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DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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**AGENDA ITEM 8: CAPACITY DEVELOPMENT
AND IMPLEMENTATION**

**EFFORTS TO SECURE AND UTILIZE AVIATION HUMAN
RESOURCES IN JAPAN**

(Presented by Japan)

SUMMARY

Japan has set a government goal of increasing the number of foreign visitors to Japan to 60 million by 2030, and a significant increase in aviation demand is expected in the future. Securing and utilizing human resources such as aircraft mechanics and pilots necessary to achieve this goal has become a major issue. Japan Civil Aviation Bureau (JCAB) established a study group to address this issue, held a series of discussions, and compiled a specific direction in March of this year.

In addition, JCAB is currently working to secure and utilize human resources in airport operations and air navigation services.

JCAB recognizes that securing and utilizing aviation personnel is a global issue not limited to Japan, and this paper aims to share the information compiled by the study group.

EFFORTS TO SECURE AND UTILIZE AVIATION HUMAN RESOURCES IN JAPAN

1. INTRODUCTION

1.1 In Japan, 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, and as a result, further growth in aviation demand is expected.

1.2 Regarding aircraft mechanics and pilots, JCAB established 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. The study group compiled its final report in March of this year.

1.3 Regarding airport operations such as ground handling and security inspections, JCAB established an expert committee in February 2023, and in June of the same year, the committee published the "Vision for the Sustainable Development of Airport Operations", which outlines current issues and the direction of future efforts to address them. Public and private sector stakeholders are currently working on initiatives based on this summary.

1.4 Regarding air navigation services, in order to raise public awareness and understanding, JCAB has launched an official website and is using social media platforms such as YouTube and Instagram to introduce aviation security operations in an easy-to-understand manner. JCAB is also working to secure human resources through enhanced public relations activities targeting educational institutions and local communities, as well as promoting recruitment efforts. In addition, JCAB is striving to retain personnel through initiatives such as continuous training and diversifying career paths.

2. DISCUSSION

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

Aircraft mechanics and pilots

2.2 Regarding aircraft mechanics and pilots, the study group's final report outlined the future direction of initiatives, such as 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 particularly 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."

1. Expansion of the scope of work for aircraft mechanics and standardization of type-specific licenses

Japan's aircraft mechanic system is divided into "aircraft line maintenance mechanics" who perform line maintenance and "aircraft maintenance engineers" who perform base maintenance. Each category requires type-specific licenses.

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 that "aircraft line maintenance mechanics" are authorized to perform only cover about 60% of the actual line maintenance operations. As a result, "aircraft maintenance engineers" ultimately need to be

dispatched to the site, and the current situation does not meet the needs of the field for utilizing "aircraft line maintenance mechanics".

In addition, for the maintenance of large aircraft, a license is required for each aircraft type, covering everything from minor to advanced maintenance tasks. However, in light of the standardization of maintenance procedures brought about by 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 realities at maintenance sites, JCAB plans to drastically revise Japan's aircraft mechanic licensing system and promote the more effective use of maintenance personnel.

2. Increasing the number of female pilots and aircraft mechanics

The ratio of female pilots in Japan is 1.95% (world: 4.69%), and the ratio of female aircraft mechanics in Japan is 5.12% (world: 3.11%). Although the representation of female pilots is currently at or below the global average, this metric demonstrates a consistent upward trajectory. Concurrently, there is an observable trend in the number of female aircraft mechanics.

In October 2024, JCAB established the “Working Group for Promoting Women's Participation in Pilots and Aircraft Mechanics” with the members including academic experts, current female pilots, and aircraft mechanics, as well as former air traffic controllers. Specific measures have been examined, and a summary of the discussions was published in February 2025.

The summary sets a goal of raising the female ratio to 10%, one of the highest levels in the world, 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" and "retaining those already employed." Specific measures are as follows:

Expanding the pool of prospective candidates

1. Increase the ratio of female students at the Civil Aviation College* (approx. 5%)
 - Measures include revising admission requirements (height restrictions and advanced science subjects) and introducing a women's quota (addition of examination categories that emphasize personal attributes, in addition to the "general quota" open to male applicants).
 - * The Civil Aviation College is the main pilot training institution in Japan with approximately 40% of Japanese airline pilots having graduated from this college.
2. Strategic public relations through public-private partnerships
 - Conduct strategic and continuous public relations activities through collaboration between the public and private sectors to dispel the stereotypical image of “pilots = male” and “mechanics = male”.

Retaining employees

1. Review of the national qualification system with consideration for maternity leave, etc.
 - Extend the current two-year period between passing the written examination and taking the practical examination to accommodate maternity and childcare leave.
2. Raising awareness of maintenance tools that compensate for physical limitations
 - Conduct research on and promote maintenance tools that help compensate for physical and muscular limitations, and advocate for their development and adoption by manufacturers.

3. Fostering corporate culture, raising awareness, and improving communication environment

- Reform corporate culture through collaboration between management and front line staff, establish shared communities through industry associations, and promote the sharing of career paths.

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

Airport operations

2.3 Regarding airport operations, based on the summary, JCAB is supporting efforts 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 and has been working to promote understanding of ground handling operations and to improve working conditions by implementing measures against customer harassment, etc..

Air navigation services

2.4 Regarding air navigation services, JCAB is currently carrying out the initiatives described in the paragraph 1.4. The number of applicants aspiring to become air traffic control officers has decreased by 4.4% from the previous year. In the context of a declining labor force, this figure is relatively favorable 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. In addition, in recent years, approximately half of the newly hired air traffic control officers have been women, and the profession is recognized as providing a work environment that is comfortable regardless of gender. In anticipation of future increases in aviation demand, JCAB will continue its efforts to secure a stable supply of personnel engaged in air traffic control operations, including air traffic control officers, in order to ensure a reliable implementation system for air traffic control operations.

2.5 To ensure a stable supply of 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 initiatives from other domestic industries.

Global Aviation and Aerospace Skills Taskforce

2.6 A skilled workforce is the foundation of the aviation sector. Amid the workforce shortages, growing aviation demand, and advancing new technologies, JCAB places importance on the efforts of the Global Aviation and Aerospace Skills Taskforce (GAAST), where States, regulators and industry collaborate to support the sustainable development of aviation. Strengthening global collaboration through ICAO's NGAP and GAAST, as well as enhancing regional cooperation within the APAC region, will be the key to achieving ICAO's strategic goals.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the content of this paper; and
- b) encourage States to actively share their own best practice experiences.