**Namibian Civil Aviation Authority**

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MAY
2023

# Safety MATTERS


Providing the Namibian aviation industry and users with vital information on the latest aviation safety statistics and reports for the continuous improvement of safety systems:

Share Knowledge = Improve Safety

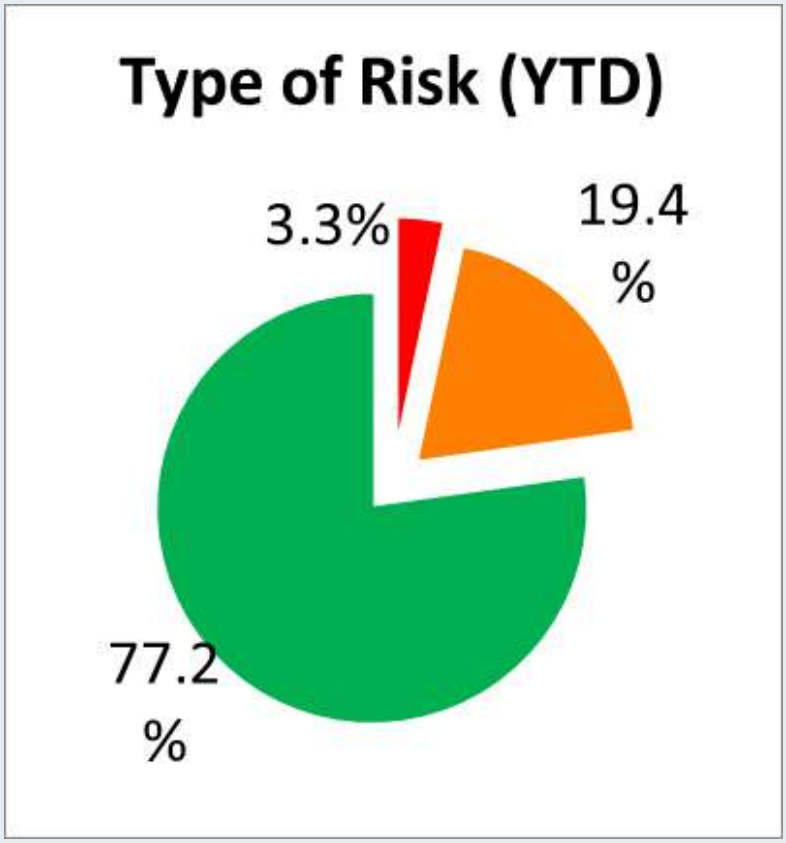
This monthly publication will keep industry, NCAA, license holders, and the general public updated in terms of what has occurred in safety monthly within the industry. All reports are de-identified and no attempt should be made to identify the reporter in this or any other avenue unless specific authorisation is given.

# Contents



*The Safety Data Collection and Processing System (SDCPS) is the tool that drives the State Safety Programme. The SDCPS collates information from sources such as reports, audit findings, observations, investigations, and many other means, which are reviewed in depth and extracted into meaningful graphs and tables for trend analysis. This data is presented in the next three pages.*

