

**United Nations
Peacekeeping Missions
Military Aviation Unit
Manual
Second Edition
April 2021**



**DEPARTMENT OF PEACE OPERATIONS
DEPARTMENT OF OPERATIONAL SUPPORT**

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Foreword

We are delighted to introduce the United Nations Peacekeeping Missions Military Aviation Unit Manual, an essential guide for commanders and staff deployed in peacekeeping operations, and an important reference for Member States and the staff at United Nations Headquarters.

For several decades, United Nations peacekeeping has evolved significantly in its complexity. The spectrum of multi-dimensional UN peacekeeping operations includes challenging tasks such as restoring state authority, protecting civilians and disarming, demobilizing and reintegrating ex-combatants. In today's context, peacekeeping missions are deploying into environments where they can expect to confront asymmetric threats and contend with armed groups over large swaths of territory. Consequently, the capabilities required for successful peacekeeping missions demand greater flexibility and interoperability.

UN peacekeeping operations are rarely limited to one type of activity. While deployed in the context of a political framework supporting a peace agreement, or in the context of creating the conditions for a return to stability, peacekeeping missions require the performance of dangerous tasks involving the timely movement of personnel and logistics; and sometimes the judicious use of force, particularly in situations involving the protection of civilians where the host state is unable to provide security and maintain public order.

To meet these complex peacekeeping challenges, military components often play a pivotal role in maintaining safety, security and stability. Under these circumstances, the deployment of military aviation assets can contribute decisively towards successful achievement of the Mission's mandate.

As the UN continues its efforts to broaden the diversity of the troop contributing countries, and in order to ensure the effective integration of all types of UN military aviation units, there is a vital need to formalize capability standards. Together with the seminal work of military experts from numerous Member States, the Department of Peace Operations (DPO) and the Department of Operational Support (DOS) have revised this Manual as a means of enhancing the preparation, operational readiness and efficiency of UN military aviation, keeping the safety of aviation operations in mind.

In recognition of the work already done, and in anticipation of future improvements, we would like to express our sincere gratitude to the Member States who volunteered and devoted so much of their time, energy and expertise in undertaking the first revision of this Manual. The result is an updated document that builds on the TCCs' Aviation experience, weaved into the UN operational setting, to develop a single, convenient guidebook.



Jean-Pierre Lacroix
Under-Secretary-General
Department of Peace Operations



Atul Khare
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Preface

I am very pleased to introduce the United Nations Peacekeeping Missions Military Aviation Unit Manual, a practical guide for commanders and their staff in peacekeeping operations, as well as for the Member States and the United Nations Headquarters.

I would like to express my sincere gratitude to the Member States Working Group, field missions, training institutions, other peacekeeping practitioners and stakeholders and colleagues from the Department of Operational Support for the dedicated support and substantial contribution they have provided in the revision of this Manual.

We will continue to refine and update this Manual ensuring its relevance in the ever-changing operational environment. In the meantime, we have every expectation that this document, especially with the concerted efforts of its intended readers, will contribute immensely to improving and enhancing our collective performance in the pursuit of peace.

A handwritten signature in blue ink, appearing to be 'C. Loitey', written over a circular stamp or seal.

Lt. Gen. Carlos Humberto Loitey
Assistant Secretary-General for
Military Affairs, Military Adviser
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Military Aviation experts of the UN Peacekeeping Missions, Military Aviation Unit Manual First Working Group, in Salvador, Brazil, 2019.

Appreciation is extended to the TCC Working Group for their expertise and time in assisting to draft this manual.

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Purpose

The second edition of the United Nations Peacekeeping Missions, Military Aviation Unit Manual provides field commanders and their staff a guide for planning and conducting military aviation operations in support of United Nations peacekeeping operations. The United Nations Headquarters and mission staff will find this manual an essential reference as they plan, generate and employ military aviation for UN missions.

The intent of this manual is not to attempt to override the national military aviation or safety doctrines/policies of individual Member States or Troop Contributing Countries (TCCs), nor impose requirements on national training, operations or structures. This manual does not prescribe any military tactics, techniques and procedures which remain the prerogative of individual Member States. Nor is it the intent of this manual to serve as an instrument for military aviation unit selection. Indeed, military aviation unit structures will be adapted, ultimately, in accordance with any concept of operations (CONOPS) and Statement of Unit Requirements (SUR). Afterwards, the Letter of Assist (LOA) and the Memorandum of Understanding (MOU) will be negotiated between the UN and TCC. Instead, this manual serves as a complement to existing or emerging TCC's military aviation capability, and preparation for the enhanced performance achieved through interoperability with other TCCs participating in the peacekeeping operation.

This manual is written primarily at the operational level. It is based on UN guidance reflecting lessons learned, feedback from field missions and input from peacekeeping practitioners experienced in UN military aviation operations. Workshops conducted by interested Member States and TCCs produced the original draft that was finalized in 2015. It was designed to assist contingents in the re-orientation of their units from a national military aviation focus to one in which they are an integral part of a unified UN peacekeeping operation.

The second edition is a result of deliberations undertaken by another working group in 2019 to identify the areas in this manual that need to be modified based on considerations of TCC delegates, recent UN doctrinal development, and on the contemporary and past UN Aviation Units' feedback.

Scope

This manual focuses on the UN military unit aviation, not civilian, aviation. Discussed within is an overview of the military aviation setting in UN peacekeeping operations. The capabilities of rotary and fixed-wing aviation are examined in terms of their employment concept, tasks, organization and support requirements (pre-deployment, in-mission, and during relief, rotation and repatriation). Military aviation currency sustainment for air crews, as well as military aviation unit's self-evaluation is examined with checklists provided along with tasks, conditions and standards that can be modified to suit any TCC's aviation unit. Additional focus has been put on self-evaluation, including modified checklists, along with advice on seeking support from the UN or third parties. Most importantly, is the modified flight safety annex (Annex D) with suggestions on how contingents can create an organizational culture that promotes operational readiness through active safety programs by considering human factor and risk assessment.

Also covered in this manual is the enlightening description of UN military aviation asset command and control. The intent of this manual is to clarify key aspects of UN military aviation for both military and civilian personnel, and thereby foster a unified approach to aviation field employment.

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CHAPTER 1



Employment Concept for UN Military Aviation

1.1 Introduction

This chapter will assist the Force and Sector Commanders, and all UN Mission staff, understand and correctly employ the full capability of UN military aviation assets. The current momentum in peacekeeping operations necessitates a highly responsive approval authority— reflecting the urgencies of daily military operations as well as civilian logistical requirements. Understanding the proper employment and approval authority for UN military aviation assets is essential to meeting time-sensitive operational demands.

1.2 Command and Control

1.2.1 Military Aviation Unit commanders and relevant personnel must be familiar with the UN Policy for Command and Control latest published edition.

1.2.2 UN military aviation assets are Operational Control (OPCON) by the Force Commander, who is authorized to further assign aviation assets under Tactical Control (TACON) to a designated commander for specific purposes and periods. TACON includes the detailed and local direction and control of movement or maneuvers necessary to accomplish an assigned mission or specific tasks. However, due to their criticality in civilian as well as military functions, not to mention related financial implications, military aviation assets are under the UN Tasking Authority of the civilian Director or Chief of Mission Support. However, there are emergency/crisis situations warranting an Aviation response (eg: Casualty Evacuation (CASEVAC) but also tactical transportation or every life-or-death situation) when immediacy of Aviation response is critical. Therefore, in order to provide adequate and timely support on 24/7 basis to the troops and for saving lives through a timely and efficiently executed missions, the Director of Mission Support (DMS) shall dedicate certain quantum of Aviation support to facilitate command and control. This would permit a unified planning process under FC responsibility more adapted to peacekeeping operations under Chapter VII of UN Charter. This pre-decided quantum of aviation support must be under the direct tasking authority of the Force Commander. With this delegation of authority FC shall be held fully accountable for the results as he has planning control over his aviation military assets, particularly in Chap. VII missions.

1.2.3 The Chief of Service Delivery^{1 2} reports to the Director or Chief of Mission Support (DMS/CMS). The Chief of Service Delivery centrally manages and exercises tasking authority on behalf of the DMS/CMS over all assigned uniformed logistics personnel and enabling units, including UN military aviation assets (with the exception of those aviation assets in direct support of military operations), along with signals, engineers, transportation, medical and explosive ordnance disposal. The Mission's aviation priorities are determined by the Special Representative of the Secretary-General (SRSG)/Head of Mission (HOM) as advised by the Mission's senior executive team. For a definitive discussion of the chain of command authorized to sanction different aviation missions, refer to the

¹ Service Delivery was formerly known as Integrated Support Services.

² See also the other UN Military Unit Manuals on some of these enablers available at UN Resource Hub <http://research.un.org/en/peacekeeping-community/guidance>

DPO/DOS Policy on Authority, Command and Control in United Nations Peacekeeping Operations (Ref. 2019, dated October 2019).

1.3 Planning Considerations for Air Operations Staff

For the purposes of this UN military aviation unit manual, the employment concept for UN military aviation assets is organized by considering separately the distinct capabilities, airframes and employment concept of rotary, fixed-wing aircraft and Unmanned Aircraft Systems (UAS) assets; but first, a brief examination of planning considerations.

1.3.1 Planning considerations for task assignment

The prime responsibility of the air operations staff at Sector and Force Headquarters is to assign tasks to military aviation units best suited for a particular operation. Planning considerations for task assignment include:

- Type of mission.
- Type of terrain.
- Number of passengers.
- Details and nature of load to be carried.
- Tactical situation.
- Conditions of Pick-Up and Landing Zones/airstrips.
- Duration of mission.
- Nature of urgency.
- Crew proficiency.
- English proficiency
- Helicopter/aircraft capabilities.
- Risk assessment/flight safety.
- Availability of ground support facilities.
- Type of fuel available.
- Requirement, type and availability of ammunition.
- Availability of specialized equipment for specialized operations.
- Weather conditions.
- Crew duty time.

In compliance with the DPKO/DFS Environmental Policy for Field Missions (2009.6) para. 37 on Energy and the need to “ensure the use of energy is optimized by the mission with the aim to minimize the mission’s greenhouse gas emissions”, with the DOS Environment Strategy for Field Missions (2017-2023) and its vision “to deploy responsible missions that achieve maximum efficiency in their use of natural resources and operate at minimum risk to people, societies and ecosystems; contributing to a positive impact on these wherever possible”, missions, under the C/DMS guidance, shall implement, whenever possible, transportation energy efficiency measures including maximizing aircraft passenger and cargo loads.

1.3.2 Task assignment for the airfield and security of the Forward Operating Base

Another key planning consideration is the need for clearly delineated task assignments for airfield and forward operating base security. Normally, the Mission will assign the airfield security task to one of its infantry units, which may or may not be from the same TCC as the military aviation unit. In cases where the supporting security detachment is not from the same TCC as a military aviation unit, clearly defined command and control arrangements must be established. However, if the military aviation unit's TCC requires the use of its own soldiers for security, this requirement will need to be negotiated with the UN.

1.3.3 Human Rights Due Diligence

In the aviation context, compliance with UN standards to safeguard international human rights and humanitarian law is particularly important in light of the high visibility of UN aviation assets and operations, and the possibility that some of the assets and personnel deployed may have been deployed in robust operations in non-UN contexts. In accordance with the Secretary-General's UN system wide instructions and as reinforced by UN Security Council resolutions, all UN support to non-UN security forces must be provided in compliance with the Human Rights Due Diligence Policy on UN Support to non-UN Security Forces (HRDDP) available on the UN Resource Hub: <http://research.un.org/en/peacekeeping-community>.

For all personnel deployed, the Policy on Human Rights Screening of UN Personnel must be strictly followed, including the required self-certification, TCC/PCC screening and proactive screening by the Secretariat itself, so as ensure that the United Nations neither selects nor deploy for service in aviation or aviation support any individual who has been involved in violations of international human rights or humanitarian law. For any procurement in relation to air operations, the United Nations Supplier Code of Conduct applies, according to which UN suppliers must not be complicit in human rights abuses and a range of other conduct contrary to the United Nations values and principles. Due diligence checks of suppliers to ensure compliance with the Supplier Code of Conduct should be ensured.

1.3.4 Search and Rescue Planning and Standard Operating Procedures

Search and Rescue planning is critical to aviation support operations. All military aviation units are required to prepare Standard Operating Procedures (SOPs) for Search and Rescue (SAR). Operators will be familiar with their national SOPs regarding Search and Rescue / Combat Search & Rescue, but those national SOPs may not be completely applicable to the environment and topography of the UN Mission. Thus, once a military aviation unit is deployed to the UN Mission area, they must update their SAR plans to reflect the new environment and operating conditions. Unit's SAR plans and SOPs must be aligned to Mission Aviation SOPs, SAR Chapter, and should take into consideration the following:

- Plans prepared in the event of an accident.
- Accident alarm system.
- Actions for overdue aircraft.
- Local lost procedure.
- Actions for on Base accident.
- Actions for off Base accidents.
- Actions for medical emergency.

- Actions on forced landing.
- Steps to ensure that all concerned know their specific tasks and roles according to the plan and SOP.

1.4 Rotary-Wing Unit Employment Concept

In addition to performing essential personnel and equipment movement, military rotary-wing units support the Mission's security and stability by performing aerial reconnaissance and surveillance, observation, screening and security operations. When required, rotary-wing units conduct show of force, support and intervention operations. Additional tasks may also include, but not limited to, armed reconnaissance, air assault/quick reaction operations, close support missions, CASEVAC/MEDEVAC, search and rescue operations, Very Important Person (VIP) transportation, helicopter landing site reconnaissance operations and joint operations. Unit tasks will of course depend upon the type of helicopters available, as well as what was previously agreed in Memorandum of Understanding (MOU) or Letter of Assist (LOA).

1.4.1 Reconnaissance and Surveillance



Helicopter reconnaissance and surveillance are keenly important by virtue of the real time ability to identify and report the locations of hostile forces and equipment. The ability to identify and geo-locate elements on the ground can support a variety of UN operations by providing early warning of peace violations, enhancing force protection, and improving Mission readiness to mitigate most threats. These types of operations may include a variety of reconnaissance and surveillance techniques such as:

- **Reconnaissance:** A mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of opposing forces, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a specific area.
- **Surveillance:** The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means.
- **Planning considerations, include:**
 - Commanders intent (what is the mission?)
 - Effects to be created. Command and Control.

- Helicopter capabilities including self-protection, design and equipment to perform the intended task.
- Crew capabilities and qualifications.
- Terrain.
- Obstacles.
- Weather conditions.
- Aeronautical information (Aeronautical Information Publications (AIP), Notices to Airmen (NOTAM), airspace).
- Minimum safe altitude.
- General security situation/threat analysis.
- Clearance from host nation.
- Adequate support planning.
- Flight plan filing as per UN and host country rules.
- Rules of Engagement.
- Weight and balance calculations.
- Inadvertent Instruments Meteorological Conditions (IIMC) Plan.
- Communication with own forces on ground, if any.
- Fitness of fuel and its certification, especially at alternate airfields.
- Wearing of appropriate protection gear by the aircrews and observers.
- Night Vision Devices (Night Vision Goggles, Forward Looking Infrared Radar (FLIR), Thermal Imaging) and Infra- Red Search Light (If applicable)

1.4.2 Armed Reconnaissance

Armed reconnaissance, if authorized under the Mission mandate and approved by appropriate UN authorities, is reconnaissance to gather information while simultaneously being prepared to use force, mainly in self-defense, by locating and attacking hostile armed elements as they arise during the course of the reconnaissance in assigned general areas, rather than attacking pre-designated targets. Armed reconnaissance often involves engaging hostile elements as they threaten the local civilian population.



• Planning Considerations Include:

- Command and Control
- Helicopter capabilities (including self-protection, design and equipment to perform the mission).

- Crew capabilities and qualifications.
- Terrain.
- Obstacles / heights in reconnaissance area.
- Weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- Minimum safe altitude.
- General security situation/threat analysis.
- Ammunition to be used.
- Availability of required logistical support.
- The number of helicopters to perform the mission (recommendation: 2, for mutual support in case of emergencies).
- Host nation clearance if not given in the LOA.
- Flight plan filing as per UN/host nation rules.
- Rules of Engagement.
- Threat assessments of hostile anti-aircraft weapons.
- Clear identification of own forces and friendly population in the area of operation.
- RT communication / guidance by own intelligence elements on ground amongst the population.
- Making a combat team of an armed helicopter with a support helicopter for evacuating the aircrew of armed helicopter, in case it is downed by hostile fire.
- Inadvertent Instrument Metrological Conditions (IIMC) Plan.
- Wearing of protection gear by the aircrew.

1.4.3 Passenger Transportation



Passenger transportation is an air movement of passengers, including VIP, from one

location to another, using UN aviation assets. Military aircraft operating under a LOA must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA. When transporting civilian passengers, military aircraft must be certified for passenger transport by the relevant aviation authority or national regulations.

• **Planning Considerations**

- Helicopter capabilities (including self-protection, availability of passenger safety equipment and design features etc.).
- Crew capabilities and qualifications.
- Command and Control.
- Terrain and safety altitude.
- Weather conditions including day/night operations.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation of route and destination.
- Host nation clearance if not given in the LOA.
- Support planning for primary and alternate destinations.
- Flight plan filing as per UN/host nation rules.
- Weight and balance calculations.
- Fuel arrangements and its fitness certification.
- Avoidance of excessively dusty landing conditions.
- Inadvertent Instruments Meteorological Conditions (IIMC) Plan.
- Wearing of protection gear by the aircrews and passengers (is required).
- Protection arrangements by the ground forces in case of a helicopter grounded at a landing site due to technical reason.
- Assigning a qualified crew (proficient in English) to demonstrate the safety features of the aircraft and assist in case of an emergency.

1.4.4 Cargo Transportation



This task involves the carrying or moving of cargo within the Mission by UN utility helicopters. The cargo can be loaded inside a cargo compartment, or outside the cargo compartment using a sling (depending upon the availability of special equipment and helicopter capability). As with passenger transportation, military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

- **Planning Considerations**

- Loading/offloading plan (locations, procedures, handling equipment).
- Helicopter capabilities.
- Crew capabilities/training standards.
- Coordination measures such as air-to-ground communications.
- Loading as per cargo packing list and manifest.
- Specialized equipment requirements for sling, jib crane, aviation nets (certified) etc.
- Weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- Weight and volume according to the helicopter's allowable limits.
- Type of cargo (for dangerous goods, refer to para 1.4.5)
- Terrain, obstacles, build-up areas and safety altitude.
- Host nation clearance if required as per LOA.
- Support planning for primary and alternate destination.
- Filing of flight plan as per UN/host nation rules.
- Serviceability of quick release mechanism of the load.
- Inadvertent Instruments Meteorological Conditions (IIMC) Plan.

1.4.5 Transportation of Dangerous Goods

Dangerous Goods (DGs) are any articles and substances having properties that, if uncontrolled, could adversely affect the safety of the passengers, crew or aircraft on which they are carried. The International Air Transport Association (IATA) DG guidance is issued in order to provide procedures for the shipper of dangerous goods, and guidelines for the operator of UN military helicopter that facilitate the safe transportation of dangerous items. The military unit should have procedures that cover the transport of DGs, which outlines the roles, responsibilities, documentation, and handling procedures. The carriage of DGs (whether internally, externally mounted or underslung) in military helicopters within the UN mission must be in accordance with the following:

- For the transport of DGs (excluding ammunition, explosives and fuel), to be in accordance with IATA and International Civil Aviation Organization (ICAO) procedures, national and UN procedures regarding the movement of dangerous goods in military helicopter.

- For the transport of ammunition, explosives and fuel, to be in accordance with national regulations covering the transportation of ammunition and fuel. For the handling of ammunition in UN missions, refer to UN Manual on Ammunition Management, 2020.

- **Planning Considerations**

- Ensure Dangerous Goods are prepared and suitable for transport by air.
- Proper inspection by qualified personnel before packaging.
- Dangerous Goods packaging, labeling and segregation.
- Completion of Dangerous Goods documentation (declarations, Notice to Captain (NOTOC), manifest).
- Aircraft capabilities (availability of specific DG handling/cargo restraints and qualified crew).
- Dangerous Goods handling, loading, unloading, airfield/Helicopter Landing Site (HLS) facilities, and associated safety distances.
- Security of Dangerous Goods and escorts (as required).
- Aircraft capabilities (availability of specific DG handling/loading/unloading equipment and qualified crew).
- All other considerations for cargo transportation remain valid.

1.4.6 Specialized Operations (Air Assault/Quick Reaction Operations/Rapelling/Fast roping/Para-drop/Helocasting)



It is an air movement of UN forces with rotary-wings to engage and destroy hostile forces, to seize and hold key terrain, or secure, destroy, disrupt or fix specific hostile forces, and interdicting hostile withdrawal routes in protection of forces or groups in accordance with the mandate.

- **Planning Considerations**

- Type of mission
- Helicopter capabilities.
- Crew capabilities and training standards.
- Detailed briefings and coordination on air assault techniques and tactics by concerned agencies and units.
- Coordination required between different types of helicopters (utility and attack).
- Area of operations. ○ Security situation/threat analysis.
- Weather conditions (Visual Meteorological Conditions (VMC).
- Aeronautical information (AIP, NOTAM, airspace).
- Terrain, obstacles and safety altitude.
- Host nation clearance, if not given in the LOA.
- Adequate admin and logistics planning including fuel and ammunition.
- Air assault techniques and training plus coordination with ground troops.
- Rules of Engagement.
- Contingency planning for recovery of a downed helicopter.
- Developing a temporary Forward Operating Base (FOB).
- Refueling arrangements in the FOB.

- Medical cover for any casualties.
- Combat search & rescue – CSAR.
- Protective gear for the aircrews.
- Dusty landing preparatory training & SOP.
- Modified maintenance SOPs for dusty unprepared operations.
- Level of armor protection of the helicopters.
- Minimum operating altitude of the surveillance helicopters accompanying the cargo helicopters.
- Pilots training for tactical flying.
- Inadvertent Instruments Meteorological Conditions (IIMC) training.
- Night Vision Goggles (NVG) capability and training, especially for unprepared landings in the field.
- Prior insertion of landing zone (LZ) protection party on utility helicopters.
- Prior sanitization of the area, especially the landing zone LZs by attack / armed helicopters, if available.

1.4.7 Close Support Missions

Close Support is the action performed by armed helicopters against hostile targets that are in anticipated or direct contact with own ground forces. This operation requires detailed integration of each air mission with the fire and maneuver of UN ground or maritime forces and must be in accord with the Mission's Rules of Engagement (RoE) and Concept of Operations (CONOPS)/mandate.



• Planning Considerations

- Helicopter capabilities (must be designed and equipped to perform close support tasks).

- Crew capabilities and training standards.
- Detailed briefing and coordination between concerned agencies and units.
- Area of operations.
- Security situation and threat analysis.
- Terrain /obstacles and safety altitude.
- Weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- Coordination measures such as air to ground communication to avoid fratricide.
- Ammunition that is consistent with Mission mandate.
- Measures to avoid and minimize collateral damage.
- Host nation clearance if not given in the LOA.
- Admin and logistics support planning for the mission's duration.
- Rules of Engagement.
- Develop standard message formats in coordination with the ground troops for calling fire.

1.4.8 Aerial Patrol



It is an air operation in a specific area in a given time in order to identify hostile activity or new threats to protected forces.

• Planning considerations

- Helicopter capabilities (appropriate equipment for visual/electronic surveillance and real time audio/visual relay).
- Crew capabilities and training standards.
- Appropriate air-to-ground communication system to pass the information to relevant agency/unit.

- o Terrain, obstacles and safety altitude.
- o Weather conditions.
- o Aeronautical information (AIP, NOTAM, airspace).
- o General security situation/threat analysis.
- o Host nation clearance if not given in the LOA.
- o Appropriate support planning.

1.4.8 Casualty Evacuation (CASEVAC)

CASEVAC³ is defined as the primary evacuation of any casualty from the Point of Injury to the closest appropriate medical facility, utilizing the most appropriate means of transportation. Medical research proves that the risk of death or permanent disability is significantly reduced if people are treated as soon as possible after the onset of a life-threatening injury or illness. Based on this evidence, it is of utmost importance that appropriate life, limb and eyesight saving procedures are provided as quickly as possible. Established optimal CASEVAC timings are referred to as the 10-1-2 timeline:



- **10** (Platinum Minutes) – Immediate lifesaving measures of haemorrhage control and airway support are to be commenced at the POI after the onset of injury/illness as soon as possible. and secured within 10 minutes. Focus is on control of major bleeding and ensuring an airway for breathing. This is often referred to as the ‘Platinum 10 Minutes’.
- **1** (Golden Hour) – Advanced lifesaving support (ALS) and damage control resuscitation (DCR) are provided by emergency medical personnel within 1 hour of the onset of injury/illness. This allows for life-saving intervention and en-route stabilisation until arrival at an appropriate medical facility and is often referred to as the ‘golden hour’.

³ DOS/2020.7 Casualty Evacuation in the Field (Policy) at United Nations Peacekeeping Resource Hub <http://research.un.org/en/peacekeeping-community>

- 2 – The casualty should receive damage control surgery (DCS) within 2 hours of the onset of injury/illness.

10-1-2 timeline is cumulative in nature with a limit of 2 hours from the onset of injury/illness to DCS.

- **Planning Considerations**

- Alert matrix
- Command and Control
- Operating hours since major engine overhaul
- Civil Aviation in the area
- Aeromedical Evacuation Team (AMET)
- Threat on the ground
- Landing Zones (LZ)
 - **Location.** The LZ must be in close proximity to the aid station. Casualties may require carrying by hand to the waiting aircraft. However, the LZ must be set up at sufficient distance so that it will not interfere with aid station operations. If possible, the LZ should be selected downwind from the aid station to avoid blowing dust on the aid station.
 - **Marking.** LZ markings must be visible from the air. In order to prevent accidents caused by Foreign Object Debris (FOD), it is better to mark a landing zone is by using smoke or illuminating devices (e.g. smoke/light candles, infrared strobe lights, etc).
 - **Communications.** Radio frequency and call signs used by the ground unit at the LZ should be preplanned.
 - **Capacity.** LZ size determines how many helicopters can land at one time to load casualties.
 - **Obstacles.** LZs should be free of obstacles.
 - Drop off location and follow-on medical support.
- Flexibility. The CASEVAC system must have enough flexibility to enable the health services to respond to changing operational and clinical situations.
- General security situation/security of pick-up site.
- Forecast casualty rate.
- Capabilities of the evacuation teams (resources, personnel and equipment).
- Capabilities of the assets such as payloads and ranges.
- Adequate support planning.

1.4.9 Medical Evacuation (MEDEVAC)

MEDEVAC entails the evacuation of patients, including wounded personnel, between two medical facilities; either within (in-theatre) or out of the mission area. A MEDEVAC should be conducted, depending on the medical urgency to save lives. For comprehensive guidance on medical operational, logistical and administrative guidelines for Member States, UN

Headquarters and field Missions, consult the Medical Support Manual for United Nations Peacekeeping Operations will be available at the UN Peacekeeping Resource Hub: <https://research.un.org/en/peacekeeping-community/guidance>

In addition to a host of other essential information, the Medical Support Manual provides information on the command and control structure for integrating medical support in field Missions, CASEVAC/MEDEVAC procedures, pre-deployment medical screening requirements, entitlements to medical care in field Missions and certification requirements for field Mission medical professionals.

- **MEDEVAC Planning Considerations**

- Helicopter capabilities (availability of specialized equipment for en-route medical care).
- Crew capabilities and training standards.
- Availability of adequately trained AMET.
- Weather conditions, terrain and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- Adequate support planning including necessary medical supplies.
- A medical risk assessment to ensure the patient's condition is within acceptable safety standards.
- Medical Treatment Facilities (levels 2 and 3) should be notified and ready to receive the patient.
- Special consideration should be given for MEDEVAC flights for patients suffering from high-epidemic diseases (Ebola) as per LOA adhering all the necessary precautionary measures.

1.4.10 Search and Rescue Operations

Search and Rescue consists of operational tasks to locate, communicate with, and recover personnel from isolated areas in a permissive environment. Search and Rescue is a specialized operation performed by rescue forces to affect the recovery of distressed personnel. Search and rescue is a technical activity rendered by a group of specially trained personnel. Immediate extraction is another concept of utilizing the available force for launching a quick rescue operation.

- **Planning Considerations**

- Helicopter capabilities (including availability of required specialized equipment, such as winch).
- Crew capabilities and training standards (including special missions).
- Area of operations and nature of terrain.
- Nature of the situation which demands SAR (Sea rescue, fire rescue, flood rescue, etc).
- Appropriate search patterns/techniques.
- General security situation/threat analysis.

- Weather conditions, obstacles and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- Appropriate support planning for maximum search endurance (including provisions for extra fuel tanks).

1.4.11 Combat Search and Rescue (CSAR) Operations



CSAR refers to specialized operations in which an isolated person or persons must be recovered from non-permissive environments, typically with the existence of threats to the recovery force. ***It is a strategic operation.*** A CSAR mission includes many assets and may be carried out by a task force of helicopters, ground-attack aircraft, aerial refueling tankers and an airborne or ground command post. It can involve ground forces such as Versatile Specialized Aviation Section (VSAS). This mission is prepared and conducted after a detailed planning process. The CSAR timeline runs from the incident +1h to the incident +1 week.

- **Planning Considerations**

- Assets capabilities (including availability of required specialized equipment, such as winch).
- Crew capabilities and training standards (including special missions and clearance to operate during the night wearing NVG if necessary).
- Area of operations and nature of terrain.
- Nature of the situation which demands CSAR (downed pilot, threats, environment...).
- Appropriate search techniques.
- SOPs
- General security situation/threat analysis.
- Weather conditions, obstacles and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- Appropriate support planning for maximum search endurance (including

provisions for extra fuel tanks).

- Coordination with task forces

1.4.12 Combat Immediate Extraction (CIMEX) Operations

Immediate Extraction (IMEX) refers to specialized opportunity operations in which an isolated person or persons are recovered from hostile environments, typically with the existence of immediate threats to the recovery force. ***It is a tactical operation.*** A CIMEX is conducted with military UN aviation assets already engaged in the operation. For this mission, the UN commander can dedicate in advance, assets for that mission or use the aviation assets already engaged. For instance, ground troops such as VSAS can be tasked for that mission. The timeline for CIMEX is within 0 (after the incident) to aviation assets endurance (approximately 2 hours)

- **Planning Considerations**

- Assets capabilities (including availability of required specialized equipment, such as winch).
- Embarked troop capabilities.
- Own support capabilities.
- Area of operations and nature of terrain.
- Playtime.
- SOPs
- General security situation/threat analysis.
- Coordination with task forces

1.4.13 Neutralization/Interdiction to protect civilians and friendly forces

Action, in order to protect civilians or friendly forces, consisting of:

- Putting the opponent out of combat for a given period and zone.
- Preventing an individual, group, or organization the use of space, personnel or facilities by physical and/or psychological measures.

- **Planning Considerations**

- Assets capabilities (including availability of required specialized equipment).
- Playtime.
- Forward Area Refueling Point (FARP) display.
- Crew capabilities and training standards (including special missions).
- Area of operations and nature of terrain.
- General security situation/threat analysis.
- Weather conditions, obstacles and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- Coordination with ground forces.
- Media management.
- Risk of Collateral damage.

- ROE

1.4.14 Helicopter Landing Site Reconnaissance Operations

It is the execution of a landing site reconnaissance with the purpose of familiarizing with an approved HLS, carrying out a technical assessment to validate the existing HLS or approving a new HLS (with relevant specialists).

- **Planning Considerations**

- Helicopter capabilities (operational/technical limitations).
- Condition of landing site (sand, rocks, slopes, surroundings).
- Crew capabilities/training standards.
- Necessary security clearances from UN and host country.
- Area of operations including general security situations and threat analysis.
- Mine / improvised explosive device (IED) clearance, if required.
- Global Positioning System (GPS) coordinates, elevation and area weather.
- Aeronautical information (AIP, NOTAM, airspace).
- Presence of natural obstacles in the area.
- Mission SOPs for reconnaissance of helicopter landing sites.
- Adequate logistics support planning.
- Filling of flight plan as per UN and host country rules.
- Logistic planning for use of Versatile and Specialized Aviation Section.

1.4.15 Joint / Multilateral Operations.

Joint operations are the integrated military activities of two or more UN components, such as Army, aviation assets, marine and police forces. Multilateral operations are the integrated military activities of one or more UN contingents with other Non-UN components, such as the host country police force, or any other force in the Mission area

- **Planning considerations**

- Helicopter capabilities (including compatibility of communications with ground troops).
- Aircrew English proficiency
- Translator/Air Liaison Officer English proficiency (if required)
- Currency of the Crew and training standards.
- Detailed briefings and coordination with concerned agencies and units.
- Coordination for overall command and control of operation.
- Appropriate logistics support including ammunition and fuel.
- Area of operations, nature of terrain, obstacles and safety altitudes.
- General security situation/threat analysis.

- Weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- Coordination for appropriate air to ground communications.
- Coordination / measures to avoid fratricide.
- Measures to avoid/minimize collateral damage.
- Necessary clearances from UN and host nation.
- ROE
- CONOPS

1.5 Fixed-Wing Unit Employment Concept

1.5.1 The role of fixed-wing assets is to support the Mission's execution of its mandate particularly regarding security and stability. Tasks depend upon the type of aircraft available. Fixed-wing tasks may include surveillance and reconnaissance (including electronic surveillance), passenger, cargo and dangerous goods transportation, aerial delivery operations (supply drops by parachute), CASEVAC/MEDEVAC, search operations, VIP transportation and aerial patrol. In some cases, single-engine armed fixed-wing aircraft also be used to conduct show of force and intervention operations. The possibilities include, but are not limited to, armed reconnaissance, close support, escort of helicopters.

1.5.2 Surveillance and Reconnaissance.

The surveillance and/or reconnaissance task is to obtain relevant information to provide the necessary early warning to the force. This activity, also requires, the availability of day and night electro-optical sensor(s). This task may require, for light attack aircraft, to locate and engage hostile forces.

1.5.2.1 Surveillance — The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means.

1.5.2.2 Reconnaissance — A mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an opposing forces, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a specific area.



• Planning Considerations

- Aircraft capabilities (must be designed and equipped to carry out the task).
- Crew capabilities and training standards.
- Area of operations including nature of terrain, weather conditions and obstacles.
- Aeronautical information (AIP, NOTAM, airspace).
- Minimum safe altitude for the mission.
- General security situation/threat analysis.
- UN and host nation clearance.
- Adequate support planning for the mission.
- Filing of flight plan according to UN/host nation rules.

1.5.3 Passenger Transportation



Fixed-wing assets conduct small to large scale air movement of passengers from one location to another. The aircraft must be properly equipped and configured to accommodate passengers. Military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA. When transporting civilian passengers, military aircraft must be certified for passenger transport by the relevant aviation authority or national regulations.

• Planning Considerations

- Aircraft capabilities
- Crew capabilities and training standards.
- Area of operations, terrain, obstacles and safety altitude.
- Weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation/threat analysis.
- Terminal availability/passenger handling facilities.
- Flight planning and necessary UN and host nation clearances.

- Appropriate admin and logistics support planning.

1.5.4 Cargo Transportation



Fixed-wing UN transport utility aircraft, properly configured to accommodate cargo, move cargo from one location to another. Military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA. For mixed transportation of cargo and passengers, cargo aircraft must be certified for passenger transportation by a national certification authority and meet UN standards for carriage of passengers with unimpeded access to emergency exits. In some cases, passenger numbers may be limited to meet UN standards.

• **Planning Considerations**

- Aircraft capabilities (configured in accordance with ICAO/CAA/UN rules for cargo transportation).
- Crew capabilities and training standards.
- Aircraft loading plan/weight management plan.
- In case of dangerous goods, refer to para 1.5.5.
- Area of operations (including reconnaissance of landing sites), weather conditions and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation/threat analysis.
- Cargo handling and terminal facilities.
- Flight planning and necessary UN/host nation clearances.
- Appropriate admin and logistics support planning.
- Unimpeded aisles and access to emergency exits when passengers are carried.

1.5.5 Transportation of Dangerous Goods

Dangerous Goods (DGs) are any articles and substances having properties that, if uncontrolled, could adversely affect the safety of the passengers, crew or aircraft on which they are carried. The IATA DG guidance is issued in order to provide procedures for the shipper of dangerous goods, and guidelines for the operator of UN military aircraft that facilitate the safe transportation of dangerous items. The military unit should have procedures that cover the transport of DGs, which outlines the roles, responsibilities, documentation, and handling procedures. The carriage of DGs (whether internally, externally mounted, or underslung) in military helicopters within the UN mission must be in accordance with the following:

- For the transport of DGs (excluding ammunition, explosives and fuel), to be in accordance with IATA and International Civil Aviation Organization (ICAO) procedures, national and UN procedures regarding the movement of dangerous goods in military aircraft.
- For the transport of ammunition, explosives and fuel, to be in accordance with national regulations covering the transportation of ammunition and fuel.

For all flights involving transport of any DGs, the DGs aspects and considerations below must be incorporated into the military aviation risk management processes prior to each flight.

• Planning Considerations

- Ensure Dangerous Goods are prepared and suitable for transport by air.
- Proper inspection by qualified personnel before packaging.
- Dangerous Goods packaging, labeling and segregation.
- Completion of Dangerous Goods documentation (declarations, Notice to Captain (NOTOC), manifest).
- Aircraft capabilities (availability of specific DG handling/cargo restraints and qualified crew).
- Dangerous Goods handling, loading, unloading, airfield facilities, and associated safety distances.
- Security of Dangerous Goods and escorts (as required).
- All other considerations for cargo transportation remain valid.



1.5.6 Aerial Delivery Operations



It is an aerial supply by parachute or airdrop; or an insertion of specialized parachute troops.

Aerial supply. This requirement might be in the aftermath of natural calamities like earthquakes or floods where landing facilities may not be available or when other means are not available or less efficient.

In case of parachute troops requirement. Peace operations may request Aerial Delivery Operations for inserting specialized parachute troops if required in support of a UN mandate. Conducting aerial delivery operations requires aircraft and crew that have been specially configured and trained respectively for that purpose.

- **Planning Considerations**

- Aircraft capabilities (specially configured for parachute operations).
- Crew capabilities and training standards.
- Availability of parachute rigging/packing/repacking facilities.
- Coordination for drop zone selection and marking.
- Aeronautical information (AIP, NOTAM, airspace).
- Area of operations, weather conditions and safety altitude.
- General security situation/threat analysis.
- Availability of loadmasters / jumpmaster.
- All other considerations for cargo transportation remain valid.

1.5.7 Casualty Evacuation

As with rotary-wing operations, CASEVAC⁴ is defined as the primary evacuation of any casualty from the Point of Injury to the closest appropriate medical facility, utilizing the most appropriate means of transportation. Medical research proves that the risk of death or permanent disability is significantly reduced if people are treated as soon as possible after the onset of a life-threatening injury or illness. Based on this evidence, it is of utmost

⁴ The UN CASEVAC Policy is available at <http://dag.un.org/handle/11176/400762>

importance that appropriate life, limb and eyesight saving procedures are provided as quickly as possible. Established optimal CASEVAC timings are referred to as the 10-1-2 timeline:

- **10** (Platinum Minutes) – Immediate lifesaving measures of haemorrhage control and airway support are to be commenced at the POI after the onset of injury/illness as soon as possible. and secured within 10 minutes. Focus is on control of major bleeding and ensuring an airway for breathing. This is often referred to as the ‘Platinum 10 Minutes’.
- **1** (Golden Hour) – Advanced lifesaving support (ALS) and damage control resuscitation (DCR) are provided by emergency medical personnel within 1 hour of the onset of injury/illness. This allows for life-saving intervention and en-route stabilisation until arrival at an appropriate medical facility and is often referred to as the ‘golden hour’.
- **2** – The casualty should receive damage control surgery (DCS) within 2 hours of the onset of injury/illness.

10-1-2 timeline is cumulative in nature with a limit of 2 hours from the onset of injury/illness to DCS.

Rapid evacuation of casualties is a command responsibility and vital to operational effectiveness. Early evacuation to the appropriate treatment level offers a higher probability of saving life and limb.

- **Planning Considerations**
 - Aircraft capabilities (configured to carry lying and sitting personnel).
 - Crew capabilities and training standards.
 - Availability of AMET (refer to Medical Support Manual for UN Missions 2015).
 - Forecasted casualty rate (in case of a sustained military/humanitarian operation).
 - Nature and disposition of nearest health facilities.
 - Number and type of evacuation platforms available.
 - Area of operations, weather conditions, safety altitude.
 - Aeronautical information (AIP, NOTAM, airspace).
 - General security situation/threat analysis.
 - Flight planning and necessary UN and host nation clearances.
 - Adequate support planning.

1.5.8 Medical Evacuation

As with rotary-wing operations, Medical Evacuation (MEDEVAC) in fixed-wing operations entails the evacuation of a patients, including wounded personnel, between two medical facilities; either within (in-theatre) or out of the mission area. A MEDEVAC should be conducted, depending on the medical urgency to save lives. Once again, for comprehensive guidance on medical operational, logistical and administrative guidelines for Member States, UN Headquarters and field Missions, readers should consult the Medical Support

Manual for United Nations Field Missions – 3rd Edition – 2015 available at: <http://dag.un.org/handle/11176/387299>.

- **MEDEVAC Planning Considerations**

- Aircraft capabilities (configured for en route medical care).
- Crew capabilities and training standards.
- Availability of AMET
- A risk assessment should be completed by a medical assessment team, fully assigned and transferred to the aircraft crew, to ensure that the risks involved are understood and the level of risk is within acceptable safety standards.
- Ensure proper documentation of flight safety assurance/doctor-certified patient risk assessment and fitness to travel by air.
- Medical Treatment Facilities (level 2 and 3 clinics) should be notified and ready to receive the patient.
- Area of operations, weather conditions, safety altitude.
- Aeronautical information (AIP, NOTAM, airspace). ○ General security situation/threat analysis.
- Flight planning and necessary clearances in accordance with UN and host nation rules.
- Appropriate admin and logistics support planning.

1.5.9 Search Operations

A search operation is the use of any aircraft to prepare and execute an air operation to search for potentially or distressed person(s) on land or at sea in a permissive environment and in support of SAR operations.

- **Planning Considerations**

- Aircraft capabilities (availability of mission specific equipment).
- Crew capabilities and training standards.
- Area of operations, obstacles, safety altitudes, weather conditions.
- Aeronautical information (AIP, NOTAM, airspace).
- Landing area analysis/final clearance for landing.
- General security situation/threat analysis.
- Filing of flight plan and necessary UN and host nation clearances.
- Adequate admin and logistics support planning.

1.5.11 Aerial Patrol

Aerial patrols are provided over an objective area, critical portion of the area of operations, or other UN area of responsibility for the purpose of observing and gathering important early warning information.

- **Planning Considerations**

- Aircraft capabilities (including self-protection, design and equipment to perform the mission).
- Crew capabilities and training standards.
- Area of operations, terrain, obstacles, weather conditions and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation/threat analysis.
- Filing of flight plan and necessary UN and host nation clearances.
- Support planning for maximum flight range and endurance.

1.5.12 Armed Reconnaissance



Sgt Marfim / Força Aérea Brasileira

Reconnaissance by a light attack aircraft to locate and engage as per ROE, in a non-permissive area, rather than to attack predesignated targets.

- **Planning considerations:**

- Aircraft capabilities (including self-protection and air-to-ground attack weapons).
- Crew capabilities and training standards.
- Area of operations, terrain, obstacles, weather conditions and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation/threat analysis.
- Filing of flight plan and necessary UN and host nation clearances.
- Support planning for maximum flight range and endurance.
- Rules of engagement.

1.5.13 Close Support by Fixed wing

It is an air action against hostile targets that are in close proximity to friendly forces and

that requires detailed integration of each air mission with the fire and movement of those forces.

Close Support is an element of the joint fire support. This fires directly support land, maritime, amphibious, and special operations forces to engage hostile forces, combat formations, and facilities in pursuit of tactical and operational objectives.

- **Planning considerations:**

- Aircraft capabilities (including self-protection and air-to-ground attack weapons, communication and Data-Link capabilities).
- Crew capabilities and training standards.
- Area of operations, terrain, obstacles, weather conditions and safety altitude.
- Aeronautical information (AIP, NOTAM, airspace).
- General security situation/threat analysis.
- Filing of flight plan and necessary UN and host nation clearances.
- Support planning for maximum flight range and endurance.
- Support troops.

1.6 Unmanned Aircraft Systems (UAS) Unit Employment Concept

UAS military units are essential to obtain, in near-real time, intelligence and track individuals or groups of interest in ISR (Intelligence, Surveillance and Reconnaissance) operations, or to provide communication relay. The tasks of the unit depend on the type of UAS (refer to Annex F), its capabilities and payloads available. These capabilities, functions and tasks will be described in the respective Statement of Units Requirements approved by the Department of Peace Operations (DPO). In addition to those already mentioned, additional tasks may also include Search Operations and Joint Operations. Some specialized systems, that need a bigger structure to operate are called RPAS, including UAS like Line of Sight (LOS) and Beyond Line of Sight (BLOS) systems that use advanced and complex control systems. Refer to Annex F for more detailed description. **Weapons of any type are NOT to be used from UAS in the United Nations Peace Operations.**

1.6.1 ISR (Intelligence, Surveillance and Reconnaissance) using UAS

The execution of ISR mission by UAS provides a secure way to obtain information for the decision-making of the UN troops. The ability to analyze data in real time, identifying and reporting location of hostile forces and equipment, identifying elements on the ground conducting violations, providing early warning, and improving troops readiness to mitigate threats. ISR missions can provide a variety of techniques, depending on the sensors employed, desired objective and the scenario conditions. For this purpose, it is essential that the UAS units are employed within the terms of the Peacekeeping-Intelligence Policy 1 May 2019.

1.7 Embarked Aviation Unit Employment Concept



Operating aircraft from ships demands a specific understanding of the command relationship, assignments, tasks, preparation and training required to conduct Naval Air Operations safely and efficiently.

The Embarked Aviation Detachment (EAD) is a fraction of an aircraft squadron, with the task of operating organically from a ship. The EAD consists of pilots, equipment and sensor operators and aircraft maintenance specialists related to aspects of air operations, flight safety and administration focused on the EAD demands. The exact composition of the EAD will depend on the characteristics and duration of the operation, the type of vessel and the number of aircraft on board.

1.7.1 Embarked Aviation Rotary-Wing Unit Employment Concept

Military helicopters operating from ships support the Mission security and stability, increasing the range of the sensors and armaments of the ships, whether for anti-surface, anti-submarine or electronic warfare, power projection ashore, including amphibious operations. The aircraft used on board must have all the characteristics and personnel qualified for such use as reconnaissance and surveillance, observation, CASEVAC/MEDEVAC, VIP transportation, search and rescue operation, cargo transportation and passenger transportation. In addition to those already mentioned, additional tasks may also include; armed reconnaissance, air assault/quick reaction operations, close support missions and firefighting, all of these, in maritime or coastal scenarios. All naval aviation operations will be under control from the mother ship.

