



Civil/Military Cooperation in Nigeria



ICAO VIRTUAL WORKSHOP ON CIVIL/MILITARY COOPERATION

From: 27th - 29th April 2021



Civil/Military Cooperation in Nigeria



Presentation By Nigeria on: Civil/Military Cooperation in Nigeria (Best Practices)



Civil/Military Cooperation in Nigeria



OVERVIEW

- **Overview**

- Objective of Civil/Military Cooperation
- Definition of Terms in Civil/Military Cooperation
- Regulatory Requirements for Civil/Military Cooperation
- Structure of Civil/Military Cooperation in Nigeria
- Civil/Military Cooperation with the Nigerian Civil Aviation Authority
- Civil/Military Cooperation with the Nigerian Airspace Management Agency
- Civil/Military Cooperation with the Accident Investigation Bureau
- Civil/Military Cooperation with the Federal Airports Authority of Nigeria
- Challenges of Civil/Military Cooperation in Nigeria
- Recommendations
- Conclusion



Civil/Military Cooperation in Nigeria



OBJECTIVE OF PRESENTATION

➤ **OBJECTIVE:**

- **The objective of this presentation is to share Nigeria's experience, perspective and Challenges in Civil/Military Cooperation in ensuring safety, security and economy of the Air Navigation System.**
- **Recommend Strategies for Enhancing Civil/Military Cooperation.**



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Air traffic flow management (ATFM)** - A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilised to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority.
- **Air Traffic Management (ATM)** - The dynamic, integrated management of air traffic and airspace (including air traffic services, airspace management and air traffic flow management) under safe, cost-effective, and efficient conditions by providing facilities and seamless services in collaboration with all stakeholders and incorporating ground and on-board features.
- **Airspace management (ASM)** - A planning function with the primary objective of maximising the utilisation of available airspace by dynamic time-sharing and, at times, the segregation of airspace among various categories of airspace users on the basis of short-term needs.



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Airspace reservation** - A defined volume of airspace temporarily reserved for exclusive or specific use by categories of users.
- **ASM Level 1** - Strategic ASM is the act of defining and reviewing, as required, the national airspace policy taking into account national and international airspace requirements.
- **ASM Level 2** - Pre-Tactical ASM is the act of conducting operational management within the framework of pre-determined existing ATM structure and procedures defined in ASM Level 1
- **ASM Level 3** - Tactical ASM is the act, on the day of operation, of activating, deactivating or real time reallocating of airspace allocated in ASM Level 2, and of solving specific airspace problems and/or of individual OAT/GAT traffic situations in real time between civil and military ATS units and/or controlling military units and/or controllers, as appropriate. This coordination can take place either in active or passive mode with or without action by the controller.



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Civil-Military Coordination** - The coordination between civil and military parties authorised to make decisions and agree a course of action.
- **Collaborative decision-making (CDM) process** - The process whereby all ATM decisions, except tactical ATC decisions, are based on the sharing of all information relevant to air traffic operation between all civil and military partners.
- **Conditional route (CDR)** - ATS route that is only available for use and flight planning under specified conditions. A conditional route may be of more than one category, and those categories may change at specified times:



Civil/Military Cooperation in Nigeria



DEFINITIONS

➤ **Category 1 conditional route (CDR1):**

- CDR1 routes are available for flight planning during times published in the relevant Aeronautical Information Publication (AIP).

➤ **Category 2 conditional route (CDR2):**

- CDR2 routes may be available for flight planning. Flights may only be planned on a CDR2 in accordance with conditions published daily in the conditional route availability message.

➤ **Category 3 conditional route (CDR3):**

- CDR3 routes are not available for flight planning. Flights must not be planned on these routes but ATC units may issue tactical clearances on such route segments.



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Controlling military unit** - Any fixed or mobile military unit handling military air traffic and/or pursuing other activities and which, owing to their specific nature, may require an airspace reservation.
- **Cross border area (CBA)** - An airspace reservation established over international boundaries for specific operational requirements. This may take the form of a temporary airspace reservation.
- **Cross border Operations (CBO)** - Cross border/FIR boundary operations is a process which encompasses activities conducted by one or more States, within an area established across international boundaries or entirely within the airspace under the jurisdiction of a State.



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Danger area** - An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.
- **Flexible Use of Airspace (FUA)** - Concept of airspace management based on the principle that airspace should not be designated as exclusively military or civilian, but as a continuous space that meets the requirements of all users to the extent possible.
- **Prohibited area** - An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.
- **Restricted area** - An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.