# Safety Statistics



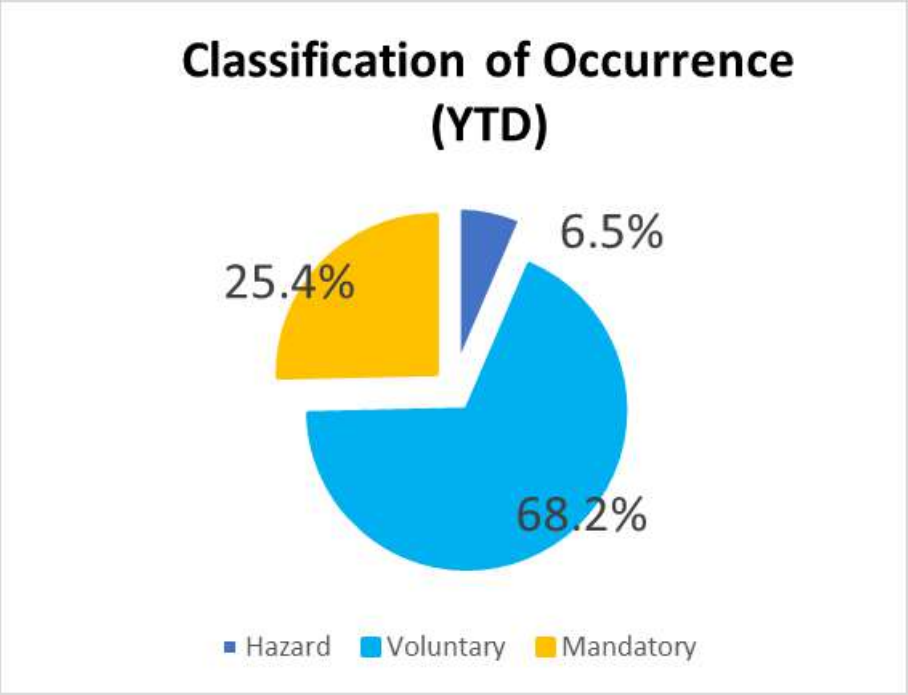

## May 2023

In May there were 36 safety reports, with eight medium risk events, one high risk event, and the remaining twenty seven were low risk. There was one accident in May, for which all occupants were uninjured, however the aircraft was substantially damaged. This is described further in the occurrences section.

The year-to-date figures for risks show approximately 77% low risk, 19% medium risk, and only 3% high risk. A continued positive trend.

For more information about classifications of risk see the definitions in Safety Bulletin 1-22.

The graphs, included in this document, show year to date figures unless specified.




In May NCAA recorded a pleasing 29 voluntary reports and two hazard reports. The remaining 5 were mandatory reports, including the one accident. This brings the total year to date remaining at 75% non-mandatory reports. The voluntary incident rate remains well above target at 6.9 per 1000 movements.

The total 12 month rolling accident rate is reduced slightly to 0.247 per 1000 movements, with a monthly average of 0.208 per 1000 movements. Further discussion on LOC-I will be conducted internally and externally with respect to accident rates.

# REPORTING CULTURE

An effective safety management system needs an effective reporting culture. An effective reporting culture is built on trust and awareness. Participants in a Safety Management System must be aware of the need to report, aware of identifying and calling attention to hazards, and they need to trust the system and not be afraid to report at all times. A just culture is essential for a reporting culture. Awareness is essential for a reporting culture. Keep employees ever vigilant by continued promotion of reporting and fair practices.


Whether mandatory or voluntary, help NCAA to help you by reporting quickly and effectively. Email incidents@ncaa.na or use the following link: Voluntary Reporting Link

## Safety Performance Indicators

# SPIs

For the second month running there were no alerts! Maintenance and technical was again well below target, along with bird strikes, which was below the ICAO recommended level of 1 per 1000. A loss of control in flight (LOC-I) and a runway incursion precursor event were above target and will be monitored. In terms of LOC-I a number of hazard reports along with the LOC-I event itself cited windshear as a significant hazard. Pilots are thus warned about the change of season windshear. Regulatory non-compliances continue to be monitored as is streamlining of enforcement processes, however there were no confirmed recurrence in May.

