Aviation emergency response plans: roles and responsibilities

A foundation to handle real emergencies

Unruly passenger

Zero tolerance for unruly behaviaor

The fuel that keep you flying...

Know what keeps our engines running

AVIATION SAFETY magazine

SAFETY IS EVERYONE'S RESPONSIBILITY

UNAMID AVIATION SAFETY UNIT

AFRICAN UNION - UNITED NATIONS
HYBRID OPERATION IN DARFUR (UNAMID)

DFS
Aviation
Safety
Programme

PPE

KNOW Safety

NO pain


Proper Gloves

Safety Shoes


Reflective Vest


Ear Protection

Personal **P**rotective **E**quipment is required and important to **YOU**

Future builds on Safety!

UN GSC
REGIONAL AVIATION SAFETY OFFICE

NO Safety

KNOW pain

United Nations Global Safety Centre

AVIATION SAFETY magazine 2017

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Mission's Leadership Message

Year 2017 was a landmark in commercial aviation—the safest year since the advent of widespread passenger-jet travel. Not a single person died in commercial passenger jet crash anywhere in the world in 2017. Although UNAMID chartered two jet aircraft and other fixed and rotary wing aircraft, the safety standard in UNAMID for overall 2017 was remarkably high.

Aviation Safety Unit is inherent to this mission that is untiringly contributing 24/7 to ensure the safest air operations within the AOR of UNAMID. UNAMID infrastructure in Darfur is far from ideal. Despite this challenge UNAMID has operated on an average 20 aircraft in 2017 without any accident.

As the Head of UNAMID, I have a duty and moral obligation to manage and protect the safety of the Mission's most valuable assets, which is its personnel. The nature of our air operations involves some level of risks to achieve the success. Therefore, Aviation Risk Management is embedded into planning at all levels so that UNAMID aviation activities can be executed in the safest way.

UNAMID Management is highly committed to maintain a positive safety culture and an effective Aviation Safety Management system. More so, UNAMID is ready to respond quickly in case of any unforeseen aviation emergency. For instance, Crisis Management Team (CMC) was activated in the last Aviation Emergency Response Live Exercise held on 28 November 2017 where I also participated as the Head of Crisis Management Team (CMT).

At any time anywhere Safety is everyone's responsibility. We have an obligation to conduct ourselves appropriately and support the air operators in their conduct of safe air operations. Please cooperate with the crew and other safety officials and if you observe any suspicious action or objects, inform these officials.

I call upon all the readers of this journal and indeed all UNAMID staff to do their part for aviation safety. I am sure if we collectively build up a positive safety culture and UNAMID will be able to continue its precious air operations in the future.

Last but not the least, I thank all UNAMID Aviation Safety Staff and concerned for their immense efforts in putting together this journal.

JEREMIAH KINGSLEY MAMABOLO
UNAMID JSR/JCM

The Department of Field Support (DFS), in order to safeguard the lives of peacekeepers and all stakeholders who use Mission aircraft, has instituted an aviation safety program both at the UNHQ level and at the Mission level. UNAMID is no exception. UNHQ's policies and guidelines shape the mission's aviation risk management procedures, aviation safety program and aviation procedures, all aimed to delivering on our mandates at an acceptable level of safety.

With resources reducing year by year, it is even more important to be aware of the entire value chain that benefits aviation safety – from the air operator, the air asset, the management level personnel, the field personnel, the local aviation environment, the weather, and more, and that demands exceptional professionalism that eschews complacency.

As we get leaner, flexibility and advanced planning is required from all of us to stay ahead of the curve. I thank you all for your professionalism and ability to deliver under all sorts of pressure. The mission management will continue to ensure that aviation safety is not compromised as we deliver on our mandates.

Thank you for taking the time to read this journal. As part of our continuous efforts to improve transparency and efficiency of our processes, the journal will henceforth also include a short summary of the aviation safety occurrences in the Mission, which can affect our operations and at times unfortunately inconvenience our staff members.

VICTORIA BROWNING
UNAMID DMS

Editor's Letter

A Dutch aviation consulting firm and an aviation safety group reports show that 2017 was the safest year for commercial travel in aviation history – the worldwide number of fatal crashes involving passenger jets was zero. This data shows that air accidents have been in broad decline for more than a decade, despite constant passenger-volume increases. UNAMID aviation safety data show the same figures, a remarkable reduction in number of aviation accidents and incidents.

But what is the aviation commercial industry doing so well to reduce the number of fatal accidents? Perhaps the key lesson lies in aviation's conception of, and approach to, mistakes. British author Matthew Syed, who studied the air industry for his 2015 book Black Box Thinking, has written that "failure is inevitable in a complex world". The key is to harness these lessons as part of a dynamic process of change." When disasters happen in the airline industry, "openness and learning, rather than blaming, is the instinctive response." The idea is not to repeat avoidable mistakes.

This notion of improving by learning from mistakes and the incorporation of technology and training have steadily reduced the incidence of aviation tragedies over the years. UNHQ's policies and guidelines related to aviation safety are based in international concepts like Safety Management System which integrates those aspects.

2017 was a year in which a particular stress was marked to Safety Assurance in UNAMID. The revision of key areas such as Aviation Emergency Response Plan and Aviation Risk Management was paramount. Safety assurance was also present in our daily aviation operations, not only from planning to execution but also to aircraft maintenance. All these observations were based on lesson learnt from occurrences and hazards reports that the mission had encountered during years of operations.

Failure is inevitable for human beings and having zero accidents forever is a utopia. But reducing the number of accidents close to zero is not. In this issue, you will find some of the activities marked in the mission's Aviation Safety Program that supported the Aviation and MOVCON operations in order to reduce the number of accidents and by extension safer air operations.

OMAR PINA
CHIEF AVIATION SAFETY OFFICER

A Gemini air cargo flight was being loaded when a number of containers got shifted towards the tail of the aircraft upsetting the balance of the aircraft and its nose went into the air.

SAFETY IS EVERYONE'S RESPONSIBILITY

"Safety is a state of individual mind and effective collaboration of individual mind enhance safest air operations"

On the 20th September 2017, one helicopter was observed to have been loaded with baggage beyond the limitations of the baggage storage area, exposing some baggage to unsafe displacement in the event of a mishap. Other items such as eggs were completely exposed and unsecured inside the helicopter cabin as evidenced in the following figure.

While the Mi-8MTV is capable to transport weights of up to 1000kg in addition to 16 passengers, it is severely limited by volume. And so to ensure compliance with volume limitations, an indicative figure of 320kg is expected to be carried when 16 passengers are traveling. This is to ensure a safe and expedient evacuation of the helicopter in the event of a mishap.

Safety in air travel has improved dramatically over the years because of regulations that enforce compliance with operating limitations. The compliance of operating limitations permits a high degree of safety and also maximizes our chances of survival in the event of a mishap.

What goes wrong when aircraft is loaded beyond baggage limitations?

- In case of helicopters, excess bag-

gage may not be secured properly, or completely, obstructing access to emergency exits.

- Unsecured and loose baggage may be violently displaced should the aircraft become uncontrollable, injuring passengers.
- Excess baggage restricts vision through the windows of the helicopter, causing a lack of situational awareness which degrades the chances of undertaking the right actions for evacuation.
- The aircraft may be unbalanced within the centre of gravity limitations, leading to an accident immediately after or during take off.
- In the event the aircraft do not crash after takeoff, some components and structures may be stretched beyond their safe elastic limits, leading to a permanent damage and loss of airworthiness.

James Reasons Swiss cheese model

The model is a metaphor for the way circumstances arise and retreat like the holes in a Swiss Emmentaler cheese. It springs from the understanding that there are at least four types of failure required to allow an accident to happen: failures of organizational influences, supervision, preconditions and specific acts.