The ship intended to perform air operations must be capable of such operations and shall have qualified personnel to safely perform all missions agreed upon in the Letter of Assist (LOA) and the Memorandum of Understanding (MOU).

- **Planning Considerations:**

- Commanders intentions (what is the mission?);
- Tactical Scenario;
- Command and Control;

- Ship capabilities to carry out the task;
- Helicopter capabilities including design and equipment to perform the intended task;
- Crew capabilities and qualifications;
- Operation Area, threat analysis, distances and limitations;
- Weather and sea conditions;
- Minimum safe altitude;
- General security situation;
- Adequate planning support; and
- ROE.

1.8 Military Airfield Support Unit

In accordance with the UN Aviation Manual (2018), and based on the Annex 14 to the Convention on International Civil Aviation the aerodromes should have Emergency Crash and Rescue (ECR), NAVAIDS, ground handling services (GHS), ground support equipment (GSE), Meteorological information, etc. Those services can be performed directly by United Nations staff or by a contracted commercial airport ground handling service provider or by a TCC military Airfield Support/Service Unit.

In case a military ASU is generated to provide these services, the Unit should be able to provide Airfield / Ramp Control, Flight Following, Aviation Emergency Crash and Rescue (including Mobile ERT, off-base), Terminal (Cargo / Passenger Handling) Services and weather observation, on a 24/7 basis, or as requested in the respective SUR.

The Unit Employment Concept states that the unit is to provide services in specific airfield such as flight following, emergency crash response (ECR) and firefighting, and terminal operations. The ASU needs to coordinate with the other service provider to keep abreast on the happenings and essential services. The relevant Statement of Unit Requirement (SUR) defines the requirements for the sustainable support provided by the ASU to secure continuous airfield operations at the specific airfield.

In case a TCC is not capable of deploying a special type of service (like meteorological service), then UN would agree to a triangular partnership with other capable TCCs.

CHAPTER 2



Capabilities and Tasks of the UN Military Aviation Unit

2.1 Introduction

2.1.1 This chapter explains the types, roles, capabilities and tasks of UN military aviation units. Aviation services are an essential part of United Nations peacekeeping operations. Flying day and night, seven days a week, military aviation may involve operations into hostile areas, locations where ground support is nonexistent or places where airfield security cannot be guaranteed. Given these demands, a UN military aviation unit must be organized, equipped and capable of dealing with countless eventualities. Unlike a standard infantry battalion, the organization and capabilities of a military aviation unit are highly dependent on the unique requirements of each field mission, its Force concept, desired end state and UN mandate. The specifics of equipment, organization, tasks and capabilities discussed in this manual are meant only as guidelines.

2.1.2 The military aviation operational capabilities and tasks described herein are divided according to the broad categories of rotary, fixed-wing aircraft and Unmanned Aerial Systems, offering a quick comparison based on the different aircraft characteristics. Within each aircraft type are listed the most common capabilities and tasks performed by that particular military aviation asset. For a more extensive discussion of how these tasks are performed, see Chapter 1, Employment Concept for UN Military Aviation, and Annexes B and C.



2.2 Types of Military Aviation Units

UN military aviation units consist of three types (see Annex A for a comparison):

- **Rotary-Wing**

The rotary wing units could be either or a combination of the following:

- Light Utility Helicopter Unit
- Medium Utility Helicopter Unit

- Heavy Cargo Helicopter Unit
- Attack /Armed Helicopter Unit



• Fixed-Wing

- Light Air Reconnaissance Unit
- Transport/Tactical Airlift Unit
- Attack/Armed Aircraft Unit



• Unmanned Aerial Systems (UAS)⁵

- Class I
- Class II
- Class III

⁵ Refer to page 113 of UN Aviation Manual 2018.

2.3 Rotary-Wing Unit Capabilities and Tasks

NVG capability is a mandatory UN requirement for every category of helicopter units. All the helicopters must have appropriate communication equipment for communicating with the ground troops.

2.3.1 Light Utility Helicopter Unit



- **Role of the Light Utility Helicopter Unit.** The Light Utility Helicopter unit is a Force asset operating day and night in support of UN Mission operations. Its role is primarily operational, with a limited logistical role for UN operations in hostile areas where there is no ground support, or where airfield security cannot be guaranteed. The light utility helicopter unit will normally be based at sector headquarters, but 25-30% of helicopters from the unit may be detached for up to 30 days, or as specified in the LOA, on the Force Commander's authority in support of operations in other parts of the area of operations. The unit must be able to sustain its personnel and equipment while maintaining a capacity for 24/7 operations.
- **Capabilities of the Light Utility Helicopter Unit.** The light utility helicopter unit should have the capability to:
 - Fly under day/night visual flight rules.
 - Sling load pallets.
 - Fly a ferry range of approximately 250 nm (460 km). Depending on the carrying load requirements, the altitude and the temperature, the specified range may be reduced.
 - Provide 24/7 reaction response under visual meteorological conditions (VMC).
 - Conduct Air Assault operations, both day and night, in conjunction with specially trained troops.
 - Establish its own FARP by day and night.
 - Refuel in the field area from barrels, and/or field area refueling points, if required.
 - Provide a response time to take off within 2 hours of warning, except when designated as the Quick Reaction Force (QRF). The Force Commander will define the required QRF response time according to operational needs and unit capacities.
 - Transport fuel from the field area refueling point for other helicopters.
 - Activate automatic direction finder (ADF) equipment to guide aircraft to an

emergency locator transmitter (ELT-121.50, 243.00 and 406.00 MHz).

- Mount one machine gun on each helicopter for self-protection.
- Evacuate four lying and six sitting casualties.
- Mount and employ a winch sufficient to lift two persons with a 40 meters cable.
- Achieve a flight altitude up to 14000 ft above mean sea level (AMSL).
- Provide (if required) basic FLIR for LZ Surveillance, Search and Rescue, Air Patrolling and situational awareness when flying NVG.

• **Tasks of the Light Utility Helicopter Unit.** The light utility helicopter unit has the following tasks:

- Reconnaissance and surveillance.
- Passenger transportation.
- Limited cargo transportation (internal and sling).
- Air assault/quick reaction operations.
- Casualty evacuation.
- Search and rescue operations.
- VIP transportation.
- Helicopter landing site reconnaissance operations.
- Joint operations.

• **Aircraft of the Light Utility Helicopter Unit.** This unit consists of helicopters with a maximum takeoff weight of less than 4000 kilograms. See Annex A in order to consult aircraft in this category. Each unit will have at least 3-4 helicopters, or more depending upon Mission requirements and the LOA.

• **Minimum Equipment Requirements of the Light Utility Helicopter Unit.** Light utility helicopters are to be equipped with:

- GPS.
- Satellite tracking system.
- Satellite phone.
- Very High Frequency (VHF) / Amplitude Modulation (AM) and High Frequency (HF) communication equipment compatible with Mission communications.
- Headset/intercom system to enable one passenger to communicate with the flight crew during a reconnaissance flight.
- Auxiliary fuel pump, filter and approved fuel drums for refueling.
- Fire extinguishers and first aid kits.
- Radar altimeter.
- Transponder.
- Automatic Direction Finder (ADF).

- Survival kits appropriate to the Mission area with emergency locator transmitters (ELT-406 MHZ).
 - Hearing protection for each passenger.
 - Operate a search light of approximately 30 million candlepower compatible with NVG.
 - Night vision devices compatible with NVG.
- **Maintenance Requirements of the Light Utility Helicopter Unit.** The light utility helicopter unit must include a fully independent maintenance component capable of conducting all necessary scheduled maintenance and repairs.

2.3.2 Medium Utility Helicopter Unit



- **Role of the Medium Utility Helicopter Unit.** The medium utility helicopter unit's primary role is the projection of force across the Mission area, particularly the rapid deployment of specialized troops. The unit's secondary role is logistical support and support to the Mission's various monitoring responsibilities that contribute to situational awareness and decision making. The medium utility helicopter unit is a Force asset, sometimes assigned to the brigade/sector level, providing, day and night, tactical and logistical support. The unit is normally based at sector headquarters but, on the authority of the Force Commander, 25-30% of its helicopters may be detached to another part of the area of operations for up to 30 days, or as specified in the LOA. The unit must be able to sustain its personnel and equipment for 24/7 operations.
- **Capabilities of the Medium Utility Helicopter Unit.** The medium utility helicopter unit should have the capability to:
 - Fly day/night, under visual/instrument flying rules.
 - Fly a ferry range of approximately 360 nm (670 km). Depending on the load carrying requirements, the altitude and temperature, the specified range may be reduced.
 - Provide 24/7 reaction response under VMC/ Instrument Meteorological Conditions (IMC).

- Be fully operational in tropical climates and dusty conditions.
 - Lift up to 10 troops with individual and crew equipment (full battle order), depending on the atmospheric conditions.
 - Provide (if required) basic FLIR for LZ surveillance, Search and Rescue, Air Patrolling and situational awareness when flying NVG.
 - Secure and lift internal cargo with proper cargo straps and tie downs for up to 3000 kg at 1500 ft AMSL.
 - Carry sling load pallets and light vehicles (up to at least 3000 kg) complete with hooks, slings, spiders, straps and nets.
 - Pre-position on a Temporary Operations Base (TOB) for up to four weeks.
 - Refuel in the field area from barrels, if required.
 - Provide a response time to take off within 2 hours of warning, except when designated as the Quick Reaction Force (QRF). The Force Commander will define the required QRF response time according to operational needs and unit capacities.
 - Transport fuel from the field area refueling point for other helicopters.
 - Land on unprepared terrain using Visual Flight Rules (VFR), by day and night without assistance from the troops on the ground.
 - Activate direction finder (ADF) equipment to guide the aircraft to an emergency locator transmitter (ELT-406 MHz).
 - Mount two machine guns on each helicopter for self-protection and support of other helicopters when flying in formation.
 - Evacuate 5-6 lying or 10 sitting casualties with at least 2 medical attendants.
 - Mount and employ a winch sufficient to lift two persons with a 40-meter cable.
 - Conduct Search and Rescue by single helicopter.
 - Operate a search light of approximately 30 million candlepower.
 - Attach additional fuel tanks for extended range.
 - Deploy/insert troops by fast rope/rappelling.
 - Provide an on-board intercom system with at least six plug-in stations for communication during air patrols and mobile monitoring.
- **Tasks of the Medium Utility Helicopter Unit.** The medium utility helicopter unit has the following tasks:
- Surveillance and reconnaissance.
 - Air patrols.
 - Air assault/quick reaction operations.
 - Helicopter landing site reconnaissance operations.
 - Joint operations.
 - Search and rescue operations.
 - CASEVAC/MEDEVAC.
 - Passenger transportation.

- Surveillance and reconnaissance tasks.
- Cargo transportation (internal and sling).

Aircraft of the Medium Utility Helicopter Unit. Medium utility helicopter units consist of helicopters with a maximum takeoff weight of more than 4000 kilograms and a capacity of at least 10 passengers. See Annex A in order to consult aircraft in this category. Each unit will typically have 4-6 helicopters, or more depending upon LOA arrangements.

- **Minimum Equipment Requirements of the Medium Utility Helicopter Unit.**

Medium utility helicopters are to be equipped with:

- Global Positioning System (GPS).
- Satellite tracking system.
- Satellite phone.
- VHF/AM and HF communication equipment compatible with Mission communications.
- Headset/intercom system to enable one passenger to communicate with the flight crew during reconnaissance flights.
- Auxiliary fuel pump, filter and approved fuel drums for refueling.
- Fire extinguishers and first aid kits.
- Radar altimeter.
- Transponder, Mode C.
- Weather radar.
- Automatic Direction Finder (ADF).
- Instrument Landing System (ILS)/ VHF Omnidirectional Range (VOR)
- Helicopter Terrain Awareness and Warning System (HTAWS).
- Survival kits appropriate to the Mission area with emergency locator transmitters (ELT-406 MHZ).
- Hearing protection for each passenger.
- Winch for two persons with 40-meter cable.
- Search light of approximately 30 million candlepower, compatible with NVG.
- Night vision devices.

- **Maintenance Requirements of the Medium Utility Helicopter Unit.**

The number and qualifications of maintenance personnel for the medium utility helicopter unit must be sufficient to meet all requirements for day and night operations, 24/7 for up to 45 flight hours/month/helicopter or as specified in the SUR. The maintenance capabilities remain the same as for the light utility helicopter unit.

2.3.3 Heavy Cargo Helicopter Unit



- **Role of the Heavy Cargo Helicopter Unit.** The heavy cargo helicopter unit is a Force asset. It operates day and night in support of Mission operations. This unit has a primarily logistical role, with some operational tasks to support UN operations. The unit is normally based at sector headquarters but, on the authority of the Force Commander, 25-30% of its helicopters may be detached to another part of the area of operations for up to 30 days, or as specified in the LOA. The unit must be able to sustain its personnel and equipment for 24/7 operations.
- **Capabilities of the Heavy Cargo Helicopter Unit.** The heavy cargo helicopter unit must have the capability to:
 - Fly day/night, under visual/instrument flying rules.
 - Achieve a ferry range of approximately 380 nm (700 km). Depending on the carrying load requirements, the altitude and the temperature, the specified range may be reduced.
 - Provide 24/7 reaction response under VMC/IMC.
 - Lift at least 16 troops (depending on the type of helicopter) with individual and crew equipment (in full battle order), depending on the atmospheric conditions.
 - Pre-position at forward locations for up to four weeks. This capability will be coordinated and agreed upon during the LOA negotiations depending on the military requirements for any specific Mission.
 - Refuel at field areas from barrels, if required.
 - Provide a response time to take off within 2 hours of warning, except when designated as the Quick Reaction Force (QRF). The Force Commander will define the required QRF response time according to operational needs and unit capacities.
 - Transport fuel from field area refueling points for other helicopters.
 - Fly and land on unprepared terrain in VMC by day.
 - Fly and land by night on unprepared terrain, without assistance from troops on the

ground, only if conditions of dust, ambient light, MET and crews` NVG currency and proficiency permit.

- Activate automatic direction finder (ADF) equipment to guide aircraft to an emergency locator transmitter (ELT-406 MHz).
- Mount two machine guns on each helicopter for self-protection and support of other helicopters when flying in formation.
- Evacuate 8-10 lying or 14-18 sitting casualties with at least 2 medical attendants.
- Provide and mount a winch capable of lifting two persons with a 40-meter cable.
- Carry sling pallets and light vehicles (up to 3500 kg) complete with hooks, slings, spiders and nets.

• **Tasks of the Heavy Cargo/ Utility Helicopter Unit.** The heavy cargo/utility helicopter unit has the following tasks:

- Medium/heavy cargo transportation (internal and sling).
- Surveillance and reconnaissance.
- Passenger transportation.
- Air Assault/Quick Reaction operations.
- CASEVAC/MEDEVAC.
- Search and rescue operations.
- Helicopter landing site reconnaissance operations.

• **Aircraft of the Heavy Cargo Helicopter Unit.** Heavy cargo helicopter units consist of helicopters with a maximum takeoff weight of more than 9000 kilograms. See Annex A in order to consult aircraft in this category. Each unit typically has 3-4 helicopters, or more depending upon LOA specifications.

• **Minimum Equipment Requirements of the Heavy Cargo Helicopter Unit.** Heavy cargo helicopters are to be equipped with:

- GPS.
- Flight data recorder/cockpit voice recorder.
- Satellite tracking system.
- Satellite phone.
- VHF/AM and HF communication equipment compatible with Mission communications.
- Headset/intercom system for one passenger to communicate with the flight crew during a reconnaissance flight.
- Auxiliary fuel pump, filter and approved drums for refueling.
- Fire extinguishers and first aid kits.
- Radar altimeter.
- Transponder, Mode 3/A Mode C.

- Weather radar.
- Automatic Direction Finder (ADF).
- Survival kits appropriate to the Mission area with emergency locator transmitters (ELT-406 MHZ).
- Hearing protection for each passenger.
- Winch capable of lifting 2 persons with a 40-meter cable.
- Search light of approximately 30 million candlepower compatible with NVG.
- Auxiliary fuel tanks for extended flights.
- Night vision devices.
- TAWS (Terrain Awareness and Warning System)

• **Maintenance Requirements of the Heavy Cargo Helicopter Unit.** The number and qualifications of unit maintenance personnel must be sufficient for day and night operations, 24/7, and for up to the minimum average flight hours/month/helicopter, in compliance with applicable standards. The maintenance capability requirements for the heavy cargo helicopter unit are the same as those for light and medium utility helicopter units.

2.3.4 Attack/Armed Helicopter Unit



Attack/Armed helicopters have the ability of firing to hostile targets (i.e. fire support). Attack helicopters are more focused on pure offensive capabilities; therefore, they are designed to mainly carry weapons. Those weapons may include advanced tactical radars, anti-armor, air to ground, or air-to-air guided weapons, and equipped with integrated fire control and aiming system. In case of armed helicopters, they are designed mainly to transport armed troops, although they can be mounted with some weapons for fire support role. The usual type of weapons that can be mounted on armed helicopters are guns, cannons, unguided rockets, bombs or cluster of bombs.

- **Role of the Attack/Armed Helicopter Unit.** The attack/armed military aviation unit is a Force asset and operates day and night in support of operations. It has a primarily defensive and deterrent role, especially in the protection of civilians (POC) and must be able to sustain its personnel and equipment. The aircraft must possess forward arming and refueling capability, as well as capacity for 24/7 operations.
- **Capabilities of the Attack/Armed Helicopter Unit.** The attack helicopter unit must have the following capabilities:
 - Guns, rockets and (if possible) anti-tank missile capability.
 - Day/night VFR/ Instrument Flight Rules (IFR) capabilities.
 - Range of 220 nm (409 km) carrying maximum allowable armament.
 - Minimum cruise speed of 100-120 knots.
 - 24/7 reaction response with up to 45 minutes take-off time.
 - Establish own forward operating LZ.
 - Refuel from barrels at field area.
 - Communicate and liaise with coordinating agencies supporting operations.
 - If possible, capability to operate with Night Vision Goggles.
- **Tasks of the Attack/Armed Helicopter Unit.** The attack helicopter unit has the following tasks:
 - Primary Tasks:
 - Fire support to UN ground forces.
 - Deterrence/interdiction/neutralization of hostile elements or weapons, as part of protection of civilians and self-defense.
 - Area surveillance and reconnaissance.
 - Armed escort.
 - Fire support to search and rescue operations.
 - Close Aviation Support.
 - Secondary Tasks: Preferably, it should also be able to do the following:
 - Observation, monitoring and surveillance by helicopter crew.
 - CASEVAC.
 - Search and rescue.
- **Aircraft of the Attack/Armed Helicopter Unit.** See Annex A in order to consult aircraft in this category. Each unit will typically have 3-4 attack helicopters, or more depending upon the LOA agreement.

• **Minimum Equipment Requirements of the Attack/Armed Helicopter Unit.** The helicopters are to be equipped with:

- Automatic Direction Finder (ADF) equipment.
- Emergency Locator Transmitters (ELT-406 MHz).
- Global Positioning System.
- Fire extinguishers and first aid kits.
- Flight data recorder (FDR) and cockpit voice recorder (CVR).
- Transponder Mode 3/A
- Radio altimeter.
- Survival kits appropriate to Mission area with emergency locator transmitters (ELT-406 MHz).
- Night vision devices.

Desirable:

- Forward Looking Infra-Red Radar capability for surveillance and Search and Rescue.
- Weather radar.
- Anti-heat seeking weapons countermeasures.
- Winch for two persons.
- Search light of approximately 30 million candlepower NVG compatible.
- Possibility to use additional tanks to increase range up to 360 nm (670 km).
- IFR capability.
- Laser designator.

• **Maintenance Requirements of the Attack/Armed Helicopter Unit.** Capability remains the same as for other helicopter units except for the additional need for ammunition handling/ storage/ weapons / ordnance experts.

2.3.5 Helicopter for Embarked Operations



Role of the helicopter for embarked operations. Helicopters for embarked operations may be multipurpose, utility, reconnaissance or attack helicopters, all of them operating from a ship with capacity to operate 24/7. Embarked operation has characteristics of employment and operation, as well restrictions that deserve special attention. The joint operation of the aircraft intends to increase the range of the sensors and armaments of the ships, so that the aircraft used on board must have all the characteristics and personnel qualified for such use. The types of embarked operations will depend on Ship capacity; however, some ships with embarked operations capability use Light Utility, Medium Utility or Heavy Cargo helicopters Units.

- **Capabilities of the Helicopters for embarked operations.** The helicopters shall be capable of:
 - Day/Night observation with Forward Looking Infrared Systems (FLIR) or night vision devices if in reconnaissance and attack, or in surveillance tasks;
 - Provision of MEDEVAC/CASEVAC;
 - Capability to provide airlift troop transportation and logistics when required.
 - Participation in Search and Rescue (SAR) operations;
 - Day/Night IFR capability devices if in reconnaissance and attack or in surveillance tasks;
 - Provision of limited extraction if necessary.
 - Transponder Mode 2, 3, A/C/S.
 - Minimum sustainability of 1h30min flight per day.
- **Tasks.** The helicopter for embarked operations has the tasks according to its categories (light / medium / heavy), and the following task, when applicable:
 - Capability to engage any hostile surface vessel.
- **Aircraft for Embarked operations.** See Annex A in order to consult aircraft in this category. The number of aircraft embarked will depend on the ship and the LOA

agreement.

- **Minimum Equipment Requirements of the helicopter embarked operations.**

The helicopters are to be equipped with:

- Automatic Direction Finder (ADF) equipment.
- Emergency Locator Transmitters (ELT-406 MHz).
- Global Positioning System (GPS).
- Radio altimeter.
- Transponder 3/A
- Latching equipment to hold the aircraft over the deck.
- Equipment to moor the blades.
- Survival kits appropriate to Mission area with emergency locator transmitters (ELT-406 MHz).
- Night vision devices.
- Winch capable of lifting 2 persons with a 40-meter cable.

Desirable:

- Emergency flotation system.
- Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR).
- Forward Looking Infra-Red Radar capability for surveillance and Search and Rescue.
- Weather radar.
- Additional fuel tanks.
- Carry sling load complete with hooks, slings, spiders, straps and nets.
- Hoist for two persons.
- Search light of approximately 30 million candlepower NVG compatible.

- **Maintenance Requirements of the Helicopter embarked operations.** The helicopter for embarked operations must include a maintenance component capable of conducting necessary scheduled maintenance and repairs. This component must include all required equipment, tools, maintenance manuals and specialist documentation. Portion of the necessary equipment may be used from the ship equipment.

2.3.6 Versatile and Specialized Aviation Support / Security Section

- **Role of the Versatile and Specialized Aviation Support / Security Section (VSAS)** is to provide every specific support that a rotary / fixed wings unit could expect. These platoons are highly specialized and dedicated to tactical support of aviation units. Even though it can be transported with vehicles most of the time, when deployed especially for unplanned missions requiring emergency aviation response, it is an embarked unit.

- **Capabilities of the VSAS**

- Support CASEVAC and Immediate Extraction;
- Reconnaissance of DZ/LZ;
- Security of DZ/LZ.
- On field replenishment;
- Day/Night guidance of aircraft;
- Fast roping, air transportation;
- Setting up a FARP.

Minimum Equipment Requirements of the VSAS

The VSAS are recommended to be equipped with:

- Signals means compatible with both ground and aviation unit;
- Survival kits appropriate to Mission area with emergency locator transmitters (ELT-406 MHZ).
- Location capabilities.

The VSAS are desired to be equipped:

- Image intensification, e.g., binoculars.
- Night vision devices.
- Hoist capability.

2.4 Fixed-Wing Unit Capabilities and Tasks

2.4.1 Light Aerial Reconnaissance Unit



- **Role of the Light Aerial Reconnaissance Unit.** The light aerial reconnaissance unit is a Force asset. It operates day and night in support of Mission operations. Its primary function is reconnaissance but can perform a limited transportation role. The unit must be able to sustain its personnel and equipment as well as have a 24/7 operational capacity on airfields where night landing and takeoff facilities are available.
- **Capabilities of the Light Aerial Reconnaissance Unit.** The light aerial reconnaissance unit must be:
 - Properly certified for day/night VFR/IFR operations.
 - Equipped with ISR sensors to support the reconnaissance role.
 - Overwater certifiable, in accordance with Federal Aviation Regulation (FAR), Part 25 (ditching requirements).
 - Capable of using JP-8 or Jet-A fuel.
 - Able to carry a minimum of 2-6 passengers, plus crew.
 - Able to take off and land with a minimum of 1800 lbs. (818 kg). total of passengers and cargo from unimproved, austere landing surfaces such as dirt, grass, gravel, etc.
 - In possession of aircraft using cargo doors that allow loading/unloading of 36-inch (91,44 cm) warehouse skids and loading/unloading of litter patients.
 - In possession of aircraft able to operate from austere bases without any ground support other than fuel being available for re-fueling operations.
 - Capable of a 900 nm range without using ferry tank(s). Additionally, the aircraft must be capable of internal ferry tank operations.
 - Using aircraft with dual pilot duty stations.

• **Tasks of the Light Aerial Reconnaissance Unit.** The light aerial reconnaissance unit has the following tasks:

- Area surveillance and reconnaissance with day and night electro-optical and **infra-red sensor** capability.
- Visual surveillance and reconnaissance.
- Tactical air patrol.
- Visual observation in support of search and rescue operations.
- Limited passenger and cargo transportation.
- Casualty evacuation.
- VIP transportation.

• **Aircraft of the Light Aerial Reconnaissance Unit.** See Annex A in order to consult aircraft in this category. Each unit will have 2-3 aircraft depending on LOA arrangements and based on the relevant SUR.

• **Minimum Equipment Requirements of the Light Aerial Reconnaissance Unit.** The aircraft are to be equipped with:

- Pod for digital imagery with electro-optical and infra-red cameras for day and night operations.
- Cameras with vertical and standoff capability with focal planes of more than 150 mm.
- Category 1 Instrument Flight Rules (IFR) approach capable.
- Dual Azimuth Automatic Direction Finder (ADF).
- Dual Very High Frequency (VHF) Omni-directional Range (VOR)/Distance Measuring Equipment (DME).
- Global Positioning System (GPS).
- Transponder Mode 3/A. Mode C.
- Weather radar, transponder that permits full utilization of the aircraft's on-board IFR flight capabilities to include Instrument Meteorological Conditions/Instrument Landing System (IMC/ILS) landings.
- Communications suite that consists of an internal crew intercom and the ability to communicate with Air Traffic Control (ATC) facilities and operational agencies, both line of sight (LOS) and BLOS via voice on dual VHF Voice, High Frequency (HF), and Ultra High Frequency (UHF) desired.
- Operational radius of 800 km, with drop tanks if required.
- Survival kits appropriate to Mission area with emergency locator transmitters (ELT- 406 MHZ).

Desirable:

- Satellite tracking system and GPWS (or equivalent) must.

- **Maintenance Requirements of the Light Aerial Reconnaissance Unit**

The light air reconnaissance unit must have an independent maintenance component, capable of routinely carrying out necessary scheduled maintenance and repairs. This component must include all required equipment, tools, maintenance manuals and specialist documentation to conduct all maintenance activities. The number and qualifications of maintenance personnel must be sufficient to ensure that all maintenance requirements are met for day and night operations, 24/7, and for up to the average minimum flight hours/month /unit, in compliance with applicable standards. Tactical Air Transport Unit

2.4.2 Tactical Air Transport Unit



- **Role of the Tactical Air Transport Unit.** The transport / tactical airlift unit is a Force asset operating day and night in support of Mission operations. Its primary function is cargo and parachute/air drops, and it can be used for freight carrying and passenger transportation in its secondary role. The unit must be able to sustain its personnel and equipment, as well as sustain 24/7 operations on airfields where night landing and takeoff facilities are available.
- **Capabilities of the Tactical Air Transport Unit.** The transport / tactical airlift unit must have the following aircraft capabilities:

Operational Capability

- Operate in a hostile environment or in the absence of flight handling facilities.
- Operate from main operating bases and unpaved runways.
- Pre-position independently at forward locations for up to 30 days.
- Conduct self-defense by passive defense equipment, laser warning receivers and chaff/flare dispensers, including add-on armored plates for the aircrew (desirable).
- Aircraft may be required at any time, day/night, for both VFR and IFR flights on a 24/7 basis, given a response time of 4 hours and crew rest. Adequate flight crews (numbers vary depending on aircraft type) are required to maintain this capability.
- Aircraft must be capable operating on airfields of 1000 meters in length, including both paved and unpaved surfaces.

Transport / tactical airlift capability:

- Lift a minimum of 40 troops with full equipment. (desirable: 90 troops).
 - Internal cargo capacity, complete with proper cargo straps and tie-downs, for a minimum 5000 kg (desirable: 15000 kg, with dimensions of 7.65 m x 2.90 m x 2.35 m; e.g., sufficient to carry an armored personnel carrier).
 - Removable paratrooper seats for up to 54 passengers complete with 9G rated seat belts for each seat. Seat belt buckles are to have metal-to-metal couplings, which operate in a snap and lock manner that do not allow slippage.
 - Aircraft must be capable of 1800 nm with an extended range of 2200 nm, for a minimum of 10 hours duration at a normal cruising speed of 200 knots (desirable: 280 knots).
 - Able to airdrop freight and deploy paratroopers with an opened rear ramp.
 - The cargo area must be a roller deck capable of accepting standard size pallets loaded to a height of at least 1.7 meters.
 - CASEVAC capable with removable litter kits for casualty or medical evacuation flights for a minimum of 20 litter cases. (desirable: 50 litter cases).
- **Tasks of the Tactical Air Transport Unit.** The tactical air transport unit has the following tasks:
 - Primary Task: Provide tactical airlift for the Mission.
 - Secondary Tasks:
 - CASEVAC/MEDEVAC capabilities augmentation.
 - Passenger transportation.
 - Cargo transportation.
 - **Aircraft of the Tactical Air Transport Unit.** See Annex A in order to consult aircraft in this category. Each unit will typically have 1-2 aircraft depending upon the LOA.
 - **Minimum Equipment Requirements of the Tactical Air Transport Unit.** The aircraft are to be equipped with:
 - 1 x Global Positioning System (GPS).
 - 2 x self-activated Emergency Locator Transmitters (ELT-406 MHz).
 - Dual VHF/AM (118.00-135.975 MHz), VHF/AM low band (33.00- 158.95 MHz).
 - HF communications equipment compatible with Mission communications equipment HF (1 - 29 MHz).
 - UHF FM (military frequencies).
 - Traffic Collision Avoidance System (TCAS).
 - Automatic Emergency Locator Transmitter (ELT-406 MHz).
 - Transponder Mode 3/A. Mode S.
 - Weather radar.

- Passenger briefing cards in English.
 - Posted “No-Smoking” signs prohibiting smoking on the aircraft in English.
 - Fire extinguishers and first aid kits.
 - Survival kits appropriate to the Mission area.
 - Radar altimeter.
 - Enhanced Ground Proximity Warning System (EGPWS)
 - Navigational systems such as ILS/VHF Omnidirectional Range (VOR), Distance Measuring Equipment (DME) and ADF.
 - Tracking system.
 - A flotation device (life jacket) for each passenger when conducting flights over water.
 - Cargo nets and straps.
 - Satellite phone.
 - Self-protection systems.
- **Maintenance Requirements of the Tactical Air Transport Unit.** The unit must have an independent maintenance component capable of routinely carrying out all necessary scheduled maintenance and repair. This component must include all required equipment, tools, maintenance manuals and specialist documentation to conduct necessary maintenance activities.

2.4.3 Attack/Armed Fixed Wing Unit



- **Role of the Attack/Armed Fixed-Wing Unit.** The attack/armed military aviation unit is a Force asset and operates day and night in support of operations. It has a primarily defensive and deterrent role, especially in the protection of civilians (POC) and must be able to sustain its personnel and equipment. The aircraft must possess forward arming and refueling capability, as well as capacity for 24/7 operations.
- **Capabilities of the Attack/Armed Fixed-Wing Unit.** The attack fixed-wing unit must have the following capabilities:

- Machine Guns/cannons, bombs, rockets and, (if possible) anti-tank missile capability.
- Day/night VFR/IFR capabilities.
- Range of 150 nm (280 km) carrying permissible armament.
- Possibility to use additional fuel tanks to increase range, but to the detriment of armament.
- Minimum cruise speed of 180-200 knots.
- 24/7 reaction response with 45 minutes take-off time.
- Operate in forward advance positions, taking off, landing, refueling and rearming at a FARP located on a tarmac road.
- Operate with Night Vision Goggles (NVG) and Forward Looking Infrared (FLIR) is desirable.
- **Tasks of the Attack/Armed Fixed-Wing Unit.** The attack Fixed-Wing unit has the following tasks:

Primary Tasks

- Fire support to UN ground forces.
- Interdiction/neutralization of hostile elements or weapons, particularly as part of protection of civilians.
- Area surveillance and reconnaissance.
- Escort; and
- Fire support to search and rescue operations.
- **Aircraft of the Attack/Armed Fixed-Wing Unit.** See Annex A in order to consult aircraft in this category. Each unit will typically have 3-4 attack/fighter aircraft or more, depending on the LOA agreement.
- **Minimum Equipment Requirements of the Attack/Armed Fixed-Wing Unit.** The aircraft are to be equipped with:
 - Automatic Direction Finder (ADF) equipment.
 - Emergency Locator Transmitters (ELT-406 MHz).
 - GPS.
 - Flight data recorder (FDR) and cockpit voice recorder (CVR).
 - Survival kits appropriate to the mission area with emergency locator transmitters (ELT-406 MHz).
 - Night vision devices; and
 - Image intensification, e.g., binoculars.
 - Forward Looking Infra-Red capability for surveillance and support for Search and Rescue operations.
 - Self-Protection System (Chaff and Flare Dispensing System and MAWS).

- Transponder Mode 3/A C.
- Weather radar or Storm Scope.
- Additional fuel tanks.
- Data link system.
- TAWS/ GPWS (or equivalent).
- Satellite tracking system.
- Ejection seat for the pilots.
- Laser Range Finder.
- Armor.

- **Maintenance Requirements of the Attack/Armed Fixed-Wing Unit.** The attack/armed fixed-wing unit must include a fully independent maintenance component capable to conduct necessary scheduled maintenance and repairs.

2.5 Unmanned/Remotely Piloted Aircraft Systems (UAS/RPAS) Unit Capabilities and Tasks

2.5.1 Class II RPAS Unit

- **Role of the RPAS Unit:** The characteristic of this unit is to operate limited to a maximum distance radius of the operating site, respecting the RPA line of sight and the communication link antenna. The size of the operating area can vary significantly depending on the RPA model used and the elevations near the data link antenna. The data provided depends on the sensors available for the RPAS. Refer to Annex F for detailed description on the classifications of RPAS.
- **Capabilities of the RPAS Unit:** The Class II RPAS unit must have the following capabilities:
 - Proper certification for day/night operations.
 - Surveillance and reconnaissance with day and night electro-optical and infra-red sensors.
 - Minimum operation range with payload: 80 Nm (150 km).
 - Minimum endurance flight with payload: 8 hours.
 - 24/7 (24 hours per day / 7 days per week) reaction response.
 - Near-real time image relay to the headquarters and ground units via a Remote Viewing Terminal (RVT).
 - Flight operation above 14.000ft AMSL.
 - Capability to operate LASER marker.
- **Tasks of the Class II RPAS Unit:** The Class II RPAS unit has the following tasks:
 - ISR with day and night electro-optical and infra-red sensor.
 - Visual observation in support of search and rescue operations.

- Communication relay.
- **Class II RPAS Unit:** The unit consists of a line of sight (LOS) with minimum range of 80 NM (150 KM) and minimum ceiling of 14,000 FT AMSL. See Annex A in order to consult aircraft in this category.
- **Minimum Equipment Requirements of the Class II RPAS Unit.** The RPAS are must be equipped with:
 - Ground control station.
 - Ground data terminal.
 - Payloads.
 - Remotely Piloted Aircraft (RPA).
 - Generator.
 - Ground support equipment.
 - GPS.
 - Transponder 3/A and C.
 - Communications suite that consists of an internal crew intercom and the ability to communicate with Air Traffic Control (ATC) facilities and operational agencies, both in LOS and BLOS, via voice, on dual VHF UHF desired.
 - Flight data recorder.
- **Maintenance Requirements of the Class II RPAS Unit.** The RPA unit must include a fully independent maintenance component capable of conducting necessary scheduled maintenance and repairs. This component must include all required equipment, tools, maintenance manuals and specialized documentation. The number and qualifications of the unit maintenance personnel must be sufficient for day and night operations, 24/7.

2.5.2 Class III RPAS Unit

- **Role of the Class III RPAS Unit:** The characteristic of this unit is to operate Beyond line of sight via satellite communication. The size of the operating area can vary depending on the satellite coverage and RPA endurance. The data provided depends on the sensors available for the RPAS.
- **Capabilities of the Class III RPAS Unit:** The Class III RPAS unit must have the following aircraft capabilities:
 - Proper certification for day/night operations.
 - Surveillance and reconnaissance with day and night electro-optical and infra-red sensors.
 - Satellite coverage.
 - Minimum endurance flight with payload: 24 hours.
 - 24/7 (24 hours per day / 7 days per week) reaction response.
 - Near-real time image relay to the headquarters and ground units via a Remote Viewing Terminal (RVT);

- Flight operations capable at 24.000ft at AMSL;
- Capability to operate LASER marker.
- **Tasks of the Class III RPAS Unit:** The Class III RPAS unit has the following tasks:
 - ISR with day and night electro-optical and infra-red sensors;
 - Visual observation in support of search and rescue operations; and
 - Communication relay.
- **Class III RPAS Unit:** The unit consists of BLOS with satellite coverage and the ability to operate at 24,000 FT AMSL. See Annex A in order to consult aircraft in this category.
- **Minimum Equipment Requirements of the Class III RPA Unit.** The aircraft are must to be equipped with:
 - Ground control station;
 - Ground data terminal;
 - Satellite terminal;
 - Payloads;
 - Remotely Piloted Aircraft (RPA);
 - Generator;
 - Ground support equipment;
 - Global Positioning System (GPS);
 - Transponder 3/A and Mode C;
 - Communications suite that consists of an internal crew intercom and the ability to communicate with Air Traffic Control (ATC) facilities and operational agencies, both in line of sight (LOS) and BLOS, via voice on dual VHF and UHF desired; and
 - Flight data recorder.
- **Maintenance Requirements of the Class III RPAS Unit.** The RPA unit must include a fully independent maintenance component capable of conducting all necessary scheduled maintenance and repairs. This component must include all required equipment, tools, maintenance manuals and specialized documentation. The number and qualifications of the unit maintenance personnel must be sufficient for day and night operations, 24/7.

2.6 ASU Capabilities and Tasks

Role of the ASU Unit: Units able to provide Airfield / Ramp Control, Flight Following, Aviation Emergency Crash and Rescue (including Mobile ERT, off-base), Terminal (Cargo / Passenger Handling) Services and weather observation or capability to collect weather information from the relevant service provider in case.

- **Capabilities of the ASU Unit:** The ASU unit must have the following aircraft capabilities:

- Conduct on-base aircraft emergency crash and rescue for Category X⁶ (to be confirmed by the mission) airfield firefighting coverage and limited off-base crash and rescue.
 - Provide training for all personnel involved in ECR activities to operate the Category X fire truck (the mission is to confirm the type of vehicle) as and when required, and hold national driving licenses that permit such activity (i.e., vehicle over 7T, heavy goods, etc.).
 - Provide at least two (2) IATA trained personnel authorized to certify dangerous goods (by air, Category X), at least two (2) K-Loader operators with valid and recognized driving license to operate this type of equipment/cargo operations in the proximity of aircraft. Also, at least two (2) Forklift operator (up to 10T) with valid and recognized national driving license.
 - Conduct aircraft pushback/towing, loading and unloading activities. All air technical and ramp personnel involved must be trained on operating near aircraft and operating a tow truck as and when required and must have a national driving license;
 - Conduct military air terminal and ramp (tarmac) handling to support military tactical/combat operations.
 - Operate by day and night and handling X number of flights per 24 hours incoming and or departing from the airfield in compliance with the UN regulatory standards.
 - Have an off-base capable, mobile emergency response team (ERT) consisting of qualified rescuers (search and rescue winch crew) trained in accordance with search-and-rescue and Hazmat handling procedures with metal and or composite build aircraft components.
 - Provide land transportation for the personnel and conduct maintenance works for the equipment.
- **Tasks of the ASU Unit:** The key tasks usually required of this type of unit are as follows:
- Provide flight following information service and aeronautical information services.
 - Exercise airfield and ramp control and directing and moving aircraft on the ground.
 - Conduct operational flight monitoring, air to ground operations coordination, aircraft polling and tracking with oversight and reporting of aircraft movement to, from and within the area of responsibility.
 - Follow (if not, be in touch with the same service provider) weather observation service to air traffic control, air operations mission planners and aircrews (Meteorological terminal area routine (METAR) / forecast / significant weather / phenomena reports / visibility, ceiling, temperature, pressure, wind strength and local weather historical statistic handling).
 - Provide aircraft ECR, including a firefighting capability.
 - Support military tactical operations: ramp access, reception capability to manage incoming / outgoing military and police personnel / troops and Special Forces tactical movement with weapons, ammunition and specialized cargo handling, cargo

⁶ Refer to ICAO Annex 14, Doc 9137

consolidation, luggage handling and security screening, loading and unloading military aircraft for special operations.

- Manage incoming and outgoing personnel and cargo, including passenger and baggage handling, ticketing, and ramp access cargo consolidation, break down and distribution, passengers, and luggage security screening, aircraft loading and unloading.

- **ASU Unit:** The unit consists of personnel and equipment capable to conduct the tasks listed above.

- **Minimum Equipment Requirements of the ASU Unit.** The unit is recommended to be equipped with:

- Communication Equipment usually provided by UN.
- Weather observation/ forecasting equipment, if required.
- Electrical Generators, to be confirmed (nature and number) during MOU negotiation.
- Water Storage Equipment.
- Engineering Equipment: Water Treatment Plant (ROWPU or equivalent 2000L/H, 1, to be confirmed during MOU negotiation.
- Accommodation Equipment.
- Ammunition containers.
- Support Vehicles (Commercial and Military Patterns).
- Material Handling Equipment.
- Aircraft/Airfield Support Equipment: Firefighting truck (category to be confirmed), provided by UN.
- Water and Compressor Trailers.

- **Maintenance Requirements of the ASU Unit.** The ASU unit must include a fully independent maintenance component capable of conducting all necessary scheduled maintenance and repairs of its integral equipment. This component must include all required equipment, tools, maintenance manuals and specialized documentation. The number and qualifications of the unit maintenance personnel must be sufficient for day and night operations, 24/7.

CHAPTER 3



Organization of the UN Military Aviation Unit

3.1 Introduction

3.1.1 As the chapters on Capabilities, Employment Concept and Tasks have demonstrated, the UN military aviation unit must be organized, equipped and capable of dealing with an abundance of requirements. The organization and resulting capabilities of each military aviation unit are necessarily dependent on the unique requirements of each UN field Mission and mandate. The specifics of capabilities, employment concept, tasks, organization and equipment discussed in this manual are meant only as a starting point for planning and negotiation between the TCC and UN Headquarters. Prior to deployment, the TCC will discuss and finalize with UN authorities' details such as the number of sections, personnel, helicopters and aircraft as part of the MOU or LOA process.

