

## NORTH ATLANTIC EARLY WARNING (NAEW) EVOLUTION IN MAJOR CONFLICTS

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**Abstract:** *The security of the regional and global environment is an issue of major concern for the political and military deciding factors, especially in the current security environment marked by profound and surprising changes at geopolitical and geostrategical level. In the early 1970s, different studies of NATO indicated that a system of airborne early warning (AEW) would considerably increase the defense of the air space of the Alliance. The Committee of Planning Defense of NATO (CPD) signed a Memorandum of Understanding (MOU) on the acquisition and operational use of an Airborne Early Warning system. The Airborne Warning & Control System (AWACS) is a developed and well-organized system, which can be permanently improved and adapted to the present realities generated by the dynamics of regional and global security. The paper presents its evolution and benefits.*

**Keywords:** early warning, prevention, security, environment, defense

### 1. Introduction

In the early 1970s, different studies of NATO indicated that a system of airborne early warning (AEW) would considerably increase the defense of the air space of the Alliance. In December 1978, the members of the Committee of Planning Defense of NATO (CPD) signed a Memorandum of Understanding (MOU) on the acquisition and operational use of an AEW system. Originally thought to support the defensive air system of those times, in the past 35 years the E-3A Airborne Warning and Control System (AWACS) has evolved into a command-and-control (C2) airborne platform at the highest standards. This decision of the member nations launched the largest NATO acquisition program since then.

*The NATO Airborne Early Warning and Control Command (NAEW & CF) was established in January 1980. The NAEW & CF headquarters is located in Geilenkirchen, Germany.*

At a strategic level, the *early warning* and prevention of terrorist situations is a very important issue both for the states and for the interests of international organizations.

The prevention of conflicts and the management of crisis represents major concerns at NATO level, especially in the current security environment marked by profound and surprising changes at *geopolitical* and *geostrategical* level.

It is very obvious that the main benefit generated by *the systems of early warning* is represented by the creation of the environment favourable to achieve information superiority by offering the resource of time necessary for the analysis of possible scenarios for the evolution of the situation, the adoption of an optimum decisional solution and the planning of an appropriate military response action which will contribute to raising the level of probability in obtaining success.

## 2. Integration of early warning into the process of crisis management

When we refer to the "NATO Strategy", it is necessary to make the distinction between policies and strategies, on the one hand, and military strategy and strategic operations, on the other hand. In this context, it is equally clear the fact that the supreme decisional body at the NATO level is the North Atlantic Council (NAC), the highest decisional authority being the Military Committee (MC), a structure which is under the direct political authority of the North Atlantic Council and which acts as an interface between the political decisional level and the level of the military structures of execution.

Thus, at the strategic level, under the authority of the *Military Committee* is the *International Military Staff* (IMS), in whose structure the *Intelligence Division* (ID) is to be found, with responsibilities in elaborating the strategic *intelligence* and prospects, the process of early warning and crises management being supported. In this context, the Intelligence Division disseminates its own evaluations to the other structures within the International Military Staff, supports the Centre of Monitorization of Crises (CMC) and the Defense Planning Committee (DPC) and is mainly involved in coordinating the intelligence structures of the allied states and supports the early strategic warning of the Military Committee and SHAPE/ACO/J2 (Supreme Headquarters Allied Powers Europe/Allied Command Operations/J2) [1].

A plea for *the integration of early warning* into the process of crisis management is redundant when the majority of factors involved in such actions rely in their evaluations and recommendations on the identification, filtering and analysis of the previous signals and indicators of the concrete situation in the media concerned.

However, the efficiency of the prevention efforts can be enhanced through establishing some mechanisms of revealing the potential tendencies towards conflict, in the form of early warning systems, consolidating the

capacities of the institutions that are relevant in the area of prevention and response to crisis, creating partnerships between institutions and the local civilian actors in the field of crisis management and, making the population aware (which is extremely important) by means of programs of security culture and discussions regarding crisis prevention and management.

## 3. The E-3A component

The E-3A component is one of the two NATO Force airborne operational units of early warning and control (NAEW & CF). This has a unique place in military history because it was the first multinational air unit established by the Alliance [2].

Its mission is to carry out all the activities of supervision and combat ordered by the Commandant of NAEW Force [3].

