

FOCUS



Building an Enduring Safety Culture

OCT 2022 | ISSUE 113

04 | Building an Enduring Safety Culture in Air Warfare Training Institute

16 | Resuming Our Overseas Multilateral Exercises Safely

11 | Strong Safety Instincts Keeps One Safe!

21 | Guarding Against Wildlife Hazards - Perspective of a Force Protection Squadron


RSF SAFETY
Mission Success ALWAYS

CONTENTS

04



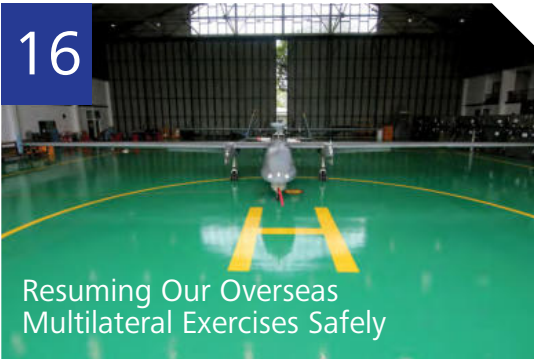
Building an Enduring Safety Culture in Air Warfare Training Institute

11



Strong Safety Instincts Keeps One Safe!

16



Resuming Our Overseas Multilateral Exercises Safely

21



Guarding Against Wildlife Hazards - Perspective of a Force Protection Squadron

24

Safety Activities

30

4 Pics 1 Word

31

Crossword Puzzle

EDITORIAL BOARD

Chairman

COL Nick Wong Wai Him

Editor

MAJ Wong Minghua, Donald

Members

SLTC Peter Ho Wing Leong
LTC Ng Cheng Guan
ME6 Amos Yap Keng Yong
MAJ Ashley Jude Peterson
MS Audrey Siah Yushu
MS Karen Pek

Assistant Editors

ME3 Su Xinyi
LCP Aden Wijidessa
PTE Xavier Tan

Design

Apache Art Enterprise

FOCUS magazine is available on these sites:

visit us @



<https://www.mindef.gov.sg/web/portal/rsaf/news-and-publications/publications>

email us @



apb_pub@defence.gov.sg

visit us @
Intranet:

<https://portal.mis.defence.gov.sg/rsaf/afi>



FOCUS is published by Air Force Inspectorate (AFI), HQ RSAF, for accident prevention purposes. Use of information contained herein for purposes other than accident prevention requires prior authorisation from AFI. The content of **FOCUS** is of an informative nature and should not be considered as directive or regulatory unless so stated. The opinions and views in this magazine are those expressed by the writers and do not reflect the official views of the RSAF. The contents should not be discussed with the press or anyone outside the armed services establishment.

Foreword

From Head Air Force Inspectorate



From left to right: ME1 Ong Bo Jun Simon (FLC), LTC Yeow Mun Cheng (Det Comd), COL Nick Wong Wai Him (HAFI), CPT Lim Jun Kai (DY S3) Peace Vanguard Detachment, Arizona, USA, 25 Jul 2022

The RSAF is widely recognised for our strong safety culture and this is the result of well-constructed foundations that were painstakingly laid down by our predecessors after many years of dedication and hard work. To ensure that our strong safety culture endures for many years to come, we will need to continue building upon our successes by nurturing the present and future generations of airmen with the belief that we can continue to achieve mission success safely in all our operations and training. Hence, building an enduring safety culture will always be an area that the RSAF will focus on, and the articles in this issue of FOCUS have been curated as a reflection of how we can all play a role in achieving it.

We begin with MAJ Lian Zhengting from AWTI, sharing how AWTI is building an enduring safety culture by establishing a strong safety foundation in our new generations of airmen through clear safety policies, strategies, and command emphasis. By educating trainees on Just Culture, Open Reporting Culture and Learning Culture, adopting the AFTC safety culture implementation framework, and making sure commanders and instructors lead by example, AWTI aims to ensure the sustenance of the RSAF's strong safety culture.

In the second article, MWO Bernard Tang, Command Chief of Helicopter Group, shares three different incidents where strong safety instincts prevented potentially catastrophic outcomes. These strong safety instincts have been developed and honed through intensive training and his care for his team's safety, allowing him to gain a wealth of invaluable experience over the years. These ultimately aided him in making swift and sound

judgements. His strong safety instincts are commendable and one that we should all look up to and follow.