| | Airprox/LOS A | CFIT | Rwy Excurs. | Wildlife | LOCI | Rwy Incurs. | Maint & Tech |
|---|---|---|---|---|---|---|---|
| Average | 0.213 | 0.038 | 0.104 | 0.975 | 0.122 | 0.104 | 2.362 |
| JAN '23 | 0.000 | 0.000 | 0.269 | 1.346 | 0.000 | 0.000 | 3.769 |
| FEB '23 | 0.000 | 0.000 | 0.274 | 0.823 | 0.549 | 0.549 | 1.646 |
| MAR '23 | 0.233 | 0.000 | 0.000 | 1.398 | 0.000 | 0.000 | 3.030 |
| APR '23 | 0.232 | 0.000 | 0.000 | 0.696 | 0.000 | 0.000 | 2.089 |
| MAY '23 | 0.000 | 0.000 | 0.000 | 0.623 | 0.208 | 0.208 | 1.247 |
| JUN '22 | 0.000 | 0.000 | 0.000 | 2.350 | 0.261 | 0.261 | 2.089 |
| JUL '22 | 0.235 | 0.000 | 0.000 | 1.877 | 0.000 | 0.000 | 2.112 |
| AUG '22 | 0.656 | 0.000 | 0.000 | 0.219 | 0.219 | 0.000 | 2.185 |
| SEP '22 | 0.499 | 0.000 | 0.250 | 0.250 | 0.000 | 0.000 | 1.747 |
| OCT '22 | 0.453 | 0.453 | 0.000 | 0.679 | 0.226 | 0.226 | 2.489 |
| NOV '22 | 0.000 | 0.000 | 0.456 | 0.684 | 0.000 | 0.000 | 3.191 |
| DEC '22 | 0.250 | 0.000 | 0.000 | 0.750 | 0.000 | 0.000 | 2.750 |
| Target 2023 | 0.276 | 0.152 | 0.123 | 1.795 | 0.110 | 0.138 | 1.958 |
| Avg 2022 | 0.315 | 0.192 | 0.137 | 1.106 | 0.094 | 0.145 | 2.198 |
| SD 2022 | 0.279 | 0.208 | 0.172 | 0.599 | 0.141 | 0.237 | 0.719 |
| Alert 3 | 0.593 | 0.399 | 0.310 | 1.705 | 0.236 | 0.382 | 2.917 |
| Alert 2 | 0.872 | 0.607 | 0.482 | 2.305 | 0.377 | 0.619 | 3.636 |
| Alert 1 | 1.151 | 0.815 | 0.654 | 2.904 | 0.518 | 0.856 | 4.354 |


## Safety Thought for the Month

"We do not rise to the level of our expectations, we fall to the level of our training!" - Archilochus. Make your training count!

*Stay Safe!*

# Reporting


NCAA is proud to announce an aviation safety social media competition for schools, as follows:

1. Submit an aviation safety social media graphic or short video. This competition is open only to school age children. Submissions shall include name, age, grade, and school.

If you have any questions about this competition please ask us at spq@ncaa.na.

NCAA HAZARD BULLETIN

# *Take Care* ON RUNWAYS

## Look-out and Listen-out

Runway safety is everyone's responsibility. We should all be vigilant when approaching a runway. **Listen out** to other traffic and vehicles. **Look out** for other traffic, vehicles, and wildlife. **Always make sure you have a clearance.**

WWW.NCAA.COM.NA
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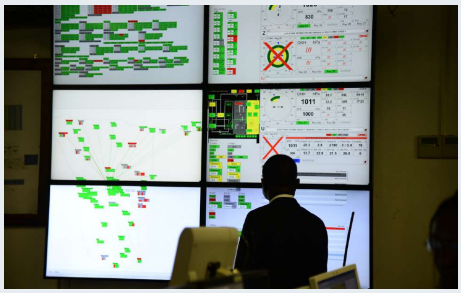
NCAA

**Runway incursions are a very real danger. Make sure you stay ahead of the risk by vigilant lookout, listen out, and take care with all clearances!**

# Meet the Team - ANSSO



About the Air Navigation Services Safety Oversight Team

The ANSSO team is responsible for certification and oversight of the NCAA Air Navigation Services Provider (AIM, ATS, A-MET, SAR, and CNS), along with any private air navigation services providers and towers.

The team is responsible for all airspace approvals including civil airspace user approvals (CAUA), permanent, and temporary airspace approvals. They are responsible for approving instrument flight procedure design (PANS) and approve publications of aeronautical maps, charts, and information. They are the primary co-ordination department for approvals of aviation events. They are responsible for management of the National Airspace Committee (NAirC).