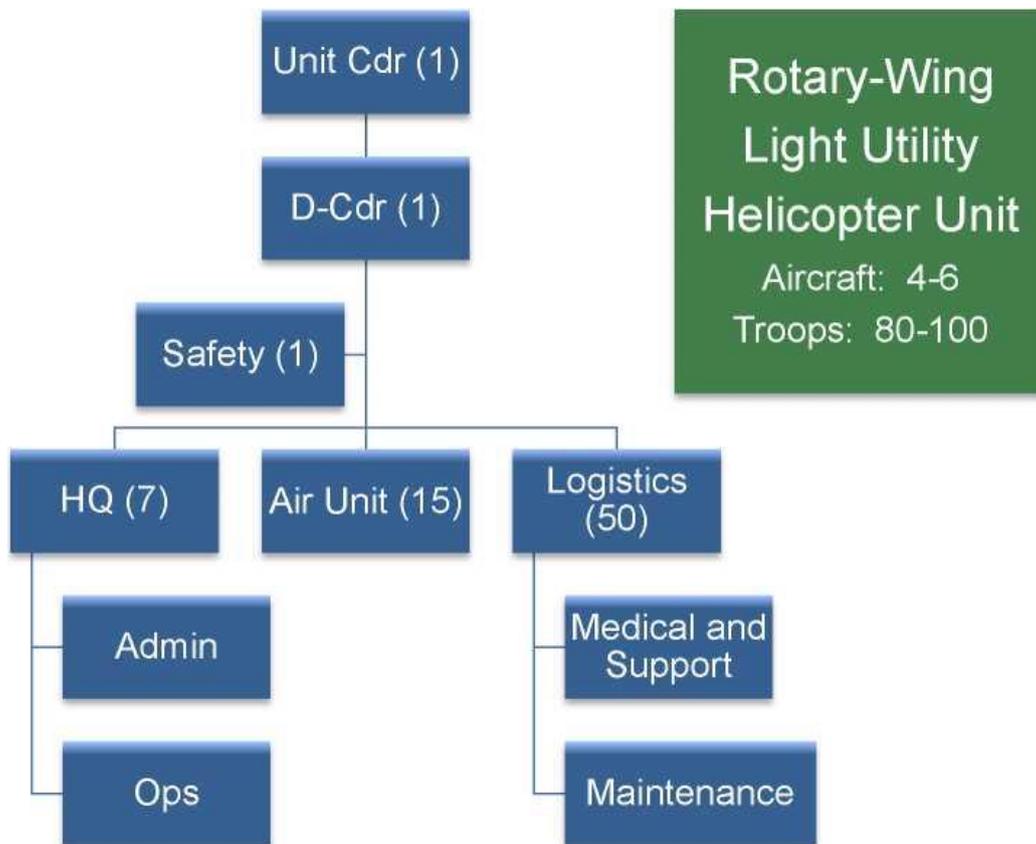
3.1.2 The organizational charts and accompanying text on the following pages describe each of the military aviation units in terms of generic structure, personnel strength and numbers of aircraft. Required internal unit functions and responsibilities upon which an aviation unit should be organized include, but are not limited to:

- Flight safety
- Mission planning
- Maintenance
- Duty operations
- Medical
- Liaison
- Logistics/administration
- Ground safety
- Security and support for the aircraft deployment areas.
- Meteorology

3.2 Rotary-Wing Unit Organization

3.2.1 Light Utility Helicopter Units

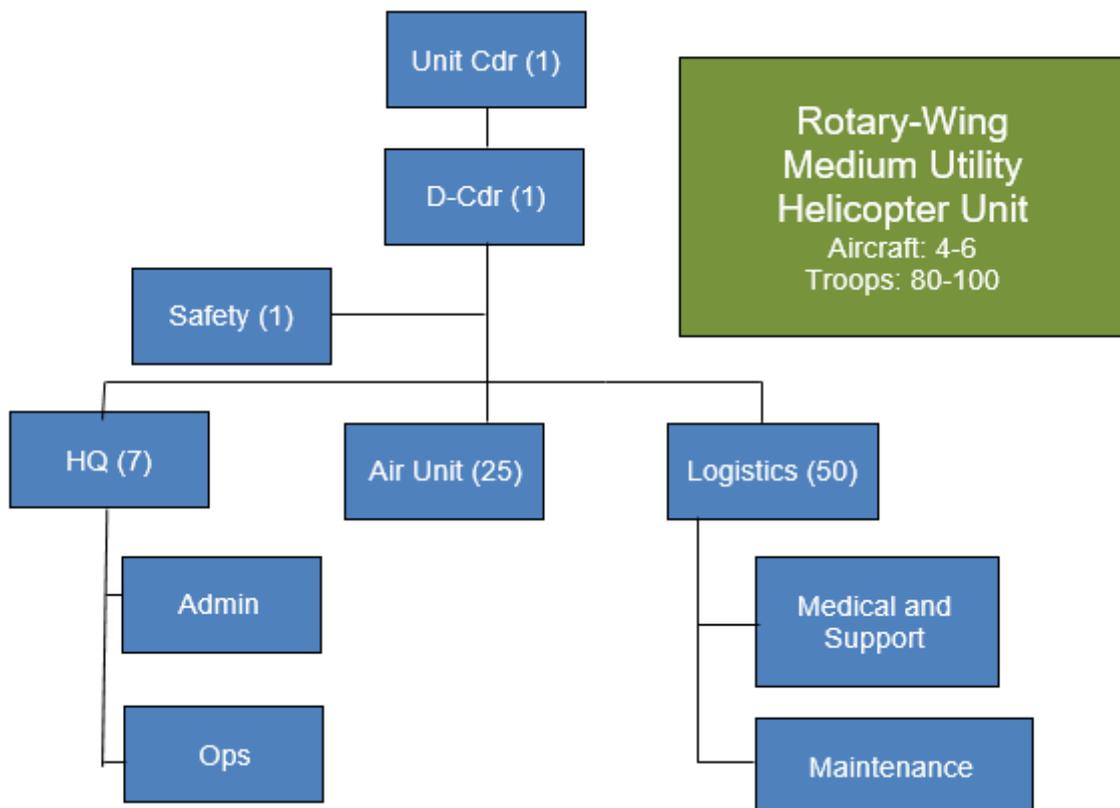
As illustrated in the chart below, the light utility helicopter unit consists of 80 to 100 personnel including pilots, maintenance staff, staff officers, security and administrative personnel and 4 to 6 light utility helicopters. Actual strength, composition and deployment locations are subject to TCC negotiations with the UN. The unit must be able to conduct 24/7 flying operations in low, medium or high threat environments and have the requisite personnel and equipment to support operations and maintenance for up to an average of 60 flight hours/aircraft/month, or as otherwise stipulated in the Statement of Unit Requirements (SUR). The unit is always required to maintain at least 75% of its helicopters in serviceable condition or as otherwise stated in TCC agreements with the UN.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.2.2 Medium Utility Helicopter Units

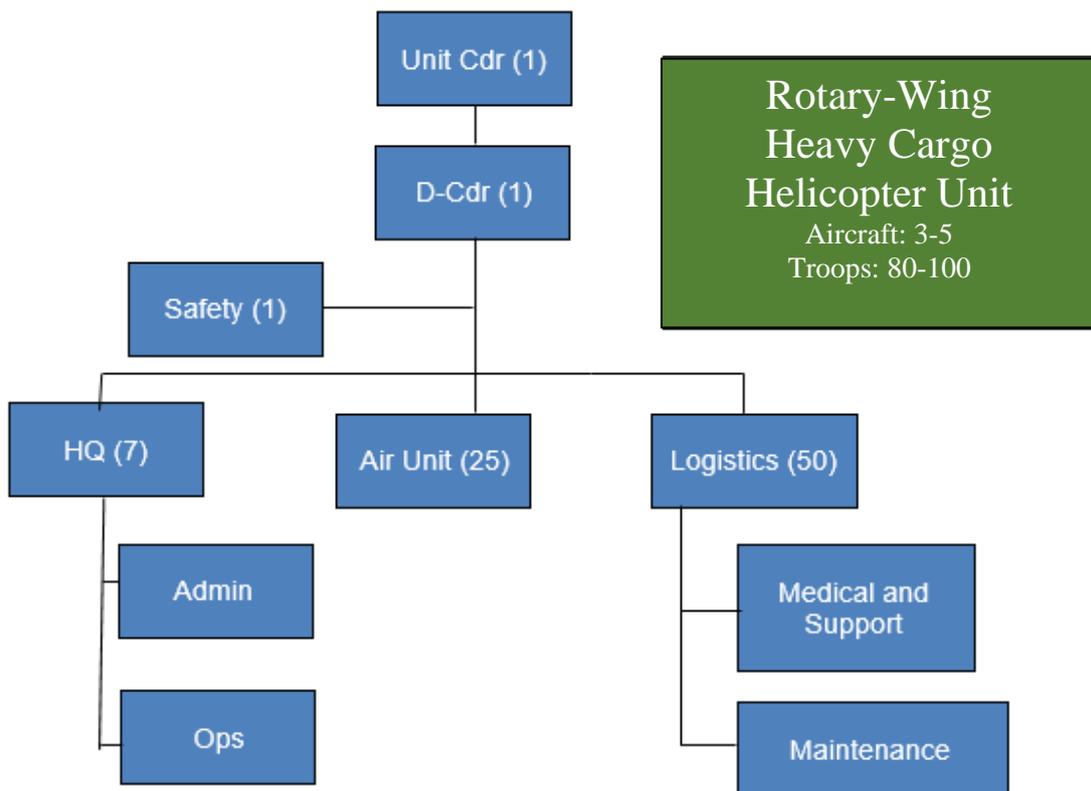
The medium utility helicopter (see chart below) unit typically consists of 80-100 personnel including pilots, maintenance staff, staff officers, security and administrative personnel and 4 medium utility helicopters. Actual strength, composition and deployment locations are subject to TCC negotiations with the UN. The unit must be able to conduct 24/7 flight operations in low, medium or high threat environments, and have the requisite personnel and equipment to support operations and maintenance for up to an average of 40-45 flight hours/aircraft/month or as stipulated in the SUR. The unit is always required to maintain at least 75% of its helicopters in serviceable condition or as otherwise stated in TCC agreements with the UN.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.2.3 Heavy Cargo/Utility Helicopter Units

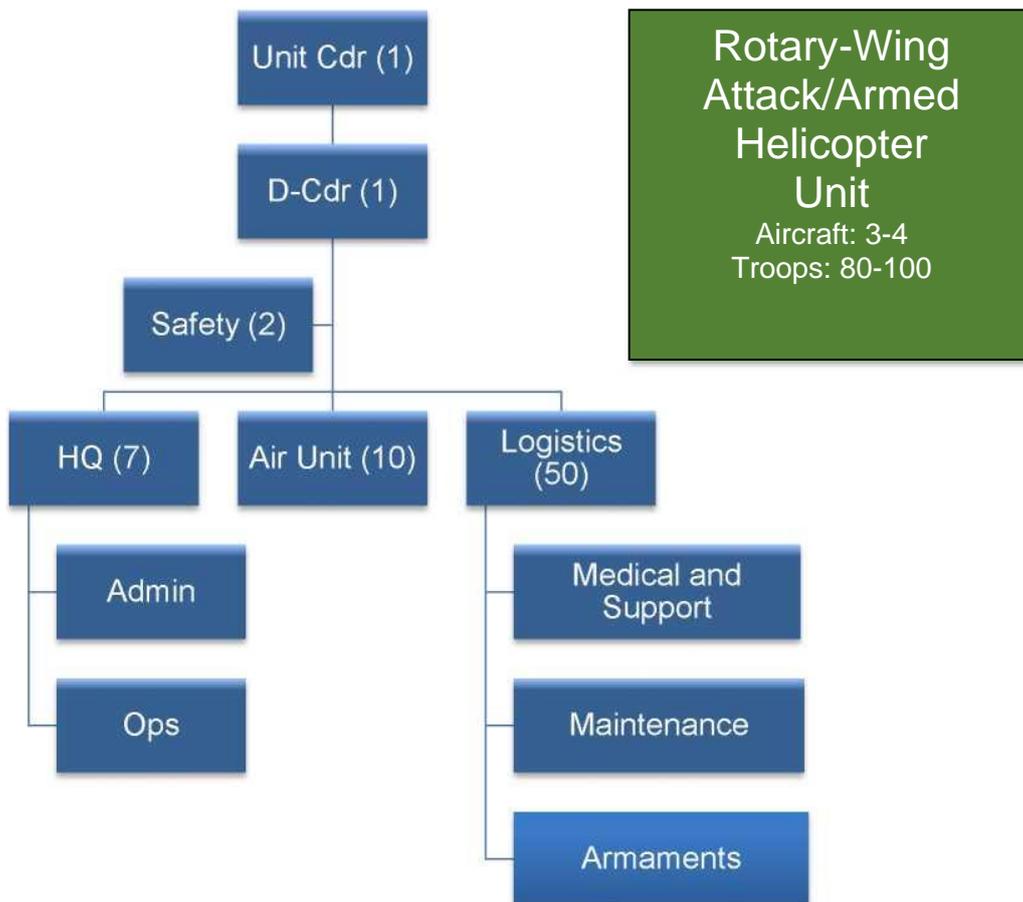
The heavy cargo/utility helicopter unit typically consists of 80-100 personnel including pilots, maintenance personnel, staff officers, administrative and security personnel and 3-5 heavy cargo helicopters. Actual strength, composition and deployment locations are subject to TCC country negotiations with the UN. The heavy cargo helicopter unit must be able to conduct 24/7 flying operations in low, medium or high threat environments. It has the requisite personnel and equipment to support operations and maintenance up to an average of 50 flight hours/aircraft/month (or as specified in the SUR). The unit must always have a minimum of 75 % helicopters serviceable unless stated otherwise in the LOA.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.2.4 Attack or Armed Helicopter Units

As shown in the following chart, the attack or armed helicopter unit may consist of 80-100 personnel including pilots, maintenance personnel, armament experts, staff officers, administrative and security personnel, and 3-4 attack helicopters. Actual strength, composition and deployment locations are subject to TCC negotiations with DPO. The unit must be staffed and equipped to conduct fire support, information gathering, armed surveillance, tactical escort, insertion and extraction of troops, logistical resupply and search and rescue missions. The unit must be able to conduct 24/7 flight operations in low, medium or high threat environments and have the requisite personnel and equipment to support operations and maintenance for up to an average of 50 flight hours/aircraft/month (or as stated in the SUR), with a minimum of 75 % (or as per LOA) of its helicopters serviceable at all times. The helicopters must be able to operate independently, or in formation with other helicopters of other units depending on operational/tactical requirements. The unit must be capable of deploying helicopters as a single machine or in pairs to separate locations for limited periods of time, depending on operational requirements.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.2.5 Embarked Aviation Detachment (EAD) Organization

The composition of the EAD will depend on the characteristics and duration of the operation, the type of vessel, helicopter category (light, medium or heavy) and the quantity of aircraft on board. In this way, the EAD shall provide pilots, maintenance, safety and administrative personnel, and will vary according to the assigned mission, as well as the supply of resources (operation level) and aviation facilities (support class) in which the ship is certified. It should be defined in conjunction with the TCCs.

The level of the operation is the qualification of the ship defined by the existing resources, correlated to the environmental conditions of visibility and luminosity (day and night period) under which the ship-aircraft binomial can operate.

The class of support is defined by the condition of the materials and qualification of the ship's personnel, including basic conditions of aviation facilities on ships, depending on the availability of maintenance and service facilities.

The EAD shall be operationally subordinate to the Commander and administratively to the Executive Officer of the ship. The EAD must have adequate flexibility in the routine regarding meals, rest and physical training in order to better meet the required readiness. The components of the EAD are not to be scheduled to services or collateral roles in the ship.

- **Responsibilities:**
- **Commander of the Ship**

The authority and responsibility of the ship's master with the aircraft on board shall include, but are not limited to:

- Conducting air operations, observing flight safety recommendations.
- Control of the launch / recoil operations.
- Monitoring the air traffic in the vicinity of the ship, keeping organic aircraft informed of such traffic.
- Control of the operations on the landing platform and hangar.
- Support of preventive and corrective maintenance services, when necessary.
- Aircraft safety against adverse weather.
- Monitoring of the maximum flight hour limits, the necessary crew rest, as well as the fatigue factors of the equipment.
- Assurance that crews have an appropriate briefing for the missions.
- Provision of adequate accommodation [for man and women] to the EAD.
- Supervision of the stores and aviation equipment.
- Provision of supplies for the aircraft.
- Provision of qualified personnel to handle and store aviation ammunition.
- Knowledge of the operational limitations of the helicopter.
- Information on the status and aviation fuel availability.
- maintain the classification of the ship for air operations in relation to the resources (level of operation) and the aviation facilities (support class) available on the ship.

- maintenance flight crews, maneuver teams and crash teams operationally qualified for the missions.

- **Commander of the Helicopter Unit**

The Commander of the Helicopter Unit, before boarding the EAD, is responsible for:

- Preparing and training the EAD that will embark according to the tasks to be performed.
- Designating the components of the EAD.
- Ensure that the components of the EAD have the necessary qualifications for the tasks to be carried out on board.
- ensuring that the aircraft designated for boarding meet the operational and safety requirements for the mission.
- establishing the maintenance procedures to be followed by the EAD.
- Ensuring that the EAD personnel have the necessary training before embarkation.

- **Senior EAD Officer**

The Embarked Aviator Officer on the highest position on board will be the Senior EAD Officer and will have the following duties:

- Assist in the elaboration of the daily flight schedules, being responsible for the completion of the air missions, in accordance with the doctrine, SOP and internal Pilot Orders.
- Ensure that pilots involved in the missions participate in the briefings and debriefings relating to them.
- Keep the training of Embarked Aviators Officers up to date, requesting the master of the ship the training flights deemed necessary.
- Supervise the maintenance services performed on the aircraft and advise the ship's commander on the need to carry out maintenance flights.
- Check, before boarding, if the EAD has the equipment recommended for the air operations.
- Ensure the discipline of the military personnel and the fulfillment of the orders received by the EAD.

3.2.6 Versatile and Specialized Aviation Support / Security Section

It is not a stand-alone section. It can be equipped with light armored vehicles, including collective heavy weapons, if necessary. It is recommended to be included in an aviation unit, where it can provide support such as:

- FARP protection.
- MEDEVAC/CASEVAC support.
- Temporary Landing Zone Display.

It should be a platoon size unit :

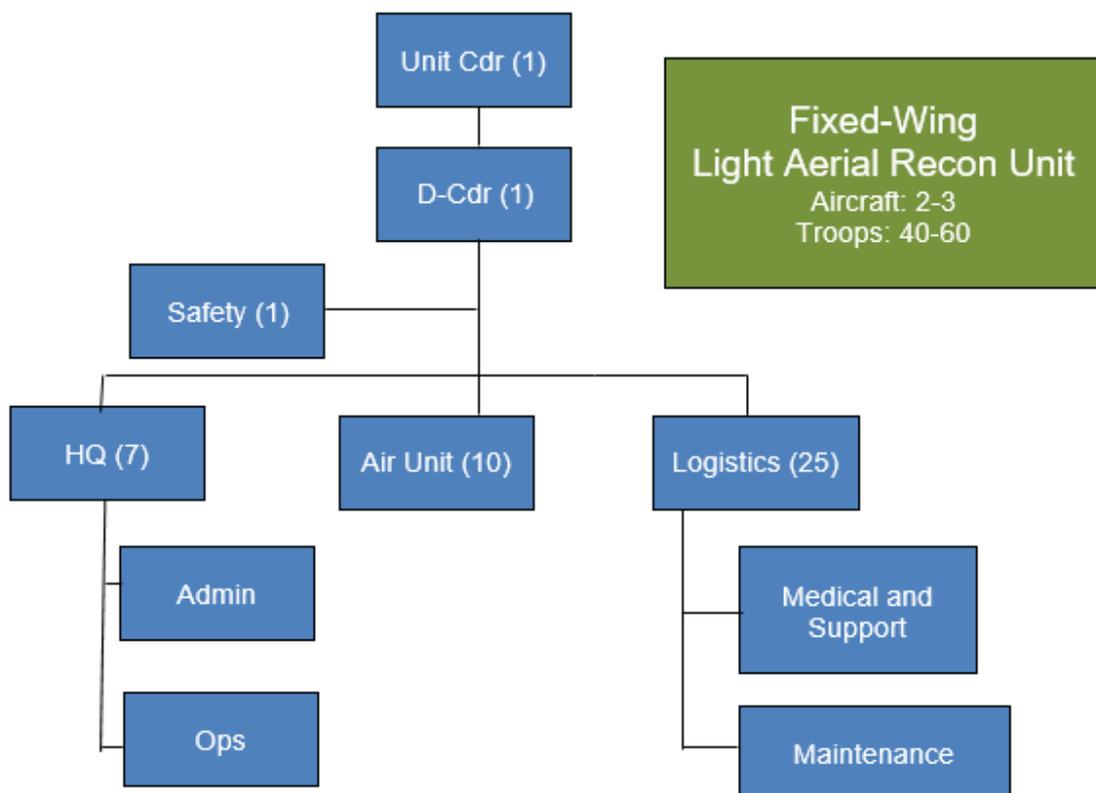
- Platoon Cdr (1)

- D-Cdr (1)
- Signal (3)
- Groups (20 to 30)

3.3 Fixed-Wing Unit Organization

3.3.1 Light Aerial Reconnaissance Units

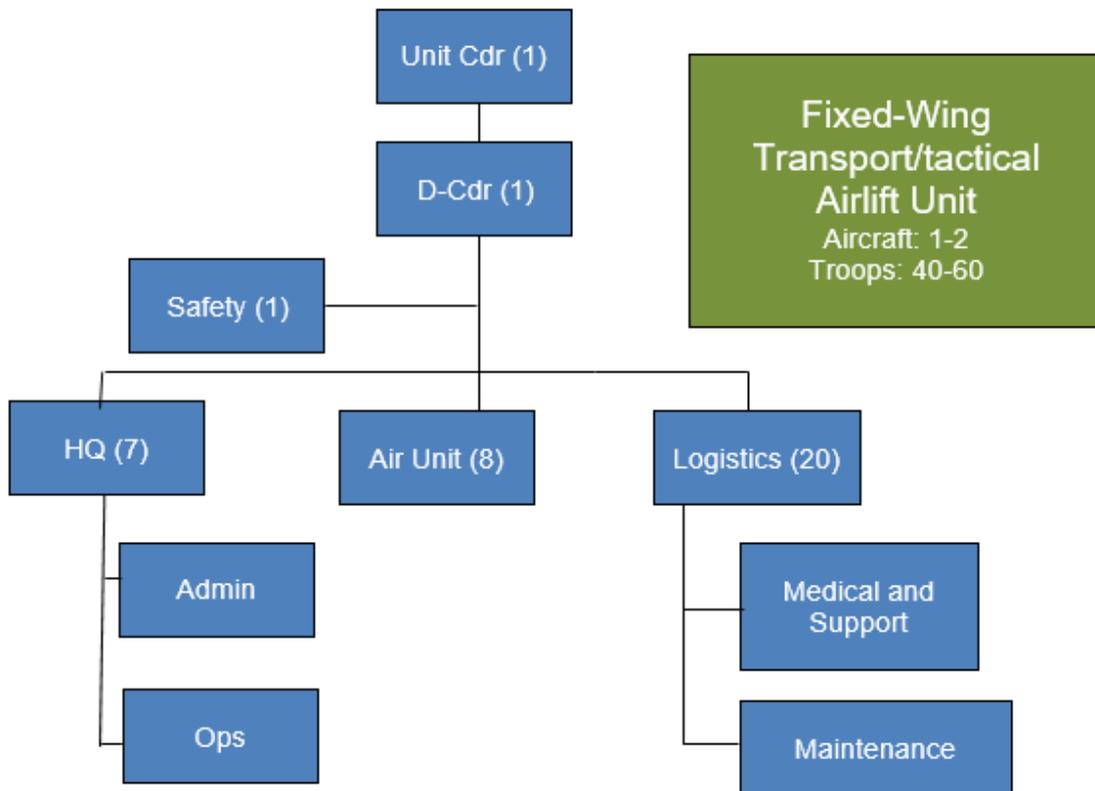
The fixed-wing light aerial reconnaissance unit shown below typically consists of up to 60 personnel including pilots, maintenance personnel, staff officers, administrative and security personnel and 2-3 light aerial reconnaissance aircraft. Actual strength, composition and deployment locations are subject to TCC negotiations with the UN. The unit must be able to conduct 24/7 flight operations at airfields where night landing and takeoff facilities are available. The light aerial reconnaissance unit must also have the requisite personnel and equipment to support operations and maintenance for up to an average of 80 flight hours/aircraft/month (or as specified in the SUR), with a minimum of 75% (or as stated in the LOA) aircraft serviceable at all times.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.3.2 Transport/Tactical Airlift Units

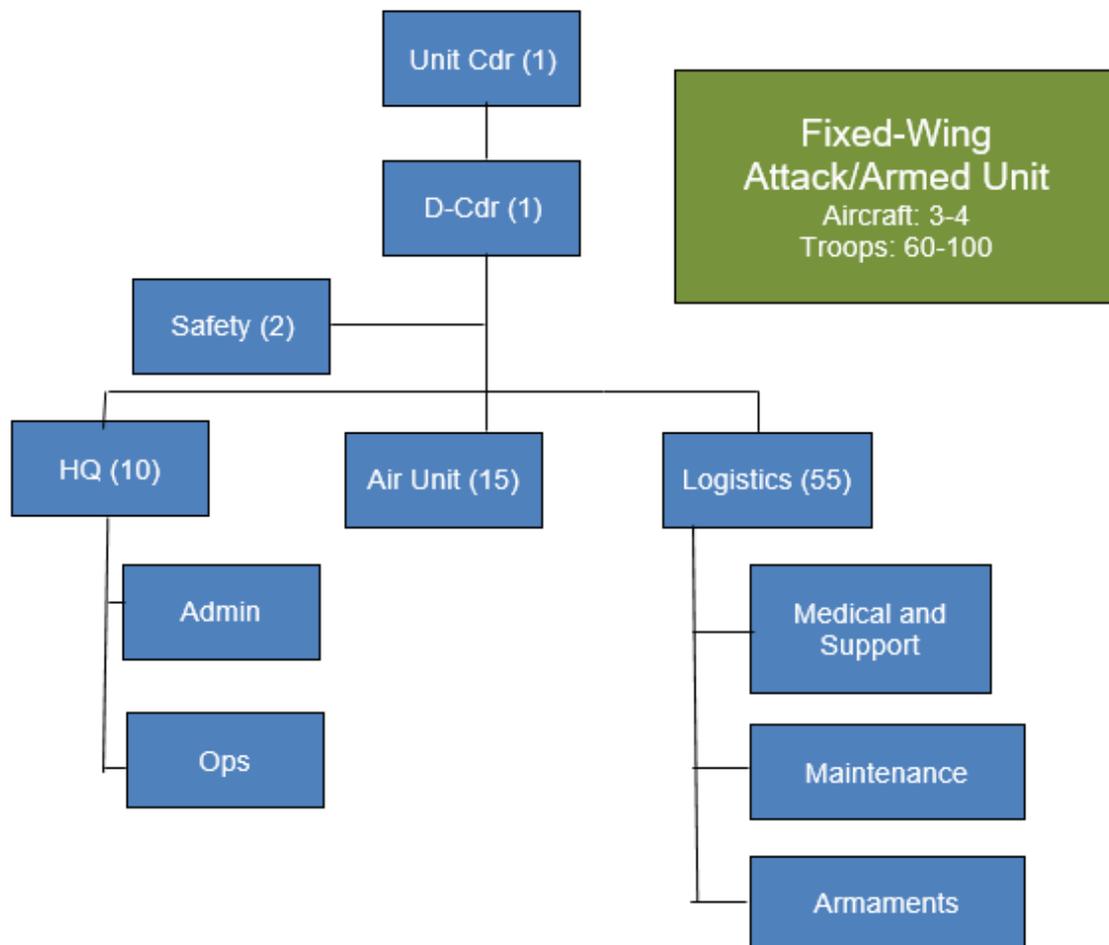
The transport/tactical airlift unit typically consists of 40-50 personnel including pilots, maintenance personnel, staff officers, administrative and security personnel and 1 to 2 transport aircraft. Actual strength, composition and deployment locations are subject to TCC negotiations with DPO. The unit must be able to conduct 24/7 flight operations at airfields where night landing and takeoff facilities are available and have the requisite personnel and equipment to support its operations and maintenance.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.3.3 Attack/Armed Fixed-Wing Units

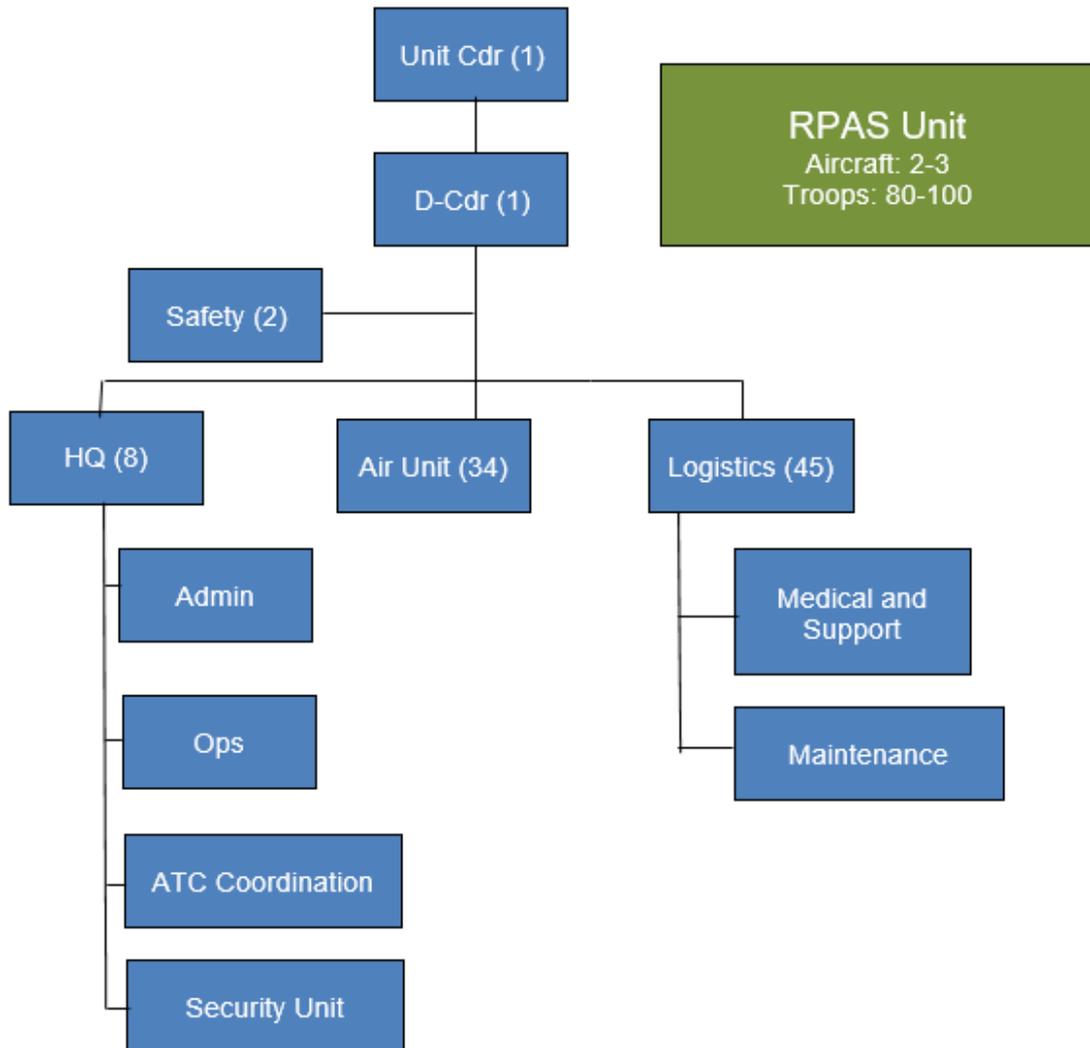
As shown in the following chart, the attack or armed fixed-wing unit may consist of 60-100 personnel including pilots, maintenance teams, armament experts, staff officers, administrative and security personnel, and 3-4 light attack aircraft. Actual strength, composition and deployment locations are subject to TCC negotiations with DPO. The unit must be staffed and equipped to conduct fire support, information gathering, armed surveillance and tactical escort. The unit must be able to conduct 24/7 flight operations in low, medium or high threat environments and meet the personnel and equipment requisite to support operations and maintenance for up to an average of 50 flight hours/aircraft/month (or as stated in the SUR), with a minimum of 75 % (or as per LOA) of its aircraft serviceable at all times. Depending on the mission, the aircraft must be able to operate independently, or in formation with other aircraft, according to operational or tactical requirements. The unit must be capable of deploying one single aircraft or two paired aircraft to separate locations for limited periods, according to operational requirements.



**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.4 UAS/RPAS Unit Organization

The RPAS unit shown below typically consists of up to 100 personnel including pilots, maintenance teams, staff officers, administrative and security personnel and 2-3 RPA. Actual strength, composition and deployment locations are subject to TCC's negotiations with the UN. The unit must be able to conduct 24/7 flight operations at airfields where night landing and takeoff facilities are available. RPAS unit must also meet the personnel and equipment requisites to support operations and maintenance for up to an average of 80 flight hours/aircraft/month (or as specified in the SUR), with a minimum of 75% (or as stated in the LOA) or its aircraft serviceable at all times.

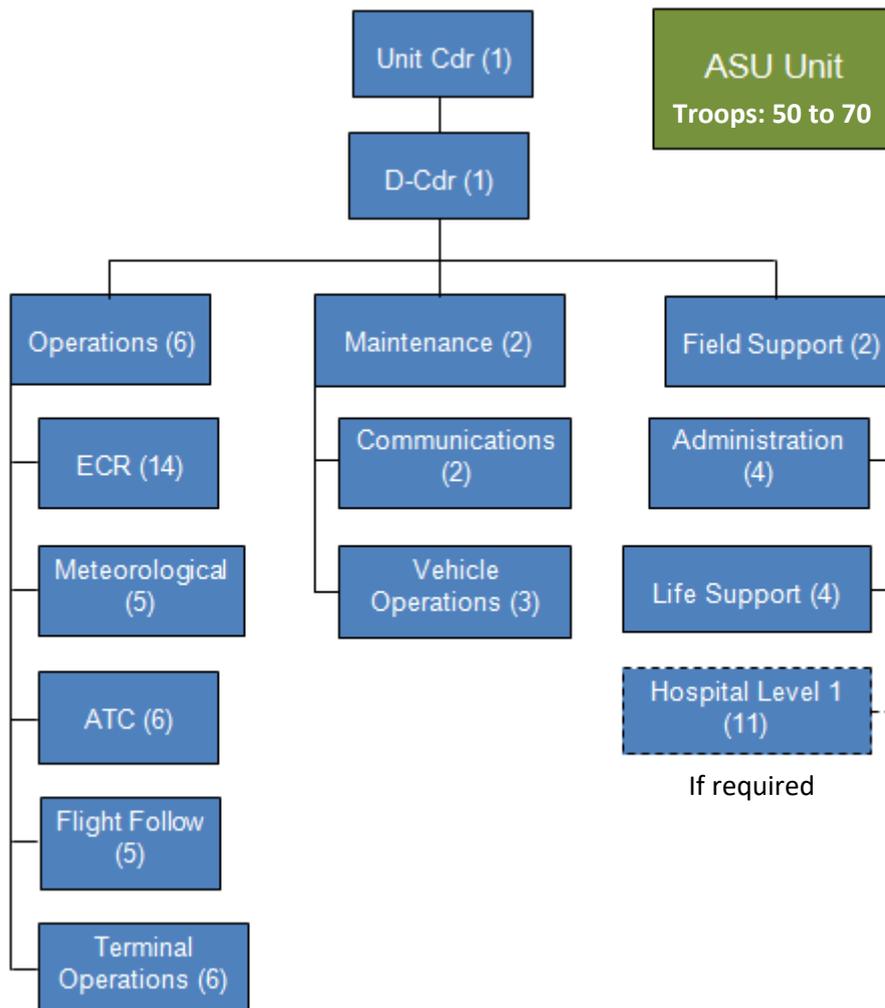


**Note: The actual number of aircraft and troop strength will depend on the specific types and number of aircraft required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

3.5 ASU Unit Organization

The ASU unit shown below typically consists of 50-70 personnel including operations, maintenance and field support. Actual strength, composition and deployment locations are subject to TCC's MOU negotiations with the UN. The unit must be able to conduct 24/7 flight operations at airfields. ASU unit must also meet the personnel and equipment requisites to manage an estimated (to be confirmed by the specific mission) air traffic of (e.g. 06/10 flights per 24 hours incoming and/or departing from each airfield), Aircraft crash and rescue, and firefighting Category X (to be confirmed by the specific mission), Dangerous Goods certification and aircraft pushback/towing capacity (if required). Also, a Military Hospital Level 1 might be required.

Indicative only. Additional 11 troops might be required for Hospital Level 1.



**Note: The actual number of equipment and troop strength will depend on the specific support required for a particular UN Mission, all subject to UN-Troop Contributing Country negotiation.*

CHAPTER 4



UN Military Aviation Unit Support

4.1 The UN Mission Logistical Framework

Logistics support, including Combat Service Support (CSS), in a UN Mission is provided by the Director or Chief of Mission Support (DMS/CMS). The DMS/CMS is assisted by a senior military (Aviation) logistician. The Mission Support Plan is published under the authority of the DMS/CMS. The Mission Support Plan is the authoritative basis for the planning and management of logistics support in the UN Mission.

4.2 Combat Service Support in UN Military Aviation

4.2.1 UN military aviation units generally operate in hostile and austere environments, deploying deep into the AOR, potentially in isolation from other UN Forces and far from any logistical base. As such, provision should be made for an addition of unit own security of platoon strength (or as appropriate) for the protection of assets and crew. Alternate agreements could be made in the MOU and LOA between the UN and TCCs.

4.2.2 A specialized combat service support (CSS) arrangement is therefore essential to support military aviation and should include specific CSS capabilities and procedures. The CSS arrangement must be well prepared and planned during the early stages of mission planning, and for each type of military aviation unit once deployed. Under CSS from Mission engineers, the aviation unit may expect and be specific about the following (if required):

- Accommodations specific to their tasking and equipment, including specific storage requirements to protect against temperature and the environment.
- Specific/additional electrical/power requirements.
- Additional water scaling.
- Waste treatments plants to cater for the additional quantity and/or type of scaling.
- Roads, tracks, runways, airstrips and heliports as per requirement, including their upkeep and maintenance.
- Specific road, airfield, airstrip and heliport requirements at the reception area, or to ensure connectivity and onward movement of forces or forward staging.
- Any specific training infrastructure.
- Field repair / recovery equipment and SOPs.
- Dust suppression liquid chemicals and SOPs.
- Support for intra-mission FOBs.
- Camp security.

4.2.3 UN support to military aviation units includes logistics, rations and fuel, strategic deployment movement of Contingent-Owned Equipment (COE) and personnel from the home country to the Mission area, as well as support to in-theater movement of medical

capabilities beyond Level I, including alternate CASEVAC capabilities involving other assets.

4.3 UN Support Process: From Pre-Deployment to the Mission Area

4.3.1 The role of DOS in supporting UN military units is encompassed in the Mission Support Concept. See also the UN Infantry Battalion Manual (UNIBAM) for further discussion of unit- level support structures, categories of support capabilities, engineering support, Contingent Owned Equipment (COE) and the Memorandum of Understanding (MOU), National Support Elements (NSE), the Letter of Assist (LOA), administrative policies and the critical issue of COE and personnel movement.

4.3.2 As with any military unit in UN peacekeeping, UN military aviation must take advantage of the various opportunities existing prior to deployment to ensure the best possible preparation of personnel and units. The TCC reconnaissance site survey (the UN authorized field visit for key commanders and staff prior to unit deployment) and the subsequent Pre-Deployment Visit (PDV) by UN experts to the TCC both serve to assist and advise in deployment preparation and support.

- **Pre-Deployment Reconnaissance and Site Survey**

As early as possible, a survey team of TCC personnel must visit the UN Mission area of responsibility. The UN will provide the TCC sufficient time to plan the deployment well in advance of the expected deployment date. Irrespective of the threat level, the UN should support the site survey team to visit all landing sites and airfields the UN intends to task the assets to. The site survey team's assessment should, at minimum, include notes on terrain, runway, landing zones, obstacles, fuel availability, ground electrical power, firefighting and approach landing systems and, most importantly, security. This information ensures adequate planning and preparation for TCC contingent selection and deployment. The survey team should also analyze the Mission's logistical support facilities so that plans can be made for any additional requirements. The site survey should especially take a note of the soil condition at likely landing zones and suggest dust suppression measures to avoid the hazard of brownout for large helicopters.

- **Personnel and Aircraft Transportation Pre and Post-Deployment**

Arrangements and contracts for transportation of personnel and assets must be finalized with clear instructions for transportation of personnel, helicopters, allied equipment and large fixed-wing assets from the TCC's home country to the Mission. Arrangements for settling any claims for damages during transportation require special attention. Specific aircraft asset preparations must be in accordance with UN standards (e.g., installation of essential equipment, aircraft colorings and markings, etc.) and their inspections conducted by a UN team in the troop 7 contributing country contingent's home country before the equipment is declared fit for transportation to the Mission country.

- **Repatriation of Flying Assets**

Arrangements for final repatriation of helicopters and aircraft by means of aerial transportation, ship or under their own power will be decided by the UN and TCC before deployment. In the case of heavy, fixed-wing passenger or cargo planes, the issue of fuel and reimbursement for flying and transit handling charges must be clarified in advance

⁷ See also the UN Infantry Battalion Manual.

to avoid any unnecessary delays at any of the transit airports.

4.3.3 Unique Equipment, Self-Sustainment and Reimbursement for COE

- If not in the COE Manual, major equipment will be treated as “special case” equipment, if the situation requires. If the equipment is under wet lease, maintenance of this equipment is a troop/police contributor responsibility. In accordance with the COE Manual, any special minor equipment or consumables not covered by the standard self-sustainment rates can be handled as “unique equipment.” These items will be handled through bilateral, special case arrangements between the troop/police contributor and the UN. Military aviation unit unique equipment requirements may include aircraft parking facilities, navigation aids, air traffic control, airfield lighting, aircraft shelters/hangars, airfield crash/rescue/fire facilities, aircraft battle damage repair capabilities, airfield protection and any aviation-specific security provisions. In addition, special equipment that the TCC aviation unit cannot provide immediately and does not necessarily impede operations but required for deployment in the mission should be provided by the UN to be handled through bilateral special case arrangements.
- While most COE items and scales would be as covered in the current version of the COE Manual, aviation operational requirements vary significantly in certain aspects, such as the scale of issue of night vision devices and High Frequency communications (see Annex B). The additional costs to the TCC for these extraordinary requirements may be reimbursed as negotiated with UNHQ.

4.3.4 The UN Mission and Contingent-Owned Communications and Information

Technology Systems

- A military aviation-specific communication and information technology system is deployed by the military aviation unit headquarters down to each aviation sub-element to ensure adequate security and communications as required for aviation operations. The military aviation unit’s internal communications and information systems are provided by each TCC.
- Nevertheless, equipment for communications between the Mission headquarters and the military aviation unit headquarters, as well as between the military aviation unit headquarters and its subordinate units, is also provided as UN-Owned Equipment (UNOE). UNOE ensures that aviation unit has integral secure military grade communications within the Mission communications network.

4.4 CASEVAC and Medical Support

For comprehensive guidance on medical operational, logistical and administrative guidelines for Member States, UN Headquarters and field Missions, consult the Manual for United Nations Field Missions – 3rd Edition – 2015” available on the UN Resource Hub <http://research.un.org/en/peacekeeping-community>

In addition to a host of other essential information, the Medical Support Manual provides information on the command and control structure for integrating medical support in field Missions, CASEVAC/MEDEVAC procedures, pre-deployment medical screening requirements, entitlements to medical care in field Missions and certification requirements for field Mission medical professionals.

4.4.1 *Military Aviation Unit Casualty Evacuation (CASEVAC):* Military aviation units often operate deep into hostile-held territory conducting Casualty Evacuation (CASEVAC) operations. To mitigate the inherent challenges, CASEVAC operations are prepared by detailed planning and training, pre-arranging for dedicated evacuation resources and coordinating for the required medical capability.

4.4.2 *Detailed CASEVAC Planning and Training:* During the planning phase of each operation, special attention is given to CASEVAC capabilities, procedures and timing with the UN Mission MEDEVAC/ CASEVAC assets and Level 2/3 hospitals that will provide specific medical support and training for the Mission's military aviation unit. MEDEVAC/ CASEVAC training is aimed at interoperability between air assets and other components such as the Quick Reaction Force.

4.4.3 *Dedicated CASEVAC Resources:* When dedicated MEDEVAC/CASEVAC military aviation resources are required, they must be planned for and obtained in advance. Aviation support capacities include peacekeeping military air units with tactical fixed-wing aircraft as well as utility, observation and attack helicopters. Aviation support can be provided by the transportation cell in the Field Operations Support unit managing Mission aviation (including military transport helicopters), movement control and MEDEVAC/CASEVAC. Under this arrangement, aviation support is placed under the authority of the Director/ Chief of Mission Support (DMS/CMS).

4.5 Troop Contributing Country Support

Logistical support for military aviation units is the responsibility of the TCC, except where otherwise provided by the UN Mission or host nation. As military aviation units are normally nationally formed, each military aviation unit must include a logistics and support element, primarily dealing with national support, integrating support from other sources such as the UN Mission or host nation. If several TCCs are providing aviation assets to the same Mission, they may wish to coordinate their aviation support effort to achieve synergy and efficiency.

4.6 UN Mission Support

4.6.1 Overall logistical support for military aviation units is coordinated through the Force Headquarters. The military aviation cells in the Force Headquarters must liaise with both the logistical structure (DCOS Operations Support, U-4 LOG, U-1 PER) and the Mission Support Centre⁸ under the office of the DMS/CMS.

4.6.2 Operations and logistics planning will determine the specific logistics requirements and the associated logistics command and control structures for each operation when military aviation units are committed. Resupply of deployed military aviation units in remote areas is planned and executed as an operational task. Generally, it requires specialized equipment and procedures to ensure refueling and POL capability.

4.7 What to Expect: Typical Logistical Support for Military Aviation Units in a UN Mission

4.7.1 General: The following discussion of logistical support for military aviation units is for illustrative purposes only. However, this discussion reflects real-world examples providing a realistic understanding of the logistical support an aviation contingent is expected to bring to, and that which it can expect from, a UN Mission. Actual logistical

The Mission Support Centre was formerly known as the Joint Logistics Operations Centre (JLOC).

support requirements are articulated in the Statement of Unit or Force Requirements and the TCC MOU. Arrangements for logistical support are provided in the UN's *Generic Guidelines for TCCs Deploying Military Units to the UN Peacekeeping Mission*, and in the UN's *COE Manual*. Subject to the terms of TCC MOU negotiations, the military aviation unit contingent is required to be self-sustainable with integral support and maintenance elements, and to sustain its operations at the permanent and temporary deployment locations. A full description of the requirements and standards for all self-sustainment categories are contained in the *COE Manual*. At a minimum, the contingent must be self-sustaining in the following areas:

4.7.2 Accommodations

- *Initial Accommodations:* The UN Mission will prepare green field sites under austere conditions at the deployment location. The contingent must deploy with sufficient tentage for all accommodations (for men and women), storage, offices, ablutions and workshop needs. Water sources will be arranged by the UN Mission. The contingent must deploy sufficient water purification units to produce and consume its own purified water. The Mission will provide Field Defense Stores (FDS) and additional FDS kits for use in mobile operations.
- *Permanent Accommodations:* The UN Mission will strive to provide hard wall accommodations (for men and women) after the initial six-month period in COE tentage; failing which the UN Mission may be required to pay a penalty until prefabricated accommodations [for men and women] can be provided.
- *Deployable Accommodations:* The contingent must deploy with a sufficient quantity of tentage necessary for short term operational and tactical deployments. The contingent must be prepared to deploy for short term operational and tactical operations. This is meant to ensure sufficiently comfortable rest arrangement for the aircrew to enable a safe and well-rested crew undertaking the assigned mission.
- *Tentage Structure:* Tentage must include flooring and the ability to heat and cool as appropriate, as well as netting at doors, windows and inner/outer fly of tents. Double layered tents with metal pipe frames are recommended due to field conditions. It is also recommended to mount the tents on cement or wooden foundations to ensure their stability. Deployable accommodations noted in the paragraph above are excluded from this requirement.
- *Helicopter parking shelters / rub hall / LAMS arrangements.*

4.7.3 Ablutions: The Mission will strive to provide ready-to-use field ablutions with running water and waste management at the initial campsite. The contingent must be prepared to deploy with its own field ablutions (field latrines and showers) to use for subsequent operational/tactical deployments.

4.7.4 Catering: The contingent must be self-sustainable in catering. Upon deployment, the Mission *may not* provide a hard wall structure for the kitchen and consequently, the contingent must be prepared to deploy with a fully mobile kitchen (e.g., kitchen trailers). The contingent must have cooks, clean and healthy kitchen facilities and equipment to include, but not limited to, deep freeze storage capacity for up to fourteen days, cold food storage capacity for seven days, dry food storage, hot dishwashing capability, mobile cold storage devices, dishes and cutlery. The contingent must be able to support all its organic units and personnel (including augmented personnel) with deployable kitchen equipment whilst operating in the field.

4.7.5 Communications: The contingent must provide its own mobile and secure communications down to the independent unit, section or team level and be able to communicate 24 hours a day, 7 days a week with the Brigade, Sector or Force headquarters in the Mission language, typically either French or English.

- *High Frequency (HF)* communications are mandatory and must have a minimum range of 250 km. The contingent must install its own HF base stations and antennae with at least 2 sets of HF radios (as primary and backup) manned by its own qualified operators for effective radio communications with the Brigade HQ, other contingents and its own elements operating outside the Very High Frequency (VHF) and/or the Ultra High Frequency (UHF) area of coverage. The capability to communicate from the equivalent of platoon to Company to Battalion to Brigade HQ must exist for all military aviation unit elements.
- *VHF/UHF:* VHF/UHF Communications (air-to-air to ground) is mandatory and must have a range of at least 30 to 35 kilometers to facilitate CASEVAC.
- *Telephone:* The contingent must provide, install and operate its own switchboard and telephone network down to its sections within the AOR.