Civil/Military Cooperation in Nigeria



DEFINITIONS

- **Temporary reserved area (TRA)** - An airspace temporarily reserved and allocated for the specific use of a particular user during a determined period of time and through which other traffic may be allowed to transit under air traffic control (ATC) clearance.
- **Temporary segregated area (TSA)** - An airspace temporarily segregated and allocated for the exclusive use of a particular user during a determined period of time and through which other traffic will not be allowed to transit.



Civil/Military Cooperation in Nigeria



Nigerian Civil Aviation Regulations

➤ **Nigerian Civil Aviation Regulations on Civil/Military Cooperation:**

➤ **Part 14.1.17. Civil/Military Coordination in Air Traffic Services:**

- **Part 14.1.17.1.** Air Traffic Services Providers, in carrying out their objectives, shall have due regards for the requirement to co-ordinate with other airspace users. In particular, Air Traffic Services Providers shall:
 - (a) make available to other Service Providers such information as may be available to the ATS provider to enable the operators meet their obligations under these Regulations;
 - (b) establish close co-operation and liaison with the military authorities responsible for activities that may affect civil flights. Military activities potentially hazardous to civil aircraft, whether over the territory of a state or over the high seas shall be co-ordinated with the appropriate ATS provider ;



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

➤ **National Civil/Military Cooperation Committee:**

- A National Civil/Military Cooperation Committee was established since 2006 and recently reconstituted with the following Members:
- Nigerian Civil Aviation Authority.
- Nigerian Air Force
- National Air Defence Corps.
- Nigerian Airspace Management Agency.
- Nigerian Navy
- Nigerian Army
- Federal Airports Authority of Nigeria.



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Structure of Civil/Military Cooperation in Nigeria:**
- Civil and Military Joint Use Aerodromes (Kaduna Military, Port Harcourt Military, Benin, Bauchi, Maiduguri, Yola, Katsina, Minna, Kano, Enugu, Abuja).
- Military Exclusive Aerodromes (Kainji, Makurdi).
- Private Aerodromes (Civil Exclusively).



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Structure of Civil/Military Cooperation in Nigeria:**
- **Civil/Military Cooperation Between The Nigerian Civil Aviation Authority and Nigerian Air Force.**
- **Civil/Military Cooperation Between The Nigerian Airspace Management Agency and the Nigerian Air Force.**
- **Civil/Military Cooperation Between The Accident Investigation Bureau and The Nigerian Air Force.**
- **Civil/Military Cooperation Between The Federal Airports Authority of Nigeria and The Nigerian Air Force.**
- **Civil/Military Cooperation Between The Nigerian Meteorological Agency and The Nigerian Air Force.**



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Civil/Military Cooperation Between The Nigerian Civil Aviation Authority and Nigerian Air Force:**
- Civil Licensing of Air Force Pilots
- Civil Licensing of Air Force Engineers
- Civil Licensing of Air Force Air Traffic Controllers
- Authorisation of Remotely Piloted Aircraft Systems
- Aero Medical Examination for Military for Issuance of Civil Licenses, etc.



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Civil/Military Cooperation Between The Nigerian Airspace Management Agency and the Nigerian Air Force.:**
- Search and Rescue Operations and Mock Exercises.
- On The Job Training for Military ATCOs for Civil License/Ratings.
- Joint User Facilities.
- Collocation of Civil and Military ATCOs in civil Towers.
- VIP Flight Movement Protocols.



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Civil/Military Cooperation Between NAMA and NAF:**
- Issuance of NOTAMs, AICs and AIP Supplements.
- Publication of Danger Areas, Restricted and Prohibited Areas.
- Security Clearances for Military Flights.
- Security Clearances for Diplomatic Flights.
- Security of Air Navigation Facilities.
- ATM Contingencies (Lockdowns, Civil Unrest, War, etc).



Civil/Military Cooperation in Nigeria



STRUCTURE OF CIVIL/MILITARY COOPERATION

- **Civil/Military Cooperation Between NAMA and NAF:**
- Implementation of Performance Based Navigation at Military Aerodromes.
- Flight Calibration of Navigational Facilities.
- WGS 84 Survey at Military Aerodromes.
- Joint Air Traffic Control Trainings.
- Regular Civil/Military Cooperation Meetings.



