



**WORKING PAPER**

**COUNCIL - SPECIAL MODEL SESSION**

**Agenda Item 45: Challenges relating to the projected shortages of skilled aviation personnel**

(Presented by Kenya)

**EXECUTIVE SUMMARY**

According to ICAO statistics, the world air travel has maintained an annual growth of 5% since 1980. It further continues to forecast a strong long term growth, with a projected global expansion of passenger capacity from its current state of 3.1 billion to 7.5 billion by 2031. The projected expansion triggers a critical demand for the global aviation stakeholders to collaborate and proactively plan to cope with the future demands on operational efficiency, optimization of the airspace, environmental management practices, technology changes, expansion of fleet and airport capacities. A looming shortage of aviation personnel is envisaged and the global aviation stakeholders faced with the challenge of ensuring they attract, develop and retain a critical mass of young aviation professionals to manage and sustain this growth forecast, despite the aging demographic of existing aviation personnel.

The paper reviews the nine critical outcomes of the 1st NGAP symposium, including recommendations made by the NGAP task force. It notes the on-going excellent HR development initiatives in training and capacity building such as CBT and EBT training for pilots by IATA, TRAINAIR PLUS, AFI PLAN. It further calls for a holistic approach in addressing the critical human resource management concerns raised by symposium in equal measure. The paper and urges Council to consider a global strategy and policy framework that gives equal attention to the critical human resource management aspects of attracting, developing and retaining the right fit of next generation aviation professionals to guide this important process.

**Action:** The council is invited to consider the following:

- a) Take note of the content of the working paper;
- b) initiate the development of a comprehensive policy framework and strategy to address these critical Human Resource issue;
- c) Encourage the Member States and their Regional regulatory institutions to initiate comprehensive self-regulating plans with global benchmarks to facilitate development of home grown solutions to the challenges identified, be shared and replicated globally;
- d) Consider reviewing the provisions of Annex 1 of the ICAO SARPS and incorporate strategic aspects that will facilitate sustainable and optimal utilization of aviation personnel projected for the growth;

<i>Strategic Objectives:</i>	This working paper relates to all the Strategic Objectives of ICAO: <b>a) Safety; b) Air Navigation Capacity and efficiency; c) Security and facilitation; d) Economic development of air transport; e) Environmental Protection</b> , as it proposes a more systematic approach to ICAO provisions related to the global human resource capacity of the next generation of aviation professionals to effectively deliver on the above five strategic objectives.
<i>Financial implications:</i>	The cost of developing the capacity of the next generation of aviation professionals should be born in collaboration between the aviation stake holders as determined in the proposed strategy document.
<i>References:</i>	<ol style="list-style-type: none"> <li>1). Annex 1 to the Chicago Convention;</li> <li>2). SAM/IG/6-IP/04-Sixth Workshop/Meeting of the SAM Implementation Group (SAM/IG/6) - Regional Project;</li> <li>3). Nov/Dec 2011(ICAO Regional Report-Progress in Africa);</li> <li>4). ICAO Training Report Vol 1 No. 1 July/August 201;</li> <li>5). ICAO Global and regional focus 2010-2030; 5). Doc 9683 (Human factors training manual)</li> <li>6). Doc 9841 (Manual on the Approval of Flight Crew Training Organizations)</li> <li>7). Doc 9868 (Procedures for Air Navigation Services Training)</li> <li>8). Doc 7192 (Training Manual for ATS Safety Electronic Personnel)</li> </ol>

## **1. Introduction**

**1.1.** According to ICAO statistics, the world air travel has maintained an annual growth of 5% since 1980. It further continues to forecast a strong long term growth, with a projected global expansion of passenger capacity from its current state of 3.1 billion to 7.5 billion by 2031. The projected expansion triggers a critical demand for the global aviation stakeholders to collaborate and proactively plan to cope with the future demands on operational efficiency, optimization of the airspace, environmental management practices, technology changes, expansion of fleet and airport capacities. A looming shortage of aviation personnel is envisaged and the global aviation stakeholders faced with the challenge of ensuring they attract, develop and retain a critical mass of young aviation professionals to manage and sustain this growth forecast, despite the aging demographic of existing aviation personnel, which further poses the demand to ensure a seamless succession management process of knowledge and technology transfer. The situation is further worsened by high demand for aviation professionals, both experienced and qualified to meet these new technological requirements as well as have the next generation professional's retaining their jobs.

## **2. Background**

2.1. Arising from the above mentioned findings, ICAO formed a task force in 2009 to develop strategies to overcome shortages in human resource capacity and competency. A worldwide symposium was organized in 2010 to highlight and carry out experiential sharing amongst national authorities, manufacturers, trade organizations and aviation companies. Regional conferences were further organized throughout 2010 and 2011 to focus on the various aspects of seeking solutions to the identified challenges, with results presenting gloomy picture of the potential shortage of aviation experts in the coming years.

2.2. Specific reference is made to the outcomes of the 2010 NGAP symposium as summarized in ICAO Secretariat's report (SAM/IG/6 –IP/04 of 23-09-2010). The paper presents nine explicit highlights acknowledged by the 2010 symposium. Key amongst them was the recognition that the development of a safe international air transport system is wholly dependent on availability of human resources, and that this should be treated as a strategic issue by the international aviation community; the collective responsibility of the international Community to attract and retain the best and brightest students who will become contributing members of the next generation of Aviation professionals and thereby the need to ensure their access to quality and affordable aviation education and training; the necessity to have reliable information regarding training needs and capacity in the short, medium and long term; the need to have a flexible regulatory framework to support the use of modern training and learning technologies (competency based training, evidence-based training, and increased use of simulation); the importance of supporting industry established standards to demonstrate compliance with the regulatory requirements of (SARPS and National regulations); essential need for transfer of knowledge and procedures to be facilitated globally in a seamless process, in the support of the Global Aviation Safety Plan (GASP); emphasis was made on the need for a permanent coordinating mechanism to address aviation training issues and concerns in the global aviation community; Collaboration between global stakeholders to further the safe, efficient and orderly development of aviation was emphasized as an overriding factor; a call limit as much as possible administrative constraints such as multiple certification processes of training organizations, training devices and training programs was made, including the need to facilitate flow of aviation professionals through internationally agreed standards and assessment practices.