A typical illustration of James Reason's model is as follows:

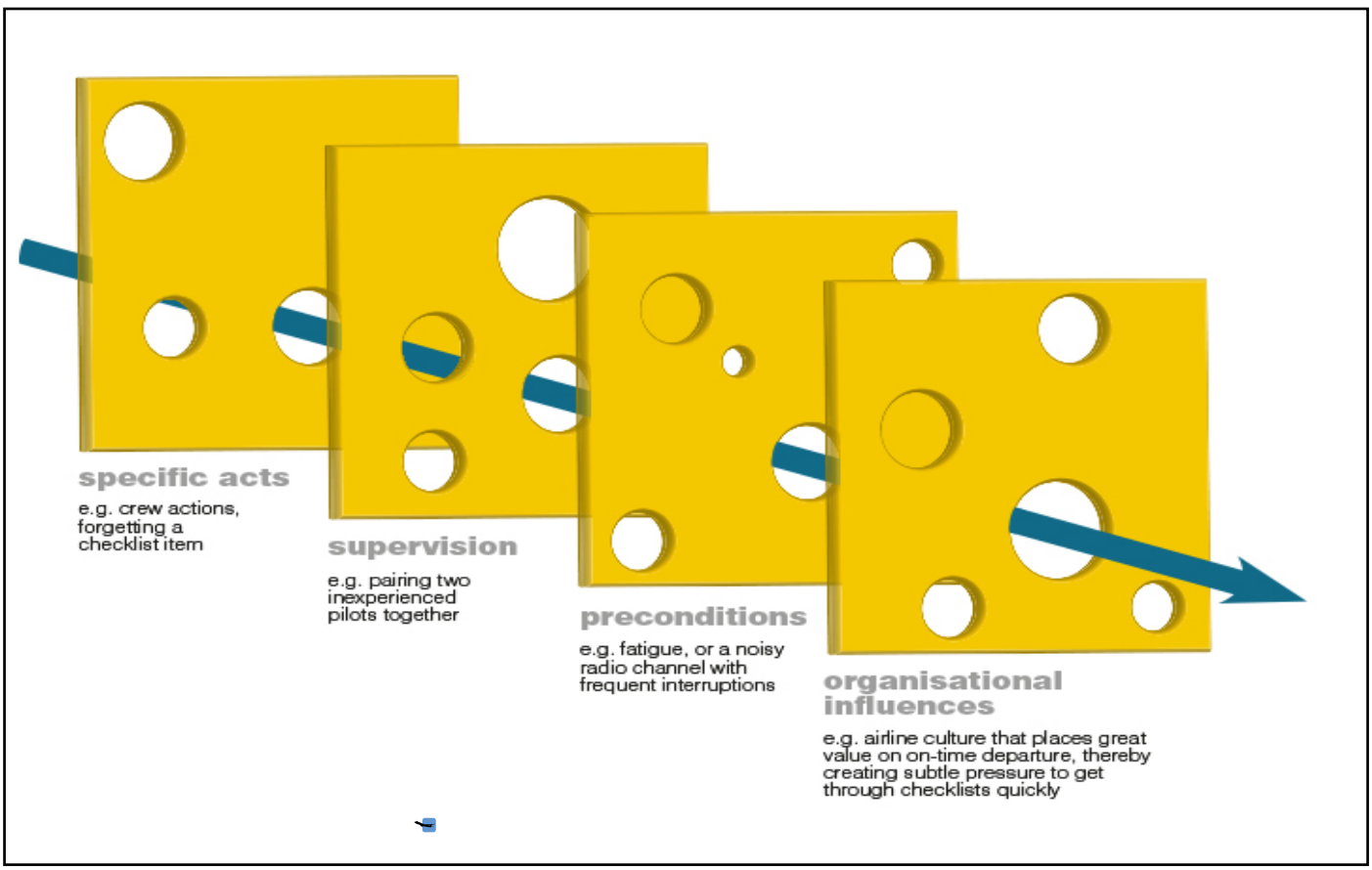
Specific Acts: Aircraft crew accepts excess baggage beyond limitations. Movcon counter staff accepts weight beyond baggage Mi-8 MTV baggage limitation.

Supervision: Counter staff is not knowledgeable of baggage limitation of Mi-8MTV with 16 passengers, and receives 420kg of baggage for transportation instead of 320kg, and no supervisor intervenes because several check-in counters are in operation at the same time.

Preconditions: weighing scales are not calibrated and so baggage weights displayed are not correct. Also baggage weighting, for example, 14.6kg are rounded down as 14 kg in order to make the passenger happy. The cumulative effect of this practice is that more weights go unrecorded. Also, distractions (conversations, phone call, and noise) goes on around the person doing the check-in, introducing errors.

Organizational Factors: No organizational aviation safety program is in place to monitor operations and capture hazards/deficiencies. Lack of interest among the Movcon/aviation service providers to report safety violations or unsafe conditions. The crew of the air operators are unscreened and not briefed about safety requirements in the AOR.

Cheese Model with four levels of failures



What should you do?

Baggage limitation broadcasted by MOVCON is the same for everybody. Let's observe baggage limitations for our own safety, especially on smaller flights.

In UNAMID, smaller flights are flights on helicopters, LET410 and CRJ-200.

Overloaded and unsecured items inside the helicopter

Benefits of Traveling with less baggage

Most people have travelled lighter and can easily attest to the benefits of traveling lightly.

It makes you smarter. You don't have to wait on end at the carousel for your baggage.

You avoid dealing with unsolicited helps who want to carry your baggage for an undisclosed amount.

The aircraft travels lighter and faster, takes off easily, increases normal and emergency performances, and leaves less carbon footprint.

You gain time on your hands—late check-in, early to leave the destination airport.

How do I know what to pack for my flight?

If you want the benefits of flying lightly, and you still do not want to miss out on what to bring along, then we have an advice for you. There are so many sources of useful information on the Internet. Simply type "how do I know what to pack for my flight?" in Google and see the fantastic information you obtain from websites like USAtoday.com and many others.

It is still your responsibility to make sure what you are packing does not pose a risk to you and other passengers.

If you are still in doubt call your Sector MOVCON officer or Aviation Safety Officer. Let us have the safe state of mind for the safest air operation round the year.

CABIN SAFETY APPLICATION FOR PASSENGERS

UNAMID passengers are frequent flier due to weak transport infrastructure in Sudan. Every time we fly, we hear the safety demonstration briefing either from the flight attendant or pre-flight safety briefing video in a commercial airliner. Due to flying frequently sometimes we do not concentrate on the safety demonstration briefing. Also, due to fatigue and unfavourable environment we feel confident that we know what to do in case of an aircraft emergency. But, in reality during the aircraft emergency due to panic, passengers remain in uncertainty about their prompt actions despite of cabin crew's instructions. Cabin crew's main responsibilities are to look after the safety of the passengers and not the serving food and drinks. Hence, it is very important for every UNMAID passengers to clearly listen and understand the safety briefing.

But, due to language barrier and boring safety video we remain casual about this important aspect. Not only may that be the seat back safety card is too clumsy to understand the safety instructions. Nothing to worry as the University of Udine's Human-Computer Interaction (HCI) Lab has the perfect app for you.

The lab has developed Air Safety World, a free app overflowing with cute graphics and quirky jokes that aims to make passenger safety instructions clearer, more fun, and more effectively remembered by passengers. The app turns safety instructions into a series of games. One tests players on oxygen mask instructions, another tests players on how to open an emergency door.

Lab director Professor Luca Chittaro told The Independent, 'research on traditional airline safety briefing media like safety cards and videos has highlighted that they are scarcely effective for two main reasons: lack of passenger's attention and lack of passenger's comprehension.'

The app follows on from an off-aircraft app produced by the Italian university. Prepare for Impact, which was issued last year and took players through disaster scenarios such as water landings, fires, and collisions during take-off.

The app is free and can be downloaded from the internet for both android https://play.google.com/store/apps/details?id=it.uniud.hcilab.airsafetyworld&hl=en and iTunes https://apple.co/2BSOBNZ in the mentioned link.

Cabin Safety App for Android and IPhone

The size of the app is 187 mb and is free, very easy to use and fun oriented for easy learning. If you are fond of playing games in your smart phone then this is the right application for you to remain safe while having fun.

According to the international aviation regulations, in case of any emergency evacuation, cabin crew have 90 seconds for complete evacuation of all the passengers be it an Airbus 380 Jumbo Jet or Mi-8 helicopters. Therefore, if you are properly oriented what to do in case of an emergency evacuation then you are not only saving yourself but also confirming safety of other passengers.

So, why not to download the free cabin safety app on your smart phone today and fly safe.

Meet Your Aircraft

MI-8 AMT/MTV (MI -17)

Various modifications of Russian Mi-8 helicopters play a leading role in peacekeeping operations, thus being important transport assets of the United Nations Organization. These aircraft have excellent performance features, which make them an ultimate choice for humanitarian missions. Such features include high reliability, multifunctional performance, simplicity of operation and maintenance, possibility to utilize these aircraft in a wide range of conditions and temperatures, payload capacity and cost effectiveness.