Civil/Military Cooperation in Nigeria



Civil/Military Cooperation Forums





Civil/Military Cooperation in Nigeria



Civil/Military Cooperation Forums





Civil/Military Cooperation in Nigeria



Civil/Military Cooperation Meetings





Civil/Military Cooperation in Nigeria



Civil/Military Cooperation Meetings





Civil/Military Cooperation in Nigeria



Strategic Level Civil/Military Cooperation Meetings





Civil/Military Cooperation in Nigeria



Strategic Level Civil/Military Cooperation Meetings





Civil/Military Cooperation in Nigeria



Strategic Level Civil/Military Cooperation Meetings





Civil/Military Cooperation in Nigeria



State Aircraft Under The Nigerian Air Force





Civil/Military Cooperation in Nigeria



State Aircraft Under The Nigerian Air Force





Civil/Military Cooperation in Nigeria



State Aircraft Under The Nigerian Air Force





Civil/Military Cooperation in Nigeria



Remotely Piloted Aircraft System





Civil/Military Cooperation in Nigeria



State Aircraft Under The Nigerian Air Force





Civil/Military Cooperation in Nigeria



State Aircraft Under The Nigerian Air Force





Civil/Military Cooperation in Nigeria



Airspace Reservations





Civil/Military Cooperation in Nigeria



Maintenance of Navigational Aids at Military Aerodromes





Civil/Military Cooperation in Nigeria



Flight Calibration of Military Nav aids





Civil/Military Cooperation in Nigeria



Civil Area Control Centre Jointly Used with Military





Civil/Military Cooperation in Nigeria



Civil Control Tower Jointly Used





Civil/Military Cooperation in Nigeria



BEST PRACTICES

➤ **Civil/Military Cooperation Best Practices in Nigeria:**

- Flexible Use of Airspace is achieved through realtime coordination between Civil and Military ATCs.
- Request for NOTAM issuance for Special Military activities affecting air navigation are made by Military for publication.
- Request for Airspace Reservations for Military Use are made and reviewed, and safety assessments conducted before publication.
- VIP Flight Movement Protocols are implemented through direct coordination as determined by the position of the VIP.
- Non Approved State aircraft are permitted into RVSM airspace with 2,000ft separation provided from other aircraft.
- Coordination between Civil and Military ATCs is very effective because of collocation or close proximity.



Civil/Military Cooperation in Nigeria



CHALLENGES

- **Challenges of Civil/Military Cooperation:**
- Inadequate Training and Sensitisation on Civil/Military.
- Inadequate funding for Civil/Military Cooperation.
- Inadequate Coordination Facilities
- Lack of Collaborative Decision Making and Planning.
- Lack of guidance materials such as MOUs, LOPs, etc.
- Permanent Airspace Reservations



Civil/Military Cooperation in Nigeria



RECOMMENDATIONS

- **RECOMMENDATIONS FOR ENHANCING COOPERATION:**
- Implement Civil Military Collaborative Decision Making.
- Implement Civil/Military Collaborative Planning.
- Interoperability of Civil/Military ATM/CNS Systems.
- Review of Civil/Military SOPs, LOPs, and MOUs.
- Security Sensitisation Workshops for Civil ATCOs.
- Enhancement of Coordination Facilities.
- Implementation of Military Total Radar Coverage for Contingency.



Civil/Military Cooperation in Nigeria



RECOMMENDATIONS

➤ **RECOMMENDATIONS FOR ENHANCING COOPERATION:**

- Review of Airspace Reservations.
- Review of VIP Protocols.
- Carriage of Transponders by State aircraft.
- Establishment of a National Civil/Military Airspace Management Committee.
- Standardisation of Flexible Use of Airspace (FUA).
- Increased Civil/Military Cooperation Workshops, etc



Civil/Military Cooperation in Nigeria



CONCLUSION

➤ CONCLUSION:

- The continued growth in civil and military aviation is a confirmation that the solution to attaining optimum airspace capacity, airport capacity and ATM capacity lies in the effective implementation of Flexible Use of Airspace (FUA) and Collaborative Decision Making.
- Therefore to achieve this, we must improve our civil/military communication, coordination, cooperation, and collaboration for the safety, efficiency and security of our air navigation system.



Civil/Military Cooperation in Nigeria



PWAJOK MATTHEW LAWRENCE

NIGERIAN CIVIL/MILITARY COOPERATION

COMMITTEE