work closely together and actively promote the implementation of these measures.

Airport operations

2.5 With respect to airport operations such as ground handling and security inspections, JCAB established an expert committee in February 2023. In June of the same year, the committee published the "Vision for the Sustainable Development of Airport Operations," which outlines current challenges and the direction of future initiatives to address them.

2.6 Currently, the number of ground handling staff has recovered to pre-COVID levels. However, training and retention remain ongoing challenges, as approximately 40% of the staff have been employed for less than three years. Similarly, the number of security inspectors has also returned to pre-COVID levels. However, retention remains a challenge due to the high turnover rate among security inspectors.

2.7 Based on the summary, JCAB is providing financial support for initiatives such as securing and developing human resources by holding joint company information sessions at each airport, improving the work environment by providing rest areas for employees, and enhancing work efficiency through the introduction of advanced equipment. In addition, an industry association for ground handling was established in August 2023. It has been working to promote recruitment and retain staff by raising awareness of ground handling operations, as well as to improve working conditions through measures such as addressing customer harassment.

2.8 JCAB, local governments, and private-sector stakeholders will continue to advance

initiatives based on the summary.

Air navigation services

2.9 With regard to air navigation services, the number of applicants aspiring to become air traffic control officers has decreased by 4.4% compared to the previous year. In the context of a shrinking workforce, this decline is relatively modest, especially when compared to the 14.1% year-on-year decrease in applicants for national civil service positions (including air traffic control officers) for university graduates and professionals.

2.10 To raise public awareness and attract talent, JCAB has launched an official website and is utilizing social media platforms such as YouTube and Instagram to introduce aviation security operations in an accessible and engaging manner. JCAB is also working to secure human resources through enhanced public relations activities targeting educational institutions and local communities, while also promoting recruitment. In addition, JCAB is striving to retain personnel through initiatives such as continuous training and the diversification of career paths.

2.11 In recent years, approximately half of newly hired air traffic control officers have been women, and the profession is increasingly recognized for offering a comfortable and supportive work environment regardless of gender. In anticipation of future growth in aviation demand, JCAB will continue its efforts to ensure a stable supply of personnel engaged in air traffic control operations, including air traffic control officers, in order to maintain a reliable and effective air traffic management system.

2.12 To secure skilled aviation personnel, it is essential to steadily implement the initiatives outlined above. JCAB will continue to address this issue in cooperation with relevant stakeholders, while also drawing on successful examples from overseas and best practices from other domestic industries.

ICAO's NGAP and GAAST

2.13 While implementing the above measures domestically, JCAB also places importance on the efforts of the GAAST, where States, regulators, and industry work together to support the sustainable development of aviation. Strengthening global collaboration through ICAO's NGAP and GAAST will be essential to achieving ICAO's Strategic Goals.

3. CONCLUSION

3.1 Collaboration among States, institutions, and industry is essential to securing a skilled aviation workforce.

3.2 To achieve sustainable growth and ensure aviation safety, it is necessary to strengthen global coordination through ICAO's NGAP and the GAAST, as well as through the sharing of best practices.

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