Under the leadership of Ms. Sarafina Maxwanu, Senior Manager, the ANSSO team work tirelessly to keep our air navigation and meteorology services effective and safe, including review of safety events related to air navigation services. If you have any questions about air navigation services safety oversight, reach out to the ANSSO team on ansso@ncaa.na, the designated inspector will respond.

*NCAA aims to include one safety oversight section each month so you can get to know our inspectors and the eight different safety/security oversight sections' roles and responsibilities. These sections comprise, AGA, AIR, ANSSO, AvSec, CRR, OPS, PEL, and SPQ.*

# SAFETY OCCURRENCES

MAY 2023

## TECHNICAL FAULTS (MANDATORY, LOW RISK, AIR)

There were only seven technical events reported in May, as follows:

| No. | Fault | Type |
|---|---|---|
| 2 | Engine fault - unspecified | piston |
| 3 | Electrical failures (2x Alternator, 1x Battery) | piston |
| 1 | Pressurisation system failure | turbine |
| 1 | Gear fault | piston |

*Note that nearly all unscheduled failures require a incident report. This need not be a lengthy dissertation, that is, it shouldn't take you too much time, only a brief summary of the most likely or determined cause of the failure. This is important for trending and/or for preventative maintenance. Please see the April 2022 article on service difficulty reports (SDRs) and mandatory occurrence reports (MORs).*

## WILDLIFE STRIKES (VOLUNTARY, MEDIUM RISK, AGA)

There were four wildlife events reported in May.

| Wildlife | Events and near misses | | |
|---|---|---|---|
| **No.** | **AD** | **Phase** | **Details** |
| 1 | FYWH | Takeoff | Bird - Unknown |
| 1 | FYWH | Landing | Bird - Unknown |
| 1 | FYKN | Descent | Bird - Unknown |
| 1 | FYNG | Climb | Bird - Unknown |

None of the events had reported any damage to the aircraft.

*Note that bird strikes, while the damage is normally negligible, are frequent occurrences, so fall into the medium risk category. Wildlife management programmes are continually worked on by our licensed aerodromes.*

# SAFETY OCCURRENCES

MAY 2023

## LOSS OF CONTROL DUE WIND GUST (MANDATORY, HIGH RISK, OPS)

A Cessna 182 was executing a crosswind landing when a sudden gust lifted the aircraft up and pushed it across a fence where it impacted with a tree resulting in substantial damage. Fortunately there were no injuries.

There were no regulatory anomalies on the pilot's training and licensing or the aircraft's airworthy status.

*These details are compiled from the preliminary report released by DAAII.*

## RUNWAY INCURSION (MANDATORY, MEDIUM RISK, ANSSO/OPS)

An aircraft was asked to vacate and hold short of the taxiway however they remained on the runway side of the holding point while another aircraft was cleared to land.

*While this is only a precursor events, it is important to note how easy it is for a runway incursion to occur and remember that we must always be vigilant, lookout and listen-out!*

# SAFETY OCCURRENCES

MAY 2023

## CHILDREN ON TAXIWAY (MANDATORY, MEDIUM RISK, OPS/AGA/AVSEC)

ATS noticed persons on taxiway without reflector jackets, supervision, or clearance to be there. An airport vehicle was dispatched to remove the persons and it was discovered that they were children of one of the service providers'staff.