4.7.6 Office Support

- *Office Space:* Office workspace must be inside tentage, but when and where possible, hard- wall structure may be provided for Brigade and Battalion headquarters equivalents.
- *Office Furniture and Equipment:* The contingent must be self-sustainable to meet all its needs in terms of office furniture, equipment, supplies and computers (including electronic data processing, reproduction equipment and required software).

4.7.7 Electrical: The contingent must be self-sustainable electrically and must supply a stable power supply down to section level, including observation posts and other elements.

4.7.8 Minor Engineering: The contingent must have light utility and general engineering support capability in order to enhance the contingent's infrastructure. The contingent must be self-sustainable and have, at minimum, the capacity to handle the following tasks:

- Non-Field-defensive construction for the contingent
- Limited construction of light structures
- Minor electrical repair and replacement
- Minor repair to plumbing and water systems
- Maintenance of all necessary tools, supplies and workshop equipment
- Deliver the aforementioned capacities by means of mobile support throughout the AOR.

4.7.9 Laundry and Dry Cleaning: The contingent must have a cleaning unit with sufficient laundry facilities for all military and personal clothing, including dry cleaning of operationally required specialist clothing. All laundry and dry-cleaning equipment must be kept hygienic and in good repair with ample spare parts. The contingent must have a minor equipment and supplies to keep the accommodation and camp area clean.

4.7.10 Fire Detection and Alarm: The contingent must have automatic fire detection and

alarm equipment.

4.7.11 Basic Fire Fighting: The contingent must have the capability to conduct basic firefighting in both accommodations and work areas.

4.7.12 Field Defense Stores: The UN will provide identification and Field Defense Stores. There is typically no need for Nuclear, Biological and Chemical (NBC) protection.

4.7.13 Observation:

- *General Observation:* The contingent must have the capacity to observe 24 hours a day, 7 days a week with section-level handheld binoculars and magnifying night vision equipment.
- *Night Observation:* Night vision systems, such as night vision goggles (NVG) and Forward-Looking Infrared Radar (FLIR), must be capable of passive and/or active infrared (IR), thermal or image nighttime line of sight observation. Night vision systems must be capable of detecting human-size objects within a range of 1000 meters.
- *Global Positioning System:* The contingent must have the capacity to acquire an accurate geographic fix on its own locations with Global Positioning System (GPS) equipment and laser range finders.

4.7.14 Explosive Ordnance Disposal (EOD) Capabilities: For the contingent's own safety, an EOD capability should preferably be provided to all deploying elements.

4.7.15 Miscellaneous General Stores: At a minimum, the contingent must be self-sustainable in terms of bedding, furniture, morale and welfare equipment and amenities.

- *Bedding:* The contingent must provide bed linens, blankets and/or sleeping bags, mattress covers, pillows and towels to all personnel.
- *Furniture:* The contingent must provide a bed, mattress, nightstand, table light and a locker to all personnel.
- *Morale and Welfare:* The contingent must provide TVs, DVD players, music systems, satellite TV systems, a library, games, exercise equipment and internet cafe(s) with 5-10 personal computers (for a company-sized unit) for the morale and welfare of its personnel. So as not to interfere with the Mission's official computer and internet network, the contingent must contract with a civilian internet service provider for its own dedicated morale and welfare network.

4.7.16 Initial Provisioning and Self Sufficiency

- *Water:* The contingent must deploy with bottled water for a length of time agreed upon during MOU negotiations. Within the first seven days, the contingent is expected to install its own water purification plant to produce bulk-treated water from a UN-provided water source.
- *Rations:* The contingent must deploy with rations for a length of time agreed upon during MOU negotiations. The UN Mission will provide rations thereafter. The contingent must have the capacity of establishing storage such as reefer trucks and containers for fourteen days of rations and fourteen days of combat ration packets, or for a duration agreed upon during MOU negotiations.
- *Supply:* The contingent is required to deploy with fully self-sufficient stocks of supply

items and spare parts for maintenance of its major and minor equipment. The contingent must be fully self-sufficient for all other supply categories (except fuel) for the first 90 days after deployment and must maintain stock levels of at least 45 days of repair parts for all types of supplies at any given time during its operations. Resupply of consumables and spare parts is a contingent responsibility.

- *Petroleum, Oil and Lubricants (POL)*: In the majority of UN Missions, the contingent must be prepared to employ only diesel-fuelled vehicles, equipment and machines as diesel is normally the only type of fuel available. The UN will deliver fuel to the existing fuel distribution points from the first day after the contingent's arrival in the Mission area. The contingent is required to collect its POL from the distribution points. Beyond the fuel distribution points, the contingent must provide self-delivery. The contingent must have the capacity to establish bulk storage facilities for fourteen supply days of diesel. The contingent should also have the capacity to distribute diesel to its vehicles and generators.
- *Medical*: The contingent must be prepared to deploy with one Medical Level I Hospital. Contingent personnel must be trained in administering basic immediate first aid and have the appropriate medical equipment. Additionally, higher level medical facilities will be deployed in the Mission area of responsibility to provide levels II and III care. Level IV medical care will also be available, sometimes outside the Mission area.

4.8 Embarked Aviation Detachment Support

As long as the aircraft is on board, support for air operations is provided by the ship's crew, which must have qualified Maneuver and Crash Teams, possess the necessary and appropriate material, and establish a training program that ensures a high standard of efficiency and safety for all personnel engaged in air operations, in order to ensure that the ship resources (level of operation) and aviation facilities (support class) remain in the category in which the ship is certified.

The level of operation is the qualifying factor of the ship and it is determined by the existing resources related to the environmental conditions in terms of visibility and luminosity (day and night periods) under which the ship-aircraft binomial can operate.

The class of support is determined by the condition of the equipment and qualification of the ship's personnel, including basic conditions for aviation facilities on ships, concerning maintenance and service availability.

In general, the ship should have the following responsibilities in supporting naval operations:

4.8.1 Maneuver Team

It is an organic crew of the ship, responsible for the manning and landing / launch / guidance maneuvers of the aircraft. Maintaining the qualification of the team is the responsibility of the ship's commander. In case of aircraft crash, the team personnel may be used as a reserve of the Crash Team.

4.8.2 Crash Officer

The Crash Team Leader is responsible for the firefighting and rescue in case of aircraft crash.

4.8.3 Crash Team

Team responsible for performing firefighting, rescue and, if necessary, drop the aircraft from the ship in case of a crash. If necessary, it will be aided by the vessel's Damage Control group.

4.8.4 Alert Boat or Inflatable Boat Team

The ship's crew responsible for the tasks to be performed in case of aircraft crash on the sea.

4.8.5 Launch and Landing Officer (LLO)

The LLO is responsible for:

- Conducting the Maneuver Team.
- Ensuring the observance of safety procedures for air operations.
- Conducting FOD patrol prior to commencement of air operations.
- Ensuring that only personnel essential to air operations are present in the helideck.
- in ships where there is no Enlisted Orientator, acting as aircraft Orientator by means of visual signals and/or radio in aircraft landing/launching.
- Checking that the Crash, Rescue, Firefighting and Helicopter Teams are in position.
- Controlling air operations on the landing platform: Departure, landing, pick-up (sling operations), external cargo (hook operations) and HIFR (Helicopter In-Flight Refueling – only for ships where landing operations are not available).
- Coordinating the movement of aircraft, permission to start engines, unhinge and disengage rotors, departure and landing helicopters with the Service / Maneuver Officer.
- Supervising the information relay from the helideck station to the Bridge, to the combat center and to the helicopter.
- Supervising the aircraft refueling, to ensure fuel testing and quality.
- Participating in the air operations briefings or being represented by a qualified officer in order to receive and transmit all the information.
- Ensuring that all personnel are briefed on air operations safety and receive the appropriate clothing and protection items before going on board a helicopter.

4.8.6 Orientator

The Enlisted, a member of the Maneuver Team, responsible for:

- Orienting the aircraft through appropriate visual signals, assisting the pilot in approaching, landing and takeoff, and pick up maneuvers (sling operations), external cargo (hook operations) and HIFR (Helicopter In-Flight Refueling – only for ships where landing operations are not available).
- Advising the LLO about safety conditions for air operations on helideck.
- Guiding the Maneuver Team.

4.8.7 Aviation Safety Officers (ASO)

The Aviation Safety Officer(s) (as outlined in Annex D) is responsible for directly advising the ship's Commander, the Helicopter Unit's Commander and the Senior EAD Officer, and liaising and cooperating with the United Nation Mission Aviation Safety Unit on Aviation Safety matters, being assigned the tasks of spreading the doctrine of safety management including the Prevention and Investigation of Aviation Accidents. The ASO(s) is responsible for maintenance and compliance with the relevant Aviation Safety Program, Aviation Accident Prevention Program, Aviation Emergency Plans, as well as the Pre-Investigation Plan and other instructions emanating from that Service. In addition, the Aviation Safety Officer(s) are to ensure suitable training and safety promotion occurs, provide support the aviation risk management process (including hazard identification), and oversee aviation safety in the embarked environment in accordance with Annex D.

4.8.8 Chief Engineer

The Chief Engineer is responsible for the maintenance and operation of the aviation fuel system and must ensure that it meets the standard specifications and that fuel supply, and the maneuvering are carried out in accordance with standard safety precautions.

4.8.9 Damage Control Officer (DCO)

The DCO is responsible for supervising the control of faults and firefighting involving the aircraft.

4.8.10 Operations Officer / Room Supervisor

The Ship's Operations Officer / Room Supervisor is responsible for:

- Supervising the control of helicopters in flight, except during landing and take-off maneuvers, which are the responsibility of the LLO.
- Establishing communications between the aircraft and the air traffic controller at the combat center / bridge. It is desirable that this circuit can be monitored in the bridge.
- Applying the ship's Aviation Emergency Plan for immediate action in case of need.

4.8.11 Service / Ship Maneuver Officer

The Service / Maneuver Officer is responsible for:

- Keeping the Commander informed of the progress of air operations.
- Maneuvering the ship in order to obtain adequate wind conditions.
- Maintaining steady course and speed during: opening and folding of blades, insertion and withdrawal of sleeves, unhinging and disengagement of rotors, aircraft operation at the gate (IFR operations) or having reported "on final approach" (VFR operation), launch and landing of the aircraft until it has taken off or is piled and / or correctly parked on the helideck with the rotors stopped.
- Keeping the flight deck ready to receive and support aircraft in emergency.
- Applying the ship's Aviation Emergency Plan for immediate action in case of need.
- Marking the time and position of persons overboard during air operations or dropping the aircraft in the event of a crash at sea.

- Ensuring that the alert boat and / or inflatable boat are trimmed and ready to operate, if necessary.

Due to the limitations of support and space available, the aircraft maintenance onboard may be reduced to routine preventive inspections, corrective repairs and replacement of components that do not require special tools or equipment. Maintenance of larger components and larger inspections may require moving the aircraft and maintenance crew to their base of origin or, if not possible, to an aerodrome on the ground, preferably an Air Base, which may offer better support.

CHAPTER 5



UN Military Aviation Unit Training

5.1 Introduction

5.1.1 Military peacekeeper training is primarily a national responsibility. What is more, training, regardless of subject, is a command responsibility at every organizational level. Military commanders and supervisors at each level have a legal and moral obligation to ensure their personnel and units are properly trained to accomplish their missions.

5.1.2 Military aviation units are normally regular (single TCC) or composite units (multiple TCCs) trained by their national training programs. National training is ideally within the parameters set by the UN in consultation with member states. Therefore, peacekeeping training is administered to a unit that is operationally ready to undertake the full range of required tasks. To fully understand interoperability in UN operations, the deploying unit will probably need to receive a UN-orientation and familiarity with its operating obligations under the Mission's Director or Chief of Mission Support-controlled Service Delivery system.

5.1.3 This chapter is designed to assist military commanders and their subordinate leaders with their responsibilities maintaining aircrew proficiency and the operational readiness of their units assigned to a UN mission. Briefly explained here, are the various tiers of training which the military personnel should undergo prior to deployment and during the Mission. Also provided is an overview of the suggested methodology for training a UN military aviation unit during the phases of pre-deployment, induction and proficiency sustainment during deployment.

5.1.4 Aircrew training requirements discussed in this chapter are task-oriented and not necessarily specific to UN peacekeeping operations. The intent is to provide a convenient guide of planning considerations for commanders as they prepare their aviators and units to support peacekeeping and stability operations. These topics will require greater levels of detail for self-assessments, either through national training standards or those standards provided by the UN, where appropriate. To meet the need for greater detail in UN-appropriate training, specialized training materials (STMs) for this manual are being developed by DPO to provide peacekeeping training standards for TCCs participating in UN operations.

5.1.5 An aircrew consists of a team of personnel who are responsible for the safe operation of an aircraft in the performance of its mission. Aircrews consist of Rated aviators and Non-Rated Crewmembers. Positions and qualifications are designated by national standards. A description of key positions are as follows.

a. Rated Crewmembers (RCM):

- (1) Air Mission Commander (AMC) – The AMC is aviation task force commander (or a designated subordinate commander for air assaults below the battalion level) who commands all aviation forces through all phases of the air mission.
- (2) Pilot-in-Command (PIC) – A PIC is an experienced aviator who is certified to

independently and safely operate an aircraft in all flight conditions (Day, Night, IFR). The PIC is responsible for safe operation of the aircraft, the safety of all occupants, and the conduct of operational and training aspects of a specific mission. The PIC is also responsible for ensuring that all other Rated and Non-rated crewmembers in the aircraft perform their duties and responsibilities as assigned.

(3) Co-Pilot (CP) or Pilot (PI) – CP and PIs are rated aviators assigned to an aircraft as a rated crewmember. CP/PIs assist the PIC in the technical and tactical operation of the aircraft. As a rated crewmember, CP/PIs must remain current and proficient in all assigned tasks. Generally, CP/PIs are battle rostered with PICs to ensure a crew mix that balances experience and skill.

b. Non-Rated Crewmembers (NRCM): NRCMs are flight personnel (other than the aviators who perform duties on board an aircraft) who are essential for the safe operation of the aircraft. They work as a coordinated team with the RCMs while the aircraft is in flight.

(1) Crew Chief (CC) – Designated NRCM who is responsible for the daily maintenance and functions of the aircraft while in flight. The CC takes direction from the RCMs and help to ensure the safety of the aircraft, its passengers and internal / external cargo. Depending upon the configuration of the aircraft, the CC may also serve as a gunner on the aircraft's organic weapons. Qualification and currency standards may also apply to the CC depending upon the aircraft's mission profile.

(2) Flight Engineer (FE)/ Load Master (LM) – FEs are specially trained aircraft specialist who are responsible for the correct configuration of internal / external cargo to ensure compliance within aircraft parameters. FE also take direction from the aircraft's RCMs to help to ensure the safe operation of the aircraft. Depending upon the aircraft's mission profile, the FE may also have requisite qualification and currency standards.

(3) Other NRCM Positions – Depending upon the aircraft's mission profile, other NRCMs may include flight medics, aeromedical personnel and auxiliary door gunners. As with other NRCM positions, performance of these in-flight duties may require compliance with qualification and currency standards in support of the aircraft's operational employment.

c. Non-crewmembers: Non-crewmembers (Technical Inspectors (TI), avionics technicians, maintenance personnel, etc) perform duties directly relate to the in-flight mission of the aircraft but are not essential to the operation of the aircraft.

5.2 Pre-Deployment Training

5.2.1 Each TCC has its own national standards and training programs that develop and maintain pilot currency, qualified and proficient aircrews. Pre-deployment training is the responsibility of each contributing country and determines the contingent's level of success and safety throughout its deployment. Pre-deployment training maintains crew proficiency in basic flight tasks while preparing aircrews to conduct specialized missions necessary for the specific operational environment. Specialized missions include those involving special mission equipment or specialized training such as flying with night vision goggles or conducting hoist, fast rope or air assault operations. Special mission training must be

documented, reinforced and held to defined standards of execution. These specialized tasks must be integrated into pre-deployment training programs.

5.2.2 Pre-deployment training is critical as it is the TCC's opportunity to ensure its military aviation units and aircrews are current, qualified and operationally ready to execute their assigned mission tasks. Pre-deployment training must be mission focused, relevant, and rigorous to prepare aircrews for the actual operational environment and the responsibilities of their assigned missions. At a minimum, TCCs should conduct pre-deployment training similar to that described herein, augmented by in-mission or sustainment training. TCCs should document their training to verify standards and levels of readiness. The training examples provided in Annexes B and C of this manual illustrate the level of competency aircrews, ground crews and leaders will require to execute the demands of missions in an operational environment. The lists and tasks are not all inclusive and TCC's should prepare for the full range of aviation operations needed by the Mission.

5.3 Deployed Proficiency and Currency Sustainment

5.3.1 Proficiency includes all Mission-specific and sustainment training necessary to maintain aircrew qualifications and currencies while deployed. In mission training augments skills developed during pre-deployment training including rules of engagement, the UN peacekeeping ethics, mandate and MOU. In-mission training also includes local area orientations and those critical skills required for special mission equipment training on night vision systems, night flying, hoist operations, fast rope, desert and dusty landing conditions, and air assaults. Depending upon the length of the deployment, aircrews will also need to maintain their currency and qualifications in both their basic aircraft type and the mission specific skills required by the operational environment.

5.3.2 The most significant part of in-mission training is orientation or induction training. Induction training familiarizes aviation personnel with the environmental and cultural factors as well as the practicalities of operational environment, particularly as it affects aircrew and aircraft performance. Military aviation unit commanders should accomplish in-mission training by combining air and ground crews in the same training, thus increasing each crew's skill, knowledge and interoperability. Military aviation unit commanders and staff can refer to the UN Infantry Battalion Manual for additional guidance and resources for developing training plans. Examples of aviation-specific in-mission training opportunities include:

- **On-The-Job Training:** A comprehensive aircrew training program covering job performance skills highlighted in pre-deployment training but reinforced with the reality of daily in-mission requirements.
- **Mission Scheduling:** Military aviation unit commanders should take the opportunity to schedule high timed aviators with less experienced personnel during routine operational missions. This combination of skill levels produces incidental training for those lacking experience.
- **Aircrew and Mission Briefings:** A vital part of continuous or in-mission aircrew training, briefings ensure adherence to desired training and capability standards for personnel and aircraft. Briefings can include academic subjects as well as pre- and post-mission briefs and reports. Suggested topics may include situational awareness, interpreting weather reports, air traffic control requirements, special equipment requirements, the nature of aviation tasks, safety and risk management, pilot ability skills, mission planning (including fuel and ammunition consumption rates), problems

and recommended solutions and explanation of misconduct cases (if applicable). Weight and balance calculation, weather interpretation, instruments flying procedure, risk assessment etc.

- **SOPs and Pilot Orders:** SOPs and pilot orders help create safe and efficient operations. SOPs and pilot orders are usually based on the experience of previous military aviation units, as well as existing UN SOPs and guidelines issued by the mission's Air Operations Branch. Aviation Safety and Risk Management SOPs include such vital subjects as guidelines for night flying procedures, night vision goggle operation, mountain flying, confined area operations, pinnacle operations and landing within built up and crowded areas and any maritime considerations associated with the operational environment. SOPs and pilot orders must be relevant to the specific military aviation unit type and the country in which the unit is deployed. New military aviation unit commanders and staff officers should consult Chapter 11, Section III of the UN Aviation Manual (2018 edition) for more information on SOP formulation. SOPs and pilot orders of the previous unit should be reevaluated and revised, where necessary.
- **Assessment Criteria.** The military aviation unit commander can use carefully crafted assessment criteria to assess aircrew proficiencies and the level of unit readiness, even as they are being evaluated on flying and special mission performance. Written tests and performance evaluations offer continuous training opportunities for each crewmember during their deployment. Flying assessment grade slips, in vogue in the TCCs Military aviation units, should be continued in UN and complete assessment record of flying checkouts with instructor pilots / Commanding Officers be maintained in individual's pilot folder.
- **Training Documentation.** A system of documenting individual performance is required to meet flight safety requirements and to ensure the operational readiness of aircrews. Such documentation assists military aviation unit commanders as they select the appropriate crew for specific mission requirements and provides the basis for identifying any additional training needed. Training needs of each individual pilot should be ascertained at the beginning of the unit's tenure and then completed with an even spread over the entire period of tenure. The training should encompass general flying, instrument flying, night flying and special operation relevant to the mission.

5.4 Aircrew Training

Aircrew training is a national responsibility and TCCs are expected to certify that their aircrews are fully qualified to perform the basic military aviation unit tasks as specified in the MOU/LOA and SUR. Aircrews are expected to conduct pre-deployment and continuous/in-mission training as described in this chapter and at Annexes B and C. The following chart describes the UN's qualification standards for aircrews, however, individual TCCs would finalize their experience criteria with the UN in their LOAs:

**UN MILITARY AVIATION UNIT (RW / FW)
UTILITY AIRCREW EXPERIENCE REQUIREMENTS**

		TOTAL F/H Min	If experienced in both FW & RW - minimum FW/RW F/H@	PIC hours On FW and RW	PIC hours on type	IFR qualified with min F/H	NVG qualified w/min FH	Flight Currency DAY / NIGHT / NVG / IFR
Rotary wing	AMC	1200				-		45-days
	PIC	1000	600	300	150	80	50	
	CP	300	200	-		20	30	
Fixed wing	PIC	1200	1000	500	250	200	50	
	CP	600	500	-	-	100	30	

**UN MILITARY AVIATION UNIT (LIGHT FW ATTACK/ISR)
SPECIFIC AIRCREW EXPERIENCE REQUIREMENTS**

		TOTAL F/H	PIC hours	PIC hours on Type	IFR qualified w/min F/H	NVG qualified w/min FH	Flight Currency DAY / NIGHT / NVG / IFR
Light FW Attack/ISR	AMC	1200			-		45-days
	PIC	600	300	100	80	50	
	CP	200	-	-	20	30	

**UN MILITARY AVIATION UNIT (RW ATTACK AND EMBARKED)
SPECIFIC AIRCREW EXPERIENCE REQUIREMENTS**

		TOTAL F/H Min	If experienced in both FW & RW - minimum FW/RW F/H@	PIC hours On FW and RW	PIC hours on type	IFR qualified with min F/H	NVG qualified w/min FH	Flight Currency DAY / NIGHT / NVG / IFR
Attack and Embarked Rotary wing	AMC	1200				-		45-days
	PIC	600	400	200	150	80	50	
	CP	300	200	-		20	30	



**UN MILITARY AVIATION UNIT Class II and III (UAS)
SPECIFIC AIRCREW EXPERIENCE REQUIREMENTS**

		TOTAL F/H	PIC hours	PIC hours on Type	IFR qualified w/min F/H	NVG qualified w/min FH	Flight Currency DAY / NIGHT / NVG / IFR
UAS Class II and III	EP	40	40	40	-	-	45-days
	IP	425	75	75	-	-	
	SC	600	150	150	-	-	

Crew Qualifications

The flight crews will possess the following minimum qualifications:

- The PIC or Operator for any sortie tasked by the UN will have a valid and current and national Military Pilot License (MPL) or equivalent based on the type of UAS or a Commercial Pilot License with Instrument Rating for the type of UAS/RPAS.
- The currency requirements, in respect to the MPL RPAS and/or UAS, will be a national responsibility. These qualification requirements must be reflected on an approved SOP or equivalent.

Key:

AMC = air mission commander PIC =pilot-in-command

CP =copilot RW =rotary-wing FW =fixed-wing

NVS = night vision system IFR =instrument flight rules NVG=night vision goggles

EP = external pilot IP = internal pilot SC = station commander

@ = Fixed Wing experience to be mentioned for the pilots to be employed on Fixed Wing duties and Rotary Wing experience to be mentioned for pilots to be employed on Rotary Wing

Note: All flying done on full flight level D simulator shall be counted towards the flying hours experience of aircrew.

Flight Currency: is considered in executing the environment tasks within the last 45 days

5.4.1 Details of flight experience and currency duly recorded in Pilot's Flying Logbook

5.4.1.1 Rotary Wing. The following parameters of flight experience and its performance during the last one year by the aircrew is considered essential for validating the experience mentioned in the tables given in paragraph 5.4 above:

- Confined Area Ops
- Pinnacle Ops (if applicable)
- Dusty Landing Ops (if applicable)
- Sling Ops
- Winching/Hoist Ops
- NVG Ops
- Night Ops
- Running landing/Take Off
- Mountain Ops (if applicable)
- IFR Ops
- Hot and Heavy Flights
- Tactical Flights
- Formation Flying
- Heliborne Weapons firing (If applicable)
- Fire Fighting/Bambi Bucket ops (if applicable)
- Emergency handling practices
- Embarked Ops (if applicable)
- **FARP Ops**

5.4.1.2 Fixed Wing. The following parameters of flight experience and its performance during the last one year by the aircrew is considered essential for validating the experience mentioned in the tables given in para 5.4 above:

- ISR
- Passenger Transportation
- Logistic lift Ops
- MEDEVAC/CASEVAC Ops
- Low level Flight Ops



- Tactical Air drops
- NVG Ops
- FARP Ops
- Personnel Airdrops
- Cargo Air-drops High/Low Altitude airdrops
- Command and Control Ops
- Night flying Ops
- Unpaved Runway Ops
- Engine running Ops
- Tactical Approaches (low and high altitude)

5.4.1.3 UAS Class II and III. The following parameters of flight experience and its performance during the last one year by the aircrew is considered essential for validating the experience mentioned in the tables given in para 5.4 above:

- ISR
- Command and Control Ops
- Unpaved Runway Ops (if applicable)

5.5 Ground Crew Training

5.5.1 Ground Crew Pre-Deployment Training

Proper training is especially important for the military aviation unit maintenance and support staff. Ground crew personnel require the highest level of skill and proficiency to ensure fleet health and asset serviceability. Refueling, rearmament and ground handling procedures must be handled professionally to avoid catastrophic mishaps. All requisite training for ground support personnel must be documented. Their training must be rigorous and conducted to trade-specific standards prior to deployment. The following examples are not all-inclusive but do illustrate the tasks, activities and standards ground crew personnel must meet:

- **Maintenance Qualification Training.** TCCs and military aviation unit leadership are responsible for aircraft maintenance qualification training. That training identifies the best maintenance personnel with the appropriate quality standards and technical skills. In addition to being technically qualified, these maintenance personnel must be certified (if required by the TCC) and capable of deploying to the area of operation in support of aviation forces. These technicians, in collaboration with the flight crews, are directly responsible for aircraft's operational readiness and the unit's ability to generate flight sorties. Each technical expert, working in any one of a variety of specialties (e.g., avionics, engine and transmission maintenance, electrical, sheet metal, etc.) must have the requisite training and equipment prior to and throughout deployment.
- **Mission-Specific Maintenance Training.** Ground maintenance personnel must be trained on the equipment they are required to operate. Mission specific training must be conducted when new equipment or procedures are introduced to meet specific mission requirements. For example, a new type of Mission radio may require pre-deployment or induction training. Mission-unique systems like lighting, generators, auxiliary power systems, and engine/aircraft wash equipment may be unfamiliar and require training. As another example, maintenance personnel may have to conduct the majority of their tasks at night or during times of limited visibility due to Mission requirements. TCC and aviation maintenance commanders must ensure that all tasks and activities are conducted by trained and properly resourced maintenance personnel.
- **Downed Aircraft Recovery.** The recovery of downed aircraft is an on-call mission using assigned personnel and specialized equipment to recover aircraft unable to return to its base of operations due to maintenance or hostile action. The Downed Aircraft Recovery Team (DART) consists of select personnel from the aviation maintenance unit who perform the assessment, repair and recovery of the downed aircraft. To effectively recover aircraft in various operational conditions, DART teams must train and rehearse these tasks using appropriate recovery equipment and Ground Support Equipment prior to deployment.
- **Ground Support Equipment (GSE) Training.** A wide variety of GSE support fleet operations. GSE includes auxiliary and ground power units, electrical power generators, maintenance cranes and specialized maintenance workshop equipment. All personnel required to operate GSE must be certified (licensed) to operate and maintain their specific piece of equipment, regardless of whether it is unit or UN-provided.
- **Specialized Vehicles Drivers Training.** Special driver training may be required for ground maintenance staff and aircrew members. Specialized vehicles such as self-propelled cranes, aircraft handling vehicles, towing tractors, forklifts, etc. may be unfamiliar to Mission personnel. All personnel required to operate any vehicle must be

trained, certified and supervised in the operation, maintenance and utilization of the vehicle. Maintenance personnel must understand the limits and constraints imposed on the use of the vehicle to avoid damaging the vehicle or aircraft.

- **Communications Equipment.** Military aviation unit commanders must ensure their soldiers are prepared to use the communications equipment provided such as hand-held radios, satellite phones and ground-based communications systems. Aviation ground crew personnel must be trained in the correct use, maintenance and servicing of communications equipment. Unfamiliar radio communications procedures, poor information sharing and difficulty using a foreign language may endanger mission success.

5.5.2 Ground Crew Deployed Proficiency and Currency Sustainment

Training levels must be strengthened and sustained once unit personnel arrive in the Mission. Ongoing training while deployed hones existing skills and introduces new capabilities, particularly those related to unit readiness in the field mission. Quality control and assurance are vitally important for ground and maintenance crews in a deployed environment. Effective military aviation unit commanders understand the importance of quality management and the direct effect it has on operational readiness. Examples of in-mission training for ground crews include:

- **On-The-Job Training:** A comprehensive ground crew training program covering job performance skills highlighted in pre-deployment training but reinforced with the reality of daily in-mission requirements. Ground crews and units particularly benefit from the establishment of a strict quality control mechanism ensuring safe and efficient flight operations when the entire Mission needs it most.
- **Ground Crew Briefings:** A vital part of continuous or in-mission ground crew training, briefings ensure adherence to desired training and capability standards for personnel and aircraft. Briefings can include academic subjects as well as pre- and post-mission briefs and reports. Suggested topics may include quality control and assurance, unit readiness, situational awareness, safety and risk management, special equipment requirements, the nature of aviation tasks, mission planning (including fuel and ammunition consumption rates), problems and recommended solutions and explanation of misconduct cases (if applicable).
- **SOPs and Guidelines:** Military aviation unit commanders are required to establish Aviation Safety and Risk Management SOPs and guidelines for ground support operations including topics such as aircraft documentation, scheduled and other maintenance procedures ground handling, parking, mooring, use of protective covering, use of towing vehicle etc in accordance with UN standards. The unit staff should also indicate the most important SOPs to provide guidelines for new military aviation unit commanders as they assume their responsibilities upon arrival in the Mission.

5.6 Tactical Training for Military Aviation Unit Commanders and Staff

5.6.1 Aviation operations in support of UN Missions are inherently dangerous and complex. Annexes B and C provide examples illustrating the tasks and responsibilities expected of military aviation unit commanders and staffs in the UN environment. Proper training of military aviation unit commanders and staff will help mitigate some of the challenges and complexities of UN Missions. Detailed descriptions of the tasks, conditions and standards of typical requirements are at Annex B, providing broad guidelines for

training and preparing military aviation units for peacekeeping operations.

5.6.2 TCCs are responsible for providing a military aviation unit with capable, proficient and professional commanders and staff members. Those leaders, in turn, are responsible for developing the leadership and technical skills of their subordinates. Training in the tactical environment focuses everyone's efforts because lives depend on individual competence, personnel and equipment readiness and unit cohesion.

5.7 Training, Operational and Equipment Readiness, and Troop Contributing Country Reimbursement

5.7.1 A military aviation unit commander must ensure his unit's readiness as verified through Operational Readiness Inspections (ORI) or other periodic verification inspections. Inspection checklists may be obtained from the concerned Mission and sector headquarters sections. Inspection preparations are necessary to ensure timely and complete TCC reimbursement.

5.7.2 Reimbursement is also based, in part, on serviceability. In order to be reimbursed under the terms of the LOA, military aviation units must provide the Mission minimum assured flying and serviceability support. Serviceability is a function of the military aviation unit's total command climate, logistical competence, training, and operational equipment readiness. However, flight safety considerations retain supreme significance, which should never be compromised for an over-ambitious serviceability target.

5.8 Features of Embarked Aviation Unit Training

Specific responsibility relationships for an aviation operation on ships include some detailed information on the preparation and use of Embarked Aviation assets in each phase, as follows:

- Pre-Deployment Training – Squadron Commander.
- Continuous or In-Mission Training - Ship Commander.
- Aircrew Training – Squadron Commander.
- Ground Crew Pre-Deployment Training – Squadron Commander.
- Ground Crew Continuous / In-Mission Training – EAD Senior Officer.

5.9 Language Proficiency Standard for Aircrew in Peacekeeping Operations

The required operational level of English proficiency for all pilots is the ICAO Level 4 or equivalent; also, the same for any other aircrew involved in radio communications (e.g. navigator, etc.). The aircrew will be subject to evaluation on this account in the mission area by the Technical Compliance Unit or equivalent.

The relevant certification of level will be presented upon arrival in the mission area to the Technical Compliance Unit or equivalent. The certifying authority must be the national Civil Aviation Authority director level or above in case the certification is being done by civilian entities, and in case the certification is being done by the military entities, it should be given on the authority of the respective Chief of Staff of the relevant Armed Force.

- **Aviation Safety Training**

Effective aviation safety management, to prevent injury and damage to property, cannot be achieved without developing and encouraging a positive aviation safety culture at all

levels of the unit, of which an aviation safety-training program is critical to this success. An aviation safety-training program is required, which is to include initial training, specialised training, pre-deployment training and periodic recurrent training. All personnel are to undergo aviation safety training relevant to their roll and command responsibilities. The training program should include all relevant topics from the aviation safety program, including but not limited to safety reporting, risk management, and organisational and human factors, refer to Annex D and the UN Aviation Safety Manual.

CHAPTER 6



Self-Evaluation of the UN Military Aviation Unit

6.1 Introduction

UN encourages the TCC to perform self-evaluation before entering into the mission area and during mission operations after every mission. This is with the aim of increasing the operational effect but at the same time keep a high/or a certain level of flight safety of human factors. It is the Command responsibility to see and make possible for aviation unit to perform self-evaluation, but it is also everyone's duty to do self-evaluation with the aim to improve. This demands a just culture.

Self-evaluation plays a key role in achieving and maintaining operational readiness. In UN peacekeeping operations, TCCs conduct their own self-evaluations to assess and monitor the state of individual and collective training, and to check the maintenance and performance of equipment. By conducting self-evaluation, TCCs can authoritatively determine how well their personnel, units and equipment perform according to UN standards, and consequently take TCC-appropriate action to make any necessary improvements. In this way, TCC self-evaluation contributes to higher states of operational readiness. This chapter provides the considerations, references, methodology, structure and key self-evaluation criteria military aviation units require to be fully mission-capable by:

- Providing guidelines to the TCC and military aviation unit commander, including suggested self-evaluation considerations using measurable and quantifiable criteria and standards.
- Providing measures to be taken during pre-deployment and in-mission self-evaluation.
- Providing timely self-evaluation to enable appropriate mid-course corrective actions well ahead of deployment.
- Facilitating efficient planning and safe execution of air support for peacekeeping operations.

6.2 UN Assistance

6.2.1 UN DPO and DOS Assistance. The UN's Departments of Peace Operations (DPO) and Operational Support (DOS) promote self-evaluation, operational readiness and commitment to UN standards by:

- Guiding, assisting, facilitating or supplementing TCC evaluation efforts with a flexible and accommodative approach.
- Providing training assistance.
- Coordinating training and assistance through third party support, where required.

- Arranging pre-deployment visits (for initial deployment only) to check availability and quality of equipment and to ensure that Statement of Unit Requirement provisions are implemented.

Providing Operational Advisory Teams from the Military Planning Service, Office of Military Affairs to guide and assist emerging and more experienced TCCs.

- Assisting in the assessment of operational readiness.

6.2.2 Assistance from the UN Mission. The Mission leadership provides the following assistance:

- Guides TCCs on the unit's expected performance objectives, pre-deployment preparation requirements and Mission-oriented training requirements.
- Coordinates pre-deployment reconnaissance.
- Organizes in-mission induction training; provides logistics support; provides operational tasks, roles and responsibilities for the military aviation unit.
- Keeping in view the unit's capabilities and broader flight safety considerations.
- Conducts the unit's in-mission operational efficiency checks.

6.3 Self-Evaluation

6.3.1 Self-Evaluation Considerations

- Operational Readiness. A UN military aviation unit is expected to have high standards in basic training capabilities, core operational tasks for each type of military aviation unit and should have developed mission-oriented task-specific drills and procedures. Weakness in any one of these areas adversely affects operational readiness. Self-evaluation criteria should focus on revealing a unit's capability in these various elements of operational readiness.

6.3.2 Self-Evaluation References

In addition to this manual and its aviation-related references (Annex I), the following UN peacekeeping documents also provide guidelines and standards for self-evaluation and operational readiness. A most useful link to access most if not all of these documents is available on the UN Resource Hub: <http://research.un.org/en/peacekeeping-community>

- UN Aviation Manual (2018);
- TCC-specific UN peacekeeping operations manuals, guidelines and SOPs.
- UN Aviation Standards for Peacekeeping and Humanitarian Air Transport Operations.
- DPO and DOS Guidelines on Aviation Safety Manual.
- DPO and DOS Policy Directive about Aviation Risk Management (ARM).
- Mission Mandate, Memorandum of Understanding, Status of Forces Agreement and Rules of Engagement.
- Statement of Force/Unit Requirements issued by OMA.

- Command and control authority for aviation missions.
- Mission Concept of Operations, Operational Directives and Orders, Operational Plans, SOPs and mission-specific case studies.
- Generic Guidelines for Troop-Contributing Countries Deploying Military Units, the COE Manual and Guidelines on Peacekeeping Training.
- Lessons Learned and Best Practices of current and past peacekeeping missions.
- After-Flight Reports.

6.3.3 Pre-Deployment Self-Evaluation Preparation

Self-evaluation is a command responsibility prior to UN DPO's pre-deployment visit, the designated military aviation unit Commanding Officer should undertake the following activities:

- Raising and establishing a military aviation unit in accordance with the Statement of Unit Requirements.
- Training in accordance with UN military aviation unit tasks and operational demands.
- Developing mission-specific, task-oriented, individual and collective expertise and capabilities.
- Identifying shortcomings and instituting remedial measures to improve capabilities.
- Making timely adjustments and mid-course corrections.
- Utilizing experienced trainers from other military aviation units to train the new military aviation unit awaiting deployment.
- Final pre-deployment inspection and rehearsal of the military aviation unit by national peacekeeping experts under TCC arrangements.

6.3.4 Methodology for In-Mission Self-Evaluation

The suggested methodology for maintaining operational readiness and carrying out self-evaluation includes:

- Continuous and simultaneous monitoring and review of performance in-mission by the military aviation unit commander.
- Identifying potential weak areas and conducting periodic selective evaluations to assess and readjust corrective actions.
- Reassessing capabilities and skills when the Mission operational situation changes or when there is a gap between Mission requirements and performance.
- Validating key appointments in command and staff positions to match responsibilities with ability and providing guidance and support where required.
- The aviation unit should perform self-evaluation with two aims. The first is to identify what the aviation unit is doing well, with the aim to pass on to others so they may, if they want, adopt that. The second aim is to identify what the aviation unit can improve, with the aim to pass that on to the others so they can learn from it.

6.3.5 Self-Evaluation Key Topics

To assess the operational readiness of a military aviation unit, the UN demands that the self-evaluation has to be implemented based on distinct topics such as organizational structure, capability in maintaining a military aviation unit's core capabilities, operational tasks and capabilities, training requirements and desired standards, aviation safety requirements, aircraft serviceability, standard equipment, maintenance and logistic support capabilities and interpersonal relationship. These self-evaluation topics will address different levels within the military aviation unit to include individuals, task-oriented groups, subordinate units, staff and military aviation unit commanders; and analyze task-oriented activities at the subordinate unit and unit headquarters.

6.3.6 Conclusion

The aim on the self-evaluation is to increase operational effect. The aviation unit should do that by performing self-evaluation regularly with the aim of identifying what the aviation unit is performing good and what the aviation unit can improve.

Self-evaluation yields great benefits in terms of operational readiness and early identification of unit weaknesses. Early identification allows performance or equipment shortfalls to be addressed before they cause mission failure or the loss of life. TCCs that lack the financial or technical ability to support their deploying units with the resources needed for self-evaluation should discuss their needs with DPO/DOS at UN Headquarters. Every effort will be made to assist the TCC with its requirements, either by expert assistance from UN Headquarters or through third party support. See Annex C of this manual for sample self-evaluation checklists covering pre-deployment and in-mission requirements. See Appendix 1-4 of Annex C for sample competency record checklists of the Aviation unit's aircrew. The purpose of providing these competency checklists is to provide the Force HQ with a clear picture of the competency which the Aviation unit brings with it to the field.

Annex A

Aircraft and Helicopter Categories

HELO / LIGHT (MTOW<4,000Kg)	HELO / MEDIUM (MTOW>4,000Kg or Pax≥10)	HELO / HEAVY (MTOW>9,000Kg)	HELO / ATTACK & ARMED	UTILITY / LIGHT SINGLE ENGINE	UTILITY / LIGHT	UTILITY / MEDIUM
- A 109* - Alouette II - Alouette III - AS 355* - B-206 Series - B-222* - B-230* - B-407 - B-429* - B-505 - BO-105* - H-125 (Former AS 350) - H-130 (Former EC-130 T2) - H-135* (Former EC-135) - H-145* (Former EC-145 T2) - Ka-26* - MD-500, MD-520, MD-600 - MD Explorer* - Mi-2* - SA 315B - SA 341 - SA 342 - R-22	- AS 365* - AW139* - AW169* - AW189* - B-205 - B-212* - B-214* - B-412* Series - B-430* - BK-117 - H-155* (Former EC-155 B1) - H-160* - H-175* (Former EC-175) - Ka-32* - Oryx* - PZL W-3* - S-58 - S-61* Series - S-76* - UH-60 Series	-Relentless- B-525* - Chinook-BV-107* / CH-47* - CH-53* Series - EH-101* - H-215* (Former AS 332 / AS 532) - H-225* (Former EC-725) - Puma SA-330 - Mi-8* Series - Mi-17* Series - Mi-26* (Extra-Heavy) - NH-90* - S-92*	- A129* - AH-1* Cobra - AH-2* Rooivalk - AH-64* - HAD Tiger* - Mi-24* Series / Mi-35* Series - Mi-28* Series - Mi-8 with MGs mounted?	- C-208&C-208B - PC-6 - PC-12	- Be-200 - Islander Trislander - Do-28&128 - N22&N24 - Let L 410&420 - MU-2 - Commander&TurboCommm - Pa-28 & Pa-31	- CN-235 Be-1900 - An-26 An-74 - C-212 - DHC-4 DHC-6 DHC-7 - DO-228 - F-27 F-50 - Arava - Let L 610 - Saab 340 - Skyvan Shorts 330 &360
CARGO / MEDIUM	CARGO / HEAVY	CARGO / EXTRA /	PAX / TURBO /	PAX / TURBO /	PAX / TURBO / HEAVY	EXECUTIVE

- C-295 - An-12 - L-100&132&382 - Belfast - II-18 - An-72 - An-32	- C-130 - An-22 - II-72	- An-124	- An-28	- ATR-42 / 72 - An-24 - BAe 748 - CV-540&580&600&640 - Dash-8 DO-328 - Jetstream - Saab 2000	- Electra - II-18	- Citation - Falcon20&200&50&2000 - Gulfstream - Westwind - Learjet - HS125&800&1000 - Avanti - Sabreliner
<i>PAX / JET / LIGHT (Pax<19)</i>	<i>PAX / JET / MEDIUM (20<Pax<199)</i>	<i>PAX / JET / HEAVY (200<Pax<299)</i>	<i>WIDEBODY (Pax>300)</i>	Class I UAS	Class II UAS – LOS (RANGE >80 NM; CELLING > 14,000 ft)	Class III UAS – BLOS (SATCOM)
- CL-600&601&604 - Falcon900 - Yak-40	- Bae 146 (Avro RJ70) - A319 A320 A321 - BAe III - B-707 B-727 B-737 - CRJ F70	- A300B2&B4&-600 - A310 - A330&-200 - B-757 B-767 - II-86 II-96-300	- A340&-500&-600 - B-747 - B-777 - II-96M - Tristar DC-10 MD-11	Small UAS - Luna - Shadow 200 - Orbiter 2 - Orbiter 3 - Mini UAS (various)	- BRUAG Ranger - Hermes 450 - IAI Searcher - Patroller - RQ-2 Pioneer - Tier I	- CAIG Wing Loong - Hermes 900 - Heron-1 - MQ-1 Predator - MQ-9 Reaper - TAI Anka

Key: *
MPL

Indicates Twin Engine
Maximum Payload

MTOW
PAX

Maximum Take-off Weight
Passengers

UN Military Aviation Unit: Tasks, Conditions and Standards

ROTARY WINGS - SURVEILLANCE AND RECONNAISSANCE

Task Description. The surveillance and/or reconnaissance task is to obtain relevant information to provide the necessary early warning to the force. This activity, also requires, the availability of day and night electro-optical sensor(s). This task may require, for light attack aircraft, to locate and engage hostile forces. Surveillance — The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means. Reconnaissance — A mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an opposing forces, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a specific area.

Conditions. The military aviation unit receives a surveillance and reconnaissance mission with various objectives aimed at providing field commanders situational awareness for informed decision making. After a detailed assessment of tasks and requirements, the unit dispatches a suitably equipped helicopter and qualified crew to conduct the mission safely and efficiently.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.
3	Crew is briefed and provided with the following information <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • ROEs for aerial engagement • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the helicopter landing sites

	<ul style="list-style-type: none"> • Provide appropriate frequencies for both flight-following and ground troops • Communication failure procedures • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
4	Flight crews are able to perform aerial command and control tasks while on surveillance missions.
5	Crews are able to determine movement and manoeuvre conditions including strengths and weaknesses of static and moving forces.
6	Helicopter unit is able to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.
7	Observations about opposing factions or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.
8	Crew prepares and submits its report after accomplishment of the assigned mission.
9	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
10	Minimum Required Training Standards <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Mission-specific training imparted • Navigational preparations carried out

ROTARY WINGS - ARMED RECONNAISSANCE

Task Description. Armed reconnaissance, if authorized under the Mission mandate and approved by appropriate UN authorities, is reconnaissance to gather information while simultaneously being prepared to use force, mainly in self-defense, by locating and attacking hostile armed elements as they arise during the course of the reconnaissance in assigned general areas, rather than attacking pre-designated targets. Armed reconnaissance often involves engaging hostile elements as they threaten the local civilian population.

