

**Follow-up Meeting to the United Nations Counter-Terrorism Committee (CTC)  
Special Meeting on 6 March, hosted by the Organization for Security and  
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Recently, international civil aviation has faced the threat of terrorist attacks featuring the use of man-portable surface to air missile (MANPADS) on aircraft engaged in civil air transport on three separate occasions. These developments are being addressed by a series of coordinated layered defensive measures threat flow from effective, intelligence-based strategies to the execution of the cockpit operations.

It is impossible to predict from one incident to another the outcome of a MANPADS attack. Given the right conditions, a MANPADS attack on a large jet aircraft could be catastrophic. You will agree that prevention of hijackings is easier than preventing MANPADS attacks.

Recently, action has been taken in OSCE, ICAO, the European Union and G8 as well as other international and regional bodies to manage this threat.

To date international countermeasures have been more reactive than proactive, and the focus should be shifted to prevention. The scope of defensive measures comprises the following:

**Aircraft Equipment** – Operators should consider the use of exhaust shrouding, non-reflective exterior paint and should use electronic countermeasure devices;

**In-flight procedures** – Aircraft should maintain a minimum altitude for the maximum time possible, should make spiraling ascents and descents over designated safe areas for landing and take-off, use of minimum power required for a safe landing and take-off, operation without lights at night in order to obscure the target at which a missile operator must aim;

**Air Traffic Services** – procedures should contain safe descent and ascent pre-planned areas, briefing of crews on the safest approach and take-off and operating procedures to random use of runways, consideration of Standard Instrument Departure (SID) routes and Standard Instrument Approach Routes (STARs); and

**Ground Procedures** – as the security perimeters around airports are currently too narrow and difficult and expensive to expand, ground procedures should require detailed surveys

of probable launch sites together with inspections of those selected sites immediately prior landing and take-off; surveillance of probable launch sites on a random basis; recruitment of local residents who can assist in the surveillance and report back when unusual or suspicious activity is detected and identification of high-risk flights for which special procedures are required and clearance of those areas from which attacks may be launched in order to eliminate places of concealment for launch sites.

The ICAO Aviation Security Section, with the assistance of the Aviation Security Panel, has developed guidance material relating to security measures against attacks by MANPADS supplementary to the material contained in Appendix 16 – Surface-to-air Missiles of the *ICAO Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference*. This additional guidance material has been made available to ICAO Contracting States via a new ICAO secured website because of the sensitivity of the information contained therein.

Annex 8- to the *Convention on International Civil Aviation*, entitled *Airworthiness of Aircraft*, has also been amended to include certification requirements which focus on protecting the cockpit of the aeroplane by strengthening its structure and on improving aeroplane systems survivability in the event of an explosion from any sources, including MANPADS. These measures, however, are intended principally to minimize damage from bomb explosions inside aircraft (bomb in cabin and/or cargo), and not MANPADS. These provisions will be applicable in 2006. While this is a step in the right direction these measures will only affect new design and construction after the year 2006.

What are the limitations of technical measures?

- The measures are reactive and defensive, and cannot guarantee that an aircraft will be safe from attack;
- Operational constraints such as poor Mean Time Between Failures (MTBF) of equipment, efficiency of equipment is questioned when several MANPADS are being used against the same target; and
- Financial constraints such as the high cost of acquiring anti-missile devices.

Several countries have produced newer systems that have improved upon the basic MANPADS design. Features include more lethal warheads, greater manoeuvrability, faster missiles, and improved seekers that can acquire targets head-on and also reject flares and other countermeasures. Whilst these systems are not as widely proliferated as the SA-7, some are being sold in the black market in greater quantities.

It will be recalled that the 32<sup>nd</sup> Session of the ICAO Assembly, held in 1998, adopted a Resolution *MANPADS export control* which urges Contracting States to reduce the MANPADS threat to civil aviation by terrorists and other unauthorized users by implementing responsible export control policies. In this regard establishment of a database on MANPADS produced so far would facilitate non-proliferation efforts.

Another crucial factor for the success of the preventive measures against any attack, MANPADS included, is the concept of random levels of implementation of aviation security measures, which means that the security measures in place at airport, and around airports, could be dramatically increased in an unpredictable manner. By doing so the preparation time required by perpetrators would increase and the chance to stop them by using Counter-Terrorism Forces and Intelligence Units in cooperation would increase as well.

Threat assessment is the key for preventing such attacks as well as the destruction of existing stocks of MANPADS complemented by strict control of the movement import/export of MANPADS between States. The *Convention on the Marking of Plastic Explosives for the Purpose of Detection* could be used as an example.

Development of uniform levels of implementation of preventive measures on a regional basis is important, because the users such as airlines and airports will be in a better position to implement additional measures in a cost-effective manner. Definition of three levels: Level 1-normal; Level 2- increased threat; and Level 3- high risk on a regional basis would facilitate the preparation and training for AVSEC forces. Combined with regional Threat and Risk Assessments and a centralized decision body, the implementation of the three-level concept would permit cost-effective countermeasures on a regional basis too. If some States require assistance such as training, international and regional organizations could jointly develop pertinent responses. ICAO encourages all Contracting States to assess the potential threat to civil aviation operations in their territory posed by MANPADS.

Most recently, in February, the ICAO Council, when considering a report on acts of unlawful interference for 2003, observed that many developments had taken place in the world since the Assembly's adoption of Resolution A32-23 MANPADS export control, and it was time for the Council to consider whether that Resolution was still valid or whether it needed to be strengthened. It was agreed that a draft new resolution on MANPADS will be submitted to the forthcoming 35<sup>th</sup> Session of the Assembly to be held in September/ October of this year for its adoption.

As regards possibility of developing a legal instrument on the subject of MANPADS, the President of the ICAO Council had mentioned this idea in different fora, as consideration should be given to the concept of establishing a regime of control over man-held missiles, and that an international legal instrument dealing with MANPADS should be developed in full cooperation and coordination with the United Nations Security Council's Counter-Terrorism Committee. This issue will be further examined and ICAO will continue to follow the matter closely in coordination with other bodies dealing with this matter.

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