Mi-8MTV (AMT) was designed on a basis of Mi-8T helicopter, and the difference from Mi-8T lies in enhanced aircraft performance, more powerful engine system, updated avionics and some changes in fuselage structure.

From the very launch of UNAMID Mission, Mi-8MTV (AMT) helicopters have actively participated in peaceful settlement of the War in Darfur providing transportation of passengers and cargo, performing emergency medical evacuation, mobilization of the Mission personnel and search and rescue operations.

Currently 13 Mi-8MTV/AMT helicopters are involved in operations of UNAMID Mission. With the purpose to enhance safety the aircraft were fitted with some additional equipment. Enhanced Ground Proximity Warning System (EGPWS) provides the crew with comprehensive information on the current situation by continuous assessment of the altitude, speed, bank angle, pitch and aircraft attitude relative to terrain and obstacles.

Furthermore, the aircraft are equipped with modern satellite tracking systems which helps in determining the precise position of a helicopter and arrange a rescue operation as promptly as possible in the event of an abnormal situation.

Besides, a system of passengers' baggage securement in a cargo cabin has been developed which enables unhampered escape of passengers from an aircraft in emergency.

At different times UNAMID Mission utilized Mi-8 MTV (AMT) helicopters equipped with searchlights, hoists with enhanced lifting capability of up to 300 kg and FLIR cameras in order to perform night operations.

PERFORMANCE

Crew / passenger capacity: 3/22-26

Maximum flight altitutde: 6000 m

Operational range: 610 km

Ferry range: 1065

Maximum speed: 250 km/h

Cruise speed: 230 km/h

WEIGHT

Maximum take-off weight: 13000 kg

Normal take-off weight: 11000 kg

Payload weight: 4000 kg

Full main fuel tanks capacity: 1977 liters

AVIATION EMERGENCY RESPONSE PLANS: ROLES AND RESPONSIBILITIES

An emergency response plan is not merely limited to those with aviation expertise. The article below attempts to familiarize the layman with aviation incidents, build a strong foundation to handle real situations and increase all-round preparedness among the prime actors.

On 21 August 2016 JSR had given directive to convene an Aviation Emergency Committee (AEC) to study existing Mission standard Operating Procedures on handling accidents, emergency security situations, MEDEVAC and CASEVAC in order to ensure that these documents are complementary and without duplication, and that they clearly allocate tasks and responsibilities to each component with the aim of being efficient in action and responsive to crisis events facing the mission. An AEC ensures the proper functioning of the emergency response procedures as directed by JSR and consists of MCOS, FC, DMS, CSA, CMO, CAVO, C/MOVCON and CASO.

An overhaul of the existing AERP was initiated, collaborated, discussed, debated, and finally anchored on the existing Mission Crisis Management SOP, drawing support from the Medical Mass Casualty Plan, and Aviation

Search and Rescue SOP. The plan was finally discussed by members of the AEC, corrected and re-circulated for additional comments and comments from different stakeholders were incorporated in the AERP.

AERP Is designed to provide an effective and coordinated response in case of any occurrence involving any UNAMID aircraft flying to, within or out of mission area. UNAMID Crisis Management SOP, UNAMID Mass Casualty Plan and UNAMID Search and Rescue SOP are critical components of the plan.

Sudan emergency services are the legitimate first responders in any aviation emergency and their emergency plans will be activated. Also, the Sudan Civil Aviation Authority (SCAA) provides Search and Rescue (SAR) services in the country. As stipulated in Sudan Aeronautical Information Publication (AIP) section GEN 1.7 and GEN 3.6.1, such service is organized whenever possible in accordance with Standard and Recommended Practices of ICAO Annex 12 by the Civil Aviation Authority in collaboration with Sudan Air Force. However, SAR services are almost non-existent or inadequately resourced in Darfur where prevailing security situation also dampers such effort. As such, UNAMID AERP is framed to bridge this gap. UNAMID Aviation SOP on SAR will therefore prevail to a large extent in case of SAR of UNAMID air assets in Darfur region. The purpose of the AERP is to:

Aircraft accidents and incidents are rare events. However, UNAMID is prepared to cope with aviation emergencies, especially in the first hour (Golden Hour) following a major safety event. UNAMID's Aviation Emergency Response Plan (AERP) provides the framework for a systematic approach to manage the Mission's affairs prior to and in the aftermath of an unplanned event such as an aircraft accident. This vital document assigns key players certain roles and responsibilities; it is essential that each of the relevant actors know what to do in such an eventuality. However, it is not merely the key players who need to be aware of their designated tasks. In all aviation safety matters, an all-agencies approach is regarded as the preferred protocol. Therefore, it is essential for all personnel deployed in the Mission to possess a basic familiarity with the AERP. Preservation of human life, prevention of injury and protection of UN property are the main goals that the AERP sets out to achieve.

Information on a safety incident involving an aircraft may come from different sources—a pilot may declare an emergency in flight and inform Air Traffic Control (ATC), a signal from a crashed aircraft Emergency Locator Transmitter (ELT) may be picked up by COSPAS-SARSAT satellite system and forwarded to the nearest ATS/SAR agency, the Duty Officer of UNAMID Flight Following (FF) ATC Tower or another ATC unit may recognize an overdue or missing UNAMID aircraft having no radio contact within the expected time frame, any person observing an aircraft accident or incident may call emergency services, the disappearance, non-mobility or alert signal from the Sky Track tracking system on an aircraft may be observed by FFDO, or, finally, an emergency transponder signal could be observed by radar (7700).

In the event of any such occurrence, the Chief Aviation Section (CAVO) or in his absence Officer in Charge Aviation Section immediately activate the ERP following the notification table of the AERP. After the activation of AERP the CAVO, CMO, Chief MOVCON and CASO shall join the Crisis management Team (CMT) in the Crisis Management Centre (CMC). Mission Crisis Management Team comprises mission's high level decision makers, provide the respective strategic level decision, leadership and direction to the operational level working groups. CMC is the nerve centre for UNAMID aviation emergency response activities. All information will flow to the centre and all decisions that cannot be taken on spot by respective response teams will be referred to the CMT by any means (Mobile, Dect, Radio, Thuraya, Email, etc.). The outflow of information will also take place from the CMC. Relevant information will be passed from CMT to Communications and Public Information Section (CPIS) for dissemination to staff members, local and international media as necessary.

Upon activation the AERP, "UNAMID Aerial Go Team" established in sectors

for aerial search and rescue will proceed with the necessary equipment to the assembly point (UNAMID Departure Terminal) and further to board SAR aircraft and to the scene of the occurrence for achieving the Golden Hour. The UNAMID Go Team is responsible for executing all activities at the accident site aimed at mitigating the loss of life, property damage and preserving crash evidence to be used in the investigation. Composition of Aerial Go Team in each sector is as follows:

- Sector Air Ops Officer (leader of the Team, custodian of Crash & Rescue Kit)
- Medical Officers (Doctors and paramedics)
- Security Officers (Cordon arrangement and coordination)
- Aviation Safety Officer (Evidence preservation)
- MOVCON Officer (Payload Accountability).
- Military Quick Reaction Protection Force (Multipurpose)
- Other personnel as required.

To complement Aerial Go Team, Military Ground Search and Rescue party will be deployed from the nearest team site or Sector HQ under the direction of the CMT through the Sector Military HQ. The ground party will undertake their responsibility in accordance with the guidance provided in the AERP (Annex 'F', Military Ground Search & Rescue Party procedures) and will respond as dictated by the situation.

Communication plays a significant role. Following any aircraft accident/ incident, the biggest requirement is the reliable and fast dissemination of accurate information to involved parties.