The policies of prevention require a system equally based on solid evaluations of risk and early warning. But the early anticipation of crises continues to be a difficult demarche for analysts and deciders and the identification of prevention opportunities or the mitigation of their disastrous effects represents an even greater challenge. Before they appear, most crises are preceded by repeated signals of early warning. Different types of crises send out different types of signals. If these are noticed, analysed and acted upon, many crises can be avoided before they are triggered. In the long history of mankind, there are documented *changes* that took place over short or long periods of time [4].

The possibility of *prevention* and *response* in these cases was naturally very limited, but the XX<sup>th</sup> century brought along satellites, advanced systems of communications, navigation and observation, technical solutions of monitorization, notification and anticipation of dangers, as well as knowledge (in the form of methodologies, prevention plans, institutional memory) in the sphere of prevention of crises of any nature.

In other words, there are conditions of efficient management of crises, there must

only be identified those mechanisms that can most appropriately be adapted to the concrete situation and can reduce the chances of a crisis to occur and reach dimensions that can no longer be controlled [5].

The increase of the complexity of the international security environment, the reduction of deadlines in which predictions are required and the transformation of the importance of geographical spaces have made warning to become a process more ample than the monitorization of the known factors by means of pre-established indicators and rely on searching the weakest signals of risks and potential, often unknown threats [6].

#### **4. NAEW evolution in major conflicts**

*NATO airborne force of early warning and control* intervened in many major conflicts, of which we point to:

- a. Anchor Guard, Crescent Guard (Data mission: 1990-1991 and 2003; location Irak);
- b. Sharp Guard, Deny Flight, Deliberate Force, Decisive Endeavour, Deliberate Guard, Allied Force, Joint Guardian (Data mission: 1992-2004; Balkan region);
- c. Agile Genie, Unified Protector (Data mission: 1992 and 2011; Location: Libya);
- d. Eagle Assist (Data mission: 2001-2002; Location USA);
- e. Active Endeavour/Sea Guardian (Data mission: 2009 - present; the Mediterranean region);
- f. ISAF (Data mission: 2011-2014, Afghanistan region);
- g. Counter-ISIL (Data mission: 2016 - present; Turkey-Syria region).

In these missions, NATO operates a fleet of modified Boeing 707 Airborne Warning & Control System (AWACS) aircraft, improved with cutting-edge military technology, equipped with sensors for radar or passive sensors, capable to detect different long-range aircraft belonging to the enemy. The information collected by AWACS can be directly transmitted from the aircraft to other users situated on land, in the air or at sea. Within these missions,

NAEW offered the Alliance a capacity of command and control (C2), air and maritime supervision, as well as a capacity of managing the combat space.

After significant changes of the NAEW community, the Command of NAEW Force moved to Geilenkirchen, and the Air Command Commandant (COM AIRCOM) now exercised the operational control over the E-3A component [7].

Today, the mission of E-3A component comes in support of the mission of NATO airborne staff of early warning and control (NAEW&CF), which is "to totally accomplish the tactical command and control in support of operations, wherever in the world, following the directives of NATO commanders."

Compared to one of the preceding missions of the Component, that of "providing a platform for supervision and control, to SACEUR order", one can notice the evolution from a simple platform for supervision and control to that of airborne early warning, management of combat and C2.

NATO NAEW & CF is the most extensive collaboration project of the Alliance, exemplifying NATO capacity of facilitating multinational cooperation and of exploiting the advantages of obtaining *resources within the military missions*.

NAEW has two components. Firstly, the NATO E-3A multinational component of Geilenkirchen, Germany, where from Boeing NATO E-3A [8] aircraft operates. NATO E-3A squadrons own international crews integrated from 16 countries and are currently in the process of carrying out a modernization program in order to cope with the *current and future military challenges*, scheduled to be finalized until 2019.

E-3A has been operating from the main base of Geilenkirchen, starting with February 1982, and from the operating bases in Trapani (Italy), Aktion (Greece) and Konya (Turkey). Moreover, there is an operating location Orland, Norway.

The second component is the Squadron of Early Airborne Warning (no. 8) of the Royal Air Force (RAF), having 6 Boeing E-3D

aircraft. The E-3D component is equipped only with RAF personnel, and the main operating base is RAF Waddington of Lincolnshire, Great Britain.