*Airport personnel with airside clearance are reminded of the strict importance of following airside protocols, no persons, especially children, should be allowed to enter the airside area unsupervised.*

## GO AROUNDS AND DIVERSIONS (VOLUNTARY, LOW RISK, OPS)

The following table details go arounds and diversions during May:

| No. | Details | Intended |
|---|---|---|
| 5 | Diversions due to weather | FYHN, FYWBx2, FYLZx2 |
| 3 | Diversions due to technical faults | Farm Progress, FYMO, FAUP |
| 2 | Diversions due to operations | FYWE |

# SAFETY OCCURRENCES

MAY 2023

## ATS FACILITIES (MANDATORY, LOW RISK, ANSSO)

The following six ATS and MET failures occurred in May:

| No. | Fault | Area |
|---|---|---|
| 3 | Failure of telephone lines and radar | FYWB |
| 1 | Failure of telephone lines | FYOA |
| 1 | Partial radar failure | FYWF |
| 1 | Upper wind information was lost from the radar display effecting accuracy of of ETAs | FYWF |

# SAFETY OCCURRENCES

MAY 2023

## TAXIWAY LANDING (MANDATORY, LOW RISK, OPS)

A non-type certified aircraft lost situational awareness following a hard landing and thereafter landed on the taxiway over another aircraft at the holding point. The same pilot later diverted due to a suspected engine fault, but departed again prior to discussion with maintenance.

*A follow up is in progress with SACAA as the pilot returned to South Africa.*

## FALSE GLIDESLOPE (VOLUNTARY, LOW RISK, OPS)

A scheduled flight picked up a false glideslope around 5nm prior to the localizer intercept.

*It is important to know your distances, that is, where to expect the localizer intercept and where to expect the glideslope intercept, when intercepting the ILS.*

## INSUFFICENT CREW (VOLUNTARY, LOW RISK, OPS)

Due to delays in MHAISS processes one operator reported extreme staff shortages resulting in possible fatigue and unnecessary pressure to fly.

*Staff shortages, while still within flight and duty limits, can cause excessive pressure on pilots who know there is no standby to fly when fatigued or miss certificate expiries for example. While NCAA attempts to assist addressing this issue, pilots are reminded that fatigue is insidious and careful self-monitoring is required during periods of low staffing.*

# SAFETY OCCURRENCES

MAY 2023

## ALLEGED LOW FLYING (MANDATORY, MEDIUM RISK, OPS)

An aircraft was reported flying low in the vicinity of Rossmund residential estate.

*On investigation it was concluded that the aircraft flew along the border of the estate and not over, at an altitude of 500ft AGL.*

*Pilots are reminded to ensure strict adherence to NAMCAR 91.06.33 Minimum Heights, and that failure to do so can incur a hefty fine to the pilot and the operator. Repeat occurrence can result in suspension or revocation of license privileges.*

## TURBULENCE / WINDSHEAR (VOLUNTARY, LOW RISK, OPS)

Three reports of sever turbulence / windshear were received.

*Pilots are warned of the strong winds and turbulence, particularly around the change of seasons, take care on landing, go around if needed, and consider a higher altitude for the cruise.*

# SAFETY OCCURRENCES

MAY 2023

## COMBINED FREQUENCY (HAZARD, LOW RISK, ANSSO)

A flight experienced significant delays in handover from approach control due to the controller being occupied on another frequency, where area and approach were operating as a combined position.

*Combining frequencies without a proper risk assessment has been cited in accident causation and thus ANSSO has been tasked to investigate procedures in place and address any safety risk.*

# SAFETY FEEDBACK

MAY 2023

## FLYING WITH EXPIRED CERTIFICATES (MANDATORY, LOW RISK, OPS)

Two pilots were booked for Safety and Emergency Procedures Training (SEPT) but the school never sent the links for completion, and subsequently the pilots flew with expired certificates. The chief pilot who normally monitors these events was out of the office on unexpected leave.

As a result, a red-tag operations briefing was issued notifying all pilots of the importance of checking their own expiry dates and the pilots concerned were given a briefing about the importance of checking expiry dates.

*It is commendable that the operator took it upon themselves to report this regulatory breach and they have taken measures to prevent recurrence. The matter was considered closed by NCAA. All pilots are reminded that you are the last line of defence in checking for non-compliances such as expiry of certificates or licenses.*

## TECHNICAL FAULTS (MANDATORY, LOW RISK, AIR)

One electrical fault (alternator failure) reported was determined to be a faulty field wire, and corrected.