Conditions. The military aviation unit receives a mission for conducting armed reconnaissance to locate and engage targets of opportunity or planned targets within the rules of engagement defined by the Mission mandate. Armed reconnaissance can be both reactive and pro-active in nature. After fully comprehending the senior field commander's intent, the military aviation unit commander dispatches an appropriately armed helicopter and crew to ensure mission success.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Command and control • Helicopter capabilities (including self-protection, design and equipment to perform the mission). • Crew capabilities and qualifications. • Terrain. • Obstacles / heights in reconnaissance area. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Minimum safe altitude. • General security situation/threat analysis. • Ammunition to be used. • Availability of required logistical support. • The number of helicopters to perform the mission (recommendation: 2, for mutual support in case of emergencies). • Host nation clearance if not given in the LOA. • Flight plan filing as per UN/host nation rules. • Rules of Engagement. • Threat assessments of hostile Anti-Aircraft weapons. • Clear identification of own forces and friendly population in the area of operation. • RT communication / guidance by own intelligence elements on ground amongst the population.

	<ul style="list-style-type: none"> • Making a combat team of an armed helicopter with a support helicopter for evacuating the aircrew of armed helicopter, in case it is downed by hostile fire. • Inadvertent Instrument Metrological Conditions (IIMC) Plan. • Wearing of protection gear by the aircrew.
4	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing / NOTAMs • Safety altitude for engagement • Low flying hazards • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
5	Coordination performed with an armed helicopter crew to provide additional protection in high threat environments (if applicable).
6	Flight crew is prepared to engage hostile forces while adhering to the UN mandate and rules of engagement.
7	Flight crew is simultaneously conducting reconnaissance, observing and reporting.
8	Helicopter unit prepared to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.
9	Observations about hostile elements or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.
10	Flight crew is able to transit from show-of-force missions to defensive actions or to deliberate and sustained attack on hostile elements as authorized depending on the development of the situation and/or requests of ground forces.

11	Flight crew prepares and submits its report after accomplishment of the assigned mission.
12	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
13	<p>Minimum Required Training Standards</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-charge and co-pilot • Mission-specific crew training • Currency and proficiency of scanners and door gunners (if employed)

ROTARY WINGS - CLOSE SUPPORT

Task Description. It is an air action against hostile targets that are in close proximity to friendly forces and that requires detailed integration of each air mission with the fire and movement of those forces. Close Support is an element of the joint fire support. This fires directly support land, maritime, amphibious, and special operations forces to engage hostile forces, combat formations, and facilities in pursuit of tactical and operational objectives.

Conditions. The unit receives a mission to provide close support (CS) to UN personnel engaged in any one of a variety of operations (e.g., operations against hostile elements, escorting a convoy through unfriendly territory, escorting transport helicopters through hazardous airspace or destroying targets endangering the safety and security of UN personnel, assets or unarmed civilians). The military aviation unit is able to provide the required support with available assets and crews in the shortest possible timeframe ensuring safe mission accomplishment.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission’s success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Helicopter capabilities (must be designed and equipped to perform close support tasks). • Crew capabilities and training standards. • Detailed briefing and coordination between concerned agencies and units. • Area of operations. • Security situation and threat analysis. • Terrain /obstacles and safety altitude. • Weather conditions.

	<ul style="list-style-type: none"> • Aeronautical information (AIP, NOTAM, airspace). • Coordination measures such as air to ground communication to avoid fratricide. • Ammunition that is consistent with Mission mandate. • Measures to avoid and minimize collateral damage. • Host nation clearance if not given in the LOA. • Admin and logistics support planning for the mission’s duration. • Rules of Engagement. • Develop standard message formats in coordination with the ground troops for calling fire.
4	Coordination measures such as air to ground communication to avoid fratricide are in place.
5	Standard message formats are coordinated with the ground troops for fire support request.
6	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing/NOTAMs • Safety altitude for engagement • Low flying hazards • Provide appropriate frequencies for both flights following and ground troops. • Communication failure procedures • Formation flying considerations / separation, changing station, take-off and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
7	Flight crew detects and deters any hostile or aggressive activities while ensuring no collateral damage.
8	The unit provides CS/CCA in both reactive and pro-active operations within the rules of engagement and UN mandate.
9	Flight crew prepares and submits its report after accomplishment of the assigned mission.
10	Internal de-briefing is conducted to improve on preparation and conduct of the mission.

11	<p>Minimum Required Training Standards</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Mission-specific crew training • Currency / proficiency of scanners and door gunners (if employed)
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ROTARY WINGS - PASSENGER/VIP TRANSPORTATION

Task Description. Passenger transportation is an air movement of passengers, including VIP, from one location to another, using UN aviation assets. Military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. The military aviation unit receives a mission to move troops, personnel, VIPs or civilians to a known location by helicopter. After the necessary mission assessment, a suitably configured helicopter is made available along with a trained crew to ensure safe mission accomplishment.

STANDARDS:	
1	<p>Upon receipt of the mission, the aviation staff conducts mission analysis for:</p> <ul style="list-style-type: none"> • Information critical to the mission’s success. • Specified and implied tasks are examined, along with flight routes, communications and control measures. • Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparation. The crews conducting the air movement must observe, conduct reconnaissance, and report as required.
2	<p><u>Passenger Flight: Planning considerations</u></p> <ul style="list-style-type: none"> • Emergency briefing for the passengers • Helicopter capabilities (including self-protection, availability of passenger safety equipment and design features etc.). • Crew capabilities and qualifications. • Command and control. • Terrain and safety altitude. • Weather conditions including day/night operations. • Aeronautical information (AIP, NOTAM, airspace). • General security situation of route and destination.

	<ul style="list-style-type: none"> • Host nation clearance if not given in the LOA. • Support planning for primary and alternate destinations. • Flight plan filing as per UN/host nation rules. • Weight and balance calculations. • Fuel arrangements and its fitness certification. • Avoidance of excessively dusty landing conditions. • Inadvertent Instruments Meteorological Conditions (IIMC) Plan. • Wearing of protection gear by the aircrews. • Protection arrangements by the ground forces in case of a helicopter grounded at a landing site due to technical reason.
B	<p><u>VIP Flight: Planning considerations</u></p> <ul style="list-style-type: none"> • Authorization process in Mission operating procedures. • Helicopter capabilities including self-protection and VIP seating as per the TCC SOP configuration. • Air crew rating and necessary security clearance. • Crew capabilities and training standards, including necessary security clearances. • Flight planning to include weather conditions, flight routes, obstacles en route, safety altitude, priority handling details, etc. • General security situation / threat analysis. • Weather conditions, obstacles and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • Host nation clearance if not given in the LOA. • <u>Appropriate logistics support planning.</u>
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Provide appropriate frequencies for both flights following and ground troops • Communication failure procedures • Navigational preparations for the route to be flown • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management

	<ul style="list-style-type: none"> • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
The unit must be able to sustain its personnel and equipment for 24/7 operations.	
4	Flight crew performs aerial command and control tasks while transporting VIP/passengers.
5	Flight crew determines movement and manoeuvre conditions.
6	Flight crew identifies safety and security threats and briefs the VIP/Passengers.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	Minimum Required Training Standards <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of the crew • Meet the UN minimum crew requirement for pilot-in-command and co-pilot

ROTARY WINGS - CARGO TRANSPORTATION

Task Description. This task involves the carrying or moving of cargo within the Mission by UN utility helicopters. The cargo can be loaded inside a cargo compartment, or outside the cargo compartment using a sling (depending upon the availability of special equipment and helicopter capability). As with passenger transportation, military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. The military aviation unit receives a mission to move cargo, equipment or supplies by helicopter to a known location within the same theater of operations. After the necessary mission assessment, a suitably configured helicopter is made available along with a trained crew to ensure safe mission accomplishment.

STANDARDS:	
1	Upon receipt of the mission, the aviation staff conducts mission analysis for: <ul style="list-style-type: none"> • Information critical to the mission’s success. • Specified and implied tasks are examined, along with flight routes, communications and control measures. • Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparation. • The crews conducting the air movement must observe, conduct reconnaissance, and report as required.

2	<p><u>Planning Considerations</u></p> <ul style="list-style-type: none"> • Loading/of loading plan (locations, procedures, handling equipment). • Helicopter capabilities. • Crew capabilities/training standards. • Coordination measures such as air-to-ground communications. • Loading as per cargo packing list and manifest. • Specialized equipment requirements for sling, jib crane, etc. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Weight and volume according to the helicopter's allowable limits. • Type of cargo (dangerous goods or fragile cargo). • Terrain, obstacles, build-up areas and safety altitude. • Host nation clearance if required as per LOA. • Support planning for primary and alternate destination. • Filing of flight plan as per UN/host nation rules. • Serviceability of quick release mechanism of the load. • Inadvertent Instruments Meteorological Conditions (IIMC) Plan.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the landing destination • Provide appropriate frequencies for both flights following and ground troops • Communication failure procedures • Special briefing in case of dangerous goods • The condition of helicopter landing site at the destination. • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management

	<ul style="list-style-type: none"> • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
4	Flight crews are able to perform aerial command and control tasks during transportation of cargo.
5	Flight crew determines movement and manoeuvre conditions.
6	Flight crew identifies safety and security threats and briefs the VIP/Passengers.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	Flight crew determines movement and manoeuvre conditions.
10	Minimum Required Training Standards <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Crew proficiency in handling specialized equipment

ROTARY WINGS - TRANSPORTATION OF DANGEROUS GOODS

Task Description. Dangerous Goods is an international standard term for goods, items or substances that when transported by aircraft in certain quantities presents a potential risk to people, health, safety, property and/or the environment. This task involves the carrying or moving of Dangerous Goods cargo within the Mission by UN aircraft, refer to para 1.4.5. As with passenger transportation, military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. Once the requirement to transport DGs is received, the military aviation unit assesses the type and size of cargo, special handling and storage facilities required and provides a suitably equipped aircraft and crew to accomplish the mission safely.

STANDARDS:	
1	A suitably equipped and configured aircraft is made available along with the equipment and specially trained personnel required for loading and offloading DGs. All mission equipment and special storage facilities are serviceable, and the necessary coordination accomplished for DG transportation to the desired location.
2	Planning Considerations <ul style="list-style-type: none"> • Proper inspection by qualified personnel before packaging.

	<ul style="list-style-type: none"> • Dangerous Goods packaging, labeling and segregation. • Aircraft capabilities (availability of specific DG handling/loading/unloading. equipment and qualified crew). • All other considerations for cargo transportation remain valid.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the landing destination • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of landing surfaces • Actions for handling DG emergencies in flight
4	Flight crews are able to perform aerial command and control tasks during transportation of cargo.
5	Flight crew determines movement and maneuver conditions.
6	Flight crew identifies safety and security threats and briefs the Passengers.
7	Flight crew prepares and submits its report after accomplishment of the assigned Mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • The TCC should include DGs as part of the crew training program to increase cabin awareness of: • The risks involved in carrying DGs by air. • Handling DG incidents onboard the aircraft. • Appropriate pilot and crew qualifications for specific aircraft types • Appropriate and valid medical certification of the crew • Meeting the UN minimum qualification requirement for pilot-in-command and co-pilot • Routine flying / special mission checks conducted • Navigation preparations for the route carried out

ROTARY WINGS - CASUALTY EVACUATION (CASEVAC)

Task Description. CASEVAC is defined as the primary evacuation of any casualty from the Point of Injury to the closest appropriate medical facility, utilizing the most appropriate means of transportation. Medical research proves that the risk of death or permanent disability is significantly reduced if people are treated as soon as possible after the onset of a life-threatening injury or illness. Based on this evidence, it is of utmost importance that appropriate life, limb and eyesight saving procedures are provided as quickly as possible. Established optimal CASEVAC timings are referred to as the 10-1-2 timeline.

Conditions: The military aviation unit receives a mission to conduct CASEVAC. The military aviation unit coordinates with the mission generating headquarters to ensure the appropriate resources are available. All coordination is completed, and the flight crew is notified of its aerial CASEVAC mission.

STANDARDS:	
1	Upon receipt of this mission, the military aviation unit commanders direct the staff to conduct its mission analysis to ensure that the helicopter is appropriately configured for the expected type and nature of casualties or patient(s) to be transported. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Alert matrix • Command and Control • Operating hours since major engine overhaul • Civil aviation in the area • Medical Teams • Threat on the ground • Landing and Pick-up Zones (LZ/PZ) • Location. The LZ/PZ must be near the aid station. Casualties may require carrying by hand to the waiting aircraft. However, the LZ/PZ must be set up at sufficient distance so that it will not interfere with aid station operations. If possible, the LZ/PZ should be selected downwind from the aid station to avoid blowing dust on the aid station. • Marking. LZ/PZ markings must be visible from the air. • Communications. Radio frequency and call signs used by the ground unit at the LZ should be pre-planned. • Capacity. LZ/PZ size determines how many helicopters can land at one time to load casualties. • Obstacles. LZs/PZs should be free of obstacles. • Drop off location and follow-on medical support. • Flexibility. The CASEVAC system must have sufficient flexibility to enable the health services to respond to changing operational and clinical situations. • General security situation/security of pick-up site.

	<ul style="list-style-type: none"> • Forecast casualty rate. • Capabilities of the evacuation teams (resources, personnel and equipment). • Capabilities of the assets such as payloads, ranges and stretchers certified and/or for aeronautical use, approved by the TCC HQ. • Adequate support planning.
4	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Number and priority of patients • Type of special equipment required • Number and type of litter or ambulatory patients
5	Medical personnel or AMET is involved in preparation and briefing for the task.
6	Flight crew conducts the air movement observe, conduct reconnaissance, and report as required.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • CASEVAC team / crew must be capable of dealing with the most severe injuries • Personnel involved in the MEDEVAC must be trained to provide adequate resuscitation, stabilization and en route care so that the casualty's condition does not deteriorate because of the evacuation. • All personnel involved in the operation must be trained in Basic Life Support and competent in basic first aid. Personnel must also observe basic barrier protection methods when dealing with human body fluids.

ROTARY WINGS - MEDICAL EVACUATION (MEDEVAC)

Task Description. MEDEVAC entails the evacuation of patients, including wounded personnel, between two medical facilities; either within (in-theatre) or out of the mission area. A MEDEVAC should be conducted, depending on the medical urgency to save lives.

Conditions: The military aviation unit receives a mission to conduct MEDEVAC. The military aviation unit coordinates with the mission generating headquarters to ensure the appropriate resources are available. All coordination is completed, and the flight crew is notified of its aerial MEDEVAC mission.

STANDARDS:	
1	Upon receipt of this mission, the military aviation unit commanders direct the staff to conduct its mission analysis to ensure that the helicopter is appropriately configured for the expected type and nature of casualties or patient(s) to be transported. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <p>Helicopter capabilities (availability of specialized equipment for en route medical care, including stretchers certified and/or for aeronautical use, approved by the TCC HQ).</p> <ul style="list-style-type: none"> • Crew capabilities and training standards. • Availability of adequately trained aero-medical evacuation crew. • Weather conditions, terrain and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • Adequate support planning including necessary medical supplies. • A medical risk assessment to ensure the patient's condition is within acceptable safety standards. • Medical Treatment Facilities (levels 1, 2 and 3) should be notified and ready to receive the patient. • Special consideration should be given for MEDEVAC flights for patients suffering from high-epidemic deceases (Ebola) as per LOA adhering all the necessary precautionary measures.
4	Medical facility provides transport of patient(s) to dedicated departure location (HLS).
5	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Number and priority of patients • Type of special equipment required • Number and type of litter or ambulatory patients
6	Medical personnel or AMET including in preparation and execution of the task.
7	Flight crew conducts the air movement observe, conduct reconnaissance, and report as required.
8	Receiving Medical installation is expecting reception of patient(s) at destination.
9	Flight crew prepares and submits its report after accomplishment of the assigned mission.

10	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
11	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • CASEVAC team / crew must be capable of dealing with the most severe injuries • Personnel involved in the MEDEVAC must be trained to provide adequate resuscitation, stabilization and en route care so that the casualty's condition does not deteriorate because of the evacuation. • All personnel involved in the operation must be trained in Basic Life Support and competent in basic first aid. Personnel must also observe basic barrier protection methods when dealing with human body fluids.

ROTARY WINGS - SPECIALIZED OPERATIONS (AIR ASSAULT/QRF/RAPPELLING/FAST ROPING/PARA-DROP/HELOCASTING)

Task Description. It is an air movement of UN forces with rotary-wings to engage and destroy hostile forces, to seize and hold key terrain, or secure, destroy, disrupt or fix specific hostile forces, and interdicting hostile withdrawal routes in protection of forces or groups in accordance with the mandate.

Conditions. The military aviation unit receives a mission to transport infantry or designated quick reaction troops in a conflict zone to, in example, assault an objective or provide a quick reaction response. After a detailed operational risk assessment, an appropriate combination of helicopters and an experienced, well trained crew is dispatched for the mission.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Type of mission • Helicopter capabilities • Crew capabilities and training standards. • Detailed briefings and coordination on air assault techniques and tactics by concerned agencies and units. • Coordination required between different types of helicopters (utility and attack). • Area of operations.

	<ul style="list-style-type: none"> • Security situation/threat analysis. • Weather conditions (VMC). • Aeronautical information (AIP, OTAM, airspace). • Terrain, obstacles and safety altitude. • Host nation clearance, if not given in the LOA. • Adequate admin and logistics planning including fuel and ammunition. • Air assault techniques and training plus coordination with ground troops. • Rules of Engagement. • Contingency planning for recovery of a downed helicopter. • Developing a temporary Forward Operating Base (FOB). • Refueling arrangements in the FOB. • Medical cover for any casualties. • Combat search & rescue – CSAR. • Protective gear for the aircrews. • Dusty landing preparatory training & SOP. • Modified maintenance SOPs for dusty unprepared operations. • Level of armor protection of the helicopters. • Minimum operating altitude of the surveillance helicopters accompanying the cargo helicopters. • Pilots training for formation flying. • Inadvertent Instruments Meteorological Conditions (IIMC) training. • NVG capability and training, especially for unprepared landings in the field. • Prior insertion of landing zone (LZ) protection party on utility helicopters. • Prior sanitization of the area, especially the landing zone LZs by attack / armed helicopters, if available.
4	Coordination measures such as air to ground communication to avoid fratricide are in place.
5	Training and coordination with ground troops conducted incl. detailed mission rehearsal.
6	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing/NOTAMs • Safety altitude for engagement • Low flying hazards

	<ul style="list-style-type: none"> • Provide appropriate frequencies for both flights following and ground troops. • Communication failure procedures • Formation flying considerations / separation, changing station, take-off and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
7	Security and support of the landing zones (LZs) by attack / armed helicopters (if available) provided.
8	Prior to insertion, landing zones cleared by ground parties and reported to main party.
9	Flight crew conducting the air movement observe, conduct reconnaissance, and report as required.
10	Internal coordination and reporting in the air party (eg. UH and AH) and with the ground forces is always maintained.
11	Follow up tasks, e.g. close support, armed reconnaissance in support of the ground forces is provided (until ground forces objective is achieved).
12	Flight crew prepares and submits its report after accomplishment of the assigned mission.
13	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
14	Minimum Required Training Standards: <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Mission specific training for the crew

ROTARY WINGS - SEARCH AND RESCUE (SAR)

Task Description. Search and Rescue consists of operational tasks to locate, communicate with, and recover personnel from isolated areas in a permissive environment. Search and Rescue is a specialized operation performed by rescue forces to affect the recovery of distressed personnel. Search and rescue is a technical activity rendered by a group of specially trained personnel. Immediate extraction is another concept of utilizing the available force for launching a quick rescue operation.

Conditions. The unit receives a mission to conduct search and rescue operations in support of a missing or overdue aircraft, helicopter, ground troops or personnel trapped in any emergency. Search and Rescue operations can be conducted over a wide variety of inhospitable terrain, water bodies or disaster-hit areas requiring high performance in aircrews and aircraft. Search and Rescue missions require thorough planning and

assessment to dispatch the appropriate crew and suitably configured helicopters.

STANDARDS SAR:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Any special equipment needed such as hoists, slings, winches, firefighting buckets, etc., along with the helicopters and special skills the crew may require are identified.
4	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Helicopter capabilities (including availability of required specialized equipment, such as winch). • Adherence with Mission Aviation SAR SOP • Crew capabilities and training standards (including special missions). • Area of operations and nature of terrain. • Nature of the situation which demands SAR (Sea rescue, fire rescue, flood rescue, etc). • Appropriate search patterns/techniques. • General security situation/threat analysis. • Weather conditions, obstacles and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • Appropriate support planning for maximum search endurance (including provisions for extra fuel tanks).
5	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission along with type of search to be conducted • Area of operation • Time of operation • Threat assessment • Weather briefing / NOTAMs • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of helicopter landing site or landing surface • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation

	<ul style="list-style-type: none"> • Refueling responsibility • Downed helicopter SOP revision
6	Crews conducting the air movement observe, conduct reconnaissance, and report as required.
7	Crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Search and Rescue plans must be prepared and rehearsed in advance • Appropriate category rating • Appropriate class rating (qualified and current on special missions) • Appropriate and valid medical certification of aircrew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot

ROTARY WINGS - SEARCH AND RESCUE (CSAR)

Task Description. CSAR refers to specialized operations in which an isolated person or persons have to be recovered from non-permissive environments, typically with the existence of threats to the recovery force. It is a strategic operation. A CSAR mission includes many assets and may be carried out by a task force of helicopters, ground-attack aircraft, aerial refueling tankers and an airborne or ground command post. It can involve ground forces such as Versatile Specialized Aviation Section (VSAS). This mission is prepared and conducted after a planning process. The timeline for CSAR is beginning of the incident +1h to 1 week.

Conditions. The unit receives a mission to conduct combat search and rescue operations in support of a person, persons or ground troops to be recovered from hostile environments. Combat Search and Rescue operations is conducted in hostile environments requiring high performance in aircrews and aircraft. Combat Search and Rescue missions require thorough planning (usually, depending on the complexity of the environment up to 1 week) and assessment to dispatch the appropriate crew and suitably configured helicopters and requires.

STANDARDS CSAR:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission’s success. Specified and implied tasks are examined, along with flight routes, communications, and control measures as well as special equipment identified to perform the task.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Assets capabilities (including availability of required specialized equipment, such as winch). • Crew capabilities and training standards (including special missions). • Area of operations and nature of terrain. • Nature of the situation which demands CSAR (down pilot, threats, environment...).

	<ul style="list-style-type: none"> • Appropriate search techniques. • SOPs • General security situation/threat analysis. • Weather conditions, obstacles and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • Appropriate support planning for maximum search endurance (including provisions for extra fuel tanks). • Coordination with task forces
4	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission along with type of search to be conducted • Area of operation • Time of operation • Threat assessment • Weather briefing / NOTAMs • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of helicopter landing site or landing surface • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
5	Coordination and preparation with ground forces performed.
6	Communication and information exchanged with embarked ground forces on situation esp. in the planned landing zone.
7	Flight crew conducting the air movement observe, conduct reconnaissance, and report as required.
8	Flight crew prepared to provide CS/CCA to ground troops.
9	Crew prepares and submits its report after accomplishment of the assigned mission.
10	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
11	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate pilot and crew qualifications for specific aircraft types • Meeting the UN minimum crew requirement for pilot-in-command (PIC) and co-pilot (CP) • Appropriate and valid medical certification of the crew

	<ul style="list-style-type: none"> • Routine flying / special mission checks conducted • Navigation preparations for the route carried out • CSAR Area of Responsibility (CSAR AOR) defined • Restricted Operation Zone (ROZ) defined • Observe the Minimum Required Training Standards related to CASEVAC missions • Be capable to locate the aircrew or isolated personnel (survivor) by visual or electronic search methods to pinpoint the survivor's location and permit recovery • Provide communication with the survivor by radio or visual signaling to conduct CSAR authentication • Recover and return the survivor to a friendly area and provide the necessary medical assistance
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ROTARY WINGS - SEARCH AND RESCUE (CIMEX)

Task Description. IMEX refers to specialized opportunity operations in which an isolated person or persons are recovered from hostile environments, typically with the existence of immediate threats to the recovery force. It is a tactical operation. A CIMEX is conducted with military UN aviation assets already engaged in the operation. For this mission, the UN commander can dedicate in advance, assets for that mission or use the aviation assets already engaged. For instance, ground troops such as VSAS can be tasked for that mission.

Conditions. The unit receives a mission to conduct a Combat Immediate Extraction Operation in support of an isolated person or persons from an immediate threat. The operation is conducted in hostile environments (to the recovery force) requiring high performance in aircrews and aircraft. Combat Immediate Extraction Operations require almost immediate reaction, so the planning and preparation requires training and coordination in advance (contingency operation) for involved ground and air assets and rehearsed tactics, techniques and procedures (TTPs). Usually these types of operations are carried out by elements of an Air Special Forces Task Group (ASOTG).

STANDARDS CIMEX:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Assets capabilities (including availability of required specialized equipment, such as winch). • Embarked troop capabilities. • Own support capabilities. • Area of operations and nature of terrain. • Playtime. • SOPs
4	Crew is briefed and provided with the following information

	<ul style="list-style-type: none"> • Type of mission along with type of search to be conducted • Area of operation • Time of operation • Threat assessment • Weather briefing / NOTAMs • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of helicopter landing site or landing surface • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed helicopter SOP revision
5	Crews conducting the air movement observe, conduct reconnaissance, and report as required.
6	Crew prepares and submits its report after accomplishment of the assigned mission.
7	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
8	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate qualifications for specific mission • Meeting the UN minimum requirements • Appropriate and valid medical certification of the personnel • CSAR Area of Responsibility (CSAR AOR) defined • Restricted Operation Zone (ROZ) defined <p>Observe the Minimum Required Training Standards related to CASEVAC missions</p> <ul style="list-style-type: none"> • Provide communication with the survivor by radio or visual signaling to conduct CSAR authentication • Recover and return the survivor to friendly control and provide the necessary medical assistance

FIXED WING - PASSENGER/VIP TRANSPORTATION

Task Description. Passenger transportation is an air movement of passengers, including VIP, from one location to another, using UN aviation assets. Military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. The unit receives a mission to move troops, personnel, VIPs, support personnel and liaison officers via air movement. The unit assesses the requirement, type and size of aircraft necessary and provides appropriate airframe and crew to accomplish the mission safely.

STANDARDS:	
1	<p>Upon receipt of the mission, the aviation staff conducts mission analysis for:</p> <ul style="list-style-type: none"> • Information critical to the mission’s success. • Specified and implied tasks are examined, along with flight routes, communications and control measures. • Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparation. • The crews conducting the air movement must observe, conduct reconnaissance, and report as required.
2	<p><u>Passenger Flight: Planning considerations</u></p> <ul style="list-style-type: none"> • Aircraft capabilities (including self-protection, availability, and suitability of passenger safety equipment and design features etc.). • Crew capabilities and qualifications. • Command and Control. • Terrain and safety altitude. • Weather conditions including day/night operations. • Aeronautical information (AIP, NOTAM, airspace). • General security situation of route and destination. • Host nation clearance if not given in the LOA. • Support planning for primary and alternate destinations. • Flight plan filing as per UN/host nation rules. • Weight and balance calculations. • Fuel arrangements and its fitness certification. • Avoidance of excessively dusty landing conditions. • Inadvertent Instruments Meteorological Conditions (IIMC) Plan. • Wearing of protection gear by the aircrews. • Protection arrangements by the ground forces in case of an aircraft grounded at a landing site due to technical reason.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation

	<ul style="list-style-type: none"> • Time of operation • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Provide appropriate frequencies for both flights following and ground troops • Communication failure procedures • Navigational preparations for the route to be flown • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
4	The unit must be able to sustain its personnel and equipment for 24/7 operations.
5	Flight crew performs aerial command and control tasks while transporting passengers.
6	Flight crew determines movement and manoeuvre conditions.
7	Flight crew identifies safety and security threats and briefs the Passengers.
8	Flight crew prepares and submits its report after accomplishment of the assigned mission.
9	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
10	Minimum Required Training Standards: <ul style="list-style-type: none"> • Appropriate pilot and crew qualifications for specific aircraft types • Meeting the UN minimum crew requirement for pilot-in-command (PIC) and co-pilot • Appropriate and valid medical certification of the crew • Routine flying / special mission checks conducted • Navigation preparations for the route carried out

FIXED WING - CARGO TRANSPORTATION

Task Description. This task involves the carrying or moving of cargo within the Mission by UN aircraft. As with passenger transportation, military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. The unit receives a mission to move materiel, equipment, ammunition, supplies, food, water, or any other approved materials via air movement. The unit assesses the requirement, type and size of aircraft necessary and provides appropriate airframe and crew to accomplish the mission safely.

STANDARDS:	
1	<p>Upon receipt of the mission, the aviation staff conducts mission analysis for:</p> <ul style="list-style-type: none"> • Information critical to the mission’s success. • Specified and implied tasks are examined, along with flight routes, communications and control measures. • Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparation. • The crews conducting the air movement must observe, conduct reconnaissance, and report as required.
2	<p><u>Planning Considerations</u></p> <ul style="list-style-type: none"> • Loading/of loading plan (locations, procedures, handling equipment). • aircraft capabilities. • Crew capabilities/training standards. • Cargo manifest and segregation of dangerous goods • Coordination measures such as air-to-ground communications. • Loading as per cargo packing list and manifest. • Specialized equipment requirements for sling, jib crane, etc. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Weight and volume according to the aircraft’s allowable limits. • Type of cargo (dangerous goods or fragile cargo). • Terrain, obstacles, build-up areas and safety altitude. • Host nation clearance if required as per LOA. • Support planning for primary and alternate destination. • Filing of flight plan as per UN/host nation rules. • Serviceability of quick release mechanism of the load. <p>Inadvertent Instruments Meteorological Conditions (IIMC) Plan.</p>

3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the landing destination • Provide appropriate frequencies for both flights following and ground troops • Communication failure procedures • Special briefing in case of dangerous goods • The condition of aircraft landing site at the destination. • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility <p>Downed aircraft SOP revision</p>
4	Flight crews are able to perform aerial command and control tasks during transportation of cargo.
5	Flight crew determines movement and manoeuvre conditions.
6	Flight crew identifies safety and security threats and briefs the Passengers.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	Flight crew determines movement and manoeuvre conditions.
10	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot <p>Crew proficiency in handling specialized equipment</p>

FIXED WING - TRANSPORTATION OF DANGEROUS GOODS

Task Description. Dangerous Goods is an international standard term for goods, items or substances that when transported by aircraft in certain quantities presents a potential risk to people, health, safety, property and/or the environment. This task involves the carrying or moving of Dangerous Goods cargo within the Mission by UN aircraft, refer to para 1.5.5. As with passenger transportation, military aircraft operating under a Letter of Assist (LOA) must meet contributing nation and UN standards for military aviation operations and comply with the terms and conditions of the LOA.

Conditions. Once the requirement to transport DGs is received, the military aviation unit assesses the type and size of cargo, special handling and storage facilities required and provides a suitably equipped aircraft and crew to accomplish the mission safely.

STANDARDS:	
1	A suitably equipped and configured aircraft is made available along with the equipment and specially trained personnel required for loading and offloading DGs. All mission equipment and special storage facilities are serviceable, and the necessary coordination accomplished for DG transportation to the desired location.
2	<p>Planning Considerations</p> <ul style="list-style-type: none"> • Proper inspection by qualified personnel before packaging. • Dangerous Goods packaging, labeling and segregation. • Aircraft capabilities (availability of specific DG handling/loading/unloading. equipment and qualified crew). • All other considerations for cargo transportation remain valid.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the landing destination • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of landing surfaces • Actions for handling DG emergencies in flight
4	Flight crews are able to perform aerial command and control tasks during transportation of cargo.
5	Flight crew determines movement and maneuver conditions.

6	Flight crew identifies safety and security threats and briefs the Passengers.
7	Flight crew prepares and submits its report after accomplishment of the assigned Mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • The TCC should include DGs as part of the crew training program to increase cabin awareness of: • The risks involved in carrying DGs by air. • Handling DG incidents onboard the aircraft. • Appropriate pilot and crew qualifications for specific aircraft types • Appropriate and valid medical certification of the crew • Meeting the UN minimum qualification requirement for pilot-in-command and co-pilot • Routine flying / special mission checks conducted • Navigation preparations for the route carried out

FIXED WING - SURVEILLANCE AND RECONNAISSANCE

Task Description. The surveillance and/or reconnaissance task is to obtain relevant information to provide the necessary early warning to the force. This activity, also requires, the availability of day and night electro-optical and infra-red sensor(s). This task may require, for light attack aircraft, to locate and engage hostile forces. **Surveillance** — The systematic observation of aerospace, cyberspace, surface, or subsurface areas, places, persons, or things by visual, aural, electronic, photographic, or other means. **Reconnaissance** — A mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an opposing forces, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a specific area.

Conditions. The military aviation unit receives a mission to conduct aerial reconnaissance and / or surveillance operations. Aerial reconnaissance and surveillance operations can include zone, route, area reconnaissance and / or surveillance. This mission can be included in both troop and equipment movements. Flight crews should always conduct reconnaissance and surveillance of the route they fly and report any information deemed significant. Force Headquarters will process the products generated by the military unit and determine its operational value.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.

3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation (from base to base) • Threat assessment • ROEs for aerial engagement • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Known hazards and conditions of the aircraft landing sites • Provide appropriate frequencies for both flight-following and ground troops • Communication failure procedures • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
4	<p>Flight crews are able to perform aerial command and control tasks while on surveillance missions.</p>
5	<p>Crews are able to determine movement and manoeuvre conditions including strengths and weaknesses of static and moving forces.</p>
6	<p>Military aviation unit is able to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.</p>
7	<p>Observations about opposing factions or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.</p>
8	<p>Crew prepares and submits its report after accomplishment of the assigned mission.</p>
9	<p>Internal de-briefing is conducted to improve on preparation and conduct of the mission.</p>
10	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate pilot and crew qualifications for specific aircraft types • Appropriate and valid medical certification of the crew • Meet the UN minimum crew requirement for pilot-in-command and co-pilot • Routine flying / special mission checks conducted • Navigation preparations for the route carried out

	<ul style="list-style-type: none"> • Minimum Survey Height. The minimum clearance height during aerial reconnaissance is 500 ft. If an aerial reconnaissance survey is to be flown at less than 159 m (500 ft) it should be flown after conducting a detailed risk analysis considering: • Terrain relief and vegetation • Aircraft type • Aircrew flight and duty times • Threat assessment
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FIXED WING - AERIAL DELIVERY OPERATIONS

Task Description. It is an aerial supply by parachute or airdrop; or an insertion of specialized parachute troops. **Aerial supply.** This requirement might be in the aftermath of natural calamities like earthquakes or floods where landing facilities may not be available or when other means are not available or less efficient. **In case of parachute troops requirement.** Peace operations may request Aerial Delivery Operations for inserting specialized parachute troops if required in support of a UN mandate. Conducting aerial delivery operations requires aircraft and crew that have been specially configured and trained respectively for that purpose.

Conditions. The military aviation unit receives a mission to conduct a parachute drop of supplies and equipment in an operational or emergency-stricken area. After detailed assessment of the requirement, the unit prepares an appropriate aircraft suitably equipped to perform the task and ensures availability of the crew required for the mission.

STANDARDS:	
1	<p>Upon receipt of the mission, the aviation staff conducts mission analysis for:</p> <ul style="list-style-type: none"> • Information critical to the mission’s success. • Specified and implied tasks are examined, along with flight routes, communications and control measures. • Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparation. <p>The crews conducting the air movement must observe, conduct reconnaissance, and report as required.</p>
2	<p><u>Planning Considerations</u></p> <ul style="list-style-type: none"> • Aircraft capabilities (specially configured for parachute operations). • Crew capabilities and training standards. • Availability of parachute rigging/packing/repacking facilities. • Coordination for drop zone selection and marking. • Aeronautical information (AIP, NOTAM, airspace). • Area of operations, weather conditions and safety altitude. • General security situation/threat analysis. • Availability of loadmasters / jumpmaster. • All other considerations for cargo transportation remain valid

3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation and drop Zone preparation • Time of operation (from base to base) • Threat assessment • Airspace limitations / restrictions • Weather briefing / NOTAMs • Minimum safe altitude • Number of troops to be dropped • Type of cargo to be dropped • Known hazards and conditions of the landing destination • Provide appropriate frequencies for both flights following and ground troops • Communication failure procedures • Special briefing in case of dangerous goods • The condition of aircraft landing site at the destination. • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
4	Flight crews are able to perform aerial command and control tasks during transportation of cargo.
5	Flight crew determines movement and manoeuvre conditions.
6	Flight crew identifies safety and security threats and briefs the parachute troops.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards/Self-Evaluation Criteria:</p> <ul style="list-style-type: none"> • Rigger Proficiency • Appropriate category rating. • Appropriate class rating (qualified and current on type). • Appropriate and valid medical certification of crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot.

	<ul style="list-style-type: none"> • Routine flying / special mission checks conducted • Navigation preparations for the route carried out
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FIXED WING - CASEVAC

Task Description. As with rotary-wing operations, CASEVAC is defined as the primary evacuation of any casualty from the Point of Injury to the closest appropriate medical facility, utilizing the most appropriate means of transportation. Medical research proves that the risk of death or permanent disability is significantly reduced if people are treated as soon as possible after the onset of a life-threatening injury or illness. Based on this evidence, it is of utmost importance that appropriate life, limb and eyesight saving procedures are provided as quickly as possible. Established optimal CASEVAC timings are referred to as the 10-1-2 timeline.

Conditions. The military aviation unit receives a mission to evacuate seriously injured personnel to the initial medical treatment facilities. After detailed mission assessment, the unit provides a suitably equipped aircraft and crew to accomplish the mission in the shortest possible timeframe.

STANDARDS:	
1	Upon receipt of this mission, the military aviation unit commanders direct the staff to conduct its mission analysis to ensure that the helicopter is appropriately configured for the expected type and nature of casualties or patient(s) to be transported. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Aircraft capabilities (configured to carry lying and sitting personnel). The aircraft must be configured with original equipment or certified for aeronautical use and approved by TCC HQ. • Crew capabilities and training standards. • Availability of AMET • Forecasted casualty rate (in case of a sustained military/humanitarian operation). • Nature and disposition of nearest health facilities. • Number and type of evacuation platforms available. • Area of operations, weather conditions, safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • General security situation/threat analysis. • Flight planning and necessary UN and host nation clearances. • Adequate support planning.
4	Crew is briefed and provided with the following information <ul style="list-style-type: none"> • Number and priority of patients

	<ul style="list-style-type: none"> • Type of special equipment required • Number and type of litter or ambulatory patients
5	Medical personnel or AMET is involved in preparation and briefing for the task.
6	Flight crew conducts the air movement observe, conduct reconnaissance, and report as required.
7	Flight crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	Minimum Required Training Standards: <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Routine flying / special mission checks conducted • Navigation preparations for the route carried out

FIXED WING - MEDEVAC

Task Description. As with rotary-wing operations, Medical Evacuation (MEDEVAC) in fixed-wing operations entails the evacuation of a patients, including wounded personnel, between two medical facilities; either within (in-theatre) or out of the mission area. A MEDEVAC should be conducted, depending on the medical urgency to save lives.

Conditions. The military aviation unit receives a mission to transport seriously injured or ill personnel to an advanced medical treatment facility located far from the departure point. After detailed mission analysis, the unit provides an appropriate aircraft suitably equipped with medical facilities and air and medical crew to accomplish the mission safely.

STANDARDS:	
1	Upon receipt of this mission, the military aviation unit commanders direct the staff to conduct its mission analysis to ensure that the aircraft is appropriately configured for the expected type and nature of casualties or patient(s) to be transported. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Aircraft capabilities (configured for en route medical care). The aircraft must be configured with original equipment or certified for aeronautical use and approved by TCC HQ. • Crew capabilities and training standards. • Availability of AMET • A risk assessment should be completed by a medical assessment team, fully assigned and transferred to the aircraft crew, to ensure that

	<p>the risks involved are understood and the level of risk is within acceptable safety standards.</p> <ul style="list-style-type: none"> • Ensure proper documentation of flight safety assurance/doctor-certified patient risk assessment and fitness to travel by air. • Medical Treatment Facilities (levels 2 and 3 clinics) should be notified and ready to receive the patient. • Area of operations, weather conditions, safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • General security situation/threat analysis. • Flight planning and necessary clearances in accordance with UN and host nation rules. • Appropriate admin and logistics support planning.
4	Medical facility provides transport of patient(s) to dedicated departure location.
5	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Number and priority of patients • Type of special equipment required • Number and type of litter or ambulatory patients
6	Medical personnel or AMET including in preparation and execution of the task.
7	Flight crew conducts the air movement observe, conduct reconnaissance, and report as required.
8	Receiving Medical installation is expecting reception of patient(s) at destination.
9	Flight crew prepares and submits its report after accomplishment of the assigned mission.
10	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
11	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Proficiency of on-board medical staff • Navigation preparations for the route carried out

FIXED WING - SEARCH OPERATIONS

Task Description. A search operation is the use of any aircraft to prepare and execute an air operation to search for potentially or actually distressed person(s) on land or at sea in a permissive environment and in support of SAR operations.

Conditions. The military aviation unit receives a mission to use fixed-wing assets for prepare and execute an air operation to search for potentially or actually distressed person(s) on land or at sea in a permissive environment and in support of SAR operations.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Any special equipment needed such as life rafts, survival kits, etc., along with the aircraft and special skills the crew may require are identified.
4	Planning considerations and preparations include: <ul style="list-style-type: none"> • Aircraft capabilities (including availability of required specialized equipment, such as winch). • Adherence with Mission Aviation SAR SOP. • Crew capabilities and training standards (including special missions). • Area of operations and nature of terrain. • Nature of the situation which demands the mission (Sea, fire, flood, etc). • Appropriate search patterns/techniques. • General security situation/threat analysis. • Weather conditions, obstacles and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). Appropriate support planning for maximum search endurance (including provisions for extra fuel tanks).
5	Crew is briefed and provided with the following information <ul style="list-style-type: none"> • Type of mission along with type of search to be conducted • Area of operation • Time of operation • Threat assessment • Weather briefing / NOTAMs • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • The condition of helicopter landing site or landing surface • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required

	<ul style="list-style-type: none"> • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
6	Crews conducting the air movement observe, conduct reconnaissance, and report as required.
7	Crew prepares and submits its report after accomplishment of the assigned mission.
8	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (Qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Navigational preparations for the route and area to be searched

FIXED WING - AIR PATROL

Task Description. Aerial patrols are provided over an objective area, critical portion of the area of operations, or other UN area of responsibility for the purpose of observing and gathering important early warning information.

Conditions. The military aviation unit receives a mission to use fixed-wing assets for patrolling over an objective or critical part of a peacekeeping area of responsibility with the purpose of gathering early warning of imminent activity using both visual and electronic means. After detailed mission analysis, the unit provides a suitably equipped aircraft and crew to accomplish the mission safely and efficiently.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	<p>Planning considerations and preparations include:</p> <ul style="list-style-type: none"> • Aircraft capabilities (including self-protection, design and equipment to perform the mission). • Crew capabilities and training standards. • Area of operations, terrain, obstacles, weather conditions and safety altitude. • Aeronautical information (AIP, NOTAM, airspace). • General security situation/threat analysis.

	<ul style="list-style-type: none"> • Filing of flight plan and necessary UN and host nation clearances. • Support planning for maximum flight range and endurance.
4	Coordination measures such as air to ground communication to avoid fratricide are in place.
5	Training and coordination with ground troops conducted incl. detailed mission rehearsal.
6	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing/NOTAMs • Safety altitude for engagement • Low flying hazards • Provide appropriate frequencies for both flights following and ground troops. • Communication failure procedures • Formation flying considerations / separation, changing station, take-off and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
7	Flight crew conducting the air movement observe, conduct reconnaissance, and report as required.
8	Flight crew prepares and submits its report after accomplishment of the assigned mission.
9	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
10	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating • Appropriate class rating (qualified and current on type) • Appropriate and valid medical certification of the crew • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot • Navigational preparations for the objective / critical area to be patrolled

FIXED WING - ARMED RECONNAISSANCE

Task Description. Reconnaissance by a light attack aircraft to locate and engage as per ROE, in a non-permissive area, rather than to attack predesignated targets.

Conditions. The military aviation unit receives a mission for conducting armed reconnaissance to locate and engage targets of opportunity or planned targets within the rules of engagement defined by the Mission mandate. Armed reconnaissance can be both reactive and pro-active in nature. After fully comprehending the senior field commander’s intent, the military

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission’s success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commander conducts map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Command and control • Aircraft capabilities (including self-protection, design and equipment to perform the mission). • Crew capabilities and qualifications. • Terrain. • Obstacles / heights in reconnaissance area. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Minimum safe altitude. • General security situation/threat analysis. • Ammunition to be used. • Availability of required logistical support. • The number of aircrafts to perform the mission (recommendation: 2, for mutual support in case of emergencies). • Host nation clearance if not given in the LOA. • Flight plan filing as per UN/host nation rules. • Rules of Engagement. • Threat assessments of hostile Anti-Aircraft weapons. • Clear identification of own forces and friendly population in the area of operation. • RT communication / guidance by own intelligence elements on ground amongst the population. • Inadvertent Instrument Metrological Conditions (IIMC) Plan.
4	Crew is briefed and provided with the following information <ul style="list-style-type: none"> • Type of mission • Area of operation

	<ul style="list-style-type: none"> • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing / NOTAMs • Safety altitude for engagement • Low flying hazards • Appropriate frequencies for both flights following and ground troops • Communication failure procedures • Formation flying considerations / separation, changing station, t/o and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
5	Flight crew is prepared to engage hostile forces while adhering to the UN mandate and rules of engagement.
6	Flight crew is simultaneously conducting reconnaissance, observing and reporting.
7	Military Aviation unit prepared to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.
8	Observations about hostile elements or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.
9	Flight crew is able to transit from show-of-force missions to defensive actions or to deliberate and sustained attack on hostile elements as authorized depending on the development of the situation and/or requests of ground forces.
10	Flight crew prepares and submits its report after accomplishment of the assigned mission.
11	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
12	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating; • Appropriate class rating (qualified and current on type); • Appropriate and valid medical certification of the crew; • Meeting the UN minimum crew requirement for pilot-in-charge and co-pilot; and • Mission-specific crew training.

FIXED WING - CLOSE SUPPORT (CS)

Task Description. It is an air action against hostile targets that are in close proximity to friendly forces and that requires detailed integration of each air mission with the fire and movement of those forces. Close Support is an element of the joint fire support. This fires directly support land, maritime, amphibious, and special operations forces to engage hostile forces, combat formations, and facilities in pursuit of tactical and operational objectives.

Conditions. The unit receives a mission to provide Close Support (CS) to UN personnel engaged in any one of a variety of operations (e.g., operations against hostile elements, escorting transport helicopters through hazardous airspace or destroying targets endangering the safety and security of UN personnel, assets or unarmed civilians). The military aviation unit is able to provide the required support with available assets and crews in the shortest possible timeframe, ensuring safe mission accomplishment.