NAEW was asked to support a wide range of *military operations*. During the Cold War, at the level of the **North Atlantic Treaty Organization**, the warning process was largely based on the military resources, which had a preponderantly *quantitative character*. In fact, on the basis of the employed system of indicators, a warning could be realised with regard to the changes taking place in the evolution of the situation at a strategic level, with particular reference to the actions of the adversary, which represented steps in preparing a possible attack against NATO and became visible at a certain moment.

A direct consequence is the official warning of the political and military deciding factors with regard to a likely crisis or attack and, implicitly, the adoption of a decision on which the planning and implementation of an appropriate response is based.

The atrocities and lessons learnt in the Balkan region conflicts fully demonstrated that the early warning of the political and military deciding factors regarding the imminence of certain crises or conflicts offers more than the possibility of managing the security situation at a regional or/and global level. This generates the environment favourable to planning and executing preventive actions, but we have to admit that it is still difficult to establish where and how the interference is to be done in order to achieve the envisaged results.

The changes occurring in the security environment at the regional and/or international level mainly resulted in reducing the risk of an armed conflict between states and in increasing the risk of triggering crises or armed conflicts within certain unstable states have consecrated the necessity of modifying and updating the system of early warning at NATO level. Thus, the range of risks and threats has gone beyond the direct, military ones, particularly focusing on the indirect, non-conventional

risks and threats pertaining to the asymmetrical category.

At the end of the year 2009, *NAEW* started to support the *NATO Active Endeavour* operation, a continuous operation of monitorization of the Mediterranean Sea against terrorism and piracy actions.

At the beginning of the year 2011, *NATO AWACS* began the Afgan Assist operation, a mission that involved flights over Afghanistan in support of *ISAF* operations.

Shortly afterwards, the support for the *Unified Protector* operation contributed to imposing the embargo on the areas where flights were banned and on the weapons imposed to Libya, providing a general image that made the air space safer and more secure and protecting the Libyan civilians in this way [9].

The *NAEW* missions currently consist in: actions of supervision in support of providing peace as a result of the Russian-Ukrainian crisis, personalized measures for providing peace in Turkey as a result of the Syrian crisis, support in the operation against the Islamic State and support operations for securing the Mediterranean Sea waters against terrorism.

The *NAEW* action clearly demonstrates the determination of combating terrorism and the security challenges coming from the south. Also, the *NAEW* offers support for the security of the important events, such as the NATO summits and the visits of the state presidents throughout Europe [10].

## 5. Conclusions

The NATO E-3A fleet is among the most modern of its kind. Since the creation of the E-3A component, different programs of modernization have been carried out in order to improve the communications, navigation and radar equipments.

In addition, all the operator joysticks have been modified in order to include colour displays. Fourteen E-3A models are currently subjected to changes in the piloting cockpit. Their most important aspect is the replacement of many analogical instruments

with a *glass cockpit*. The navigation equipment has also been modified.

The NAEW operations in times of peace and crisis rely on a structure that encompasses the personnel, infrastructure and the systems of command and control (C2).

The evolution from the simple mission of supervision and control to that of combat management and C2 in support of the commandants of joint forces (type Joint) has led to the diversification of the types of missions run by the E-3A Component. The AWACS missions are no longer exclusively related to the support of the air defensive system realized through supervision and control, but the teams are trained to be efficient and ready at any time to take part in ten types of missions assigned to supervision and early warning. Achieving air space supervision and control (guidance) in support of NATO air forces remains one of the basic missions of the Component, around which the other missions and roles are developed and on which the NATO operations can be based apart from the defensive air operations. Moreover, it can be noticed the way the organization and platform can adapt to different missions.

Even if the radar of maritime supervision dates back to 35 years ago, AWACS remains the principal and efficient element in the operations against piracy.

AWACS is a developed and well-organized system, which can be permanently improved and adapted to the present realities generated by the dynamics of regional and global security. It is very important to understand that, within this continuously-running process, the intelligence structures of the member states provide the political and military deciding factors with the level of knowledge and understanding necessary for planning and implementing some political, diplomatic and proactive military actions, which can counteract certain actions hostile to the Alliance or limit to the maximum the consequences generated by them. The imminence of triggering crises or of the hostile intentions is rarely so obvious that the intelligence structures can transmit the deciding factors warnings with a very high level of certainty. The level of uncertainty is permanent and will increase with the reduction of the quantity and quality of the collected and processed information.

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