Another electrical failure was traced to a faulty battery. It is noted in this case that the battery was flat on arrival. Care should be taken to do an operational check on the battery if it is flat when a technician is available.

A pressurisation fault was traced to a faulty squat switch. It is noted that the fault occurred twice but was not checked or reported the first time since the crew managed to get the system working again, demonstrating the importance of reporting!

# SAFETY FEEDBACK

MAY 2023

## ATS VSAT LINES (MANDATORY, LOW RISK, PEL/OPS)

Last month there were multiple reports of VSAT line failure, that is the telephone hot-lines used to connect our ATS with other stations for estimates and traffic co-ordination.

Thanks to the vigilance of reporters, our CNS team were able to contract the responsible maintenance provider, ATNS, who attended to the issue. The fault has not reoccurred this month.

## MET SERVICES (MANDATORY, LOW RISK, ANSSO)

After multiple reports of unavailable meteorological services, NCAA has drafted a letter to the Minister of Works and Transport to escalate the matter.

Follow up will be provided once it is received.

# SAFETY ARTICLE:

## TIPS FOR EFFECTIVE READBACK-HEARBACK

Readback and hearback are an essential part of efficient and safe flight operations. Without correct readback aircraft can deter from assigned clearances, altitudes, turn directions, potentially causing a loss of separation, or even worse a mid air collision. Controller hearback, that is confirmation the readback was received correctly, is also critical as it is the last line of defence in ensuring a clearance is fully understood. Acknowledgement should only be given when understanding and a full, correct readback is assured.

Some tips for ensuring correct readback and hearback include:

- Always use standard phraseology and don't include unnecessary jargon
- Always ensure to give/receive a full readback/hear-back of the required information - don't take shortcuts!
- Always write down clearances
- Always use proper strip marking
- When working in a two-crew environment - ensure that both are listening to clearances and confirm with each other after receipt

A full readback is essential in the following situations:

- Route clearance
- Holding instructions
- Any route and holding point specified in a taxi clearance
- Any clearances, conditional clearances or instructions must be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with
- Approach clearances
- Altimeter settings
- SSR codes
- Level instructions/restriction.
- Runway in use
- Heading and Speed instructions
- Clearances and instructions to enter, land on, take off from, hold short of, cross or backtrack on any runway

# SAFETY ARTICLE:

## TIPS FOR EFFECTIVE READBACK-HEARBACK

The use of "Roger", "Willco", or "Copied" should NEVER be used in place of a readback. Nor should a controller use these terms for a transmission requiring further instruction, eg a response of cannot comply. Generally, avoid using these terms.

Errors often include but are not limited to:

- transposing numbers to what was expected
- reversing numbers
- reading back left or right incorrectly
- replacing a heading with a flight level or vice versa etc.
- guessing when a clearance is inaudible
- failure to query an incorrect clearance

NEVER Assume! If you didn't copy ask again! If a readback was inaudible, ask again! Only a complete clearance and a complete clearance readback is an acceptable form of communication in the preceding circumstances.

With vigilant active listening, standard phraseology, and strict adherence to procedures we can all help make the skies safer when it comes to readback/hear-back errors.