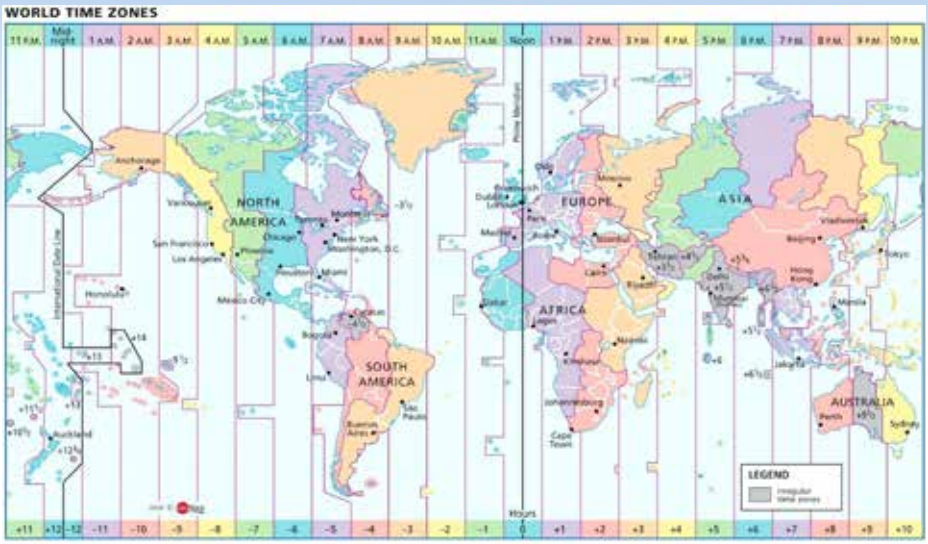
The Aviation Safety Unit (ASU) already conducted Table-Top exercises in SN and SS and Communication and Live Exercises on AERP in El Fasher to aware all key personnel in their Area of Responsibility (AOR). In the near future the unit is also planning to arrange exercises on AERP in other sectors. The concept behind this exercise is to practice the actions taken related to aircraft accidents or incidents. ASU has developed scenarios for on-base and off-base incidents involving various aircraft types used by the Mission's Aviation Unit. Using these scenarios ASU will be able to focus on practical issues in which the key players receive training and participate in simulations that approximate real-life crisis as well as give them an idea of the nature of their roles and responsibilities. One of the most important issues when dealing with a post-crash incident is to understand what others around you are dealing with.

The Table-Top, Communication and Live Exercise on AERP is designed not only to involve each individual, but also to increase awareness of each other's roles and responsibilities. The AERP Live Exercise for 2017 has already been held for Sector North. ASU expects that such

exercise will build a strong foundation to handle real situations and increase all-round preparedness among the prime actors.

SOURCE:
UNAMID AVIATION ERP 2017;
UNAMID AVIATION SAFETY PROGRAMME 2017

TIME CHANGE IN SUDAN: WHAT IT MEANS FOR UNAMID AVIATION OPERATIONS



The effect of the recent time change is Sudan has had some consequences. For the average person it would seem that more time is provided for sleeping in the morning, and more daylight is provided in the evening after the work period is over. For airlines operating in Sudan, most of them have changed their departure and arrival time by one hour to conserve the amount of hours of operations that connects with their other flights. It was equally expected that UNAMID would also adjust its Khartoum operations from 08:00hrs to 07:00hrs to conserve the hours of operations in daylight time. However, that has not been the case.

For terminal, navigational congestion reasons, UNAMID had been exploiting the possibility of shifting its departure time in Khartoum even before the Sudan time zone change surfaced. A shift to early departure has the benefit of increasing our daylight operation hours, albeit with some challenges.

UNAMID aviation operations have mostly been carried out in daylight hours. In fact, all airports in Darfur operate in daylight hours only. On exceptional cases, the airport authorities grant special dispensation to UNAMID to operate into the night, once a life-threatening situation arises or when government functionaries are part of a specific UNAMID night flight.

The cost implication of having air assets that can only be used in daylight hours is huge. The reason is that UN charters aircraft for its operations and needs more aircraft to undertake its activities within a very narrow window (daylight hours). Should the window of operation be 24 hours, the UN could use far less fleet of aircraft for the same level of activities because some activities could be scheduled in the night if not done in the day by the few aircraft fleet. As an example, a typical Boeing 737 in an airline flies about 10-11 hours a day whereas UNAMID Boeing 737 flies only 3 hours a day, typically.

Let's look at how the daylight hours have reduced for UNAMID operations after the change of Sudan time from GMT+3 to GMT+2. Refer to the table below for an analysis of the challenge.

From the table above, it can easily be seen that the amount of daylight hours left for UNAMID operations after UNO-760 (Boeing 737-400 aircraft) arrives in El Fasher has been reduced from 09:37 hours to 08:37 hours. As a result, flights of UNAMID UNO-760 will be landing in the night in Khartoum. Also, any departure delay in El Fasher will see the Boeing departing at night, and UNAMID staff members who work at the airport leaving their stations either at night or very close to night hours.

	31/10/2017 in El Fasher (GMT+3)	01/11/2017 in El Fasher (GMT +2)
Sunrise Time	07:13	06:12
Sunset time	18:52	17:51
UNO-760 Departure Time from Khartoum	08:00	08:00 (No change)
Amount of Daylight hours prior to UNO-760 Departure	0:47	1:47
Arrival Time in El Fasher	09:15	09:15 (No change)
Amount of Daylight hours left for operations	09:37	8:37

AIRSIDE SAFETY — PROCEDURES FOR STOPPING HAZARDS

The main mode of travelling in UNAMID is by air. For various reason, different units of UNAMID and external companies are operating around the ramp area for their various purposes. If these operations are not done as per procedure, there might be serious hazards which may lead to some incident/accident. So, ramp operation or airside safety is one of the important issue where we want to focus on through this issue of Aviation Safety Bulletin.

Airports are divided into landside and airside. Landside includes parking lots, public transport railway stations and access roads. Airside includes all areas accessible to aircraft, including runways, taxiways and apron/ramps. Passage between landside and airside is tightly controlled at all airports. To access airside, one must go through Security, and if applicable, Passport Control too. This applies to everyone, including staff.

Units Operating Around Ramp Area

A good number of agencies are working in the Ramp areas of UNAMID. The agencies are

- MOVCON;
- ATU;
- Air Ops;
- Security Personnel;
- Ground Handling agency;
- Crew;
- Passengers;
- Local ground handling operators.

Hazards Related to Ramp Operation

Hazards around ramp area can be of various type. Common hazards we face in UNAMID are as following

- Vehicle;
- Pedestrians;
- Weather;
- Dangerous goods;
- FOD;
- Crew;
- Passengers.

Ramp Operation Training

These kind of incidents are to be avoided as soon as possible to reduce the probability of any accident/ incident. A ramp operation training is needed for all personnel working around ramp area. This training is needed for the safety and security of the Air Assets, People and equipment around the ramp area. The key issues of the training may contain:

- Introduction to the airside environment and airport ramp services
- Aircraft characteristics and turnaround plan
- Cleaning, catering and other services
- Ground service equipment
- Standard operating procedures
- Airside safety
- Ramp security awareness
- Future developments in the sector of ramp services

Ramp or Air Side Operation Training is mandatory for those operating around aircraft and ramp area.

Recommendation

Only three recommendation from Aviation Safety Unit;

- All personnel working around ramp area are to be trained properly including the drivers of VIP vehicle,
- All are to work as a team,
- Report anything you feel hazardous.

SAFETY IN AND AROUND HLS — WHY SO IMPORTANT?

Due to difficult terrain and general insecurity, the preferred and safest means of travel by UNAMID passengers to team site is by air. There are 19 Helicopter Landing Sites (HLS) in five sectors of Darfur where 17 helicopters of UNAMID fly regularly. Thus, safety in and around of these HLSs plays an important role for the safety of UNAMID passengers.

ICAO Annex 14 Volume II explains Standards and Recommended Practices covering all aspects of heliport planning, design and operations and provides the following definitions:`

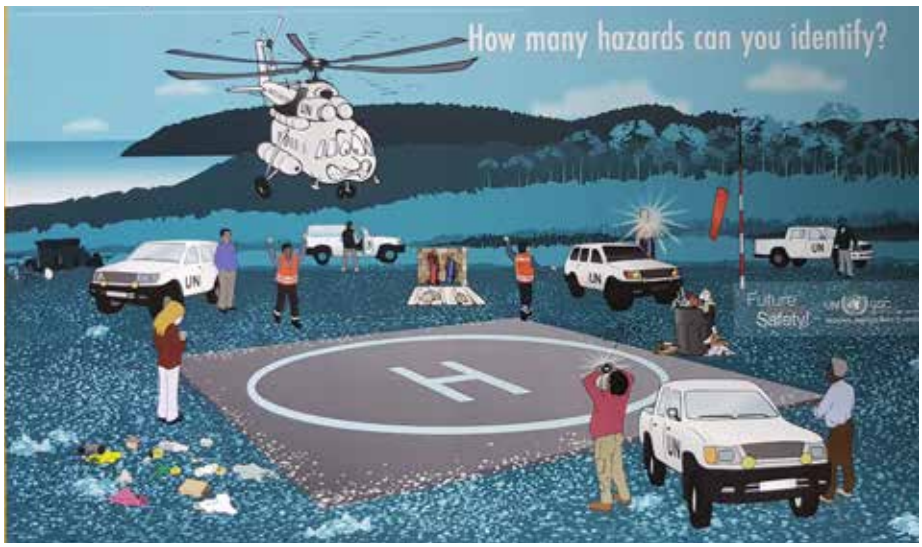
Final approach and take-off area (FATO) - is a defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced.