STANDARDS:	
1	Upon receipt of the mission, the military aviation unit commanders direct the staff to conduct a mission analysis for information critical to the mission's success. Specified and implied tasks are examined, along with flight routes, communications, and control measures.
2	Military aviation unit commanders conduct map reconnaissance, mission rehearsals and other mission preparation.
3	Planning considerations and preparations include: <ul style="list-style-type: none"> • Aircraft capabilities (must be designed and equipped to perform close support tasks). • Crew capabilities and training standards. • Detailed briefing and coordination between concerned agencies and units. • Area of operations. • Security situation and threat analysis. • Terrain /obstacles and safety altitude. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Coordination measures such as air to ground communication to avoid fratricide. • Ammunition that is consistent with Mission mandate. • Measures to avoid and minimize collateral damage. • Host nation clearance if not given in the LOA. • Admin and logistics support planning for the mission's duration. • Rules of Engagement. • Develop standard message formats in coordination with the ground troops for calling fire.
4	Coordination measures such as air to ground communication to avoid fratricide are in place.
5	Standard message formats are coordinated with the ground troops for fire support request.
6	Crew is briefed and provided with the following information

	<ul style="list-style-type: none"> • Type of mission • Area of operation • Time of operation • Threat assessment • Type of munitions to be used • Weather briefing/NOTAMs • Safety altitude for engagement • Low flying hazards • Provide appropriate frequencies for both flights following and ground troops. • Communication failure procedures • Formation flying considerations / separation, changing station, take-off and landing sequence • Weight and balance calculation, if required • Inadvertent Instruments Meteorological Conditions (IIMC) • Crew resources management • Instrument Flying Rules – Departures, Arrivals and En-route charts • Flight directions and GPS preparation • Refueling responsibility • Downed aircraft SOP revision
7	Flight crew detects and deters any hostile or aggressive activities while ensuring no collateral damage.
8	The unit provides CAS in both reactive and pro-active operations within the rules of engagement and UN mandate.
9	Flight crew prepares and submits its report after accomplishment of the assigned mission.
10	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
11	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating; • Appropriate class rating (qualified and current on type); • Appropriate and valid medical certification of the crew; • Meeting the UN minimum crew requirement for pilot-in-command and co-pilot; and • Mission-specific crew training.

UAS - INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (ISR)

Task Description. The ISR task is to obtain relevant information to provide the necessary early warning to the force.

Conditions. The military aviation unit receives a mission to use UAS assets for ISR over an area. The main mission consists of employing UAS to ensure availability of required ISR support.

STANDARDS:	
1	The UAS unit should be able to provide the required ISR support and exploitation in accordance with the tasking directed by the U2.
2	<p>Planning considerations</p> <ul style="list-style-type: none"> • Commander`s intent (mission goals). • Effects to be generated. • Command and Control. • Platform (Fixed-wings, rotary-wings and UAS) capabilities, including self-protection, design and equipment to perform the intended tasks. • Crew capabilities and qualifications. • Terrain features. • Obstacles on the ground. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Minimum safe altitude. • General security situation/threat analysis. • Clearance from host nation. • Adequate support planning. • Flight plan according to UN and host country rules. • Rules of Engagement.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission; • Area of operation; • Time of operation (from base to base); • Threat assessment; • Airspace limitations / restrictions; • Weather briefing / NOTAMs; • Minimum safe altitude;

	<ul style="list-style-type: none"> • Provision of appropriate frequencies for both flights following and ground troops; • Special coordination measures; • Communication failure procedures; and • Link (RPA-RPS) failure procedures
4	Crews are able to perform aerial command and control tasks while on surveillance missions.
5	Crews are able to determine movement and manoeuvre conditions including strengths and weaknesses of static and moving forces.
6	Military aviation unit is able to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.
7	Observations about opposing factions or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.
8	Crew prepares and submits its report after accomplishment of the assigned mission.
9	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
10	Minimum Required Training Standards: <ul style="list-style-type: none"> • Appropriate category rating; • Appropriate and valid medical certification of the crew; • Compliance with the UN minimum crew requirement for pilot-in-command; and • Conduction of routine flying / special mission checks.

UAS - COMMUNICATION RELAY

Task Description. The Communication Relay consists of employing the UAS to ensure the flow of information between UN forces (air and ground).

Conditions. The military aviation unit receives a mission to use UAS assets for communication relay over an area. The main mission consists of employing UAS to ensure the flow of information among United Nations forces (air and ground).

STANDARDS:	
1	The UAS should be able to provide communication between troops on ground or aircraft air to air.
2	<p>Planning considerations:</p> <ul style="list-style-type: none"> • Command and Control. • General security situation/threat analysis. • Placements of the elements in the scene. • Airspace coordination. • RPAS capabilities, including self-protection, design and equipment to perform the intended task. • Crew capabilities and qualifications. • Terrain features. • Obstacles on the ground. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Adequate support planning. • Flight plan according to UN and host country rules. • ROE.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission; • Area of operation; • Time of operation (from base to base); • Threat assessment; • Airspace limitations / restrictions; • Weather briefing / NOTAMs; • Minimum safe altitude; • Provision of appropriate frequencies for both flights following and ground troops; • Special coordination measures; • Communication failure procedures; and

	<ul style="list-style-type: none"> • Link (RPA-RPS) failure procedures.
4	Crews are able to perform aerial command and control tasks while on surveillance missions.
5	Crews are able to determine movement and manoeuvre conditions including strengths and weaknesses of static and moving forces.
6	Military aviation unit is able to provide information necessary to allow peacekeeping forces to maintain freedom of manoeuvre, and, if necessary, manoeuvre against hostile elements to minimize their ability to affect UN peacekeeping efforts.
7	Observations about opposing factions or terrain are recorded using visual, photographic, infrared or electronic on board and manually operated equipment.
8	Crew prepares and submits its report after accomplishment of the assigned mission.
9	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
10	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating; • Appropriate and valid medical certification of the crew; • Compliance with the UN minimum crew requirement for pilot-in-command; and • Conduction of routine flying / special mission checks.

UAS - SEARCH OPERATIONS

Task Description. A search operation is the use of any aircraft to prepare and execute an air operation to search for potentially or actually distressed person(s) on land or at sea in a permissive environment and in support of SAR operations.

Conditions. The military aviation unit receives a mission to use UAS assets to gather information and detect any activity using sensors. After detailed mission analysis, the unit provides a suitably equipped and appropriate RPA (Sensor) with crew to accomplish the mission safely and efficiently.

STANDARDS:	
1	A properly configured UAS is made available for the assigned task ensuring availability of experienced crew and adequate C ² communications to report, in real time, useful information that can be converted into actionable intelligence for ground force commanders
2	<p>Planning considerations</p> <ul style="list-style-type: none"> • Aircraft capabilities (availability of mission specific equipment). • Adherence with Mission Aviation SAR SOP. • Operators' capabilities and training standards. • Area of operations, obstacles on the ground, safety altitudes, weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • General security situation/threat analysis. • Flight plan according to UN and host country rules. • Adequate support planning.
3	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission; • Area of operation; • Time of operation (from base to base); • Threat assessment; • Airspace limitations / restrictions; • Weather briefing / NOTAMs; • Minimum safe altitude; • Provision of appropriate frequencies for both flights following and ground troops; • Special coordination measures; • Communication failure procedures; and • Link (RPA-RPS) failure procedures.
4	<ul style="list-style-type: none"> • Crews conducting the air movement observe, conduct reconnaissance, and report as required.
5	Crew prepares and submits its report after accomplishment of the assigned mission.

6	Internal de-briefing is conducted to improve on preparation and conduct of the mission.
7	Minimum Required Training Standards: <ul style="list-style-type: none">• Appropriate category rating;• Appropriate Sensor Operator qualifications for specific sensor types.• Appropriate and valid medical certification of the crew;• Compliance with the UN minimum crew requirement for pilot-in-command and Sensor Operator;• Conduction of routine flying / special mission checks; and• Navigational preparations for the route and area to be searched. RPAS Training

ANNEX B – JOINT OPERATIONS

JOINT OPERATIONS

Task Description. These are the integrated military activities of two or more UN components, such as Army, aviation assets, marine and police forces.

Conditions. The military aviation unit receives a mission to conduct joint operations: integrated operations with other UN components such as ground or maritime troops, Marines or the UN Police. Joint operations can be conducted over open operational areas or in built-up areas, like cities and other populated areas. Joint operations require the highest degree of coordination between the participating components to ensure mission success. Thorough planning and assessment are required to dispatch the appropriate crew and suitably configured RPAS for Joint operations.

STANDARDS:	
1	Upon receipt of this mission, the military aviation unit commanders direct the staff to conduct mission analysis and thorough coordination with the supported troops. The coordination must include communication arrangements, recording of the Forward Line of Own Troops and the extent of UN and hostile presence in the area of responsibility
2	The aviation staff conducts its mission analysis for information critical to the mission success.
3	Military aviation unit commanders conduct map reconnaissance, mission rehearsals (if necessary) and other mission preparations.
4	<p>Planning considerations</p> <ul style="list-style-type: none"> • Crew capabilities and training standards. • Coordination for overall command and control of operation. • Detailed briefings and coordination with concerned agencies and units. • Appropriate logistics support, including fuel. • Area of operations, terrain features, obstacles and safety altitudes. • General security situation/threat analysis. • Weather conditions. • Aeronautical information (AIP, NOTAM, airspace). • Airspace coordination of the flight area. • Coordination to appropriate air-to-ground communications. • Measures to avoid/minimize collateral damage. • Necessary clearances from UN and host nation. • ROE. • CONOPS.

5	<p>Crew is briefed and provided with the following information</p> <ul style="list-style-type: none"> • Type of mission; • Area of operation; • Time of operation (from base to base); • Threat assessment; • Airspace limitations / restrictions; • Weather briefing / NOTAMs; • Minimum safe altitude; • Provision of appropriate frequencies for both flights following and ground troops; • Special coordination measures required; • Communication failure procedures; and <p>Link (RPA-RPS) failure procedures.</p>
6	<p>The flight crew must observe, conduct reconnaissance, and report as required.</p>
7	<p>Crew prepares and submits its report after accomplishment of the assigned mission.</p>
8	<p>Internal de-briefing is conducted to improve on preparation and conduct of the mission.</p>
9	<p>Minimum Required Training Standards:</p> <ul style="list-style-type: none"> • Appropriate category rating; • Appropriate Sensor Operator qualifications for specific sensor types; • Appropriate and valid medical certification of the crew; • Compliance with the UN minimum crew requirement for pilot-in-command and Sensor Operator; • Conduction of routine flying / special mission checks; and • Navigational preparations for the route and area to be searched.

Self-Evaluation Sample Checklists For Pre-Deployment and In-Mission

Pre-Deployment

Serial	Pre-Deployment Self-Evaluation Determining Factors	Evaluation	Remarks
a	Understanding the importance of self-evaluation. Is the aviation unit personnel open to understand the importance of self-evaluation pre-mission and in-mission and the aims with it? It is the commander's responsibility to educate the personnel about this aspect.		
b	Generic Peacekeeping Skills. Are all personnel of the military aviation unit trained on and sensitized to the generic policy guidelines and directives of conducting peacekeeping operations? Do they demonstrate a clear understanding of these guidelines and directives?		
c	Basic Aviation Capabilities. Is the unit able to perform basic aviation capabilities based on the type of unit?		
d	Mission-Specific Capabilities. Is the unit able to perform mission-specific aviation capabilities based on the task and type of UN Mission?		
e	Operational Aviation Tasks. Is the unit already familiar with and capable of performing the different operational aviation tasks expected of it?		
f	Aviation Safety. Does the unit have an aviation safety program (refer Annex D), and all personnel of the unit trained in aviation safety?		

g	Organization. Is the unit organized into task-oriented groups with the appropriate support structure for its type of UN operations?		
h	Leadership. Is the military aviation unit chain of command capable, responsive and made accountable to deliver in a peacekeeping environment?		
i	Staff. Is the military aviation unit staff integrated, trained and capable of planning, organizing, coordinating and directing the assigned tasks / operations in the peacekeeping environment?		
j	Training. Has the military aviation unit undertaken peacekeeping oriented and mission-specific training and achieved the requisite standards?		
k	Resources. Is the unit carrying or in possession of the required number of personnel and minimum essential equipment as per the SUR / MOU and Mission requirements?		
l	Maintenance Management. Is the military aviation unit capable of maintaining a minimum serviceability rate of 75 % and does it have the ability to perform preventive maintenance, recovery and repair in situ?		
m	Logistics. Are the subordinate units and flights configured for independent and self-sustained logistics capability (food, water, accommodation, hygiene and sanitation, transport, medical, etc.)?		
n	Medical. Do unit personnel meet the requisite physical and psychological medical standards and have they passed a periodic medical examination?		

o	<p>Regulatory Understanding. Are unit personnel aware of applicable UN rules, regulations, and the code of conduct? Do they possess a high standard of professionalism and regulatory awareness?</p>		
p	<p>Morale and Motivation. Are unit personnel well motivated to operate in a complex, restrictive, multinational and multidimensional environment while maintaining high morale?</p>		
q			
r	<p>Legal. Do unit personnel and military aviation unit commanders clearly understand the responsibility to adhere to, promote and protect the legal framework for UN Peacekeeping Operations with specific reference to SOFA, SOMA, ROE, Human Rights and Humanitarian Law, other relevant international legal statutes and host nation laws?</p>		
s	<p>Evaluation. Has the unit carried out a formal self-evaluation, have shortcomings been identified and rectified, and have the TCC authorities certified the unit to be fit for deployment in the Mission as scheduled?</p>		

**In-Mission**

Serial	Pre-Deployment Self-Evaluation Determining Factors	Evaluation	Remarks
a	Performance. Does the unit perform its mission essential tasks effectively and safely as per peacekeeping norms and Mission SOPs?		
b	Shortcomings. Has the unit taken corrective actions on performance shortcomings observed by the unit, COE team or Mission leadership?		
c	Skills Refresher Training. Does the chain of command ensure that unit personnel skills are kept up to date based on their basic qualification standards?		
d	In-Mission Training. Is the unit carrying out periodic in-mission refresher, task oriented and Mission-specific training as per TCU guidelines?		
e	Flight Safety Program. Does the unit ensure safety and standardization when conducting aviation operations, risk assessment, search and rescue planning and ground safety? (refer Annex D)		
f	Aircraft Serviceability. Is the unit carrying out periodic inspections and maintenance based on aircraft technical manuals?		
g	Conduct and Discipline. Does the unit continue to maintain the highest standards of conduct and discipline in accordance with the MoU?		



Appendix 1 to Annex C - Example

This Appendix provides an example of a completed operational competencies check list; it provides a basis for how the table should be completed. The completed form should be accompanied by a statement from each nation declaring the number of aircraft and crews that they are bringing to the operation / exercise.

Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
Formation Flying	Section (2 ac)	4	4	4	4	4	Trained to minimum separation distance of 2 rotor spans by day and 4 rotor spans by night / NVG.
	Flight (3-4 ac)	4	4	4	4	4	Trained to minimum separation distance of 2 rotor spans by day and 4 rotor spans by night / NVG.
Terrain Flight	Low Level Flying	4	4	4	4	4	
	Contour Flying	4	4	4	4	4	
	Nap of the Earth (NOE)	4	4	4	4	4	Minimum height for night / NVG operations 50ft AGL
External Load	Underslung Loads	4	4	4	4	4	
	Water Bucket	0	0	0	0	0	Helicopter not equipped with water bucket

Limitations (e.g. weather, light, crew day, etc.):

- Nation X has 4 operational crews available for the period of Operation Y.
- For day operations crews are limited to weather of minimum cloud base 300ft and visibility 1500m. Crew duty is limited to 8 hours flying.
- For night operations (including NVG) crews are limited to minimum cloud base 500ft and visibility 3000m. Crew duty is limited to 4 hours flying during a period of darkness.
- Minimum light levels that crew can fly over the land at night is 10 millilux.
- Crews require 10 hours uninterrupted rest after flying ceases.



Appendix 2 to Annex C – Rotary-Wing

Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
Refueling related	Rapid Refueling						
	Aviation Delivered Ground Refuel						
Evasive Maneuvering	Surface Based						
Formation Flying	Section						
	Flight						
Terrain Flight	Low Level Flying						
	Contour Flying						
	Nap of the Earth (NOE)						
External Load	Underslung Loads						
	Water Bucket						
Environmental Flight	DVE White Out						
	DVE Brown Out						
	Operating in Mountainous Terrain						



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	Overwater Flight						
	IMC following IFR						
	IMC not following IFR						
	Aided Night Flight						
Insertion/Extraction	Deck Landing						
	Helo-casting						
	Rappelling						
	Fast-Rope Insertion/ Extraction System (FRIES)						
	Para Drops - automatic						
	Para Drops - freefaller						
	Hoisting						
Operational Tasks	Reconnaissance and Surveillance						
	Armed Reconnaissance						
	VIP Transportation						
	Passenger Transportation						
	Cargo Transportation						



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	Air Assault / Quick Reaction Operations						
	Close Aviation/Air Support Missions						
	Aerial Patrol						
	CASEVAC						
	MEDEVAC						
	Search and Rescue (SAR)						
	Combat Search and Rescue (CSAR)						
	Helicopter Landing Site Reconnaissance						
	Joint / Multilateral Operations						
	Combat Immediate Extraction (CIMEX)						
Weaponry	Aerial Gunnery						
Additional Competencies							

Limitations (e.g. weather, light, crew-day, etc.):



Appendix 3 to Annex C- Embarked Rotary-Wing

Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
On Ship Landing	Deck Landing						
Refueling related	Hover In-flight						
Evasive Maneuvering	Surface Based						
Formation Flying	Section						
	Flight						
Sea/Terrain Flight	Low Level Flying						
	Contour Flying						
	Nap of the Earth (NOE)						
External Load	Underslung Loads						
	Water Bucket						
Environmental Flight	DVE Brown Out						
	Operating in Mountainous Terrain						



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	IMC following IFR						
	IMC not following IFR						
	Aided Night Flight						
Insertion/Extraction	Fast-Rope						
	Helo-casting						
	Rappelling						
	Other insertion / extraction techniques						
	Para Drops - automatic						
	Para Drops - freefaller						
	Hoisting						
Operational Tasks	Reconnaissance and Surveillance						
	Armed Reconnaissance						
	VIP Transportation						
	Passenger Transportation						
	Cargo Transportation						
	Air Assault / Quick Reaction Operations						



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	Close Aviation/Air Support Missions						
	Aerial Patrol						
	CASEVAC						
	MEDEVAC						
	Search and Rescue (SAR)						
	Combat Search and Rescue (CSAR)						
	Helicopter Landing Site Reconnaissance						
	Joint / Multilateral Operations						
	Personnel Recovery (RP)						
Weaponry	Aerial Gunnery						
Additional Competencies							

Limitations (e.g. weather, light, crew-day, etc.):



Appendix 4 to Annex C- Fixed-Wing

Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
Refueling Related	Rapid Refueling						
	FARP (Forward Arming and Refueling Point)						
Evasive Maneuvering	Surface Based						
Formation Flying	Section						
	Flight						
Terrain Flight	Low Level Flying						
	Contour Flying						
	Nap of the Earth (NOE)						
External Loads	Wing Stores						
Environmental Flight	Dusty Environment						
	Operating in Mountainous Terrain						
	Extreme Conditions						



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	Non-Standard Operations						
	IMC following IFR						
	IMC not following IFR						
	Aided Night Flight						
Insertion/Extraction	Para Drops - automatic						
	Para Drops - freefaller						
	NonStandard Off-Load						
	Eng Running Ops						
Operational Tasks	Surveillance and Reconnaissance						
	VIP Transportation						
	Passenger Transportation						
	Cargo Transportation						
	Dangerous Goods						
	Aerial Patrol						
	Search and Rescue (SAR)						
CASEVAC							



Competency		# of Qualified Crews	# of Current Crews	Day	Night	NVD/NVG	Remarks / National Limitations
	MEDEVAC						
	Personnel Recovery (PR)						
	Armed Reconnaissance						
	Close Aviation/Air Support						
Weaponry	Aerial Gunnery						
Additional Competencies							

Limitations (e.g. weather, light, crew-day, etc.):

Annex D

Aviation Safety

Flight planning is undertaken to provide assurance that aviation operations are conducted effectively and in the safest possible manner, with the associated risks identified and reduced or controlled to prevent harm or damage. Safety Assurance in the context of the military unit is the planned and systematic actions necessary to afford adequate confidence that the military aviation unit and the related safety program achieves an acceptable or tolerable level of Safety. Safety Assurance activities include safety performance monitoring and measurement, management of change and continuous improvement of safety management. The UN aviation safety system is outlined in the UN Aviation Safety Manual. The Military Aviation Unit, while having its own safety program and policies, must also interface with the UN aviation safety system and cooperate with the UN Aviation Safety Unit activities and functions within the Mission.

Aviation Safety is not only a Commander's responsibility but is a responsibility that everyone associated with aviation has in terms of thinking and acting in a way that makes sure aviation safety is at its highest standard. It contributes to the operative effect and force preservation and sustainment.

1. Introduction

This annex emphasizes the significance of aviation safety and Aviation Risk Management and should be read in conjunction with the DPO-DOS Aviation Safety Guidelines, Aviation Safety Manual 2012 and DOS Aviation Risk Management Policy. Military Aviation Unit Commanders are strongly advised to embrace accident prevention measures that protect their people, equipment and readiness. Safety programs promote mission success by preventing accidents and improving working conditions by, amongst other things, removing hazards, accelerating fault analysis and conducting preventative maintenance. Effective Military Aviation Unit Commanders are committed to safety programs that assure the continuous availability of aviation assets for Mission requirements.

2. Flight Safety

Flight safety is a state of mind, an atmosphere that must become an integral part of individual and unit procedures, being part of the unit's aviation safety culture. The International Civil Aviation Organization (ICAO) defines safety as, ***"the state in which the possibility of harm to persons or of property damage associated with aviation activities, related to, or in direct support of the operation of aircraft are reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management."*** In other words, safety is a combination of required conditions so that a flight reaches its destination with maximum preservation of life and equipment and minimum risk of accident.

3. Safety Responsibilities

a. Military Aviation Unit Commander

Aviation safety and accident prevention is a command responsibility, but also everyone's responsibility who are associated with aviation activities and operations. Safety enhances mission effectiveness by protecting the people, skills and equipment that provide the Mission its aviation capability. Safety must be integrated into all aspects of unit's activities including operational use, maintenance of aircraft and equipment, and

flight and ground crew training. Military aviation unit commanders should:

- Appoint a suitable experienced person as Flight Safety Officer and Ground Safety Officer.
- Inform the aviation unit why and how they are going to work and approach aviation safety. An important part of aviation safety is the self-evaluation and monitoring safety performance.
- Identification and correction of accident-producing conditions and practices.
- Prioritize self-evaluation and resolution of accident-producing problems.
- Development of accident prevention methods and safety programs.
- Encouragement of input from air and ground crews to identify and prevent safety hazards, thus promoting physical and psychological wellbeing, unit morale and efficiency.
- Delegation of specific authority and responsibilities to individuals in the overall safety program.
- Measurement and self-evaluation of the aviation accident and risk control measures producing needed modifications for optimum results.
- Review of technological developments that can be applied to minimize accidents and aviation risks.
- Formulation of clearly defined and practical SOPs.
- Inclusion of safety considerations, standardization, proficiency standards and flight safety rules in all unit training activities and programs.
- Ensure aviation risk management processes are followed for aviation activities.
- Ensure that all aviation accidents and incidents are reported and investigated.
- Coordination with the Mission's Aviation Safety Unit.

b. Flight Safety Officer

Another key person in unit safety is the Flight Safety Officer. He or she should preferably be a senior aviator and must be trained and committed to organizational safety. For standardization, Flight Safety Officer duties should include:

- Planning, organizing, implementing and supervising the unit's Flight Safety Program.
- Assisting and advising the Military Aviation Unit Commander, and other respective senior officers in the chain of command, on all flight safety matters.
- Reviewing, analyzing and developing flight safety policies, directives, regulations and SOPs.
- Support all aviation areas/sections of the unit in the risk management process and the conduct of risk assessments for all aviation activities.
- Conducting periodic flight safety surveys and self-evaluations, making positive recommendations for correcting noted safety concerns.
- Monitor all aviation safety recommendations for the actions taken and for continuous improvements to the system.
- Participating and representing the Military Aviation Unit on the periodic Mission

Aviation Safety Council.

- Identifying and reporting any aircrew psychological problems that may affect their efficiency and safety.
- Maintaining records, and share reports with the Mission Aviation Safety Unit, of unit aircraft accidents, incidents, near misses, forced landings, precautionary landings, operational and maintenance hazard reports, violations, recommendations and corrective actions taken in each case.
- Conducting preliminary investigations of all unit aviation accidents and incidents.
- Organizing and recording the minutes of unit flight safety meetings on a monthly basis.
- Coordinating with the Mission Aviation Safety Unit on aviation safety matters.
- Prepare for UN Mission safety visits and assessments of the Military Aviation Unit.
- Coordinating with operations, maintenance, training and medical staff to ensure that flight safety practices are part of all aviation activities.
- Coordinating all aviation safety training and training program throughout all areas of the unit and aviation activities.
- Monitoring all aviation training and performing spot checks of flying proficiency in coordination with the unit's standardization team.
- Establishing and maintaining a unit plan in the event of accidents and conducting regular rehearsals to ensure its proficiency. This emergency response plan must be integrated into the Mission emergency response plan.

4. Flight Safety Planning

The Military Aviation Unit Commander and Flight Safety Officer must highlight actions that can assist in the establishment of an effective flight safety program. An effective safety program involves planning so that more time is spent on preventing safety hazards rather than reacting to accidents. The Flight Safety Officer's main task should be analyzing the reported incident/accidents and come up with suggestions to the Commander and how not to make the same mistake again. The Flight Safety Officer should also analyze not only probable incoming missions but also what measures that can be taken to prevent incident/accidents. The solution is not to ground the aircraft but to find the balance between operational and operative effects with the aim to maximize the operational effect with enough flight safety. The Flight Safety Officer's job is to convey to the operators the rationale behind a safety directive, to identify and anticipate safety hazards and advise operators on remedial measures before the accident occurs. Some methods for effective communication and safety planning include:

- **Flight Safety Hazard Reporting System.** The Flight Safety Officer must initiate an effective and confidential hazard reporting system that encourages personnel to report any potential hazard, no matter how seemingly minor, that could develop into something far more serious if not checked and corrected. The hazards must be reported, via the UN Aviation Safety Unit, so that they can be shared with other units in order to avoid accidents, as long as confidentiality is not compromised and does not expose the persons involved.
- **Monthly Flight Safety Meetings.** The Flight Safety Officer should organize a monthly Flight Safety Meeting chaired by the Military Aviation Unit Commander. This meeting

highlights unit issues and summarizes the command's safety-related incidents. It is an opportunity to discuss safety-related trends from the previous month's performance. Representatives from subordinate units or sections can take advantage of the meeting to explain why safety issues persist and can request resources to correct problems.

- **Flight Safety Boards, Posters and Bulletins.** Safety-related key points that merit attention in a particular work area can be efficiently publicized by way of dedicated "Safety Boards," general bulletin boards and posters. New ideas or approved amendments concerning safe operation procedures may be posted. Brief narratives with lessons learned can be added from time to time for the benefit of all personnel.
- **Daily Weather and Air Traffic Briefings.** is the aircraft captain and aircrew responsibility with the aid of the mission support element. The Flight Safety Officer must ensure that operators, especially aircrews, are current on weather and air traffic conditions, risks and hazards. Daily briefings on these subjects can be arranged allowing the aircrews and other operators to clarify their concerns about weather and traffic.
- **Flight Safety Council.** The Flight Safety Officer, in coordination with the Military Aviation Unit Commander, must establish a flight safety council. The council includes members from each subordinate branch and unit. The council monitors and ensures implementation of flight safety rules and regulations in the unit's daily routine.

5. Full Time Safety Organization

In the pursuit of accident prevention, a full-time safety organization should exist to monitor, enforce, review, follow up, and manage accident prevention activities. Such organizations have certain characteristics and responsibilities including:

- **Leadership Support.** Safety is a leadership responsibility. The unit leadership should direct safety efforts by providing the required support in terms of command interest, decision making and providing resources to mitigate safety hazards.
- **Systematic Procedures.** The safety organization must have approved accident prevention plans, procedures and guidelines on which safety efforts are based. Without these plans and guidelines, safety officers will not be able to help the unit progress.
- **Creating and Maintaining Interest.** Pilots, technicians, air and ground support crews and other aviation personnel must be periodically reminded of the importance of accident prevention. The unit safety organization must be innovative and creative to gain and maintain operator interest in safety activities.
- **Striving for Better Working Conditions.** Working conditions play an all-important role in establishing and maintaining an organization's safety standards. Proper working conditions have a direct impact on the quality of maintenance, particularly given the many sensitive items of unit equipment. Units that neglect proper working conditions are risking parts contamination, technician fatigue and equipment failure.

6. Flight Safety Program

A Flight Safety Program for a military unit has the following elements:

- **Management.** A demonstrated commitment by the commanders and service, key personnel, safety organization, responsibilities, and accountabilities.
- **Emergency Plan.** What the unit will do in the event of an emergency, including preparatory training, roles and responsibilities, exercises/drills, and

interaction with the mission and other agencies.

- **Risk Management.** The process that the unit will use for managing risks, decision making, and the acceptable levels of risk.
- **Accident Reporting Procedures.** Easy to understand and follow procedures for quick, accurate and detailed accident reporting. This process must include the reporting to higher command and civilian authorities and the Mission Aviation Safety Unit.
- **Accident/Incident Investigations.** All personnel concerned, particularly Ground and Flight Safety Officers and engineers, should carefully examine accidents to determine their causes and corrective measures to prevent future accidents. Additionally, information on the interaction and cooperation with UN and State investigations.
- **Safety Analysis.** Supervisors and line managers should analyze trends in unit faults, incidents, deficiencies that are reported. By recording fault incidents and analyzing trends, systemic weakness will emerge that can then be addressed through remedial measures.
- **Safety Performance.** The mechanism that will be used in the unit and by the service to monitor and ensure safety is effective and performance is at the highest standard possible.
- **Safety Training.** The safety training program and requirements for all personnel and management.
- **Safety Communication.** The safety communication methods used by the unit to disseminate information and create and improve the safety culture.
- **Safety Activities.** Outline other safety activities that are conducted by the unit in the UN peacekeeping environment, as examples: FOD programs, wildlife programs, crew duty/fatigue risk management, and flight data analysis programs.

Further information on the elements of an effective safety program can be found in the Aviation Safety Manual and related policies as referenced through this Annex.

7. Human Behavior in Aviation Safety

Organizational behavior, an important factor in aviation safety management, is concerned with the psychology of the organization's personnel. Personnel's attitude towards their jobs, their interaction amongst various groups at the workplace, their consciousness towards safety, and their motivation to perform well, reflect their organizational behavior. The health of the members of any organization is equally important and directly affects their organizational behavior. There is a constant psychological tussle between the domestic and job pressures on one hand and the motivation of the individual to perform optimally at work on the other, affecting the organizational behavior positively or negatively. In Aviation, any negative behavioral tendencies would undermine safety, which may lead to an accident directly and quickly, or may create the peripheral conditions for an accident, indirectly and slowly.

Historical data and accident studies have demonstrated that human error accounts for 70-80% in aviation accidents, rather than technical failures of the past, which has focused the

emphasis on 'human factor' in aviation safety. The James Reason's "Swiss Cheese" model of human error causation has been developed to account for the contributing factors to accidents and when several safety barriers/defences fail and line up lead to an accident. This model uses the complex socio-technical systems with several diverse causal sequences contributing to accidents, not a singular event.⁹

Reason suggests, the high-tech safety mechanisms built into modern aircraft prevent system failures, however the human interface in those technologies whose failure causes accidents. These human errors and failures could be divided into active failures or latent failures. Active failures constitute 'those errors and violations having an immediate adverse effect,'. Latent failures are decisions or actions, and the damaging consequence of which may lie dormant for a long time, only becoming evident when they combine with local triggering factors (i.e., active failures, technical faults, atypical system conditions, etc) to breach the system defences.¹⁰

The model also presents that human actions at appropriate times could avoid or mitigate accidents.

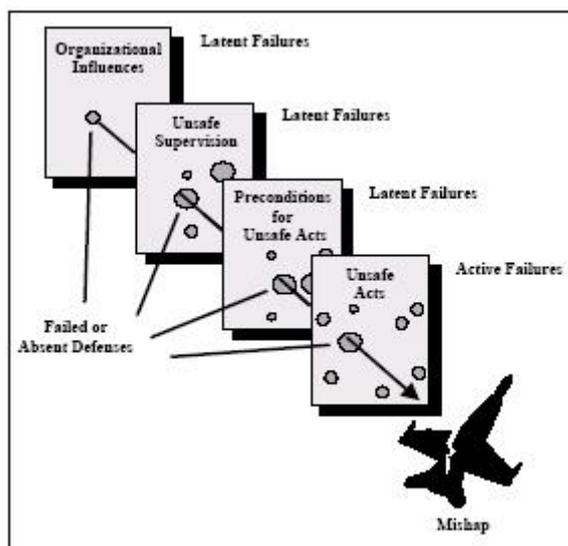


Figure 1: The "Swiss Cheese" model of human error causation (Reason, 1990)

Reason's "Swiss Cheese" model considers four imaginary stages leading to an accident. The accident itself, termed as "unsafe act" is the fourth or last stage. It is preceded by the third stage comprising the circumstances leading to the accident, termed as "preconditions for unsafe act." The second stage deals with the failures in supervision, termed as "unsafe supervision." The first stage is about inadequacies of the system, termed as "organizational influences." If these imaginary four stages are considered to be slices of Swiss cheese, its characteristic holes depict failures in those stages. If somehow those holes are aligned, any tiny object would be able to slip through all the four stages unhindered. This is the analogy of an accident, which happens when

defences fail at every stage reflecting those holes in the model, and the hazard slips by the holes aligned by misfortune to allow that slippage. Reason terms the first three stages as 'latent failures' and the last stage as 'active failures.'¹¹

In order to have a glimpse into the minds of the aircrew and maintenance personnel, anonymous questionnaires and informal interaction can be used by the Commanding Officer in following domains:

⁹ J. Reason, "The Contribution of Latent Human Failures to the Breakdown of Complex Systems," *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences* 327, no. 1241 (1990): 475–84.

¹⁰ Ibid.

¹¹ D.A. Wiegmann and S.A. Shappell, "The Human Factors Analysis & Classification System - HFACS," Technical Report (Washington DC: Office of Aviation Medicine Federal Aviation Administration, February 2000), https://www.nifc.gov/fireInfo/fireInfo_documents/humanfactors_classAnly.pdf.

Organizational Factors:

- How do you rate your satisfaction with the UN's Mission working environment?
- How do you grade the administrative facilities provided by the UN in your deployment area?
- How do you grade the administrative facilities coordinated by UN in the field areas visited by you as part of your flying duties?
- Are you satisfied with the job incentives provided in this UN deployment?
- Are you satisfied with your country's punishment / reward system after an aircraft accident investigation?

Unsafe Supervision:

- How do you rate the initiatives taken by your Commanding Officer to address problems?
- How do you see your supervisor as a role model in terms of motivation and guidance?
- How do you rate your Commanding Officer and Force HQ's compliance with policies and instructions in routine flying ops?
- How do you see your ability to discuss an issue candidly with your Commanding Officer?

Pre-Condition to Unsafe Act:

- How do you rate the unit's working / professional environment?
- How do you rate the availability and maintenance of tools and test equipment?
- How do you find the relevance of aviation SOPs, policies, and guidelines with your day-to-day tasks?
- How do you assess your personal motivation to maintain physical fitness; not only for your health, but for enhancing flight safety?
- How often do you find yourself flying in not-so-perfect state of physical health and peace of mind?

Unsafe Act:

- How often have you undertaken a flying mission under pressure from Commanding Officer / higher HQ / UN Mission?
- How do you rate the current capacity of the system to prevent violation of SOPs by aircrew?
- How often have you found aircrew / maintenance personnel committing violations of flight / maintenance related SOPs?
- How well do you think the current training opportunity in your deployment fulfills the requirement of maintaining the required flying proficiency?

8. Risk Assessment and Management**a. Introduction**

Aviation Risk Management (ARM) is defined as: A logical and systematic method of establishing the context, identifying, analysing, evaluating, treating, monitoring and

communicating risk associated with aviation-related activities in a way that will enable organizations to minimize losses to an acceptable level and maximize opportunities.

Safe mission accomplishment relies heavily on the integration of risk management into the planning and execution of aviation operations. There are some risks in the operational environment over which the Military Aviation Unit has control, some risks over which it has reduced control, and some risks over which the unit has no control. In each case, an assessment must be made to accept the risk, mitigate the risk, or cancel the mission if the risk is unacceptably high. The following discussion of risk management provides an introduction to what can be a highly technical analysis. The intent of this introduction is to familiarize the reader with the broader risk management considerations, not replace a more thorough methodology.

For an authoritative discussion of Risk Management, readers are strongly advised to consult the DPO/DOS Policy on Aviation Risk Management dated 22 May 2014, the Aviation Safety Manual and the DPO/DOS Aviation Manual Edition 2018 Annex 5F. That policy contains discussion and details on acceptable risk levels, decision-making structure, aviation risk management matrices, proper documentation of risk decisions above the acceptable risk level, documenting identified hazards and other risk assessment and management related topics. See the link on References in Annex I.

For the purposes of a simple *introduction* to the topic, what follows next is an abbreviated method for considering risk assessment and management.

b. The Risk Management Process

Aviation Risk Management is a continuous process that provides the structure to detect hazards, determine the associated risks, assess their risk, and implement and sustain risk control measures. The logic of the process rests with a decision-making process based on the comparison of the actual (new) risk level with the (pre-determined) acceptable risk. Then once the decisions are made, control measures are in place, then there is the supervision of activities, monitoring of the risks and providing feedback of any changes in activities, degradation of control measures or elevation in risk, in which case the risks are then reviewed and the process is initiated again.

The fundamentals behind the risk management approaches is to determine the level of risk, assess if it is acceptable, and decide if the risks can be further reduced with risk mitigation measures, by modifying the activity, cancelling the activity, or in the outcome accept the risk by the appropriate authority. The risk management process **is not** designed to prohibit operations, especially the nature of military operations, it is to know the risk that military personnel are being exposed to, ensure it is as low as possible and accept it. The risk decisions may be based on the following questions:

- Which is greater, the risk of doing or the risk of not doing the activity?
- How important is the activity?
- Will the anticipated gains justify accepting a high level of risk?
- Has there been enough done to lower the risk to a level that is reasonable for military operations in the peacekeeping environment?

As a general outline of a risk management process, and in use by the United Nations, is a six-step process to risk management (refer to the DPO/DOS Policy on Aviation Risk Management dated 22 May 2014):

1. Hazard Identification

2. Risk Assessment
3. Risk Mitigation/Analysis
4. Risk Decision
5. Implement Risk Control Measures
6. Supervise & Feedback

- **Step 1: Hazard Identification.** The process begins by accurately assessing all aviation activities to identify any hazards. This step is vital, yet often done poorly or not at all. Consequently, the risk management decisions that follow are made with either inaccurate or inadequate information. Hazards are identified by military aviation unit commanders and personnel based on pilot and crew observations, intelligence and reconnaissance reports of threatening activity, weather, geography, airfield/landing zone conditions and equipment readiness. A systemic approach is used, taking into consideration management, policies, human factors, environment, equipment, processes and procedures, experience, and the level of training, to ensure all aspects of the activity are analyzed in order to ensure that the associated hazards are identified and their possible consequences clearly determined. Experience, common sense, and specific risk management tools help identify real or potential hazards and the associated potential risks.

- **Step 2: Risk Assessment.** The risk assessment is the application of quantitative and qualitative measures to determine the level of risk associated with a specific hazard. Risk is the effect of uncertainty on objectives and will be expressed in terms of a combination of the consequences of an event (severity) and the associated likelihood of the consequences of the hazard. This process defines the likelihood and severity of an incident or an accident that could result from the hazard based upon the exposure of personnel or assets to that hazard, and the hazard's impact on the overall mission.

- **Step 3: Risk Mitigation/Analysis.** The purpose of the analysis of the risks is to investigate specific options, strategies and tools that may reduce, mitigate, or eliminate the risk. Effective risk mitigation measures reduce or eliminate at least one of the three components (likelihood, severity, or exposure) of a risk.

- **Step 4: Risk Decision.** The Military Aviation Unit Commander and any delegated decision makers, at the appropriate level in the field, are to determine the best control or combination of control measures based on the analysis of overall costs and benefits vs risk and consequence. Decisions are made on what risks are acceptable without mitigation, what risks are acceptable with mitigation, and what risks are not acceptable and require mission cancellation if they are too likely to occur. A key part of this assessment is whether the Military Aviation Unit can bring the necessary resources to bear in order to mitigate the risks in question. With the decision of the risk controls to minimize the risk is the decision to accept the residual risks of the activity.

By assigning aircrew with adequate experience, or with any other appropriate mitigation measure, the Commanding Officer shall ensure that the medium and high difficulty level missions are focused upon deliberately. In case Force HQ is to be asked for authorization due to a high-risk assessment in an assigned mission, it is approached in time for taking that decision.

- **Step 5: Implement Risk Control Measures.** Once risk control strategies have been selected, an implementation strategy needs to be developed and then applied by those managing the operations in the field and in the relevant sections.

- **Step 6: Supervision and Feedback.** Risk management is a process that continues throughout the duration of the aviation activities. Field managers at every level must fulfill their respective roles in assuring that risk control measures are effectively implemented and sustained throughout the operations. The risk management process must be periodically reevaluated to ensure effectiveness.
- **Proactive Approach.** The point of risk management is to anticipate hazards and risks, assess their probability of occurring and take action to mitigate their affects, not react to them after they have already jeopardized the operation.
- **Command Responsibility.** The responsibility for decisions made with regard to risk management and flight authorization rest with the Military Aviation Unit Commander, who is held responsible for the lives of his personnel, the readiness of his equipment and everything his unit does or fails to do.

9. Ground Safety

A Ground Safety Program is essential to prevent personal injury and equipment damage on the ground, which due to overlap and to reduce duplicity should be combined with flight safety in a single aviation safety program for the unit. A good Ground Safety Program ensures smooth operations, unit readiness and enhances flight safety. Ground safety considerations include:

- **Individual Training.** Safety training can be categorized as initial, specialized or recurring. Unsurprisingly, initial training is provided to personnel new to a particular function. This may include aviation safety training for new pilots and maintenance technicians, safety inspection training for management personnel, aviation safety specialist training and actions/response in the event of an accident training. Specialized training may include Dangerous Goods (DG)/Hazardous Material (HAZMAT) handling and packaging training, first aid, use of fire extinguishers and cardiopulmonary resuscitation (CPR) for crewmembers and maintenance technicians. Finally, recurring aviation safety training is a review and update of initial and specialized training.
- **Equipment Maintenance.** Proper equipment maintenance is another factor in ground safety. Periodic and other inspections of aircraft and ground equipment must be meticulously done to standard. Timely aircraft rotation to locations outside the Mission is a matter of flight safety. Catastrophic failures can be avoided by rotating aircraft to locations where advanced maintenance and repairs can be performed to offset the effects of prolonged operation in adverse and hazardous climatic conditions. LOA/MOU negotiators must ensure those documents contain clear language providing for the rotation of aircraft after completing a certain duration or number of flight hours in the Mission. Negotiations will determine the precise terms of aircraft rotation policy and responsibility for assuming the cost of rotation.
- **Stowage of Equipment and Stores.** The appropriate stowage of specialized equipment and stores, especially flammable materials, is extremely important and must be emphasized with all unit personnel.
- **Personal Safety and Tool Handling.** To ensure their personal safety, all personnel must be trained on using the different tools and materials within their area of expertise. All personnel must know their tools, machines, capabilities, strengths and weaknesses to minimize workplace hazards. The proper handling of sophisticated equipment and correct use of tools are fundamental safety requirements. All crews need to incorporate

these practices into their daily job routine.

- **Protective Clothing.** Military aviation unit commanders should create a climate in which all personnel make routine use of protective clothing including helmets, goggles and ear plugs/hearing protection.
- **Fire Protection.** All personnel must be aware of potential fire hazards and trained in the proper use of fire extinguishers. Improper use of fire extinguishers and other firefighting techniques can create more equipment damage than the fire itself.
- **Medical Facilities/First Aid.** In the event of an emergency, all personnel should be familiar with the location of the nearest available medical facilities. Military aviation unit commanders should coordinate with medical staff for periodic unit first aid training.

a. Ground Safety Officer

Ground Safety Officers oversee a wide spectrum of unit activities:

- Aircraft towing and ground running.
- Routine inspections and aircraft maintenance.
- Rectification of aircraft faults.
- Operation of test-benches, test equipment and facilities.
- Workshop procedures and techniques.
- Protection of ground personnel from injury during ground handling and maintenance operations.
- Technical orders and instructions.
- Use of ground support equipment and vehicles.
- Regulation of vehicular traffic in aircraft parking and maintenance areas.
- Investigation of aircraft incidents associated with weaknesses in proficiency of ground personnel.
- All other activities concerned with ground handling and maintenance of aircraft.
- Coordination with Mission aviation support unit for implementation of Ground Safety Program.

b. Ground Safety Board

Every Military Aviation Unit should have its own ground safety board or committee. Led by the Ground Safety Officer and in coordination with the Flight Safety Officer, the board should arrange ground safety meetings, conduct surveys and recommend improvements to the Military Aviation Unit Commander.

c. Ground Safety Program

A Ground Safety Program has the following elements:

- **Management.** A demonstrated commitment by the commanders and service, key personnel, safety organization, responsibilities, and

accountabilities.

- **Risk Management.** The process that the unit will use for managing risks, decision making, and the acceptable levels of risk.
- **Accident Reporting Procedures.** Easy to understand and follow procedures for quick, accurate and detailed accident reporting. This process must include the reporting to higher command, civilian authorities (where applicable) and sharing these reports with the Mission Aviation Safety Unit.
- **Accident/Incident Investigations.** All personnel concerned, particularly Ground and Flight Safety Officers and engineers, should carefully examine accidents to determine their causes and corrective measures to prevent future accidents. Additionally, there should be information on the interaction and cooperation with UN and State investigations.
- **Safety Analysis.** Supervisors and line managers should analyze trends in unit faults, incidents, and deficiencies that are reported. By recording fault incidents and analyzing trends, systemic weakness will emerge that can then be addressed through remedial measures.
- **Safety Performance.** The mechanism that will be used in the unit and by the service to monitor and ensure safety is effective and performance is at the highest standard possible.
- **Emergency Plan.** What the unit will do in the event of an emergency, including preparatory training, roles and responsibilities, exercises/drills, and interaction with the mission and other agencies.
- **Fire Prevention Measures.** To protect unit readiness, all personnel must know fire prevention measures that apply to their specific tasks and work areas. Regularly scheduled fire prevention and evacuation training will save lives and equipment. Highly visible markings should indicate fire extinguisher locations. All personnel must know what to do and emergency contact procedures during a fire.
- **Equipment Damage.** Equipment damage must be immediately reported, and the cause determined to prevent recurrence. Damaged equipment can lead to personal injury, catastrophic aircraft or vehicle failure and diminished unit readiness.
- **Tools and Equipment.** Frequent inspections of tools and equipment should be organized to replace defective tools. Other processes like tool control mechanisms should also be included.
- **Special Equipment Operation.** All drivers and operators must be proficient or receive additional training in operating their vehicles and special equipment.
- **Special Clothing and Equipment.** Personnel must be familiar with the use and handling of special protective clothing and equipment.
- **Special Safety Precautions.** Many ground operations require special techniques and attention for safe performance. The associated tools also require special attention and personnel performing maintenance should be well trained to avoid physical injury to hearing, vision, hands and limbs, damage to equipment, tools, facilities and the environment.

