WORKING PAPER

ASSEMBLY — 36TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 15: Aviation Security Programme

STRENGTHENING AVIATION SECURITY IN
A RESOURCE-CONSTRAINED ENVIRONMENT

(Presented by the United States)

EXECUTIVE SUMMARY

Threats to aviation continue to evolve as terrorists seek to defeat existing measures and create new methods of targeting aircraft, passengers, and aviation facilities. Various techniques exist that can be of assistance to Member States in order to counter these ever-evolving threats. These techniques range from sophisticated and expensive technologies for screening passengers, baggage, and cargo, to less expensive technologies used as primary or supplemental screening. States can tailor their security regimes based on the size of their aviation system and resources available, while still meeting international standards. This paper proposes that alternative measures and technologies be considered when developing and expanding a Member State's aviation security regime. In addition to the deployment of high-tech equipment for the screening of passengers, baggage, and cargo, there are lower-cost mechanisms that can add true value to an existing security regime, thereby increasing its effectiveness.

Action: The Assembly is invited to:
a) note that constraints on financial and human resources need not limit development of an effective aviation security system;
b) recommend that alternative measures and technologies be considered when developing and expanding a Member State's aviation security regime;
c) develop guidance material on low-technology methods for States to utilize;
d) urge States to share with one another low-technology and innovative techniques for securing the global aviation system; and
e) explore ways that ICAO training centers might develop courses on low-technology mechanisms.

Strategic Objectives:	This working paper relates to Strategic Objective B *(Enhance global civil aviation security).*
Financial implications:	No additional resources required:

1.   **INTRODUCTION**

1.1   Civil aviation continues to be a target of terrorists and criminals in light of its visibility, high-profile nature, and national symbolism. Threats to aviation have evolved over the course of several decades, and are now considered generally well-planned and sophisticated. The most recent major threat against global civil aviation surfaced in August 2006 with the plot to use liquid explosives to destroy U.S. bound aircrafts flying from the United Kingdom. This plot is a prime example of the ever-evolving threat against civil aviation.

2.   **DISCUSSION**

2.1   Each nation's aviation system is unique in terms of its size and resource capabilities. While all ICAO Member States have a responsibility to meet agreed-upon global aviation security standards, e.g., via the Standards and Recommended Practices (SARPs), each State can achieve compliance within its own economic and political realm by employing techniques and technologies individually adapted for its own capabilities and limitations.

2.2   To mitigate the economic costs associated with aviation security, nations around the world are developing innovative low-cost screening measures, reminding us that technology is no substitute for imagination. In addition to the deployment of high-tech equipment for the screening of passengers, baggage, and cargo are lower-cost mechanisms that can add true value to an existing security regime, thereby increasing its effectiveness.

2.3   **Layers of Flexible, Unpredictable Response**

2.3.1   The terrorist we face is adaptive, patient, and intelligent. The aviation transportation system is vast and largely open. Efforts at universal protection using "100 percent-type" measures are neither cost-effective nor perfectly unassailable; therefore, the focus in countering the threat should be on risk management. Security measures need to be developed and established on the basis of risk analyses and should provide multiple opportunities to prevent an attack. The measures should continually evolve, introducing uncertainty into adversaries' planning and surveillance efforts, and should be adaptable to different modes and threats in order to increase their robustness in the face of a dynamic and learning enemy.

2.3.2   *Flexible.* A better overall security posture results from using security personnel officers most flexibly, rather than overly tying them down at checkpoints checking and re-checking people and property. Risk-based security shares resources not only across all risk levels, but also in strategic proportions. The terrorists' aim is to beat the system and exploit predictable opportunities. The security strategy should be nimble, flexible, mobile, and above all, dynamic.

2.3.3   *Unpredictable.* Unpredictability is a crucial tool in thwarting terrorists' plans.   If security protocols are mechanically applied the same way every time in every location, terrorists can calculate exactly what to expect and how to defeat these efforts. If an element of unpredictability is introduced, however – such as changing or adding inspection routines on a variable basis, or using canine teams at varying points in the security process – the element of randomness will effectively increase the complexity for would-be terrorists.

2.4   **Behavior Observation**

2.4.1   One evolving technique that is utilized in the U.S. by the Transportation Security Administration (TSA) is the behavior observation and analysis program, which is designed to provide Transportation Security Officers at U.S. airports with a non-intrusive tool to identify potentially high-risk individuals for further evaluation and/or screening. The program is a derivative of other behavioral analysis programs that have been successfully employed by law enforcement and security personnel, both in the U.S. and around the world.

2.4.2   The techniques are performed by a dedicated cadre of TSA personnel, each of whom conduct behavior observation to recognize passengers exhibiting stress and/or fear as these exhibited behaviors may be indicative of deception, criminal and/or terrorist activity. The program allows TSA personnel to work more efficiently by focusing resources on passengers and individuals throughout the airport and allows law enforcement to be proactive when dealing with the public in an airport environment.

2.4.3   The program uses an integrated approach, in close cooperation with law enforcement officials (LEO), in which behavior recognition techniques are used by both TSA and law enforcement in a coordinated response to high-risk passengers. The advantages of this unique, integrated approach are that the program maximizes the effectiveness of the LEO and TSA assets at the airport through a teamwork concept in which each component has clearly identified responsibilities; and it ensures that the highest-risk passengers are given further scrutiny and, in some cases, interviewed and evaluated by a LEO.

2.5   **Canine Team Program**

2.5.1   Another tool used by TSA is the National Explosives Detection Canine Team Program (NEDCTP). The program began on March 9, 1972, when a flight from New York City to Los Angeles received an anonymous bomb threat. The aircraft returned to New York, where passengers were evacuated and a bomb-sniffing dog identified the explosive device just twelve minutes before it was set to detonate. NEDCTP was formed that same day. Since 2001, the program has more than doubled from 174 teams at 39 airports to more than 420 teams at over 75 airports and in 13 mass transit systems.

2.5.2   Under this program, TSA prepares dogs and handlers to become very effective mobile teams that can rapidly locate and identify dangerous materials that may present a threat to transportation systems. Training includes search techniques for aircraft, baggage, vehicles and transportation structures, as well as procedures for identifying dangerous materials and "alerting" or letting the handler know when these materials are present. Additionally, these teams can quickly rule out the presence of dangerous materials in unattended packages, structures or vehicles, allowing for the free and efficient flow of commerce. Because canine teams combine excellent mobility with reliable detection rates, their use today has evolved to include searching areas in response to bomb threats at airports and mass transit terminals and inside aircraft, trains, luggage, cargo and vehicles as well as serving as a proven deterrent to would-be terrorists.

2.5.3   The United States is committed to the advancement of innovative low-cost screening methods. Once the TSA Security Training Academy in Oklahoma City becomes ICAO-certified, the U.S. may be able to host training on the development of low-technology mechanisms, and thereafter assist other States with the development of such training.

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