Touchdown and lift-off area (TLOF). An area on which a helicopter may touch down or lift off.

Safety area. A defined area on a HLS surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damage to helicopters accidentally diverging from the FATO.

UNAMID helicopters take off and land in most of the HLS's vertically which produces strong downwash. As such no Foreign Object Debris (FOD) should be in and around HLS to avoid damage to the rotating blades which in turn may result to an accident. UNAMID HLSs regular operations is for day only and should ideally have:

- Adequate markings and a clear boundary for identifying from air;
- TLOF, FATO and Safety Area free of FOD;
- Windsock is visible to pilot and working;
- Required means to determine wind speed and direction, temperature and pressure installed and working;
- Aviation MovCon Liaison Officer (AMLO) is trained, knows his duties and has two way communications;
- HLS is fenced or secured from incursions ;
- Firefighting equipment is in adequate condition.



Now, that we've gone through the article, can you tell what is wrong in this picture? For answers check page - 17

Risks in and around UNAMID HLSs

Aviation has been declared the safest mode of transportation in 2017. But we have not achieved it so easily. It has the talent and hard work of millions of aviation personnel around the globe. But that does not make us completely risk-free. Every day we're dealing with risks and we're mitigating those risks to make our working environment as safe as possible. Likewise, risks in and around HLS can be of various types. Common risks faced in UNAMID HLSs are as follows:

- Inadequate markings
- Infrequent FOD drill
- Improper location of windsock
- Aviation MovCon Liaison Officer (AMLO) not trained
- Inadequate firefighting equipment
- Presence of stray animals and birds
- Unserviceable metal detectors
- Unavailability of weighing scales

Now, let's go through some Dos and Don'ts in Aviation just to make ourselves a bit more knowledgeable than we were before we read this article:

Do's

- Always be on time
- Listen to passenger brief
- Turn off your mobile phone or switch it to Flight Mode.
- Wear seatbelts at all times.
- Keep your pockets closed and loose items secured.
- Declare any dangerous goods.
- You may read the magazine from your seat pocket.

Don'ts

- Never be late, especially if you're in stand-by!
- Don't listen to music when the Flight Attendant is briefing.
- Never try to connect your mobile phone while on-board.
- Never stand up from your seat or move in the aircraft.
- Never wear loose articles like hat/cap which may fly off.
- Never carry more luggage than you're authorized to.
- Do not smoke inside the aircraft; not even E-cigarette.

OCCURRENCE REPORT

"Planned and systematic actions are necessary to afford adequate confidence that aviation related activities can achieve acceptable and tolerable level of safety."

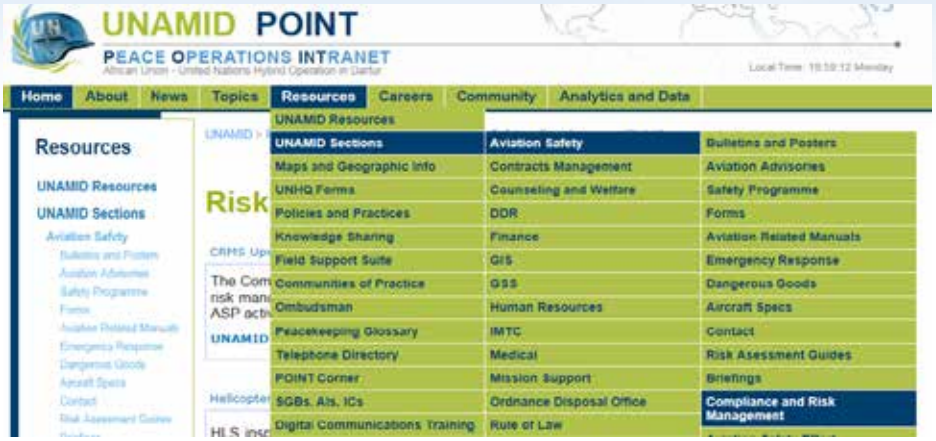
In UN Aviation Operations, there are three reports that are common and are worth shedding light on. These reports are Hazard Reports, After Mission Reports, and Occurrence Reports. Hazard reports are reports that anyone can raise to draw Aviation Safety Office's attention to an unusual situation about aviation operations. Recently, a staff officer raised a Hazard report about dogs close to the runway when he was onboard a Boeing 737 outbound to Khartoum. This is good example of a Hazard report.

After Mission Report are reports raised by the crew member after the conduct of their flight, touching on operational issues with no safety concerns.

Occurrence Reports are only raised by the crew of an aircraft to report safety related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person. The reports are intended to provide information on the circumstances of any accident or incident involving DFS-contracted aircraft.

The purpose of occurrence reporting is to improve aviation safety by ensuring that relevant safety information relating to civil aviation is reported, collected, stored, protected, exchanged, disseminated and analyzed. By analyzing past occurrence reports, and their roots, we very easily learn and produce a safer aviation operations. It is not to attribute blame or liability.

All serious occurrences are shared with Sudan Civil Aviation Authorities which is the State of our Operations. The air carriers also share occurrence reports with their National Civil Aviation Authorities as the State of Registry. The UN analyzes all occurrence reports raised by the air carriers and provides tailored recommendations when necessary. Since April 2013, UNAMID has been using European Coordination Centre for Accident and Incident Reporting System (ECCAIRS) 5 to record all occurrences. ECCAIRS offers a versatile database for Occurrence collection and exchange of aviation safety information.



Practically all accidents have been preceded by similar, but non-fatal, incidents that followed a just slightly different scenario. If, we understand these precursors we can be in a position to prevent a similar accident from happening. Establishing the occurrence sequence is important to ascertain what happened first, which in turn may determine the chronological actions by operators and supervisors that might have contributed to the occurrence. Thus, establishing an occurrence sequence makes discovering the occurrence factors easier. In this context, only actions, lack of actions, unsafe acts or conditions, failures or happenings that are critical to the occurrence happening are of interest.

In UNAMID every occurrence is immediately reported to Aviation Safety Office for recording, verification, analysis, and collaboration with the air carrier in its handling prior to resumption of further operations. In 2017, total 80 Occurrence reports and 43 Hazard Reports were received and investigations were completed. Year-to-year analysis and trends are shared with the air carriers, aviation-related staff members, and UNHQ as they become due. Monthly and quarterly details of all Occurrences and Hazard reports and trend analysis are posted on the UNAMID Intranet. From the homepage, click on Resources, UNAMID Sections, Aviation Safety, and finally click on Compliance and Risk Management. A Print screen is posted below as an aid.

UNRULY PASSENGER

Recently one UNAMID passenger was offloaded from a UNAMID aircraft as he was found intoxicated. Of recent, UN airport security have been calling for more alcohol breathalyzer test of UNAMID passengers as some passengers have been found behaving as if intoxicated.

Are you allowed to fly in UN aircraft while intoxicated? The answer is very simply "NO".

Annex 17 to the ICAO Chicago Convention defines a disruptive passenger as: "A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at an airport or on board the aircraft."

An unruly passenger is someone who, by action or stated intent, jeopardizes or might jeopardize the safety of aircraft, persons or property therein or the accepted level of good order and discipline on board. Example include:

- Illegal consumption of narcotics
- Refusal to comply with safety instructions
- Verbal confrontation with crew members or other passengers
- Physical confrontation with crew members or other passengers
- Uncooperative passenger (examples include interfering with the crew's duties, refusing to follow instructions to board or leave the aircraft)
- Making threats of any kind towards the crew, other passengers or the aircraft
- Sexual abuse / harassment
- Not complying with regulations
- Other type of riotous behaviour (examples include: screaming, annoying behaviour, kicking and banging heads on seat backs or tray tables)

Causes of Unruly Behaviour

There are numerous factors and triggers that can lead a typical person towards unruly behaviour.