- **Safety Training.** The safety training program and requirements for all personnel and management.
- **Safety Communication.** The safety communication methods used by the unit to disseminate information and create and improve the safety culture.
- **Safety Activities.** Outline other safety activities that are conducted by the unit in the UN peacekeeping environment, as examples: FOD programs, tool control programs, wildlife programs and fatigue risk management for ground crew.

10. Accident Investigations

In the event of an aircraft accident, the UN will carry out an Aviation Safety Technical Investigation (ASTI) and conduct a Board of Inquiry (BOI), which are both internal procedures of the United Nations. All aircraft accidents must be investigated thoroughly, regardless of how obvious the cause(s) may be. All contributing factors will be considered, and remedial action taken to prevent further occurrences. Accident investigations are conducted professionally with a focus on accuracy to objectively establish the reason(s) for the accident.

Accidents involving military aircraft are normally investigated by the investigating authority of the state of occurrence in conjunction with the relevant investigating authorities of the government of the state to which the military aircraft belongs. As the hirer of the aircraft, the UN will be an accredited representative in such investigations. [Legal note: The intention to be an accredited representative will be filed by the UN Mission concerned in the accident report to the responsible investigative authority of the state of occurrence, and to the government of the state to which the military aircraft belongs.]

Aviation Safety Technical Investigations are formal in nature. However, the Military Aviation Unit Commander may task initially the Flight Safety Officer to conduct a preliminary investigation to determine the accident's probable cause. The Military Aviation Unit Commander may forward the findings to the ASTI for in-depth analysis. For a more detailed discussion, see the chapter on investigations in the UN Aviation Safety Manual, (March 2012).

Annex E

Night Flight Military Operations in the UN



Night flying is a critical element in military operations. The United Nations Peace Missions rely in the capabilities provided by the member states, in particular, the ability of the TCCs aviation units to operate by night in a safe and efficient manner. In fact, 24/7 operations, including the ability to operate with NVG, is a mandatory requirement in all the UN SURs in place for specific Peace Missions.

Aerial Night operations in the UN Missions environment must be conducted within the scope of the UN regulatory framework, mainly the UN Aviation Manual, however, operational planning and execution of each mission are delegated to national procedures and respective military regulatory guidelines. While planning and conducting air night operations, the military commanders must refer to the UN Aviation Manual, Chapter 6 (air/ground services acquisition process), Annex 5E (Aeromedical Evacuations), Annex 5H (helicopter rotors running on-load/off-load procedures), Annex 5L (night flight operations), Annex 5M (remote helicopter landing sites (RHLS) – criteria) and Annex 5N (helicopter landing sites (HLS) –technical criteria).

Military Aviation Units must be fully trained and qualified to perform night operations, in general, in moderate to high hostile environments.

All aviation operations at night will conduct an appropriate aviation risk management (ARM) process, considering all aspects of the flight, to include weather challenges and potential options. It should be noted that while it is recommended and encouraged that all night helicopter operations take place to approved helipad facilities, with associated night

lighting, communications and wind direction indicators, there is no restriction in operating at night to unlit, un-reconnoitered landing zones, while utilizing night vision goggle / thermal imaging technology.

Military aviation units would defer to national regulatory guidance in respect to night helicopter operations. It is expected that military units employing night vision goggle technology would be competent in what would be considered a core task; tactical or remote site landing operations to unfamiliar landing zones, at night. However, dusty conditions, smoke, clouds, and other visual degradations, at and around the landing site, might restrict helicopter flight operations at night. Furthermore, moon-less nights might also restrict the utilization of helicopters on NVGs in nights of less than 20 percent illumination, where NVG operations should not be expected from TCCs that do not have the equipment / expertise to operate in zero illumination conditions.

It is expected that unacceptable risks may exist with regards to low starlight/moon illumination, poor weather, and lack of a suitable landing site (e.g. brown out conditions), which all must be captured and assessed in a comprehensive aviation risk management process.



Planning considerations

- Helicopter and/or aircraft capabilities
- Currency and qualifications of the Crew.
- Coordination with concerned agencies and units including.
- Coordination for overall command and control of operation.
- Appropriate logistics support including ammunition and fuel.
- Landing sites prepared and unprepared, considerations.
- Area of operations, nature of terrain, obstacles and safety altitudes.
- Night Vision Devices (NVD) including NVG and FLIR, considerations.
- General security situation/threat analysis.
- Night flying risk assessment
- Meteorological conditions and minima for night ops, including NVG.

- Aeronautical information (routes, AIP, NOTAM, airspace de-confliction).
- Coordination for appropriate air to ground communications.
- Necessary clearances from UN and host nation.
- ROE
- CONOPS

Night Operations / NVG Recommendations (GO/NO-GO checklist)

The below Go/No-Go checklist is recommended for night operations / NVG in general. Each TCC might use different procedures for the same purpose. Night operations / NVG, Go/No-Go Checklist must be completed and signed by the pilot and the operations officer during the pre-flight briefing. This checklist is intended to provide decision making data to unit commanders during their mission risk assessment process.

Operational Planning

- All nighttime aviation missions have been subjected to the risk assessment process and have been approved by the Air Operations Officer.
- All applicable aviation positions are assigned to fully qualified personnel.
- Pilots, aircraft and support personnel meet the Unit requirements for nighttime operations.
- Temporary Flight Restriction (TFR) is in place when appropriate.
- All pilots and crew members meet duty day and flight hour limitations.

Communications

A nighttime communications plan has been prepared and approved to include the following:

- Air-to-Air
- Air-to-Ground
- Take Off and Landing
- Command and control

Briefings

- Ground units and involved personnel has been briefed according to national and UN standards.
- Flight crews personnel have been briefed on specifics of night operations.

MOB Operations

- A flight follower Qualified Crewmember has been assigned to the MOB ops centre.
- Procedures have been established for night-time aircraft movement around the MOB.
- Procedures have been established for maintaining aircraft separation in the airspace surrounding the MOB.
- Procedures have been established for flight following of assigned aircraft.
- Procedures have been established to control the movement of personnel and vehicles around the MOB.
- Procedures have been established to provide dust abatement measures during night-time operations.
- Emergency procedures have been established for response to incidents or accidents

at the MOB or applicable location.

Unprepared landing site Operations

- Procedures have been established for identifying the landing pad and the lighting configuration to be used.
- Safe approach and departure paths have been identified.
- Reporting points have been established to manage spacing and sequencing into and out of the landing site.
- Potential aerial hazards have been identified.
- Wind-shift decision points have been established and change of direction procedures are in place.
- Specific hand signals have been identified to be used by personnel at the landing site.
- Positioning of personnel at the landing site during landing and take-off has been established.

Annex F

Operation with Unmanned/Remotely Piloted Aircraft Systems (UAS/RPAS)

UAS including RPAS have had an increasingly important role in support of United Nations peacekeeping and humanitarian operations. A large variety of UAS and RPAS, operated by both commercial operator and military units, are already being used on multiple missions for a wide variety of tasks (see Figure 1). The utilization of unmanned aircraft must adhere to the Standards and Recommended Practices (SARPs) stipulated in the ICAO Annexes and documents, troop-contributing countries (TCCs) military regulations and United Nations established applicable policies, procedures and practices.

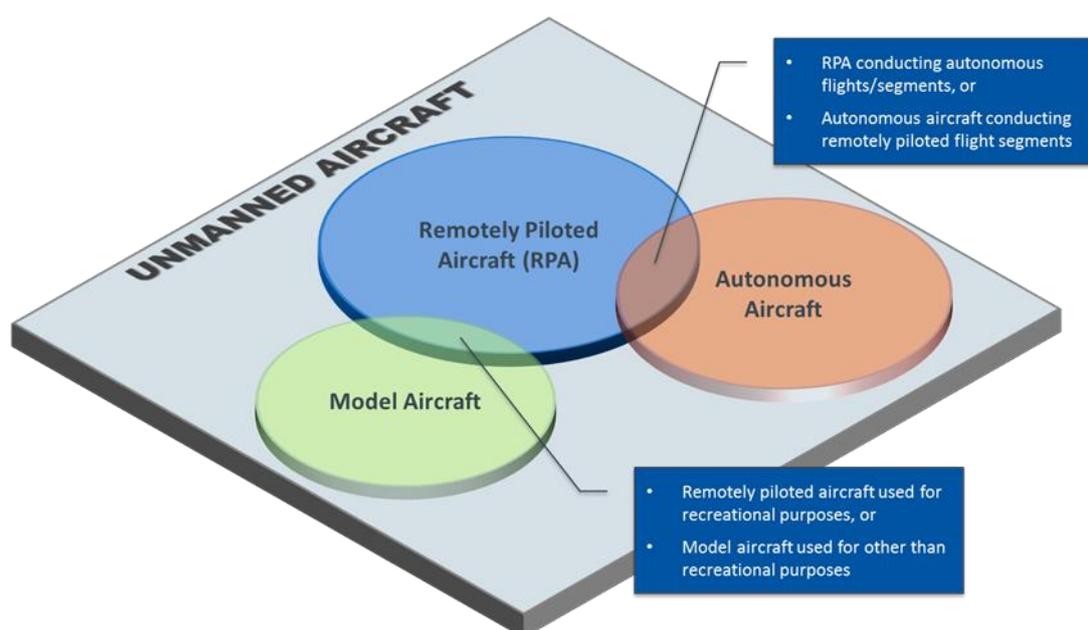


Figure 1: Types of unmanned aircraft*

Definitions

Unmanned aircraft (UA): The overall term for all aircraft that do not carry a human operator and can be operated remotely using varying levels of automated functions, such as flying super marine spitfire model aircraft.

Remotely Piloted Aircraft (RPA): This refers to an unmanned aircraft that is controlled from a remote pilot station by a pilot (unmanned aircraft pilot - UAP), who is tasked with the overall responsibility for operation and safety of the RPA and who has been trained and certified to equivalent standards as a pilot of a manned aircraft as per civilian or military regulations. This is usually the case for all medium and high-altitude long endurance (MALE/HALE). See Table 1

Unmanned Aerial Vehicle (UAV): A UAV is an unmanned aircraft that is remotely controlled by a UAV operator who is tasked with the overall responsibility for operation and safety of the UAV but does not need to be trained and certified to the same standards as a

regular pilot of a manned aircraft as per international civilian or military regulations. This is typically the case for small and tactical UAS operated for military purposes or for commercially available quad copters employed for main operating base (MOB) security and surveillance.

Unmanned Aircraft System (UAS): The overall term for a system whose components include one or more unmanned aircraft, the supporting network and all equipment and personnel necessary to control the unmanned aircraft.

Remotely Piloted Aircraft System (RPAS): A UAS whose components include one or more RPA and requires a UAP for operation.

Visual LOS is used to describe most Class I UAS as the aircraft pilot must be able to see the UAS at all times to safely control it and avoid collisions with other aircraft, people, buildings and terrain.

The term radio LOS refers to the means of communicating with larger UAS to provide directional input and to receive any feed from the sensors; it does not mean that the UAS must be within visual range.

When using the term beyond LOS (BLOS), this refers to the need to use satellite uplinks and downlinks to communicate with the UAS and is almost exclusively used to refer to Class III UAS



Classification of UAS/RPAS

There is a large variety of UAS/RPAS available. Systems are categorized by various parameters, including type of operations, different performance parameters, payloads, roles and sensor types. However, other classifications might be valid, depending on the specific employment of those systems. For the purpose of this manual, the UN classifies UAS/RPAS by operational employment (see Table 1). The types, performance and tasks for

each specific system will be described in the respective Mission Statement of Unit Requirements (SUR).

- **Class I UAS:** Small, mini and micro UAS, only operated up to a limited altitude of not more than 1,000ft above ground level (AGL), normally with a weight of between 1 and 25kg, and within radio line of sight (LOS) of the operator, with a maximum range of up to 50km.

- **Class II UAS/RPAS:** Tactical UAS/RPAS, normally with a maximum take-off weight (MTOW) between 150kg and 600kg, equipped with a LOS data link. Normally operated up to 18,000ft AGL, with a maximum range of 200km. Payload limitations and airworthiness restrictions may limit these systems to operations in restricted or special use airspace.

- **Class III UAS/RPAS:** Typically, MALE and HALE UAS/RPAS, normally weighing more than 600kg and operated up to 65,000ft AGL with unlimited range (beyond radio line of sight or BRLOS), equipped for limited or even unrestricted use of airspace with an equally less restrictive or even unrestricted airworthiness certificate.

Table 1: UN UAS/RPAS Table

Class	Category	Recommended Employment	Normal Aprox Recommended Altitude (AGL)	Range	Examples
Class III	HALE	Strategic/National	< 65,000 ft	Unlimited (BLOS)	Global Hawk
	MALE	Operational/Theater	< 45,000 ft	Unlimited (BLOS)	Heron/Hermes 900
Class II	Tactical	Tactical Formation	< 18,000 ft	< 150 km (LOS)	Hermes 450/Falco Sperwer
Class I	Small	Tactical Unit	< 1,000 ft	< 50 km (LOS)	Scaneagle/Shadow 200 Luna
	Mini	Tactical Subunit (manual or hand launch)	<1,000 ft	< 25 km (LOS)	Raven/Aladin Puma/Skylark Heidrum V1
	Micro	Tactical Subunit (manual or hand launch, tethered)	< 400 ft	< 5 km (LOS)	WASP/III/MICADO DJI Phantom 4, DJI Mavic Pro Hovermast 100

Recommendations on the employment of Class I (mini/micro under 10kg) UAS

To mitigate the potential hazards for Class I (mini and micro) UAS categories operation, the following points are recommended to be followed by all military UAS/RPAS operators:

- Operations within 8 Km from an airfield or heliport are restricted. They are only allowed with prior coordination with the Mission Aviation Section. If the operations are conducted within the area of an airfield/heliport with no Aviation Section presence, Local Air Traffic Control authorization will be required if available. Military mini/micro UAS may continue to operate close to airports and heliports under urgent operational requirements;
- Visual line-of-sight (VLOS) operations only;
- UA may not operate over any persons not directly involved the ongoing operation, not under a covered structure, and not inside a covered stationary vehicle;
- For night operations, activities should be coordinated by Mission's Aviation Section;
- Must not be flown close to an aircraft, in any case yield right of way to other aircraft;
- Maximum altitude of 400 feet above ground level (AGL) unless a different ROZ has been previously arranged with the mission authorities;
- No person may act as a remote pilot/operator in command for more than one UA operation at one time;
- No operations from a moving vehicle unless the operation is over a sparsely populated area (military convoys might deviate from this rule if operational situation demands);
- The UA Operator in command must conduct a pre-flight check of the UA to ensure its serviceability is in condition for safe operation;
- UA operator must be qualified and trained suitability for safe UAS operations;
- All mini/ micro UAS flight operations must be authorized and documented with adequate and approved SOPs.

All UAS operators, civilian and military, in the Mission area are required to abide by the above, coordinating all UAS operations with the Mission aviation authorities as required. All UAS operators are encouraged to report all occurrences and observed hazards to Mission Aviation staff promptly.

UAS/RPAS Aviation Safety recommendations.

UAS/RPAS Military Units should have a SOP, including a Safety Management System (SMS) implemented to systematically integrate the management of safety risk into their operations and decision making. This SOP shall include as a minimum the following components:

- Safety policy and objectives
- Safety risk management
- Safety assurance
- Safety promotion
- Operational Procedures

Tasking of UAS/RPAS

Class II and III UAS/RPAS aviation units will be tasked by the U2 following the mission air assets tasking procedures. The management and employment of UAS/RPAS within the field Missions will be done in accordance with this Manual, the UN DOS Aviation Manual 2018 and the UN Aviation Safety Manual and Aviation Risk Management Policy latest editions.

All operations of the Class II and III UAS/RPAS will be conducted in direct response to tasking by the U2 and subsequent to an Air Tasking Order through the Mission chain of command.

The issuance of an Air Tasking Order (ATO) will authorize the flight and provide confirmation of airspace/air traffic management arrangements. Every flight planned for the UAS/RPAS (with the exception of some Class I UAS as stipulated and determined by the Mission) shall be included in the respective flight schedule specifying the dates and times of departure, originating operating site and sortie profile.

The Force Commander exercises operational control (OPCON) and tasking authority over military UAS component.

On some occasions, particularly in reference to mini and micro Class I UAS/RPAS activity, for operational reasons, scheduling flights as described in the above paragraphs will not be possible. Though, efforts must be done to include those flights or activity on the flight schedule when pre-planned.

These types of small tactical UAS may fly at a short-notice request made by the local delegated authority, who will notify when possible such eventuality to the Mission Aviation Section/MAOC/Air Region; based on the specific operational situation.

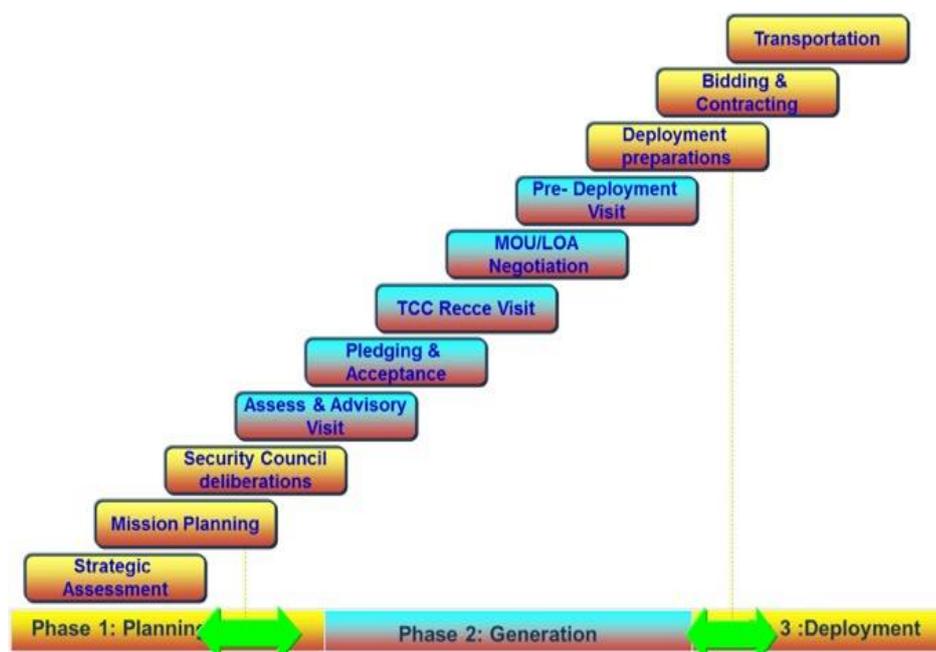
The Mission is responsible for the overall airspace management coordination plan to include utilization of UAS/RPAS of any type. For that reason, the operation of small Class I UAS under the described circumstances or any other specific to each particular Mission, must be described, specified and regulated through the Mission Standard Operating Procedures (SOPs).

Annex G

Guidance for Military Aviation Units Letter of Assists (LOA)

General

1. Military Aviation Units are deployed in UN peace Missions under two different types of contractual agreement that must be agreed upon and signed by the TCC and the UN prior deployment. These are the Memorandum of Understanding (MOU) and the Letter of Assist (LOA). The operational requirement, equipment, capabilities, functions and tasks to be performed by the aircraft and crew are defined and established in the LOA. In common words, the LOA is the contractual document by which the aviation services are provided to the UN.
2. During the LOA negotiation process, the technical and operational requirements established in the respective SUR are reflected into the LOA, including aircraft and crew capabilities, equipment and qualifications. For that reason, it is ultimately important that the aviation unit critical personnel, including Unit commander, operations officers and crews are involved during the LOA negotiation process.



LOAs are complex documents including different types of information, including legal obligations from both parties for the fulfillment of this agreement. Below a template generic LOA for provision of aviation services, it is recommended that aviation unit personnel are familiarized with the terms of their LOA before deployment. **Be advise that LOAs defer from one another based on multiple factors, such as type of unit, TCC, Mission, etc, these template are presented for the purpose of guidance only, final LOAs are the product of bilateral discussions between the TCC and the UN on a case by case basis and will be based on approved DPO/DOS UN aviation regulatory framework.**

UTILITY HELICOPTER TEMPLATE:



MISSION
(Host Country)

LETTER OF ASSIST
General Terms and Conditions

LOA 20xx-xxx

TCC
Number Type Utility Helicopters

**GENERAL TERMS AND CONDITIONS OF LETTER OF ASSIST 20XX-XXX FOR
THE PROVISION OF LONG-TERM AVIATION/AIR TRANSPORTATION SERVICES
INVOLVING STATE AIRCRAFT**

1. Letter of Assist documents.

1.1 The cover letter and these Terms and Conditions constitute the entire Letter of Assist (hereinafter referred to as the Letter of Assist - LOA) for the provision of long-term helicopter services by the Government of TCC in support of the United Nations peacekeeping activities in MISSION (Host Country).

2. Services.

2.1 Aviation/Air Transportation Services (hereinafter referred to as the "services") are an important and essential part of United Nations peacekeeping operations. The purpose of the services is to support the United Nations peacekeeping activities mandated by the Security Council. These services may include, but be not limited to, cargo re-supply, troop movements, medical transport (CASEVAC and MEDEVAC with AMET provided by the Mission), combat search and rescue, search and rescue, VIP flights and Observation/Monitoring, Reconnaissance and Surveillance flights. The provision of such services by the Government shall be subject to the provision of paragraphs 16 and 19 of this LOA and may involve operation into hostile areas or fields where there is no ground support or where airfield security cannot be guaranteed.

2.2 These General Terms and Conditions shall govern the use of State aircraft providing services to the United Nations under Letters of Assist. For purposes of these General Terms and Conditions, State aircraft comprise aircraft owned, leased or chartered by a Government, providing aviation/air transportation services for United Nations peace-keeping operations under United Nations Letters of Assist, excluding aircraft operated by the military of that Government solely for military operations by such Government.

3. Aircraft and Crew.

3.1 The Government of TCC (hereinafter referred to as the "Government") shall provide to the United Nations the services of **Number type of utility helicopters** (hereinafter referred to as the "Aircraft") operated by a military contingent from TCC, as per the MOU signed between the UN and The Government, in connection with the peacekeeping activities of MISSION. The contingent and its personnel shall form part of the mission in the same way as any other contingent and in accordance with the existing rules and regulations contained in the Guidelines for Troop-Contributing Countries.

3.2 The Aircraft shall, inter alia, be capable of the following configurations and conduct missions as mandated by the Security Council:

3.3 Cargo: For internal cargo complete with proper cargo straps and tie-downs for a maximum of **xxxx (as per SUR)** kg of cargo internally at sea level or **xxxx (as per SUR)** kg freight externally (by sling);

- a) Capability to lift up to **xx (as per SUR)** fully equipped personnel per helicopter with individual/crew equipment at one time;
- b) Minimum range of **xx (as per SUR)**
- c) Capability to sling load pallets and light vehicles;
- d) Day/night IFR flying capable;
- e) Capacity to mount **xx (as per SUR)** machine gun on each helicopter for self-protection only;
- f) Capability of 24/7 reaction response under Visual Meteorological Conditions (VMC);
- g) Capability to generate **xx (as per SUR)** hours per helicopter per month;
- h) Capability of operating with Night Vision Goggles (NVG);
- i) Helicopter Landing Site (HLS): The ability to operate day and night (including NVG) under visual meteorological conditions (VCM) in approved HLS, with standard security provided by UN troops and ground- to- air communication whenever it is possible as per the UN Aviation Manual (Annex 5N);
- j) Remote Helicopter Landing Site (RHLS): The ability to operate day and night (including NVG) under visual meteorological conditions (VCM) in approved RHLS, with limited assistance on ground as indicated in the UN Aviation Manual (Annex 5M);
- k) Helicopter Landing Sites not designated approved HLS or RHLS: The ability to operate day and night (including NVG) under VMC at locations where no approved HLS/RHLS exist, without assistance from troops on ground. These operations shall be limited to emergency situations (In-flight emergency, CASEVAC, etc.) as indicated in the UN Aviation Manual (Annex 5M) In this case, the Pilot- in- Command (PIC) is the ultimate responsible for the safe execution of the task on a case by case basis.
- l) Integral refuelling capability;
- m) Passengers: Removable seats for a maximum of **xx (as per SUR)** passengers with 9G rated seat belts for each seat. Seat belts must be connected with metal-to-metal couplings, Seat belts must be connected to the seats as designed by the manufacturer for that purpose with an approved attachment method;
- n) CASEVAC/MEDEVAC: Up to **xx (as per SUR)** stretchers with a CASEVAC/MEDEVAC team of **xx (as per SUR)** personnel;
- o) Armoured protection for crew and, where possible, passengers;
- p) Capability (including gloves and ropes etc) for troop insertion by fast roping/rappelling;
- q) Able to transport troops with loaded weapons, dangerous goods, fuel, ammunition, and human remains;

- r) Capable, when pre-tasked, to maintain continuous readiness for rapid response tasks such as CASEVAC or QRF transport, with a maximum of 15 min take-off time;
- s) Observation/Monitoring, Reconnaissance and Surveillance; this task is subject to operational risk management assessment. The pilot in command is the ultimate responsible for the safety of the aircraft and crew;
- t) Flight Instruments: Required for IFR/IMC and night conditions;

3.4 In addition to the above, the aircraft shall include the following minimum equipment:

- a) Global Positioning System (GPS) with updated database;
- b) Night Vision Goggles cockpit compliance;
- c) VHF, UHF, HF communications equipment compatible with MISSION communications equipment and satellite phone;
- d) Emergency Locator Transmitters (ELT-406 MHz) with valid inspection;
- e) One (1) Transponder 3/A and C;
- f) Non photographic FDR (Flight Data Recorder) and CVR (Cockpit Voice Recorder);
- g) Auxiliary Fuel Pump;
- h) Fire extinguishers and first aid kits;
- i) Radio Altimeter;
- j) Direction Finder (DF) equipment capable to guide aircraft to Emergency Locator Transmitters (ELT 406 MHz); Composite survival kits appropriate to the mission area;
- k) Portable Satellite Tracking System to be provided by the MISSION;
- l) Weather radar;
- m) Winch for two (2) persons, with 40m cable and harness;
- n) Searchlight of approximately 30 million candelas;
- o) Night vision equipment (NVG); and
- p) Forward Looking Infrared Radar (FLIR) for surveillance.

3.5 The flight crews will possess the following minimum qualifications:

- a) The Pilot-in-Command (PIC) for any sortie tasked by the UN will have a minimum of 1000 total flight hours (800 rotary flight hours), with a minimum of 250 actual flight hours on the type aircraft. In addition, each PIC needs to be IFR qualified and will have a minimum of 50 night flight hours on **Type** helicopters.
- b) The Co-pilot (CP) will have a minimum of 100 hrs on **Type** helicopters and will be IFR and night flying qualified.

- c) All air crew shall be properly qualified and trained to fly and operate at night with NVG as per national standards with a minimum of 30 NVG flight hours.
- d) The number, qualifications, and the flight experience of the crews must be sufficient to ensure that all the requirements are fulfilled in capacities and capabilities, for day and night operations, 24/7, and up to **xx (as per SUR)** flight hours per month per aircraft in compliance with the applicable national standards.
- e) Weapon currency is a national responsibility as there are no helicopter weapon ranges in **Host Country** for use by MISSION. Pilots must be current with all the weapon systems for the duration of their stay without the need of refresher in the Mission.

4. **Term.**

- 4.1 The term of this Letter of Assist is for a TERM of one-year effective **xx Month 20xx until xx Month 20xx**, on the expiry of this term the UN at its option with the Government of **TCC** may extend the term of the LOA for two optional additional periods of one year each (1+1+1 year) until **xx Month 20xx and xx Month 20xx** respectively. (Subject to MISSION mandate). The activation of the optional years will require the agreement of both parties

5. **Aircraft availability.**

- 5.1 The Aircraft shall be available as follows:
 - a. Minimum average individual helicopter availability rate of at least 75% per month (a maximum of 22 maintenance days for the number helicopters per month).
 - b. A minimum of **Number Type** Utility helicopters should be available at any given time.

6. **Flight Time.**

- 6.1 The Government shall be capable of providing an average of **xxx** hours of flight time per month for the fleet of **Number Type (xx flight hours per aircraft)** not to exceed **xxx** hours of flight per year.
- 6.2 For purposes of this Letter of Assist, "flight time" means the total time from the moment the helicopter blades start turning for the purpose of taking off for a flight tasked by the United Nations until it comes to rest at the end of such flight.

7. **Operational base**

- 7.1 The main operational base for **Number Type** Utility Helicopters shall be **Location (Host Country)**.
- 7.2 For operational reasons the Aircraft may be re-deployed permanently or temporary (up to xx days) **(as per SUR)** to another location in the **Host Country** or temporarily to another Mission for Intermission Cooperation with UNSC approval and after prior consultation and approval by the

Government of **TCC**. Temporary forward deployments, to be agreed between the UN and the TCC, may be subject to aircraft and/or personnel rotation for maintenance, provision of crew accommodation (as COE Manual, currently 2017, or as revised), meals, local transportation, operational communication facilities, ground support equipment and security of helicopters, and must be discussed and agreed with the authorised United Nations Chief Aviation Officer (CAVO) and **TCC** Government representative.

8. **Reimbursement**

8.1 The United Nations shall reimburse the Government for the satisfactory performance of the services under this Letter of Assist the following costs:

- a) **US\$ xxxxxx** per flying hour of flight time which includes all costs for operations, maintenance, inspections, spare parts, oils, lubricants, aircraft maintenance/support equipment and appropriate aircraft manuals. This also includes regular security and evacuation exercises in consultation with the Force HQ and authorized by the Mission's air specialist.
- b) **Actual cost** for firing chaff, flares, rockets and machine guns by the pilots during the year. Details of such firings are included in reimbursement of Ammunition expended by LOA aircraft (Attachment 2) and would be in excess of the amount agreed in the paragraph 8.2. of the General Terms and Conditions. Ammunition expended during actual hostilities and proficiency training will be verified by the United Nations Aviation Verification Officer for the certification and subsequent reimbursement at the agreed rates.
- c) **Positioning/Depositioning** - Each and every time an aircraft accumulates a total of **xxx** flight hours in support of the Mission during the period of this LOA, the Government is entitled to rotate the aircraft at UN expense under coordination between the Government and the United Nations. Rotation can be accomplished under commercial arrangements or, alternatively, under separate LOA as agreed between United Nations (Air Transport Service, LD/OSCM/DOS and Movement Control Section of TMS/LD/OSCM/DOS) and the Government.
- d) **US\$ xxxxxx** total for 'UN' painting the **Number** aircrafts (if required) or any substitution at **US\$ xxxxxx** each aircraft.
- e) Costs for airport services, excluding taxes from which the United Nations is exempt, as specified in paragraph 17 below, and costs for aviation fuel are not included in the cost of the fixed term rental rate set out in (a) above, and will be reimbursed and/or provided by the United Nations to the Government at actual cost provided: (i) such costs are incurred during flight time; (ii) such costs are reasonable; (iii) the Government submits to the United Nations, together with its invoice, a copy of the invoice presented to the Government.

8.2 The foregoing notwithstanding, the United Nations shall not reimburse the Government in excess of **US\$ xxxxxx** for the period of three years from **xx Month 20xx to xx Month 20xx**.

- 8.3 The United Nations will not pay guaranteed minimum hours, only actual hours flown that were tasked and certified by the United Nations with reference to a maximum utilization as defined in paragraph 6.1. Hours flown for maintenance test flights will not be reimbursed by the UN.
- 8.4 Certification for reimbursement by the United Nations requires inter alia verification by the authorized United Nations Chief Aviation Officer that the Aircraft was operating in accordance with this Letter of Assist. The number of hours flown should be verified by both parties.
- 8.5 Aircraft tasked to conduct flight operations outside the scope, direction, or intent of this Letter of Assist may not be endorsed for reimbursement.
- 8.6 The United Nations shall make payments to the Government under this Letter of Assist upon receipt of the Government's invoice and certification by the authorized United Nations Chief Aviation Officer that the services for the period of the invoice have been satisfactorily performed. The signature of the authorized UN Representative on Form FOD 40, Aircraft Use Report (AUR) constitutes a certificate that the services provided as described thereon have been satisfactorily performed.
- 8.7 Government invoices for the items referred to in paragraph 8.1 a., b., c. and d., should be sent to the Chief, Reimbursement Claims Management and Performance Section, Uniformed Capability Support Division, Office of Supply Chain Management, Department of Operational Support (RCMPS/UCSD/OSCM/DOS). All other invoices are to be presented to **MISSION** in accordance with subparagraph 8.1(e) above and will be reimbursed to the Government by **MISSION**.
9. **Assignment.**
- 9.1 The Government will not assign, transfer, pledge or make other dispositions of this Agreement or any part thereof, or any of the Government's rights, claims or obligations under this Agreement except with the prior written consent of the United Nations.
10. **Aircraft call signs.**
- 10.1 The United Nations will, if required, assign to the Government appropriate United Nations call signs, which the Government may use only for self-deployment and redeployment of the Aircraft to and from the mission area. In addition, with respect to long term services Aircraft, once the Aircraft have arrived at the "mission base of operation", the United Nations will assign to the Government appropriate United Nations call signs, which the Government may use **only for flights, which have been tasked by the United Nations**. In both above-mentioned instances, the Government may only use the United Nations call sign together with its own usual call sign in order to ensure the proper identity of the Aircraft. In this connection, the Government must always identify itself and the Aircraft, using both call signs, in all communications with airports and in-flight agencies.

11. **Aircraft painting and markings.**

- 11.1 The Government shall paint the Aircraft in United Nations livery (white) and affix "UN" markings to the Aircraft in accordance with the instructions attached hereto as Attachment 1. The Government may only use such painted and marked Aircraft for flights, which have been tasked by the United Nations.
- 11.2 Upon the expiration or termination of this Letter of Assist, all UN markings shall be removed from the Aircraft. Deployment and redeployment flights with UN markings are allowed provided that it is noted in the flight plan that the flights are repositioning/ depositions flights to/from a United Nations mission. To ensure the availability for United Nations tasking, the Government shall ensure that aircraft substituted for Aircraft due for scheduled maintenance are marked in accordance with Attachment 1.
- 11.3 The painting and markings will be professionally and uniformly applied without streaking, bleed through, chipping, and over-sprays.

12. **Clearances.**

- 12.1 The Government shall be responsible for obtaining authorizations from governmental or other authorities and other documents necessary for the performance of the transportation under this Letter of Assist.

13. **Scheduling of flights.**

- 13.1 The flights under this Letter of Assist shall conform to a flight schedule as tasked by the United Nations. The flight schedule shall specify the dates and times of departure, originating airports, routes, sortie profile, number of passengers and/or total weight of cargo and estimated time of arrival.
- 13.2 Should any flight(s) be delayed by the Government, the Government shall promptly notify the United Nations of the delay and the reasons for such delay.

14. **Facilities provided by United Nations.**

- 14.1 The United Nations may provide the Government such facilities as are necessary for the performance of services hereunder, as agreed by the parties and set out below:

- a) Facility 1
- b) Facility 2
- c) (if applicable)

These facilities are provided for the convenience of the Government at no cost and give rise to no liability on the part of the United Nations.

15. **Reporting and accidents.**

- 15.1 In the event of any accidents or incidents involving the Aircraft, the Government shall immediately report such accidents or incidents to the

United Nations and all appropriate governmental authorities and shall protect and preserve all evidence in connection with the accidents or incidents. In addition, the Government shall co-operate with all investigations into the accidents or incidents, which may be instituted by the United Nations and/or governmental authorities, including the preparation of reports.

16. **Safety.**

16.1 The Government shall be solely responsible for the safety and airworthiness of the Aircraft and the operation of the Aircraft, and represents that during the term of this Letter of Assist:

- a. The Aircraft shall be properly manned, equipped, operated, inspected, maintained and serviced, in compliance with the rules and regulations of the Government and any other applicable aeronautical rules and regulations, including those of the host country when applicable;
- b. The Aircraft shall be fit for the purposes for which they are being used and shall be safe for passenger, cargo and passenger/cargo combination (-combi) air transportation in the designated area (s) of operation under this Letter of Assist.
- c. Any requirement to rotate or replace the aircraft for maintenance or safety reasons, within the period of this LOA (**xx Month 20xx to xx Month 20xx**) shall be at the sole responsibility and cost of the Government. However, any aircraft logging more than **xxx** flight hours before the expiry period of this LOA or on completion of the three years period of the LOA, will be rotated/replaced at UN expense including painting costs, if required.

16.2 The flight crew, maintenance and other required support personnel shall, inter alia, be medically fit and possess the necessary training knowledge, qualifications, skill and experience to perform the duties under this Letter of Assist. Training and proficiency is a TCC responsibility. The pilots are required to maintain day and night currency (including NVG) in accordance with International/Government/ Service/UN regulations. **Hours flown to maintain pilot day/night (NVG) currency will be reimbursed by the UN.** Without prejudice to the above, the United Nations reserves the right to review and inspect documentation relating to the experience level and current medical status of all aircrew members, including the Pilot, Pilot-Navigator (co-pilot), Engineer and Radio Operator. **Documents mentioned in Paragraph 26.1 related to Service Regulations for crew currency and proficiency will be provided by the Government. In addition, the flight crew shall be fully fluent in "aeronautical" English.**

16.3 The Government agrees that flights tasked by the Mission will fully comply with the operating procedures in Chapter 3 of the UN Aviation Manual and with local flying instructions issued by the Mission.

16.4 The UN Aviation Manual, Chapter 3 requires that the Pilot in Command accomplish a risk assessment. It is to be completed prior to the initial flight

each day that covers the day's tasking. The Government agrees that during the term of this Letter of Assist, the Pilot-in-Command of the UN tasked aircraft will complete the risk assessment checklist. The checklist will be forwarded to the Mission's Aviation Specialist prior to the initial flight for review, except when precluded by emergency situations.

17. **Responsibility for claims and insurance.**

17.1 The Government shall bear the risk of loss or damage to the body and parts of the Aircraft and shall be responsible for any claims by its crew and its other support personnel who are not members of the United Nations peacekeeping operation arising from the performance of services hereunder. The Government may meet its responsibility through insurance or self-insurance.

17.2 Government claims in respect of the death, injury or illness of members of the Aviation Unit attributable to United Nations service shall be dealt with in accordance with the Guidelines for Troop-Contributors annexed to the MOU and General Assembly Resolution A/Res/64/269.

17.3 The United Nations maintains insurance covering loss or damage sustained by third parties, including passengers, for death, bodily injury and/or property damage and shall handle any claims by such third parties arising from the performance of services hereunder within the scope of the insurance policy maintained for this purpose and in accordance with the established procedures of United Nations peacekeeping operations, excluding claims by personnel provided by the Government including members of the Aviation Unit, as referred to in paragraphs 17.1 and 17.2 above. However, if the third-party claim arises from the gross negligence or willful misconduct of any personnel provided by the Government, including any member of the Aviation Unit, the United Nations shall be entitled to claim recovery from the Government in respect of such claims in accordance with the MOU.

18. **Tax exemption.**

18.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations exempts the United Nations from payment of direct taxes and duties other than taxes and duties that are no more than charges for public utility services. Accordingly, the Government authorizes the United Nations to deduct from the Government's invoice any amount representing such taxes or duties charged by the Government to the United Nations. Payment of such corrected invoiced amount shall constitute full payment by the United Nations. In the event that any taxing authority refuses to recognize the United Nations exemption from such taxes, the Government shall immediately consult with the United Nations to determine a mutually acceptable procedure.

19. **Cancellation by the Government.**

19.1 The aircraft shall be at all times under the exclusive command of the Government. The Government may cancel, delay or abort a flight should the pilot in command determine that to fly would in the circumstances endanger

the safety of the passengers, aircraft or its crew. In particular, the Government may cancel, delay or abort any flight in case of force majeure.

19.2 In case a flight is cancelled, delayed or aborted for force majeure, the Government shall be entitled to reimbursement from the United Nations, on a pro-rata basis, in respect only of flights, or portions of the flight already completed prior to the decision to cancel, delay or abort such flight.

19.3 In the event that the Government decides to cancel, delay or abort a flight for any other reasons not directly attributable to the United Nations, including but not limited to reasons of operational difficulties, technical failure of the Aircraft, the Government shall not, except where alternate air transportation has been provided by the Government, be entitled to payment from the United Nations for that flight, and where payment has already been made, the United Nations shall be entitled to full reimbursement of any amounts paid plus reasonable expenses incurred by the United Nations as a result of such decision.

20. **Termination.**

20.1 Either party may terminate the Letter of Assist for cause upon 7 days written notice to the other party. In the event of termination pursuant to this clause, no costs relating to termination shall be reimbursable by the terminating party to the other party.

20.2 Either party may also terminate the Letter of Assist, in whole or in part, upon 30 days written notice to the other party. In the event of termination pursuant to this clause, the United Nations shall only be responsible for reimbursement to the Government for services satisfactorily performed in accordance with this Letter of Assist prior to the effective date of termination. In the event of termination by the Government, except due to an event of force majeure, the United Nations shall be entitled to reimbursement by the Government for all reasonable costs relating to such termination. In the event of partial termination, the price shall be proportionately reduced.

20.3 The United Nations may also terminate this Letter of Assist at any time for convenience in the interest of the Organization should the mission mandate or the funding be curtailed or terminated, in which case the Government shall be entitled to reimbursement by the United Nations for all reasonable costs relating to such termination.

21. **Forward commitments.**

21.1 The Government shall upon receipt of notice of termination of the Letter of Assist under paragraph 20 above, bring the services to a close in a prompt and orderly manner, reduce all expenses to a minimum and shall not undertake any forward or further commitments in connection with the Letter of Assist.

22. **Modifications.**

22.1 No changes in, or modifications to, this Letter of Assist shall be made except by mutual agreement, in writing, between the United Nations and the Government.

23. **Settlement of disputes.**

23.1 The United Nations will establish a mechanism to discuss and resolve amicably by negotiation in a spirit of cooperation disputes arising under this Letter of Assist. In the event that a dispute arises, the Under-Secretary-General for Field Support will institute discussions and consultations with representatives of the Government with a view to reaching an amicable resolution of the dispute. Disputes that have not been resolved through consultations or discussions, as described above, may be submitted to a mutually determined conciliator or mediator appointed by the President of the International Court of Justice, failing which the dispute may be submitted to arbitration at the request of either party. Each party will appoint one arbitrator, and the two arbitrators so appointed will appoint a third, who will be the Chairman. If within thirty days of the request for arbitration either party has not appointed an arbitrator, or if within thirty days of the appointment of two arbitrators the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint an arbitrator. The arbitrators will fix the procedures for the arbitration, and each party will bear its own expenses. The arbitrators will have no authority to award punitive damages. The arbitral award will contain a statement of reasons on which it is based and will be accepted by the parties as the final adjudication of the dispute.

24. **Privileges and immunities.**

24.1 Nothing in or relating to this Letter of Assist shall be deemed a waiver of any of the privileges and immunities of the United Nations, including its subsidiary organs.

25. **Force majeure.**

25.1 In the event of and as soon as possible after the occurrence of any event constituting force majeure, the Government shall immediately give notice and full particulars in writing to the United Nations of such event if the Government is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Letter of Assist.

25.2 Upon receipt of such notice, the United Nations shall have the right to take such action as, in its sole discretion, it considers to be appropriate or necessary in the circumstances, including suspension or termination of this Letter of Assist.

25.3 Force majeure. Any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism, or any other acts of a similar nature of force, provided that such acts arise

from causes beyond the control and without the fault and negligence of the Government. The Government acknowledges and agrees that, with respect to any obligations under the Letter of Assist that the Government must perform in areas in which the United Nations is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas, or to any incidents of civil unrest occurring in such areas, shall not, in and of itself, constitute *force majeure* under the Letter of Assist.

26. **Documentation.**

- 26.1 Prior to the aircraft arrival in the Mission, the Government shall provide a copy in English of the Service (Army, Air Force or Navy) regulation(s) governing aviation to Air Transport Service, LD/OSCM/DOS. The document rendered should outline operational requirements, and at a minimum include crew rest, weather minimum, flight limitations for day, night, over water and mountains, pilot currency and proficiency requirements, crew mixture and minimum crew requirements.
- 26.2 As soon as possible, the Government will provide the Mission's Aviation Section a copy, in English, of the Aviation Unit's Standard Operating Procedures (SOP) or equivalent document.

For the United Nations

On behalf of the Government of TCC

Signature:

Date:

Name:

Title:

Assistant Secretary- General
Office of Supply Chain Management

Attachment 1 to "General Terms of LOA"

PAINTING AND MARKING INSTRUCTIONS

1. As the size and type of aircraft used in missions can differ considerably, good judgement and common sense must prevail when painting and marking aircraft for lease with United Nations Peacekeeping operations. The following guidelines are provided:
 - a Entire aircraft will be painted white; however, exhaust wash areas and critical components may be black. Fire ground rescue safety markings, as required by ICAO regulations, will be standard colours and remain clearly visible.
 - b Paint in black or dark blue the letters "UN" or the words "UNITED NATIONS" on the underside and topside of either the left or right wings to be clearly visible and proportionate to size of wing. Helicopters should have the letters "UN" on the underside of the fuselage and the nose.
 - c Paint in black or dark blue the letters "UN" or the words "UNITED NATIONS" on the both sides of the fuselage so as to be clearly visible and proportionate to the size of the aircraft. Large aircraft may affix the letters "UN" on the front of the fuselage, with the words "UNITED NATIONS" on the rear of the fuselage. Helicopters and small aircraft should use the letters "UN" on both sides of the fuselage. The letters should be made as large as possible, placed in a logical area proportionate to the size of aircraft.
 - d Paint in black or dark blue the letters "UN" on both sides of the vertical tail surface or affix the UN emblem.
 - e Serial numbers can remain on the vertical tail surface and on the wings as required by regulation.
 - f Company/Operator name shall not appear on the aircraft. National flag symbols, if required, may appear discreetly in the usual position. If on the vertical tail surface, emblems must be below UN symbol.
2. In all cases, dimensional scale and in-flight legibility must be emphasized. All lettering and placement shall be in proportion of the size of the aircraft.
3. These guidelines are provided for long-term charters with permanent markings. A limited supply of UN decals is available from UNHQ for certain one-time charter flights.