**Prepared by :**
SPQ/ANSP

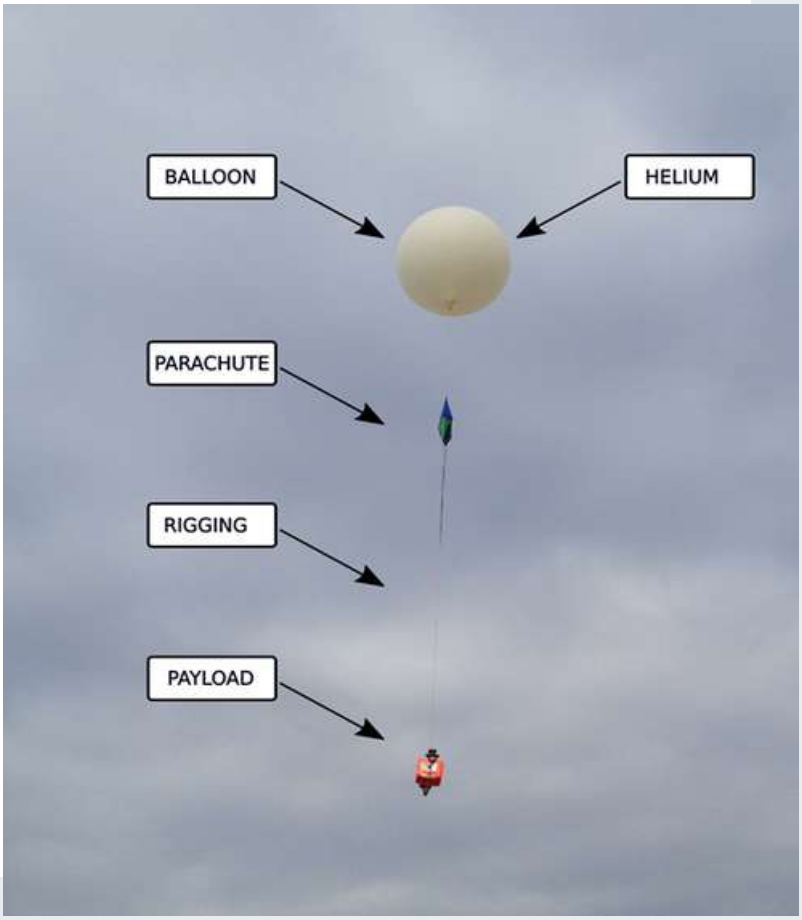
# SAFETY ARTICLE:

## HAZARD IDENTFICATION - WEATHER BALLOONS

*A helium/hydrogen balloon is a pilotless object without propulsion in free flight. It stays in the air as it is filled with helium/hydrogen, which is lighter than air. Helium/hydrogen-filled balloons move freely through the air depending on the winds.*
*Twice a day, every day of the year, weather balloons are released worldwide. The balloon flights last for around 2 hours, can drift as far as 200KM away, and rise up to over 100,000ft (about 30km) in the atmosphere!*

*Weather balloons, which are made of latex or synthetic rubber (neoprene), are filled with either hydrogen or helium. The sides are about 0.051 mm thick before release and will be only 0.0025 mm thick at typical bursting altitudes! The balloons, which start out measuring about 6ft wide before release, expand as they rise to about 20ft in diameter prior to burst.*
*An instrument called a radiosonde is attached to the balloon to measure pressure, temperature, and relative humidity as it ascends up into the atmosphere.*

*These instruments will often endure temperatures as cold as -95°C, relative humidity from 0% to 100%, air pressures only a few thousandths of what is found on the Earth's surface, ice, rain, thunderstorms, and wind speeds of almost 170Kts! A transmitter on the radiosonde sends the data back to tracking equipment on the ground every one to two seconds. By tracking the position of the radiosonde, we can also calculate wind speed and wind direction. The radiosonde is powered by a small battery.*



# SAFETY ARTICLE:

## HAZARD IDENTFICATION - WEATHER BALLOONS

A parachute, attached to the end of the balloon, allows the radiosonde to fall slowly to the ground at speeds less than 20Kts after the balloon bursts. This is to protect the public from injury. Each radiosonde contains a mailing bag and instructions on what to do if you find one. These instruments may be fixed and reused if necessary. The radiosonde design with materials ensure that the radiosonde would not cause significant damage if it collides with an aircraft or if ingested by the aircraft engine. However, when released, the free-flying helium/hydrogen-filled balloons may drift far from the point of release to areas and heights that may affect aircraft operations. The free-flying helium/hydrogen-filled balloons may distract pilots during critical stages of flight (such as take-off or landing) and/or be ingested by aircraft engines.