These include, but are not limited to:

- Intoxication
- Drug use (both prescribed and non prescribed)
- Mental heath issues
- Anxiety (including a fear of flying)
- Fatigue
- Frustration as a result of personal issues or from travel related dissatisfactions

Pre-boarding issues
- Long queues
- The security and screening process
- Departure delays (and the lack of timely information)
- Missed connections

Post-boarding issues
- Crowded conditions
- Lack of personal space
- Unserviceable equipment (seat won't recline, in-flight entertainment system inoperative etc.)
- Annoying individuals in one's vicinity (loud or boisterous passengers, seat kickers, etc.)
- Intoxication

ICAO has defined a four tier threat level hierarchy. The ICAO level of threat specifics are as follows:
- Level 1 — Disruptive behaviour (verbal);
- Level 2 — Physically abusive behaviour;
- Level 3 — Life-threatening behaviour (or display of a weapon);
- Level 4 — Attempted or actual breach of the flight crew compartment.

Prevention

Identification and mitigation measures for the prevention of, or the control of, an unruly passenger incident must occur at all stages of the journey, beginning when the passenger first enters the terminal at the point of origin. To do this, UNAMID employees must be vigilant when interacting with the travelling public.

- **MOVCON Check-In Staff:** MOVCON staff should be encouraged to identify, and to report, any UNAMID passenger whose behaviour would suggest that they might be unsuitable for carriage. As an example, if a person appears to be in an intoxicated state or is acting strangely, their condition and actions should be reported to the UN Security before they are processed for the flight. Where a potential problem is identified, an assessment should be made and a decision made to grant or to

ZERO TOLERANCE

THREAT LEVEL	SOUNDED WHEN	ACTION TAKEN
Verbal abuse	Crew members give clear warnings	A red warning card is also given to unruly passengers
Physical abuse like touch, slap and manhandling	Captain gets involved, makes announcement	Passenger is clearly warned to behave. Red card is given Passenger is handed over to security on arrival
Life-threatening behaviour	In consultation with the captain, restraining techniques applied	Passenger is handed over to security on arrival
Break in cockpit	Hijack kind of situation	Restraining techniques applied by crew
Restraining is initiated at or after level 3 at the discretion of pilot in command		

Source: IndiGo

deny carriage.

- **UNDSS Staff:** UNDSS Personnel at the security screening points should look out for unusual passenger behaviour. If UNDSS personnel doubts the state of the passenger, a calm request to undertake alcohol breath test of the passenger would be necessary.
- **Prior to Departure -** The final chance to leave a potential problem on the ground occurs just before the aircraft doors are closed. Observation of the boarding passengers by the Cabin Crew is an important tool for identifying potentially problematic behaviour. Cabin Crew should note passengers who are extremely nervous, intoxicated, loud or belligerent or who otherwise appear suspicious. The first step in intervention would be for a member of the Cabin Crew to attempt speaking with the passenger. Often, this contact is all that is required to defuse the behaviour and to gain the passenger's cooperation. If it does not, then the situation should be handled as appropriate to the level of unruly behaviour. Unless the situation can be resolved to the satisfaction of the crew, if a passenger displays disruptive behaviour whilst the aircraft is still on the ground, they, and their baggage, should be removed from the aircraft.
- **In Flight -** Once the aircraft is in flight, the Flight Crew is no longer able to leave the flight deck to assess or assist in the resolution of a passenger problem. Responsibility for determining the threat level of a specific situation and dealing with it appropriately now lies in the hands of the Cabin Crew. Cabin Crew training, in regard to unruly passengers, has become significantly more comprehensive in areas such as regulations, early detection, intervention and restraint.
- **Post Incident -** The Pilot-in-Command should report whenever a serious passenger disruption occurs during flight, according to company policy. If deemed necessary, the operator might request to be met on arrival by local law enforcement authorities and a representative of the airline if they consider that criminal prosecution is desirable. The crew should record contact information of all passengers who witnessed the incident, as their testimony might be required in later legal proceedings. The perpetrator should be held by the authorities until an airline representative properly debriefs the crew. It should then be decided if charges are to be brought against the perpetrator.

Despite the complexity of the issue, there are practical steps that UNAMID can take to prevent and manage unruly passenger incidents. Cabin crew are in a unique position when it comes to dealing with the unruly passenger problems as they are not able to escape the situation or to call for the authorities for assistance on board during flight. The emphasis on unruly behaviour of passengers should be one of prevention and with strong emphasis in doing so from the arrival at the airport through to the passenger cabin of the aircraft in order to best mitigate incidents, and when possible, to keep the unruly behaviour on the ground.

A collective and unified approach by the UNAMID personnel result in significant improvements to the problem of unruly passengers. It is incumbent on all persons within UNAMID to realize that this is a very real and serious safety issue, and to closely monitor and report any event that may result in the unacceptable behaviour of passengers while in flight.

Offenses to avoid:

Assaulting, intimidating, threatening a crew member or passenger

Smoking anywhere on board, including in the lavatories

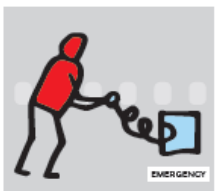
Refusing to follow instructions from the crew

Tampering with the smoke detectors

Intoxicated or disorderly conduct or consuming alcohol which was not provided by crew members

Using a portable electronic device when not permitted to do so

Engaging or displaying in any indecent or lewd behavior



Removing or damaging safety or emergency equipment, the aircraft or property on boar

DANGEROUS GOODS: SHOULD WE CARE ABOUT THEM?

On 14 April 2011, there was a scheduled UN Flight from El Fasher – Um Barro. After 2 hours and 10 minutes from onboarding the cargo, the helicopter arrived at Um Barro. During the offloading of the luggage the flight attendant noticed that some liquid was leaking from a passenger's carton box. An inspection revealed that two car batteries were the source of the leakage. With the help of the team site, the electrolyte was washed from the floor of the helicopter and fortunately there was no visible damage from the occurrence. The passenger had not declared that he was carrying a dangerous good, and the airport security in El Fasher had also been breached.

ValuJet Flight 592 was a regularly scheduled flight from Miami International Airport to Hartsfield-Jackson Atlanta International Airport. On May 11, 1996, the ValuJet Airlines McDonnell-Douglas DC-9 operating the route crashed into the Everglades about 11 minutes after taking off from Miami as a result of a fire in the cargo compartment caused by stored cargo. All 110 people on board perished. During investigation, it was determined that, just before takeoff, over 100 expired chemical oxygen generators were placed in the cargo compartment in five boxes marked COMAT (company material) by ValuJet›s maintenance contractor, SabreTech, in contravention of Federal Aviation Administration (FAA) regulations forbidding the transport of hazardous materials in aircraft cargo holds.

The above examples prompt us to be careful with what we take onboard an aircraft, especially since the main mode of traveling in UNAMID is by air. For various reasons, we carry different things with us when we travel either for personal or official purpose. Your awareness about dangerous goods might be the last barrier of defense for stopping an improper transportation of dangerous good.

What are Dangerous Goods?

Dangerous goods are items or substances that when transported by aircraft are a risk to health, safety, property or the environment. These include obvious things, such as explosives, radioactive materials, flammable liquids, dangerous or volatile chemicals, strong acids, compressed gases, poisons etc. Everyday items that can cause problems include toiletries, aerosols, tools, and lithium batteries.

Why are they a Risk?

They are a risk because their composition and characteristics are likely to dangerously change when exposed to changing ambient pressure, temperature and/or vibrations. In an aircraft, flying high above the earth and subject to severe atmospheric pressure of up to 75kPa, extremes of temperature of minus 40°C to plus 55°C and vibration of 1G to 8G of acceleration, some items can behave unpredictably, and dangerously. With that in mind, those items identified as dangerous good should be packaged accordaing to a recommended packing instruction so as to mitigate the risk they pose.

Are some items prohibited?

Based on the risk they pose, some items are completely prohibited for transport in the cabin. These are:

- Explosives - fireworks, flares, toy gun caps.
- Compressed gases - filled or

partly filled aqualung cylinders (including camping gas cylinders).
- Flammable liquids and solid - lighter fuel, non-safety matches, paints, thinner, fire fighters.
- Oxidizers - some bleaching powders.
- Organic peroxides - some types of solid hydrogen peroxide.
- Poisons - arsenic, cyanide, and weed-killer.
- Irritating materials - Tear gas devices.
- Infectious substances - live virus materials.
- Radioactive materials - medical or research samples which contain radioactive sources.
- Corrosives - acids, alkalis, wet cell type car batteries, caustic soda.
- Magnetized materials - instruments containing magnets.

