International Civil Aviation Organization

WORKING PAPER

A41-WP/347
EX/149
19/8/22
(Information paper)
English only

ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 14: Aviation Security — Policy

THREAT POSED TO CIVIL AVIATION BY MAN-PORTABLE AIR DEFENCE SYSTEMS (MANPADS)

(Presented by the United States)

EXECUTIVE SUMMARY	
This Information Paper presents the United States' views on the threat posed to civil aviation by Man-Portable Air Defence Systems (MANPADS), particularly by systems in the hands of non-State groups, and highlights a way forward to aggressively and effectively counter this threat.	
Strategic Objectives:	This working paper relates to the *Security and Facilitation* Strategic Objective
Financial implications:	
References:	ICAO Man-Portable Air Defence Systems (MANPADS) - Information and Airport Vulnerability Assessment Guide - Restricted Doc 10108, *Aviation Security Global Risk Context Statement*

1. INTRODUCTION

1.1 The threat to international civil aviation from Man-Portable Air Defence Systems (MANPADS) is recognized in the ICAO *Aviation Security Global Risk Context Statement* (Doc 10108). Countering the proliferation of MANPADS is a top U.S. national security priority. In the hands of terrorists, criminals, or other non-State actors, MANPADS – also known as shoulder-fired anti-aircraft missiles – pose a serious threat to passenger air travel, the commercial aviation industry, and military aircraft around the world. The United States is working closely with numerous countries and international organizations, including ICAO, to keep the skies safe for all.

2. BACKGROUND

2.1 MANPADS are surface-to-air missiles that can be carried and fired by a single individual or carried by several individuals and fired by more than one person acting as a crew. Most MANPADS consist of:

a) missile packaged in a tube;
b) launching mechanism (commonly known as a "gripstock"); and
c) battery

2.2 The tubes, which protect the missile until it has been fired, are disposable. Rudimentary sights are mounted on the tube. A single-use battery is typically used to power the missile prior to launch.

2.3 MANPADS were first developed in the 1960s to help legitimate armed forces defend against air attacks. However, in the hands of terrorists, criminals, or other non-State actors, MANPADS pose a serious threat to commercial and military aircraft around the world. Since 1970, terrorists and other non-State actors have successfully struck dozens of civilian aircraft with MANPADS.

3. DISCUSSION

3.1 Because MANPADS are easy to transport, conceal, and use – and because a single successful attack against an airliner would have serious consequences for the international civil aviation industry – they are particularly attractive weapons to terrorists and criminals. Keeping MANPADS out of their hands is thus a major priority of the U.S. Government.

3.2 Successful MANPADS attacks have resulted in catastrophic loss of life. The dozens of MANPADS attacks on civilian aircraft since 1973 have killed over 1,000 civilians. While 90% of these attacks have occurred in/over conflict zones, the portability of these systems and proliferation to non-State actors is also a cause for concern for civil aviation outside of conflict zones.

3.3 Over the past decade, looting of thousands of MANPADS from national stockpiles and illicit proliferation of the weapons in and around the Middle East and North Africa region have increased the MANPADS threat to both military and civil aviation. Non-State actors obtain MANPADS from a number of sources, including regional black markets and state sponsors. Since 2011, violent extremists have looted thousands of MANPADS and other advanced conventional weapons from unsecured State stockpiles in Libya, Syria, and Yemen, making efforts to reduce the threat to aviation even more crucial.

3.4 In addition to serious risks posed to human and national security, a recent study suggests that a single MANPADS attack on a civilian target such as a commercial airliner could result in a loss of

up to 1.4% of national Gross Domestic Product (GDP).[1] A 1.4 % hit to GDP would have far-ranging effects that could compound the current economic challenges posed by the COVID-19 pandemic.

3.5 The year 2022 marked the 15th consecutive year without a MANPADS attack on a civilian airliner. Despite this success, the threat remains. There are many reports that non-State actors are seeking to acquire and use MANPADS, and many of these groups have successfully deployed them against military targets. Moreover, there is the very real risk that armed groups will misidentify and inadvertently target civil aircraft.

3.6 Globally, armed groups in more than 40 countries have acquired MANPADS, including several in Europe. These armed groups pose a threat to citizens and aircraft operations in and around those countries.

4. WAY FORWARD

4.1 The growing challenge of countering illicit and irresponsible conventional weapons proliferation requires reinvigorated international focus. We need to continue to work together to address this threat by leveraging the capabilities and resources of key partners, other international organizations, and the commercial aviation industry.

4.2 ICAO has a long history of working with its Member States to address aviation security threats, including MANPADS. All Members States have committed to uphold and implement Standards to counteract the threat posed by MANPADS, as enshrined in Annex 17 to the Chicago Convention.

4.3 The United States implements a far-reaching counter MANPADS strategy, which includes:

a. Working with governments to help reduce excess, loosely-secured, or otherwise at-risk state-held stocks;
b. Improving the physical security and stockpile management practices for MANPADS retained by States for their legitimate self-defence;
c. Training border security guards and other law enforcement agencies to counter illicit proliferation;
d. Assisting countries in their ability to implement existing commitments on non-proliferation and end-user requirements;
e. Working with governments and industry on airport security and effective mitigation measures, as well as ensuring awareness of MANPADS threats among aviators; and
f. Monitoring the possession and use of MANPADS by non-State actors.

4.4 The United States encourages all ICAO Member States to develop and support national programs and policies to counter the threat posed by MANPADS. These include programs focused on: destruction and stockpile security and management; counter proliferation and training; increased international awareness campaigns; improving airport and aviation security; and counterterrorism.

4.5 The United States is eager and willing to engage with our partners, including on a bilateral basis, on aviation security training and the development of MANPADS national action plans.

— END —

[1] A 2019 RAND study on the use of MANPADS against commercial aviation found “a MANPADS-like attack on an aircraft is associated with a 1.4-percent decrease in GDP.” (Ziegler *et al.*, 2019, pg. xiii).