**2.3.** The challenges posed above, have implications which call for a concerted efforts for collective planning for effective management of key elements of air transport such as safety, security, air navigation capacity and efficient environmental management to maintain safe and secure skies, it reminds each member state to proactively and project the global findings to local scenarios. The Kenyan Aviation

industry has gained significant improvement in its growth and technology enhancement in the past decade, this steady growth has led to an increase in demand for aviation professionals both in the technical and customer service fields. There is an escalating shortage as a result of the recent increase in retirements of pilots who started their careers in aviation at the start of the 80's. The recent introduction of the larger fleets has made it even more apparent that a next generation of professionals is needed urgently to ensure effective transition in the management of aviation systems as projected over the next 20 years. Personnel filling these positions must continue to exhibit or exceed the professional standards that exist today. To address this shortfall, the Kenyan Civil Aviation stakeholders continue to seek solutions for meeting the projected demand for trained, qualified and professional flight attendants, pilots, and maintenance engineers, air traffic controllers. For example, clustered initiatives, mostly at private levels (from licensed flying schools) in collaborating with private schools to elicit student interests in the aviation career are in place. Such opportunities still remain limited a few children whose parents can afford. Despite this, it is a step in the right direction as a few young pilots currently in service were mentored through this initiative. In this regard, a policy framework needs to be worked out at a national or even global level to facilitate development and offer such opportunities to a critical mass the brightest and the best in the aviation world for the future.

### 3. Consideration of Issues

- 3.1. The international aviation stakeholders have made significant milestones with regard to the NGAP initiative, particularly in training and capacity building. Some of the important milestones can be traced through initiatives made by ICAO's TRAINAIR PLUS programs, AFI PLAN, IATA's Competency Based Training (CBT) and Evidence Based Training (EBT) initiatives for commercial pilot licenses, modernisation of training and competence provisions for Air Traffic Management (ATM) and Air Navigation Services (ANS) to mention but a few. Specifically in East African region, We have made notable progress in the sharing scarce human resources during the development of State Safety programs for (Kenya, Uganda, Tanzania, Rwanda and Burundi). The interventions and achievements made through these initiatives so far, are notable and must be applauded;
- 3.2. Despite the notable interventions made so far, there still remains the need for a broad and critical re-examination of all the pertaining issues as a comprehensive package, then prioritize and plan for execution of its implementation process. So far, it is noted that priority has been given to training and capacity building as an immediate intervention, This cannot be understated, as staff development plays a critical role in the whole transition process. However, it is important that an alternative framework is in place to guide the process of identifying and mobilizing the next generation aviation professionals to fill the transitional gap of succeeding the current group satisfy the demand created by the envisaged growth in aviation. Collaborative steps must be taken from a business and political point of view, to influence global policy to maintain a coordinated process towards the development of these professionals for the future survival of the global aviation sector. The outcome of the 1st NGAP symposium and by extension, Ms. Nancy Graham's (Director, ANS –ICAO) quote ***“This heightened emphasis on training strongly acknowledges that heart of every technology and programme which holds out promise for aviation's safer, more efficient and more secure future, stands a Human Agent”*** sums it all. The global aviation sector's survival depends on qualified personnel. This is a strategic matter that must be given the prominence it deserves. In simple terms, it took 70 years to plan and build the existing competence to handles the current 3.1 billion passengers annually. In a nutshell, there is a general expectation that in less than 20 years, the international aviation stakeholders must handle 7.5 billion passengers a year (4.1 billion more passengers annually in less than one third the timeline). They must identify and train these personnel to manage the global air transport system, while at the same time deal with retirements as a result of an aging demography of existing personnel. There can be no better time to consider a holistic approach to addressing the global aviation Human Resource matters at an international level than now.

- 3.3. A review of Annex 1 may be necessary to incorporate standard competency requirements of aviation personnel to fast track the standardization in implementation of the global air traffic management system. Leaving competence schemes solely at the discretion of employers as has been done in the past, may in the long run impede the growth of the system considering what must be achieved within a short time. A clear global policy framework is necessary to guide the growth process. Further, a well thought through strategy is required to set immediate, mid-term and long-term strategies to focus on achieving the desired goals. The process suggested to address this very critical matter requires stakeholder negotiations, standardization and where necessary, regulating to ensure that the industry is in tandem, in achieving its desired long-term goals by 2030. Council is best placed to provide this direction.

#### **4. Financial Implications:**

It is assumed the Secretariat has professionals who would prepare the necessary documents for stakeholder contributions. Its further development and refinement with stakeholders may have corresponding budget implication, budget implications which should be developed and presented to council where necessary for consideration and approval at a later stage. .

#### **5. Action:**

The Council is invited to:

- 1) Take note of the content of the working paper;
- 2) initiate the development of a comprehensive policy framework and strategy to address these critical Human Resource issue;
- 3) Encourage the Member States and their Regional regulatory institutions to initiate comprehensive self-regulating plans with global benchmarks to facilitate development of home grown solutions to the challenges identified, be shared and replicated globally;
- 4) Consider reviewing the provisions of Annex 1 of the ICAO SARPS and incorporate strategic aspects that will facilitate sustainable and optimal utilization of aviation personnel projected for the growth;

**THANK YOU**