Are some items more dangerous than others?

Classification of dangerous goods is broken down into nine classes according to the type of danger materials or items present. These are as follows:
- Class 1 - Explosives
- Class 2 – Gases
- Class 3 - Flammable Liquids
- Class 4 - Flammable Solids
- Class 5 - Oxidizers and Organic Peroxides
- Class 6 - Toxic Materials and Infectious Substances
- Class 7 - Radioactive Materials
- Class 8 - Corrosive Materials
- Class 9 - Miscellaneous Dangerous Goods

Where can you look for help?

Have a basic idea of dangerous goods. Common household substances such as oven and drain cleaners, bleach, glues, aerosols and pesticides, petrol and paint can be classified dangerous goods and cannot be taken onboard an aircraft. You can also check to see whether there is any of these hazardous symbols on the container. Most importantly, make sure the luggage is scanned by an aviation security person who is trained to identify dangerous goods when carried.

It is your responsibility to make sure what you're packing doesn't pose a risk to you and other passengers. Civil Aviation Safety Authority Australia developed dangerous goods app that will help you figure out what you can and can't pack, and how to pack items safely.

You can access the app from the locations below by searching "Can I pack that? – DG App" for both android and IPhone.

WHY IT SOMETIMES SEEMS LIKE "MANAGEMENT DOESN'T CARE ABOUT SAFETY"?

We recently received an interesting email from the safety manager of an airline which operates hundreds of flights daily. It says "I am quitting this job along with several pilots because we all are frustrated with the blame culture here. The owner continually threatens that he will fire us if we keep taking the plane out of service for maintenance again and again, and this comes at the cost of safety.

We are not surprised because the owner is a farmer operating an airline".

Most of us believe it is "common sense" to know that "lack of maintenance of an aircraft, means compromising safety" and everyone will see it the same way. But, just because something is logical does not mean we will all agree on it. This is where we can see that emotions are part of decision making. The safety manager may be basing his actions on care for his customers or fear of consequences while the owner could be focused more on the urgency of profits or believe he "knows better" than the professionals, which could be arrogance.

The safety manager in the above story expects the airline to be run by someone with an aviation background like their own and cites the owner's farming background as the cause of his problem. What he misses is the fact that many aviation companies are not owned by aviation professionals. In addition to farmers, people in leadership roles in the aviation industry may include politicians, bankers, military veterans, entrepreneurs, brewers, etc. While the safety managers see safety as a value, it is natural that the stakeholders may not see it the same way because they are unique observers.

While this may sound like an isolated story, frequently we hear statements from employees saying, "management doesn't care about safety". Basically, they are talking

about the "emotion of care" and its absence. The question here is whether the owner in the above story is aware of his or her "lack of care" and the percentage of risk he or she owns. Even if he or she has some awareness, they may be blind to parts of it because of possible emotions such as fear of short term financial loss, lack of courage, denial, naïveté or greed. It is the safety manager's responsibility to identify risks and opportunities and make them clear to the decision makers to enable prudent decision making. But if the decision makers don't see it the way the safety manager sees it, the safety manager could help the leader see it differently. Although we experience more than one emotion at a time, we generally act from the emotion that is strongest. What is possible here is to precisely identify the emotions of each individual and make them a part of every decision to generate the desired action. This methodology is called safety coaching, it is a skill that can be learned and is different from safety training, consulting or advising.

However, coaching requires permission from the coachee and if the decision maker holding authority does not give permission to the coach, no safety improvement can be expected until the decision maker generates a high degree of self-awareness. One of the common reasons why Safety Management Systems (SMS) fail is the lack of top management support. Safety coaching can be a powerful addition to "Safety Promotions", the fourth pillar of your SMS.

COURTESY: DAN NEWBY
AUTHOR & COACH, STUDYEMOTIONS.COM, SAFETYRELATIONS.COM, BARCELONA, SPAIN

"IF YOU SEE SOMETHING, SAY SOMETHING.."

"Unauthorized vehicle driving to apron area around the parked aircraft posing hazard that is likely to cause collision due to the nature of Air Operation."

Again… "Onboard the helicopter, luggage and loose items are not secured properly by the crew, posing hazard as the loose items could hit the passenger in case of any emergency."

or how about this?

"Passengers carrying luggage more than authorized weight limitation - likely to affect the safety of the flight."

Now take a pause and think for a while…. are these hazards?

How significant is the risk? Do you need to report it ???

These are few HAZARDS that were reported by the aircrew and UNAMID personnel in different situations. Why are they reporting those incidents? Why is it so important to report hazard? What may go wrong if you don't report a hazard? You don't have to be a genius to answer these. Your intuition will lead you the right answer.

What is a HAZARD?

A hazard is anything with the potential to cause harm.

Examples of Hazard:

- Animals or birds on the runway; objects on the apron.
- Unguided or uncontrolled passengers around apron.
- Driving onto the apron by untrained personnel.
- Non-manifested luggage or non-screened hand carry luggage.
- Objects blocking passengers' emergency exit aisle in the cabin.
- Flight Attendant missing safety point while briefing passengers.

and many more around you……

Hazard Identification Sources

- Safety Reporting which includes safety occurrence reporting through mandatory and voluntary reporting schemes.
- Internal investigation of safety occurrences.
- Safety occurrence trend analysis.
- Information provided by personnel, from operational perspective and training.
- Analyzed data from automated data collecting tools (e.g. flight data analysis (FDA) in the airline industry).
- Results from safety surveys and operational oversight safety audits carried out internally (by the operator/service provider) and by States.
- Monitoring of "day-to-day" normal operations and environment.
- Official State investigation results of accidents and serious incidents and.
- Information-exchange practices between operators/service providers.

Scope of Hazards in Aviation

The scope of hazards existing in aviation operation environment is very wide. That is why hazard identification is a complex process as it considers extensive range of possible sources of failure. Depending on the nature and size of the organization, its operational scope and environment, there are different factors to consider during hazard identification. The following factors listed are examples of common hazard sources in aviation:

- Design factors, including equipment and task design;
- Procedures and operating practices;
- Communications, including the medium, terminology and language;
- Personnel factors as policies for recruitment, training and remuneration;
- Organizational factors, such as the compatibility of production and safety goals, the allocation of resources, operating pressures and the corporate safety culture;
- Work environment factors, such as ambient noise and vibration, temperature, lighting and the availability of protective equipment and clothing;
- Regulatory oversight factors, including enforceability of regulations; the certification of equipment, personnel and procedures; and the adequacy of surveillance audits; and
- Defenses, including such factors as the provision of adequate detection and warning systems, the error tolerance of equipment and the extent to which the equipment is hardened against failures.

How can you report?

1. **Hazard Report Form:** Kindly send a Hazard Report to UNAMID Aviation Safety Unit. The Hazard Report form is available in UNAMID Point page. UNAMID Point Page address is : http:// point.un.org/UNAMID/SitePages/aviaForms.aspx After filling up the Form send it to unamid-aviation-safety@un.org
2. **E-mail:** Send an email to unamid-aviation-safety@un.org, describing the hazard you identified.
3. **Phone Call:** You can also make a phone call to Aviation safety Unit and describe the hazard you identified. Phone Numbers are listed on the left of this page.