Attachment 2 to "General Terms of LOA"

Reimbursement of Ammunition Expended by Oryx Utility Aircraft

1. The dispensing of air to ground armament by UN aircraft provided by Troop Contributing Country (TCC) under LOA requires unique skills and the necessity for the aircrews to maintain proficiency in the use of the weapons systems.
2. Ammunition such as **Type of Ammunition** and **Type of Ammunition** expended during day/night security evacuation, proficiency exercises in **TCC**, live fire exercises authorized by the Force Commander and approved by the mission's Chief Aviation Officer, and firing during actual hostilities or proficiency training exercises within the Mission AOR are included as part of the LOA, and will be reimbursed in accordance with the wet lease maintenance rates of the COE Manual (currently 2017, or as revised) or as agreed to by the TCC.
3. The Scale of ammunition to be used in the proficiency firing shall be as follows:
 - a. **Quantity** of **Type of Ammunition** (per pilot per year)
 - b. **Quantity** of **Type of Ammunition** (per pilot per year)
4. The rates of reimbursement of expended ammunition will be as under:
 - a. **Type of Ammunition** USD **xxx** per unit
 - b. **Type of Ammunition** USD **xxx** per unit
 - c.
5. Ammunition expended during proficiency firing in **TCC** or in **MISSION AOR** and actual hostilities within **MISSION** will be verified by the United Nations Aviation Verification Officer for the certification and subsequent reimbursement at above mentioned rates.
6. According to the COE Manual the United Nations will reimburse the cost of ammunition expended by the **Type** helicopters Military Unit during the duration of the service. Reimbursement rates for this ammunition will be considered as Contingent-Owned Equipment from the Government of TCC, and therefore will be excluded from the LOA NTE.

ATTACK HELICOPTER TEMPLATE:

MISSION
(Host Country)

LETTER OF ASSIST

General Terms and Conditions

LOA 20xx-xxx

TCC
Number Type Attack Helicopters

GENERAL TERMS AND CONDITIONS OF THE LETTER OF ASSIST 20XX-XXX FOR THE PROVISION OF LONG-TERM AVIATION/AIR TRANSPORTATION SERVICES INVOLVING STATE AIRCRAFT

1. Letter of Assist documents.

1.1 The cover letter and these Terms and Conditions constitute the entire Letter of Assist hereinafter referred to as the ☐Letter of Assist (LOA) for the provision of long-term helicopter services by the Government of TCC in support of United Nations peacekeeping activities in MISSION (Host Country).

2. Services.

2.1 Aviation/Air Transportation Services (hereinafter referred to as the "services") are an important and essential part of United Nations peacekeeping operations. The purpose of the services is to support the United Nations peacekeeping activities mandated by the Security Council. These services may include, but not limited to, fire support to ground forces, armed anti-armour support, armed escort, quick reaction force response, redeployment of forces and support to ground combat operations, fire support to search and rescue (SAR) and SAR, extraction operations, deterrence (show of force), surveillance flights, CASEVAC/MEDEVAC, emergency logistic support UN personnel (civilian and military, authorized by Mission's authority), patrol, observation and monitoring flights. Due to the nature of peacekeeping operations, such services may involve operation into hostile areas or fields where there is no ground support or where airfield security cannot be guaranteed. The aircraft will be operated in accordance with the mission's concept of employment.

2.2 These General Terms and Conditions shall govern the use of State aircraft providing services to the United Nations under Letters of Assist. For purposes of these General Terms and Conditions, State aircraft comprise aircraft owned, leased or chartered by a Government, providing aviation/air transportation services for United Nations peace-keeping operations under United Nations Letters of Assist, excluding aircraft operated by the military of that Government solely for military operations by such Government.

2.3 The rules for employment and engagement will be adhered to unless otherwise authorized by the SRSG (Head of Mission). Unit's tasks are subject to change at any time, pending changes in the situation and operational requirements, which will be addressed by appropriate orders from MISSION. Significant changes in the Unit's capabilities may require adjustments to be discussed at the level of United Nations (DOS/UNHQ) and Permanent Mission of TCC to the United Nations and may require the concurrence of the Government of TCC.

3. Aircraft and Crew.

3.1 The Government of TCC (hereinafter referred to as the "Government") shall provide to the United Nations the services of Number type attack military

helicopters (hereinafter referred to as the "aircraft") operated by a military contingent from **TCC**, as per the MOU signed between the UN and The Government, in connection with the peace-keeping activities of **MISSION**. The aircraft are part of the contingent, which is covered under a separate Memorandum of Understanding (MOU). The contingent and its personnel shall form part of the mission in the same way as any other contingent and in accordance with the existing rules and regulations contained in the Guidelines for Troop-Contributing Countries. The Unit must have sufficient ground personnel, flight crews and equipment to support operations and maintenance requirements to operate 24/7.

3.2 The aircraft shall, inter alia, be capable of the following configurations and conduct missions as mandated by the Security Council:

- a) Armed Escort, Fire support and anti-armour support: with appropriate weapons to include gun, rocket and anti-tank missile capability;
- b) Patrol/Observation/Monitoring, Reconnaissance and Surveillance by helicopter crew. Eight soldiers with small arms, Removable seats for a minimum of 8 soldiers with 9G rated seat belts for each seat. Seat belts must be connected with metal-to-metal couplings. Seat belts must be connected to a "Hard Point" on the airframe or floor and not to the seats unless designed by the manufacturer for that purpose. Attachment methods are to be to a similar approved standard;
- c) Day/Night VFR, IFR and Night Vision Goggles (NVG) Capability: 24/7 capability including flight instruments required for VMC and IMC operations, including day and night VFR and IFR flights. Capable of operating with NVG;
- d) Helicopter Landing Site (HLS): The ability to operate day and night (including NVG) under visual meteorological conditions (VCM) in approved HLS, with standard security provided by UN troops and ground-to-air communication whenever it is possible as per the UN Aviation Manual (Annex 5N);
- e) Remote Helicopter Landing Site (RHLS): The ability to operate day and night (including NVG) under visual meteorological conditions (VCM) in approved RHLS, with limited assistance on ground as indicated in the UN Aviation Manual (Annex 5M);
- f) Helicopter Landing Sites not designated approved HLS or RHLS: The ability to operate day and night (including NVG) under VMC at locations where no approved HLS/RHLS exist, without assistance from troops on ground. These operations shall be limited to emergency situations (In-flight emergency, CASEVAC, etc.) as indicated in the UN Aviation Manual (Annex 5M) In this case, the Pilot-in-Command (PIC) is the ultimate responsible for the safe execution of the task on a case by case basis.
- g) Capability for 24/7 reaction with 45 mins take-off time;
- h) Capability to refuel from aviation fuel drums from forward locations;

- i) Armoured protection for crew;
- j) Additional fuel tanks for extended range (external tanks);
- k) Range of **xx NM (as per SUR)** carrying armament. It is understood that fire capabilities will be reduced depending on the required range; and
- l) Minimum cruise speed of **xx knots (as per SUR)**.

3.3 In addition to the above, the aircraft shall include the following minimum equipment:

- a) Global Positioning System (GPS) with a valid database;
- b) VHF, UHF HF and satellite phone communications equipment compatible with **MISSION** communications equipment;
- c) Automatic Emergency Locator Transmitter (ELT) with 406 MHz frequency on each aircraft equipped with a Personnel Locator Beacon (PRB);
- d) Transponder 3/A and C;
- e) Composite survival kits appropriate to the mission area;
- f) Fire extinguishers and first aid kits;
- g) Radar Altimeter;
- h) Direction Finder (DF) equipment capable to guide aircraft to Emergency Locator Transmitters (ELT 406 MHz);
- i) FDR (non- photographic) (Flight Data Recorder) and CVR (Cockpit Voice Recorder);
- j) Portable Satellite Tracking System to be provided by **MISSION**;
- k) ILS/VOR and DME;
- l) Automatic Direction Finder (ADF);
- m) Radar Warning Receiver (RWR), Chaff and/or Flares (anti heat seeking weapons counter measures);
- n) Helicopter internal and external lights compatible with NVG; and
- o) Forward Looking Infra-Red (FLIR).

3.4 The flight crews will possess the following minimum qualifications:

- a) The Pilot-in-Command (PIC) for any sortie tasked by the UN will have a minimum of 600 total flight hour (300 flight hours as PIC), with a minimum of 100 actual flight hours as PIC on type aircraft. In addition, each PIC needs to be IFR qualified as per national standards with a minimum of 80 flight hours and shall be properly qualified and trained to fly and operate at night with NVG with a minimum of 50 NVG flight hours.
- b) The Co-pilot (CP) will have a minimum of 200 total flight hours. In addition, **each CP needs to be IFR qualified as per national standards with a minimum of 20 flight hours and shall be properly qualified and trained**

to fly and operate at night with NVG with a minimum of 30 NVG flight hours.

- c) All air crew shall be properly qualified and trained to fly and operate at night with NVG as per national standards with a minimum of 30 NVG flight hours.
- d) The number, qualifications, and the flight experience of the crews must be sufficient to ensure that all the requirements are fulfilled in capacities and capabilities, for day and night operations, 24/7, and up to **xx (as per SUR)** flight hours per month per aircraft in compliance with the applicable national standards.
- e) Weapon currency is a national responsibility as there are no helicopter weapon ranges in **Host Country** for use by MONUSCO. Pilots must be current with all the weapon systems for the duration of their stay without the need of refresher in the mission.
- f) The Government of **TCC** will conduct the required firing proficiency training of the flight crew prior to the crew rotations. The reimbursement of the firing proficiency services for the United Nations will be conducted upon verification of the actual ammunition used in accordance with Annex 2 of this LOA and minimum national standards required for the crew to be current to perform the required United Nations tasks. The Government shall notify United Nations (Air Transport Section, Logistic Support Division, and Department of Field Support) in advance on the dates of such training exercise in advance that United Nations verification inspector(s) will ensure procedural compliance in accordance with the United Nations Regulations and Rules.

4. **Term.**

- 4.1 The term of this Letter of Assist is for one year term, effective from xx Month 20xx **until xx Month 20xx**, on the expiry of this term the UN at its option with the Government of **TCC** concurrence may extend the term of the LOA for two optional additional periods of one year each (1+1+1 year) until **xx Month 20xx and xx Month 20xx** respectively. (Subject to MISSION mandate). The activation of the optional years will require the agreement of both parties

5. **Aircraft availability.**

- 5.1 The aircraft shall be available as follows:
 - a) Minimum availability of **Number Type** attack helicopters daily;
 - b) Individual helicopter availability of at least 23 days per month (**21 days in February**) for each aircraft.

6. **Flight Time.**

- 6.1 The Government shall provide an average of **xxx** hours of flight time per month for the fleet of **Number Type (xx flight hours per aircraft)** not to exceed a total of **xxxx flight hours** for the term from **xx Month 20xx to xx**

Month 20xx should the **three optional years** (1+1+1) be activated not to exceed total of (**xxx hrs + xxx hrs+ xxx hrs**) **subject to Mission's mandate.**

6.2 For purposes of this Letter of Assist, "flight time" means the total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stowed for a flight tasked by the United Nations.

7. Operational base

7.1 The main operational base shall be **Location (Host Country)**, but for operational reasons the aircraft may be temporarily re-deployed to another location within MISSION area of responsibilities. Temporarily deployments (self-supporting) of **Number** aircrafts detached to forward operational locations at previously certified airfields or HLS within **MISSION** Area of Responsibility (AOR) shall be for periods of up to number (**xx**) days to (**as per SUR**), including all personnel, maintenance, and support requirements. At those Temporary locations, security will be provided by **MISSION** Force elements. Temporary forward deployments in excess of **xx** days, are to be agreed between the UN and TCC and may be subject to aircraft and/or personnel rotation for maintenance, provision of crew accommodations (as COE Manual currently 2017, or as revised), meals, local transportation, operational communication facilities, ground support equipment and security of helicopters. This relocation will be only performed upon consultations and concurrence of the Government of **TCC**.

7.2 Inter- Mission Cooperation: Based on the United Nations Security Council Resolutions (UNSCR's), with the concurrence of the Government and in coordination with the Mission(s) involved, the aircraft may operate temporarily outside of the **MISSION** AOR in support of other Peacekeeping Mission, if applicable.

8. Reimbursement

8.1 The United Nations shall reimburse the Government for the satisfactory performance of the services under this Letter of Assist the following costs:

- a) The reimbursement will be based on the fixed term rental rate at **US\$ xxxxxx** per month (**US\$ xxxxxx per aircraft**) where the Government shall be capable of providing an average of **xx** hours of flight time for the fleet of **Number** military aircraft per month (**xx flight hours per aircraft**) and not to exceed a total of **xxxx flight hours** for the term of each year (1+1+1 year), as specified in paragraph 4. It includes all costs for operations, maintenance, inspections, spare parts, oils, lubricants, rocket launchers, aircraft maintenance/support equipment and appropriate aircraft manuals. This also includes regular security and evacuation exercises in consultation with the Force HQ and authorized by the Mission's air specialist.
- b) **The amount of fixed monthly rate to be reimbursed to the Government shall be reduced, on a pro-rata basis, ONLY in the event that the Aircraft and/or Aviation Personnel do not fulfil the capability and availability requirements for performing MISSION tasking as set out in paragraphs**

5 b of this Letter of Assist as per the following formula: US\$ xxxxxx (monthly rate) / number of days per month x NON available days (to be applied as described in the following paragraph) within that month=Actual monthly deduction for each aircraft.

The number of NON-available days to be applied in the previous formula will be calculated on a monthly basis for each helicopter, as follows:

- **For all months, except February, if availability is less than 23 days, then Non-available days (to be applied) = 23 - days available.**
 - **For the month of February, if availability is less than 21 days, then Non-available days (to be applied) = 21 - days available.**
- c) Actual cost for firing of anti-tank guided missiles, rockets and machine guns by the pilots during the year. Details of such firings are included in reimbursement of Ammunition expended by LOA aircraft (Attachment 2) and would be in excess of the amount agreed in the paragraph 8.2. of the General Terms and Conditions. Ammunition expended during actual hostilities will be verified by the United Nations Aviation Verification Officer for the certification and subsequent reimbursement at above mentioned rates.
- d) **US\$ xxxxxx for painting of the four aircraft (US\$ xxxxxx per aircraft or any substitution);**
- e) **Positioning/Depositioning.** Under United Nations and Government arrangements provided each and every time an aircraft accumulates a total of **xxx** flight hours in support of the mission. These rotations shall be at UN expense and coordinated between the Government and United Nations. Rotations can be accomplished under commercial arrangements or, alternatively, under separate LOA as agreed between United Nations (Air Transport Service, LD/OSCM/DOS and Movement Control Section of TMS/LD/OSCM/DOS) and the Government.
- f) Costs for airport services, excluding taxes from which the United Nations is exempt, as specified in paragraph 17 below, and costs for aviation fuel are not included in the cost per flying hour set out in (a) above, and shall be reimbursed and/or provided by the United Nations to the Government at actual cost provided: (i) such costs are incurred during flight time; (ii) such costs are reasonable; (iii) the Government submits to the United Nations, together with its invoice, a copy of the invoice presented to the Government.
- 8.2 The foregoing notwithstanding, the United Nations shall not reimburse the Government in excess of **US\$ xxxxxx** for the period of three year from **xx Month 20xx to xx Month 20xx.**
- 8.3 Certification for reimbursement by the United Nations requires inter alia verification by the authorized United Nations Chief Aviation Officer the aircraft was operating in accordance with this Letter of Assist.

- 8.4 Aircraft tasked to conduct flight operations outside the scope, direction, or intent of this Letter of Assist may not be endorsed for reimbursement. The cost of aviation fuel which was used during test flights after routine maintenance can be deducted from the UN assessed sum to reimburse the Government compensation amounts. The basis for this deduction will be a notification to the UN Mission, confirmed by the national contingent commander.
- 8.5 The United Nations shall make payments to the Government under this Letter of Assist upon receipt of the Government's invoice and certification by the authorized United Nations Chief Aviation Officer that the services for the period of the invoice have been satisfactorily performed. The signature of the authorized UN Representative on Form FOD 40, Aircraft Use Report (AUR) constitutes a certificate that the services provided as described thereon have been satisfactorily performed.
- 8.6 Government invoices for the items referred to in paragraph 8.1 a., c., d., and e. should be sent to the Chief, Reimbursement Claims Management and Performance Section, Uniformed Capability Support Division, Office of Supply Chain Management, Department of Operational Support (RCMPS/UCSD/OSCM/DOS). All other invoices are to be presented to **MISSION** in accordance with subparagraph 8.1(f) above and will be reimbursed to the Government by **MISSION**.
9. **Assignment.**
- 9.1 The Government will not assign, transfer, pledge or make other dispositions of this Agreement or any part thereof, or any of the Government's rights, claims or obligations under this Agreement except with the prior written consent of the United Nations.
10. **Aircraft call signs.**
- 10.1 The United Nations will, if required, assign to the Government appropriate United Nations call signs, which the Government may use only for self-deployment and redeployment of the aircraft to and from the mission area. In addition, with respect to long term services aircraft, once the aircraft have arrived at the "mission base of operation", the United Nations will assign to the Government appropriate United Nations call signs, which the Government may use **only for flights, which have been tasked by the United Nations**. In both of the above-mentioned instances, the Government may only use the United Nations call sign together with its own usual call sign in order to ensure the proper identity of the aircraft. In this connection, the Government must always identify itself and the aircraft, using both call signs, in all communications with airports and in-flight agencies.
- 10.2 In order to facilitate the United Nations' compliance with paragraph 8.1.e, the Government shall provide 14 days' written notice of aircraft rotations. The notice should be addressed to the Chief, Air Transport Service, LD/OSCM/DOS with a copy to **MISSION** Chief Aviation Officer and provide

the scheduled rotation date, Aircraft Registration Mark, and reason for rotation.

11. **Aircraft painting and markings.**

11.1 The Government shall paint the aircraft in United Nations livery (white) and affix "UN" markings to the aircraft in accordance with the instructions attached hereto as Attachment 1. The Government may only use such painted and marked aircraft for flights, which have been tasked by the United Nations.

11.2 Upon the expiration or termination of this Letter of Assist, or the withdrawal of certain aircraft from the fleet provided by the Government, all UN markings shall be removed from the aircraft prior to departing from the mission area.

11.3 The painting and markings will be professionally and uniformly applied without streaking, bleed through, chipping, and over-sprays.

12. **Clearances.**

12.1 The Government shall be responsible for obtaining authorizations from governmental or other authorities and other documents necessary for the performance of the transportation under this Letter of Assist.

13. **Scheduling of flights.**

13.1 The flights under this Letter of Assist shall conform to a flight schedule as tasked by the United Nations. The flight schedule shall specify the dates and times of departure, originating airports, routes, sortie profile, number of passengers and/or total weight of cargo, estimated time of arrival.

13.2 Should any flight(s) be delayed by the Government, the Government shall promptly notify the United Nations of the delay and the reasons for such delay.

14. **Facilities provided by United Nations.**

14.1 Ground support arrangements, including the provision of accommodation and facilities, are specified in the relevant MOU between the Government and the UN as COE Manual (currently 2017, or as revised).

14.2 The United Nations may provide the Government such facilities as are necessary for the performance of services hereunder, as agreed by the parties and set out below:

- a) Facility 1
- b) Facility 2
- c) (if applicable)

These facilities are provided for the convenience of the Government at no cost and give rise to no liability on the part of the United Nations.

15. Reporting and accidents.

15.1 In the event of any accidents or incidents involving the aircraft, the Government shall immediately report such accidents or incidents to the United Nations and all appropriate governmental authorities and shall protect and preserve all evidence in connection with the accidents or incidents. In addition, the Government shall co-operate with all investigations into the accidents or incidents, which may be instituted by the United Nations and/or governmental authorities, including the preparation of reports.

16. Safety.

16.1 The Government shall be solely responsible for the safety and airworthiness of the aircraft and the operation of the aircraft, and represents that during the term of this Letter of Assist:

- a) The aircraft shall be properly manned, equipped, operated, inspected, maintained and serviced, in compliance with the rules and regulations of the Government and any other applicable aeronautical rules and regulations, including those of the host country;
- b) The aircraft shall be fit for the purposes for which they are being used and shall be safe for passenger, cargo and passenger/cargo combination (-combi) air transportation in the designated area (s) of operation under this Letter of Assist.
- c) Any requirement to rotate or replace the aircraft for maintenance or safety reasons within the period of this LOA, **(xx Month 20xx to xx Month 20xx)**, shall be at the sole responsibility and cost of the Government. However, any aircraft logging more than xxx flight hours before the expiry period of this LOA or on completion of the three years period of the LOA, will be rotated/replaced at UN expense including painting costs, if required.

16.2 The flight crew, maintenance and other required support personnel shall, inter alia, be medically fit and possess the necessary training knowledge, qualifications, skill and experience to perform the duties under this Letter of Assist. The pilots are required to maintain day and night flying currency in accordance with International/Government/UN regulations. **Hours flown to maintain pilot day/night (NVG) currency will be reimbursed by the UN.** Without prejudice to the above, the United Nations reserves the right to review and inspect documentation relating to the experience level and current medical status of all aircrew members, including the Pilot, Pilot-Navigator (co-pilot), Engineer and Radio Operator. **Documents mentioned in Paragraph 26.1 related to Service Regulations for crew currency and proficiency will be provided by the Government. In addition, the flight crew shall be fully fluent in "aeronautical" English.**

16.3 The Government agrees that flights tasked by the Mission will fully comply with the operating procedures in Chapter 3 of the UN Aviation Manual and with local flying instructions issued by the Mission.

- 16.4 The UN Aviation Manual, Section II Chapter 3 requires a risk assessment be accomplished by the Pilot-in-Command. It must be completed prior to the initial flight each day that covers the day's tasking. The Government agrees that during the term of this Letter of Assist, the Pilot-in-Command of the UN tasked aircraft will complete the risk assessment checklist. To the maximum extent possible, the checklist will be forwarded to the Mission's Aviation Specialist for review prior to the initial flight, except where precluded by emergency conditions. In addition it is required that "Risk/Threat assessment for the area of operations" to be executed by MONUSCO Aviation specialists (Force HQ, Aviation Safety Unit and/or Aviation Section) prior to any operational flight; copy of the assessment summary to be provided to the Contingent Commander on a daily basis.
17. **Responsibility for claims and insurance.**
- 17.1 The Government shall bear the risk of loss or damage to the body and parts of the aircraft and shall be responsible for claims by any personnel provided by the Government who are not members of the United Nations peacekeeping operation arising from the performance of services hereunder. The Government may meet its responsibility through insurance or self-insurance.
- 17.2 Government claims in respect of the death, injury or illness of members of the Aviation Unit attributable to United Nations service shall be dealt with in accordance with the Guidelines for Troop-Contributors annexed to the MOU and General Assembly resolution A/Res/64/269.
- 17.3 The United Nations maintains insurance covering loss or damage sustained by third parties, including passengers, for death, bodily injury and/or property damage and shall handle any claims by such third parties arising from the performance of services hereunder within the scope of the insurance policy maintained for this purpose and in accordance with the established procedures of United Nations peacekeeping operations, excluding claims by personnel provided by the Government including members of the Aviation Unit, as referred to in paragraphs 17.1 and 17.2 above. However, if the third-party claim arises from the gross negligence or wilful misconduct of any personnel provided by the Government, including any member of the Aviation Unit, the United Nations shall be entitled to claim recovery from the Government in respect of such claims in accordance with the MOU.
18. **Tax exemption.**
- 18.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations exempts the United Nations from payment of direct taxes and duties other than taxes and duties that are no more than charges for public utility services. Accordingly, the Government authorizes the United Nations to deduct from the Government's invoice any amount representing such taxes or duties charged by the Government to the United Nations. Payment of such corrected invoiced amount shall constitute full payment by the United Nations. In the event that any taxing authority refuses to recognize the United

Nations exemption from such taxes, the Government shall immediately consult with the United Nations to determine a mutually acceptable procedure.

19. **Cancellation by the Government.**

19.1 The aircraft shall be at all times under the exclusive command of the Government. The Government may cancel, delay or abort a flight should the pilot in command determine that to fly would in the circumstances endanger the safety of the passengers, aircraft or its crew. In particular, the Government may cancel, delay or abort any flight in case of force majeure.

19.2 In case a flight is cancelled, delayed or aborted for force majeure, the Government shall be entitled to reimbursement from the United Nations, on a pro-rata basis, in respect only of flights, or portions of the flight already completed prior to the decision to cancel, delay or abort such flight.

19.3 In the event that the Government decides to cancel, delay or abort a flight for any other reasons not directly attributable to the United Nations, including but not limited to reasons of operational difficulties, technical failure of the aircraft, and unavailability of aviation fuel/ improper quality of aviation fuel, the Government shall not, except where alternate air transportation has been provided by the Government, be entitled to payment from the United Nations for that flight, and where payment has already been made, the United Nations shall be entitled to full reimbursement of any amounts paid plus reasonable expenses incurred by the United Nations as a result of such decision.

20. **Termination.**

20.1 Either party may terminate the Letter of Assist for cause upon 7 days written notice to the other party. In the event of termination pursuant to this clause, no costs relating to termination shall be reimbursable by the terminating party to the other party.

20.2 Either party may also terminate the Letter of Assist, in whole or in part, upon 30 days written notice to the other party. In the event of termination pursuant to this clause, the United Nations shall only be responsible for reimbursement to the Government for services satisfactorily performed in accordance with this Letter of Assist prior to the effective date of termination. In the event of termination by the Government, except due to an event of force majeure, the United Nations shall be entitled to reimbursement by the Government for all reasonable costs relating to such termination. In the event of partial termination, the price shall be proportionately reduced.

20.3 The United Nations may also terminate this Letter of Assist at any time for convenience in the interest of the Organization should the mission mandate or the funding be curtailed or terminated, in which case the Government shall be entitled to reimbursement by the United Nations for all reasonable costs relating to such termination.

21. **Forward commitments.**

21.1 The Government shall upon receipt of notice of termination of the Letter of Assist under paragraph 20 above, bring the services to a close in a prompt and orderly manner, reduce all expenses to a minimum and shall not undertake any forward or further commitments in connection with the Letter of Assist.

22. **Modifications.**

22.1 No changes in, or modifications to, this Letter of Assist shall be made except by mutual agreement, in writing, between the United Nations and the Government.

23. **Settlement of disputes.**

23.1 The United Nations will establish a mechanism to discuss and resolve amicably by negotiation in a spirit of cooperation disputes arising under this Letter of Assist. In the event that a dispute arises, the Under-Secretary-General for Peacekeeping Operations will institute discussions and consultations with representatives of the Government with a view to reaching an amicable resolution of the dispute. Disputes that have not been resolved through consultations or discussions, as described above, may be submitted to a mutually determined conciliator or mediator appointed by the President of the International Court of Justice, failing which the dispute may be submitted to arbitration at the request of either party. Each party will appoint one arbitrator, and the two arbitrators so appointed will appoint a third, who will be the Chairman. If within thirty days of the request for arbitration either party has not appointed an arbitrator, or if within thirty days of the appointment of two arbitrators the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint an arbitrator. The arbitrators will fix the procedures for the arbitration, and each party will bear its own expenses. The arbitrators will have no authority to award punitive damages. The arbitral award will contain a statement of reasons on which it is based and will be accepted by the parties as the final adjudication of the dispute.

24. **Privileges and immunities.**

24.1 Nothing in or relating to this Letter of Assist shall be deemed a waiver of any of the privileges and immunities of the United Nations, including its subsidiary organs.

25. **Force majeure.**

25.1 In the event of and as soon as possible after the occurrence of any event constituting force majeure, the Government shall immediately give notice and full particulars in writing to the United Nations of such event if the Government is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Letter of Assist.

25.2 Upon receipt of such notice, the United Nations shall have the right to take such action as, in its sole discretion, it considers to be appropriate or

necessary in the circumstances, including suspension or termination of this Letter of Assist.

- 25.3 Force majeure as used in this Letter of Assist means any unforeseeable and irresistible act of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism, or any other acts of a similar nature of force, provided that such acts arise from causes beyond the control and without the fault and negligence of the Government. The Government acknowledges and agrees that, with respect to any obligations under the Letter of Assist that the Government must perform in areas in which the United Nations is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas, or to any incidents of civil unrest occurring in such areas, shall not, in and of itself, constitute *force majeure* under the Letter of Assist.
26. **Documentation.**
- 26.1 Prior to the aircraft arrival in the Mission, the Contributing Nation shall provide a copy in English of the Service (Army, Air Force or Navy) regulation(s) governing aviation to Air Transport Service, LD/OSCM/DOS. The document rendered should outline operational requirements, and at a minimum include crew rest, weather minimum, flight limitations for day, night, over water and mountains, pilot currency requirements, crew mixture and minimum crew requirements.
- 26.2 As soon as possible, the Government will provide the Mission's Aviation Section a copy, in English, of the Aviation Unit's Standard Operating Procedures (SOP) or equivalent document duly authorised by the adequate national authority.

For the United Nations

On behalf of the Government of TCC

Signature:

Date:

Name:

Title:

Assistant Secretary- General
Office of Supply Chain Management

Attachment 1 to "General Terms of LOA"

PAINTING AND MARKING INSTRUCTIONS

1. As the size and type of aircraft used in missions can differ considerably, good judgement and common sense must prevail when painting and marking aircraft for lease with United Nations Peacekeeping operations. The following guidelines are provided:
 - g Entire aircraft will be painted white; however, exhaust wash areas and critical components may be black. Fire ground rescue safety markings, as required by ICAO regulations, will be standard colours and remain clearly visible.
 - h Paint in black or dark blue the letters "UN" or the words "UNITED NATIONS" on the underside and topside of either the left or right wings so as to be clearly visible and proportionate to size of wing. Helicopters should have the letters "UN" on the underside of the fuselage and the nose.
 - i Paint in black or dark blue the letters "UN" or the words "UNITED NATIONS" on the both sides of the fuselage so as to be clearly visible and proportionate to the size of the aircraft. Large aircraft may affix the letters "UN" on the front of the fuselage, with the words "UNITED NATIONS" on the rear of the fuselage. Helicopters and small aircraft should use the letters "UN" on both sides of the fuselage. The letters should be made as large as possible, placed in a logical area proportionate to the size of aircraft.
 - j Paint in black or dark blue the letters "UN" on both sides of the vertical tail surface or affix the UN emblem. Helicopters should have the words "UNITED NATIONS" along the tail boom surface, but it is not absolutely necessary.
 - k Serial numbers can remain on the vertical tail surface and on the wings as required by regulation.
 - l Company/Operator name shall not appear on the aircraft. National flag symbols, if required, may appear discreetly in the usual position. If on the vertical tail surface, emblems must be below UN symbol.
2. In all cases, dimensional scale and in-flight legibility must be emphasized. All lettering and placement shall be in proportion of the size of the aircraft.
3. These guidelines are provided for long-term charters with permanent markings. A limited supply of UN decals is available from UNHQ for certain one-time charter flights.

Attachment 2 to "General Terms of LOA"

Reimbursement Rates and Scale of Ammunition Expended by LOA Armed Aircraft

1. The dispensing of air to ground armament by UN aircraft provided by Troop Contributing Country (TCC) under LOA requires unique skills and the necessity for the aircrews to maintain proficiency in the use of the weapons systems
2. Ammunition such as **Type of Ammunition** and **Type of Ammunition** expended during day/night security evacuation, proficiency exercises in **TCC**, live fire exercises authorized by the Force Commander and approved by the mission's Chief Aviation Officer, and firing during actual hostilities or proficiency training exercises within the Mission AOR are included as part of the LOA, and will be reimbursed in accordance with the wet lease maintenance rates of the COE Manual (currently 2017, or as revised) or as agreed to by the TCC.
3. The Scale of ammunition to be used in the proficiency firing shall be as follows:
 - a. **Quantity of Type of Ammunition** (per pilot per year)
 - b. **Quantity of Type of Ammunition** (per pilot per year)
4. The rates of reimbursement of expended ammunition will be as under:
 - a. **Type of Ammunition** USD **xxx** per unit
 - b. **Type of Ammunition** USD **xxx** per unit
 - c.
5. Ammunition expended during proficiency firing in **TCC** or in **MISSION AOR** and actual hostilities within **MISSION** will be verified by the United Nations Aviation Verification Officer for the certification and subsequent reimbursement at above mentioned rates.
6. According to the COE Manual the United Nations will reimburse the cost of ammunition expended by the **Type** helicopters Military Unit during the duration of the service. Reimbursement rates for this ammunition will be considered as Contingent-Owned Equipment from the Government of **TCC**, and therefore will be excluded from the LOA NTE.

Annex H

GLOSSARY

While not intended to be all-inclusive, the following definitions clarify the most commonly used terms in UN aviation. For those terms not covered here, the definitions contained in the annexes to the Convention on International Civil Aviation (also known as the Chicago Convention) apply.

1. **Absolute Ceiling.** The maximum altitude above mean sea level at which an aircraft can maintain horizontal flight under standard atmospheric conditions.
2. **Accountable Officer.** The UN official exercising overall responsibility and authority for management of air transport and aviation safety.
3. **Acceptance Checklist.** A document used to assist in checking the external appearance of dangerous goods packages and their associated documents to determine that all appropriate requirements have been met.
4. **Aerodrome.** A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.
5. **Aeronautical Information Publication (AIP).** It is a publication issued by or with the authority of a State and containing details of regulations, procedures and other information pertinent to the operation of aircraft in the particular country to which it relates.
6. **Aeronautical Product.** Any aircraft, aircraft engine, propeller, or sub-assembly, appliance, material, part, or component to be installed thereon.
7. **Aeroplane or Airplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces that remain fixed under given conditions of flight.
8. **Aircraft Category.** Classification of aircraft according to specified basic characteristics (e.g., aeroplane/airplane, helicopter, glider, free balloon). Light, Medium and Heavy.
9. **Aircraft (Type Of).** All aircraft of the same basic design including all modifications thereto except those modifications that result in a change in handling or flight characteristics. For example, C-130.
10. **Airframe.** The fuselage, booms, nacelles, cowlings, fairings, airfoil surface (including rotors but excluding propellers and rotating airfoils of an engine), and landing gear of an aircraft and their accessories and controls.
11. **Air Navigation Facility.** Any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the

landing and take-off of aircraft.

12. **Air Operator Certificate (AOC).** A certificate authorizing an operator to carry out specified air transport operations.

13. **AOC Holder.** A civil air transport operator in possession of a valid air operator certificate. "AOC holder" is used as an alternative to "operator" when referring to a civil air transport operator.

14. **Air Traffic Control (ATC).** A service provided for the purpose of expediting and maintaining an orderly flow of traffic by preventing collisions between aircraft and (on the maneuvering area) between aircraft and obstructions.

15. **Air Traffic Control Unit (ATU).** A generic term meaning variously, area control centre, approach control unit or aerodrome control tower, comprising suitably qualified air traffic controllers and communication equipment specialists.

16. **Appliance.** Any instrument, mechanism, equipment, part, apparatus, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, engine, or propeller.

17. **Approved Maintenance Organization (AMO).** An organization approved by a contracting state, in accordance with the requirements of ICAO Annex 6, Part I, Chapter 8 - Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by that state. An AMO may be part of an operator's organization or it may be another organization to which the operator has sub-contracted maintenance tasks.

18. **Approved Maintenance Program.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability program, necessary for the safe operation of those aircraft to which it applies, approved by the state of registry.

19. **Approved Training.** Training conducted under special curricula and supervision approved by a contracting state that, in case of flight crew members, is conducted within an approved training organization.

20. **Authority.** The civil aviation authority of the operator's (AOC holder's) state.

21. **Aviation Task Force.** It is a unit or formation established to work on a single defined task, operation or activity.

22. **Calendar Day.** The period of elapsed time, using Co-ordinated Universal Time or local time that begins at midnight and ends 24 hours later at the next midnight.

23. **CAT X Fire Fighting.** It refers to the International Civil Aviation Organization (International Civil Aviation Organisation - ICAO) requirements for aerodrome Rescue and Fire Fighting Service (RFFS) in Annex 14, Volume 1 - Aerodrome Design and Operations.

24. **Certify as Airworthy.** To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts

thereof.

25. **Certifying Staff.** Those personnel who are authorized by the approved maintenance organization in accordance with a procedure acceptable to the authority / state of registry to certify aircraft or aircraft components for release to service.

26. **Commercial Air Transport Operation.** An aircraft operation involving the transport of passengers, cargo, or mail for remuneration or hire.

27. **Continuing Airworthiness Information.** Any information necessary to ensure that an aircraft or aircraft components can be maintained in a condition such that airworthiness of the aircraft, or serviceability of operational and emergency equipment, as appropriate, is assured.

28. **Contracting States.** All states that are signatories to the Convention on International Civil Aviation (Chicago Convention).

29. **Controlled Flight.** Any flight that is subject to an air traffic control clearance.

30. **Co-Pilot.** A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

31. **Crew Resource Management.** A program designed to improve the safety and efficiency of flight operations by optimizing error management, through the effective use of all available resources, by flight crew.

32. **Critical Engine.** The engine whose failure would most adversely affect the performance or handling qualities of an aircraft.

33. **Critical Phases of Flight.** Those portions of operations involving taxiing, takeoff and landing, and all flight operations below 10,000 feet, except cruise flight.

34. **Dual Instruction Time.** Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft.

35. **Flight Crew Member.** A licensed crew member charged with duties essential to the operations of an aircraft during flight duty period.

36. **Flight Currency.** It is a theoretical and practical knowledge required periodically by a certified/licensed flight operator/aircrew to enable him to perform his mission/task.

37. **Flight Duty Period.** The total time from the moment a flight crew member commences duty, immediately subsequent to a rest period and prior to making a flight or series of flights, to the moment the flight crew member is relieved of all duties having completed such flight or series of flights.

38. **Flight Following.** The recording in real time of departure and arrival messages by operational personnel to ensure that a flight is operating and has arrived at the destination airport.

39. **Flight Monitoring.** In addition to requirements defined for flight following, flight

monitoring includes the:

- a. Operational monitoring of flights by suitably qualified operational control personnel from the point of departure throughout all phases of flight.
- b. Communication of all available and relevant safety information between the operational control personnel on the ground and the flight crew.
- c. Provision of critical assistance to the flight crew in the event of an in-flight emergency or security issue or at the request of the flight crew.

40. **Flight Time (Aeroplanes/Airplanes).** The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight. Flight time as here defined is synonymous with the term “block to block” or “check to check” time in general usage which is measured from the first time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight).

41. **Flight Time (Helicopters).** The total time from the moment a helicopter’s rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

42. **Flight Watch.** In addition to all of the elements defined for flight following and flight monitoring, flight watch includes the active tracking of a flight by suitably qualified operational control personnel throughout all phases of the flight to ensure that it is following its prescribed route, without unplanned deviation, diversion or delay and in order to satisfy state requirements.

43. **Forward Operating Base.** A FOB is any secured forward military position, that is used to support strategic goals and tactical objectives. An FOB may or may not contain an airfield, hospital, machine shop, or other logistical facilities. The base may be used for an extended period of time. FOBs are traditionally supported by Main Operating Bases that are required to provide backup support to them. An FOB also improves reaction time to local areas as opposed to having all troops on the main operating base.

44. **Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reaction of the air on one or more power-driven rotors on a substantially vertical axis.

45. **Helicopter Landing Site (HLS).** It is a designated landing area in which a helicopter can land.

46. **Inadvertent Instrument Meteorological Conditions (IIMC).** It is defined when a situation where deteriorating weather prevents you from flying under visual meteorological conditions when you were planning to fly under VFR. IIMC can also be stated as loss of horizon references and/or an accompanying loss of visual contact with the ground.

47. **Inspection.** The examination of an aircraft or aeronautical product to establish conformity with a standard approved by the appropriate authority. The inspection could be visual or by use of other means.

48. **Instrument Approach Procedure.** A series of predetermined maneuvers by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point

from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as Non-Precision Approach (NPA) Procedure and Approach Procedure with Vertical Guidance (APV).

49. **Instrument Flight Rules (IFR).** IFR are a set of regulations that dictate how aircraft are to be operated when the pilot is unable to navigate using visual references under visual flight rules.

50. **Instrument meteorological conditions (IMC).** IMC is meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions. See: Annex 2 to the Convention on International Civil Aviation: Rules of the Air

51. **Instrument Flight Time.** Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

52. **Instrument Training.** Training received from an authorized instructor under actual or simulated instrument meteorological conditions.

53. **Large Aeroplane/Airplane.** An aeroplane/airplane of a maximum certified take-off mass of over 5,700 kg.

54. **Landing Zone (LZ).** Landing Zone (LZ) is an area where aircraft can land in order to deploy and/or conduct operations.

55. **Main Operating Base.** An area permanently manned, well protected base, used to support permanently deployed forces, and with robust sea and/or air access.

56. **Maintenance.** The performance of tasks to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

57. **Maintenance Control.** The operator's procedure necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time all in a controlled and satisfactory manner.

58. **Maintenance Release.** A release completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and the procedure described in the maintenance organization's procedures manual.

59. **Master Minimum Equipment List (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the state of design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

60. **Minimum Equipment List (MEL).** A list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative (which is) prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

61. **Night.** The hours between the end of evening civil twilight and the beginning of morning civil twilight or such periods between sunset and sunrise, as may be prescribed by the appropriate authority. Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.
62. **Non-Precision Approach (NPA) Procedure.** An instrument approach procedure that utilizes lateral guidance but does not utilize vertical guidance.
63. **Notice for Airmen (NOTAM).** It is a notice filed with an aviation authority to alert aircraft pilots of potential hazards along a flight route or at a location that could affect the safety of the flight.
64. **Operational Control.** The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of aircraft safety and flight regularity and efficiency.
65. **Operator.** A person, organization or enterprise engaged in or offering to engage in an aircraft operation. Under UN standards, the term "AOC holder" is used in place of "operator" to refer to a civil air transport operator.
66. **Precision Approach (PA) Procedure.** An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation. Lateral and vertical guidance refers to the guidance provided by either ground-based navigation, or computer-generated navigation data.
67. **Pilot-in-Command (PIC).** The pilot designated by the operator as being in command and charged with the safe conduct of the flight.
66. **Powerplant.** An engine used or intended to be used for propelling an aircraft. It includes turbo superchargers, and accessories necessary for its functioning, but does not include propellers.
67. **Pre-Flight Inspection.** The inspection carried out before flight to ensure that the aircraft is airworthy and fit for the intended flight.
68. **Rating.** An authorization entered on or associated with a license and forming part thereof, stating special conditions, privileges or limitations pertaining to such license.
69. **Release to Service.** Documentary evidence that all required maintenance work has been completed and the aircraft is airworthy and ready for flight.
70. **Remote Helicopter Landing Site (RHLS).** It is a landing area which does not require to meet full ICAO requirements for an HLS. Each field mission shall develop procedures related to RHLS.
71. **Remotely Piloted Aircraft System (RPAS).** This includes the aircraft itself along with the ground control station, telemetry and communications systems, launch and landing equipment, sensors and other hardware and software used to operate the aircraft.
72. **Repair.** The restoration of an aircraft / aeronautical product to a serviceable condition in conformity with an approved standard.

73. **Rigger.** A person qualified to prepare different types of equipment and cargo to be air dropped.
74. **Small Aeroplane/Airplane.** An aeroplane/airplane of a maximum certified take-off mass of 5,700 kg, or less.
75. **State of Registry.** The state on whose register the aircraft is entered.
76. **State of Operator.** The state in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.
77. **Technical Log.** A document carried on board an aircraft for recording defects and malfunctions discovered during operation and for recording details of all maintenance carried out whilst the aircraft is operating between scheduled visits to the base maintenance facility. It also contains operating information relevant to flight safety, including sectors operated, and maintenance data that the operating crew need to know.
78. **Temporary Operating Base (TOB).** A TOB is any secured military position, that is used to support strategic goals and tactical objectives to be used for a specified period of time. A TOB may or may not contain an airfield, hospital, machine shop, or other logistical facilities.
79. **Transponder (XPDR).** It is a receiver/transmitter which will generate a reply signal upon proper interrogation; the interrogation and reply being on different frequencies.
80. **Very High Frequency (VHF).** Radio frequencies from 30 to 300 MHz in amplitude modulation (AM) known as air band and frequency modulation (FM) known as city band.
81. **Visual flight rules (VFR).** A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going.
82. **Visual meteorological conditions (VMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima. See: Annex 2 to the Convention on International Civil Aviation: Rules of the Air.

Annex I

REFERENCES

The following documents provide more in-depth discussion and guidance on the topics covered in this manual. The dates of publication have been omitted to allow for the publication of updated versions. These UN and other references may be obtained through UN Research Hub, available at: <http://research.un.org/en/peacekeeping-community>

- DPO-DOS United Nations Peacekeeping Operations Principles and Guidelines – The Capstone Doctrine, 2008.01.
- Standard Operating Procedure on Implementation of Amendments on Conduct and Discipline in the Model Memorandum of Understanding Between UN and TCCs, 2011.01.
- Memorandum of Understanding between the United Nations and Troop Contributing Countries.
- DPO-DOS Policy on Authority, Command and Control in UN Peacekeeping Operations, 2019.23.
- LCS/SUPPLY/GT Sourcing of UNOE Weapons and Ammunition in Peacekeeping Operations, September 2002.
- COE Manual, 2017.
- DPO Generic Guidelines for TCCs Deploying Military Units to UN Peacekeeping Missions, March 2008.
- DPO-DOS Policy Directive on Contributing Country Reconnaissance Team Visits, 2005.06.
- Policy Directive on Pre-Deployment Visits, October 2005,03.
- International Air Transport Association - Dangerous Goods Regulations.
- DPO-DOS United Nations Manual on Ammunition Management, 2019.27.
- DPO-DOS Guidelines, Aviation Safety Manual, 31 December 2017.
- DPO-DOS Aviation Risk Management Policy, 2014.02.
- UN Aviation Standards for Peacekeeping and Humanitarian Air Transport Operations, September 2012.
- UN Night Vision Imaging Systems (NVIS) Policy.
- Transport of Dangerous Goods Manual for UN PKO.
- DPO-DOS Aviation Manual, 2018.21.
- United Nations Infantry Battalion Manual 2020.01.
- United Nations Standby Arrangements (UNSAS) in the Service of Peace Tables of Organization and Equipment.
- DOS Environment Strategy for Field Missions 2017-2023 (formerly DFS Environment Strategy, 2017-2023)
- DPKO-DFS Environmental Policy for UN Field Missions, 2009.6)
- Human Rights Due Diligence Policy on United Nations support to non-United Nations security forces (A/67/775-S/2013/110)
- United Nations Policy on Human Rights Screening of United Nations Personnel, 2012
- United Nations Supplier Code of Conduct, 2018
- DOS Policy on Casualty Evacuation in the Field, 2020.7
- United Nations Use of Unmanned Aircraft Systems (UAS) Capabilities Guidelines 2019.05