**How Do I Release Free-Flying Helium or any Unmanned Balloons Safely?**

Free-flying helium/hydrogen balloons should not be released within 5km of an airport without an approval from the Executive Director of Civil Aviation (ED), pursuant to NAMCAR Part 101 and Part 71, and reiterated in AIP ENR 1.1 para 11 and 12.

**Do I Need To Notify NCAA To Release Free-Flying Helium/Hydrogen or any Unmanned Balloons?**

Yes. If you are planning to release free-flying helium/hydrogen balloons within the following area and height limits, you will need to submit an application for approval by the ED of NCAA:

a) higher than 150ft above the surface;
b) within a published air traffic control zone, air traffic area; or
c) closer than 5nm from the boundary of an aerodrome.

**When Do I Need an approval To Release Free-Flying Helium Balloons or any Unmanned Balloon?**

An approval is required from NCAA when releasing free-flying helium/hydrogen balloons within the area and height limits above. Applications will be assessed on a case-by-case basis. It will take 14 working days to process your application, as assessment will be conducted in consultation with the other stakeholders such as Air traffic Services providers and military.

# SAFETY ARTICLE:

## HAZARD IDENTFICATION - WEATHER BALLOONS

High altitude unmanned balloon activities are defined as “unmanned free balloons”, the regulations for which are within the NAMCARS Part 101. Therefore, an organiser/operator needs to obtain NCAA approval for any such launches in Namibia, regardless of the balloon/payload size and weight. All applications should be submitted using the CAUA Application FSS-ANSSO-FORM 015-19A.

If it is a recurring event/activity, the proposal must be submitted to the National Airspace Committee as required under NAMCAR Part 12 Subpart 2, and after approval by the ED, an AIP publication under ENR 5.3 will be promulgated detailing the time, launching site, as well as the vertical limit.

If is temporally (within 90 days) the operator should submit a CAUA application for ED approval and a NOTAM will be published valid for the operation period.

There have been a number of cases of medium and large aircraft hitting weather balloons at high altitude, one resulting in the loss of 45 lives when an AN-24 collided with a weather balloon. Keep a good lookout and beware!



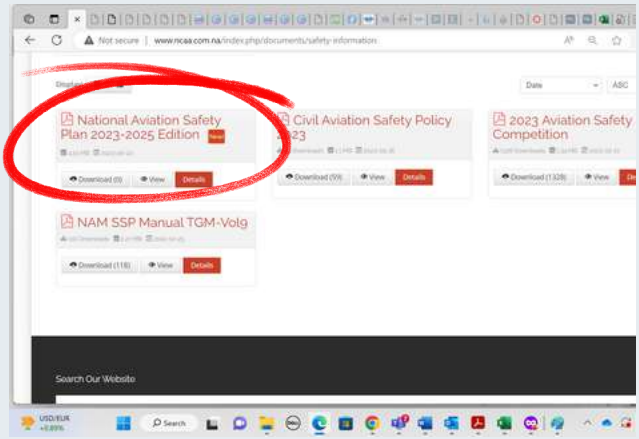
**Prepared by :**
ANSSO

# Articles and Ask NCAA

NCAA values your input and we have created this forum for answering questions or requests for information and publications. Feel free to drop us a line and enquire: spq@ncaa.na.

# Publications

The National Aviation Safety Plan has been approved by the Board and is now available on the NCAA website! A big thanks and congratulations to all those that helped in this important task.




# Invitation to Contribute

Service providers and users are invited to contribute topics and ideas or articles to NCAA SPQ department for consideration in our safety publications or safety workshops. Remember the safety system only works with participation and information sharing is key to continuous improvement and achieving global aviation safety goals.

Further information requests, submissions, or queries can be sent to:
email: spq@ncaa.na
phone: 083 235 2468