Aviation Safety Unit Contact List

unamid-aviation-safety@un.org

Mr. Omar Piña
Chief Aviation Safety Unit
email: pina@un.org, Dect: 192-6670

Mr. Danny Kaye
Regional Aviation Safety Officer, SS,
email: kaye@un.org,
Dect: 192-7194, 196-4551

Mr. Muhammed kamrul Huda
Regional Aviation Safety Officer, SN
email: kamrulhuda@un.org,
Dect: 192-6123, 0922410245

Sqn Ldr Abu Md Wazahat
Aviation Safety Officer, HQ
email: unamid-hq-so-aviationsafety
Dect: 192-8656, 0990068305

Flt Lt A K M Sawkat Ullah Sameo
Aviation Safety Officer, SN
Email: unamid-sn-soaviationsafety
Dect: 192 -7841, 0994494716

Maj Eslam Hafez
Aviation Safety Officer, SN
E-mail: unamid-sn-soaviationsafety2
Dect: 192-6255 , 0990995175

Mr. Ehab Khalil
Aviation Safety Officer, KRT
email: Khalile@un.org
Dect : 196 – 8277, 0900905293

Mr. Mohammad Abaker Nouba
Office Assistant, HQ
email: nouba@un.org
Dect : 192-6539, 0912401543

To report any aviation safety concern to us, send an email to:

unamid-aviation-safety@un.org

UNAMID AVIATION SAFETY UNIT

////////////// Hazard Report Data Sheet //////////////

Safety Officer use ONLY

HAZARD REPORT
HR

State file number

State reporting
Sudan

Reporting organisation
International Organisations
Other

Date entered

Occurrence class
Not determined

Occurrence category

Report Information

Issued By

State/area of occurrence
Sudan

Name of Person Reporting (OPTIONAL)

Date of Observation - dd/mm/yy

Location of HAZARD

Time of Observation - hh:mm

HAZARD Narrative

Description of the HAZARD

Reserved for the Administration
DO NOT WRITE BELOW THIS LINE

Tracking Number

Office

Received

Notes/Comments

Signature

Send this form to the Chief Aviation Safety Officer or Designated Staff.

JET A-1, THE FUEL THAT KEEPS YOU FLYING...

Performance requirements for protective coating systems used in aviation fuel storage tanks fitted with floating suction arm and piping

The main type of fuel used for both civil and military aircraft is Jet A-1. It is essentially the same as kerosene which is widely used all over the world for domestic heating and cooking because it can be handled safely. This is a low volatility fuel which is more difficult to ignite (i.e. requires a more powerful ignition source) than aviation gasoline (AVGAS). The use of AVGAS is becoming confined to light aircraft with piston engine.

Some may ever wondered just what a Jet A-1 fuel is.? Is it similar to standard Jet A?

Well, here is a layman's summary of the various commercial jet fuels:

Jet A narrow cut kerosene; standard commercial jet fuel in the U.S. which usually has no additives and have a freeze point of minus 40ºC.

JetA-1 like Jet-A, but has a lower freezing point of minus 47ºC or below. Used outside the U.S., and is the fuel of choice on long haul flights where the fuel temperature drops close to the freeze point. Usually is doped with static dissipater.

Jet-B wide cut kerosene, with "gasoline type" components present. Used widely in Canada, with static dissipater and has a very low flash point.

Jet A-1 is made to the same specification all over the world, and stored in tanks of the same design. From crude oil well side to the refinery, transportation to aircrafts, extreme care have taken to preserve the quality of Jet-1. Every litre of jet fuel delivered to aircraft passes through a series of filtration components in aviation fuel handling systems.

UNAMID Fuel Storage - Holding area for airport fuel

The cleanliness of jet fuel is affected by the presence of particulate matter and dispersed water, which can be introduced at any stage in the distribution system, and may have a variety of effects on ground handling operations and ultimately those on board aircraft.

Key to maintaining fuel quality is the performance of filtration components

All UNAMID's Jet fuel fuelling vehicles (refueller) are fitted with the filtration equipment, meeting the appropriate and latest edition specification of: Filter monitors- EI 1583 and Filter water separators- EI 1581. They are equipped with filter water separators and a system to detect free water in the sump where sample of fuel to test for a daily quality control checks.

It is also recommend that all operators continue to diligently conduct daily quality control test including water removal procedures. We follow the QC program and make sure to do daily wither there is refueling or no refueling.

Change Is a Good Thing!

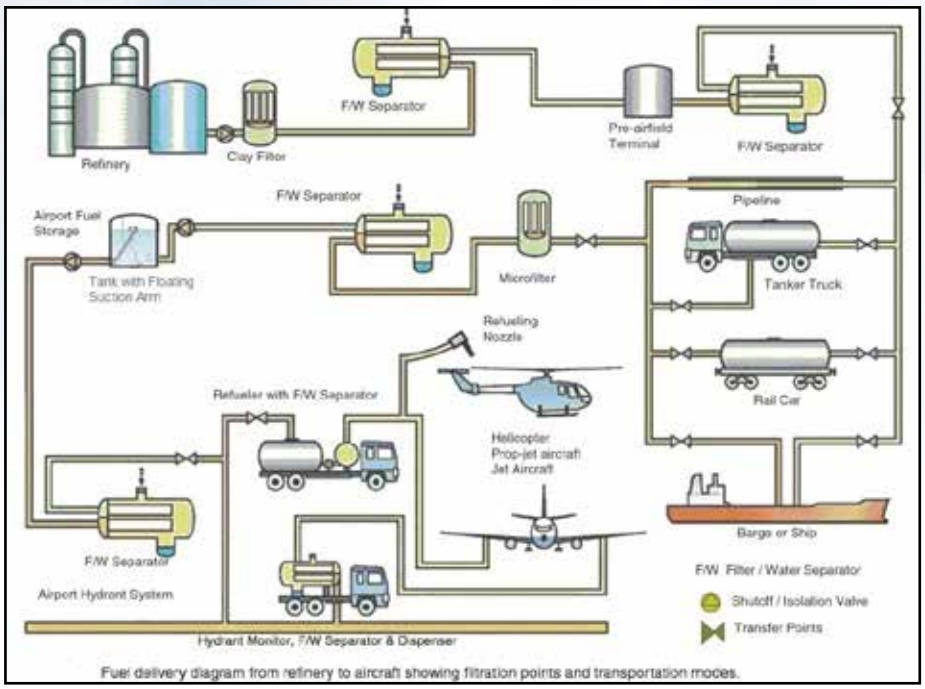
It's always useful to inspect new elements before installing in the filter vessel. Although the shipping carton may show no wear-and-tear, elements can be damaged during shipping. Inspecting new elements could result in preventable downtime.

Refuellers shall not be operated unless they are in proper repair, have no leaks, and are free of accumulated grease, oil, and other combustibles. Proper and careful operation of equipment will maximize safety and efficiency of the fueling operation.

Proper Fueling Procedures

Each fueling to an aircraft will have their own fueling operating procedures. Follow the specific fueling procedures, safety is always the priority.

The following are required safety



The typical distribution diagram for the delivery of clean/ dry aviation fuel

procedures for fueling operation.

- When parking the fuel truck, park it so that it may evacuate the area quickly in an emergency. Never park under or beside the Airport Terminal or under the aircraft wing.
- Emergency brake must be set before leaving the vehicle.
- Chock the wheels after parking the fuel truck.
- Before dispensing fuel, check adequate required fire protection coverage. Fire extinguishers are placed upwind and warning signed are installed.
- Attach the grounding wire to the aircraft to be bonded to refueller and earthed to eliminate static spark. This will ensure that the aircraft and fuel source are electrically neutral respect to each other.

- Use fuel handle when pulling the hose, try to prevent the hose from dragging on the ground. Refuelling hose-ends must be fitted with suitable covers when not in use.
- Never block the deadman control in the open position.
- A deadman control is the device that will stop the flow of fuel when released by the operator in emergency situation.
- All vehicle other than those performing service operation are not permitted within 15 meters of aircraft during fueling. APU must be kept at least 3 meter away from fueling point and fuel equipment.
- Fuelling operation should be suspended when there is lightening discharges within 8 km from airport and onset sandstorm- Haboob. Fuel bonding wire must be disconnected from aircraft.
- Upon completion of fueling operation, properly stow all hoses and materials used during fueling.
- Before and after fueling, make sure to check your truck, aircraft, and the surrounding area for any spills (fuel, oil, hydraulics, etc.)

Flight Safety

this not only has to be looked after in the air, it has to be maintained everywhere from flight crews to air traffic control, to fuel and ground service crews, our job, our equipment, our lives depend on it.

COURTESY: **KYAW SOE**
FUEL UNIT

Remember- in any fueling operation, bonding must be done before fueling begin.

DFS
Aviation
Safety
Programme

Helicopters Engine Running Operations (HERO)

Is NOT a routine task

It must be included in the flight schedule or tasking order

You have to receive a briefing before boarding

Wait to be escorted to the aircraft

Be a Safety HERO...

FOLLOW the instructions!

Future builds on Safety!

UN GSC

Do not approach when engines are starting up or shutting down

Keep your belongings secure and below your waist

If you're uncomfortable, sit down where you are, do not run or panic

Any Time Anywhere
Safety is Everyone's Responsibility
2018

January

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

March

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

UNAMID AVIATION SAFETY UNIT

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