Next, CPT Ong Zile from UAV Training School, describes his experiences in Exercise COPE TIGER 2022 as we gradually overcome the COVID-19 pandemic and resume our overseas training and exercises. He shares the safety tools that were used to identify hazards and manage risks during the exercise and how strong fundamentals, safety education and training ensured the safe and successful conduct of the exercise. His contributions in making safety an everyday habit helps build an enduring safety culture for future generations to benefit from.

In the final article, 3WO Hong Weijie, a Military Police Specialist from 605 SQN, shares his experiences of managing stray dogs which posed a threat to Tengah Air Base's flying operations. His innovative attitude and initiative to improve safety eventually led him to find a successful solution to manage the threat safely. 3WO Hong's inquisitive spirit and continuous brainstorming of ideas to improve our safety systems is indeed one which we can all learn from.

I hope these four articles will spur you on to do your part in building a strong and enduring safety culture in your own workplaces. It is only when we continue to be proactive, inquisitive and play our part in looking after each other's safety will we truly be able to continue achieving **Mission Success, Safety Always** for many generations to come.

COL Nick Wong Wai Him 
Head Air Force Inspectorate

Building an Enduring Safety Culture in Air Warfare Training Institute



MAJ Lian Zhengting
Air Warfare Officer (Air Traffic Control)
Air Warfare Training Institute,
Air Force Training Command

Introduction

The RSAF has made tremendous advancements in its operational capabilities over the last five decades. Concurrently, the RSAF has come a long way in developing and strengthening its safety culture. Our strong safety culture has been built methodically over many years by our predecessors and needs to be continuously sustained in order for us to push the boundaries and safely advance the development of our capabilities.

Building an enduring safety culture starts with our people. With Air Force Training Command (AFTC) being the very first touchpoint for all airmen entering the organisation, it plays a pivotal role in shaping our personnel's beliefs and personal values,

aligning them with the RSAF safety philosophy and core values. Likewise, at the Air Warfare Training Institute (AWTI), we envisage building an enduring safety culture by establishing the safety foundations through clear safety policies, developing and executing implementable strategies for them to apply, and sustaining safety practices through command emphasis.

Establishing the Safety Foundations

The AFTC Safety Mission and Safety Management System

The AFTC Safety Mission is "To Train and Develop Air Force Professionals Committed to the Safety and Health Principles and Philosophy of the RSAF".

AFTC adopts the RSAF Safety Management System (SMS) which comprises four key components, namely Policy, Risk Management, Assurance and Promotion. These components are anchored to a strong safety culture which includes Just Culture, Reporting Culture and Learning Culture, as illustrated in Figure 1. AWTI ensures that the safety mission and SMS is introduced and inculcated into all AWTI trainees for them to understand and establish the importance of safety in the RSAF.



Figure 1: AFTC Safety Management System

Nurturing the Right Safety Culture

AWTI strives to create a nurturing environment for people to share and learn openly without the fear of being unjustly punished. To achieve this, AWTI educates our trainees on Just Culture, Open Reporting Culture and Learning Culture.

Just Culture is founded on the values of fairness and transparency. It aims to strike a balance between the “punitive culture” and

“blame-free culture” by recognising the possibility of human errors and taking a balanced approach to hold individuals accountable for their actions, based on the context of their actions and other contributing factors.

An Open Reporting Culture strengthens the safety system through learning from others. With the assurance of Just Culture, it promotes the adoption of Reporting Culture where people will feel obliged and more willing to share their errors and violations without fearing unjust consequences.

A strong Open Reporting Culture will then provide the content and resources to promote the Learning Culture, where the organisation can conduct analyses on significant incidents in order to attain important insights and learning pointers for future improvements.

Together, Just Culture, Open Reporting Culture and Learning Culture reinforce and complement one another to create a nurturing environment for the sustenance of a strong safety culture in AWTI.

Implementation Strategy to Inculcate Safety in Trainees

Building a strong safety culture in AWTI requires a comprehensive and robust strategy. To this end, AWTI adopts the AFTC safety culture implementation framework, which is illustrated in Figure 2.



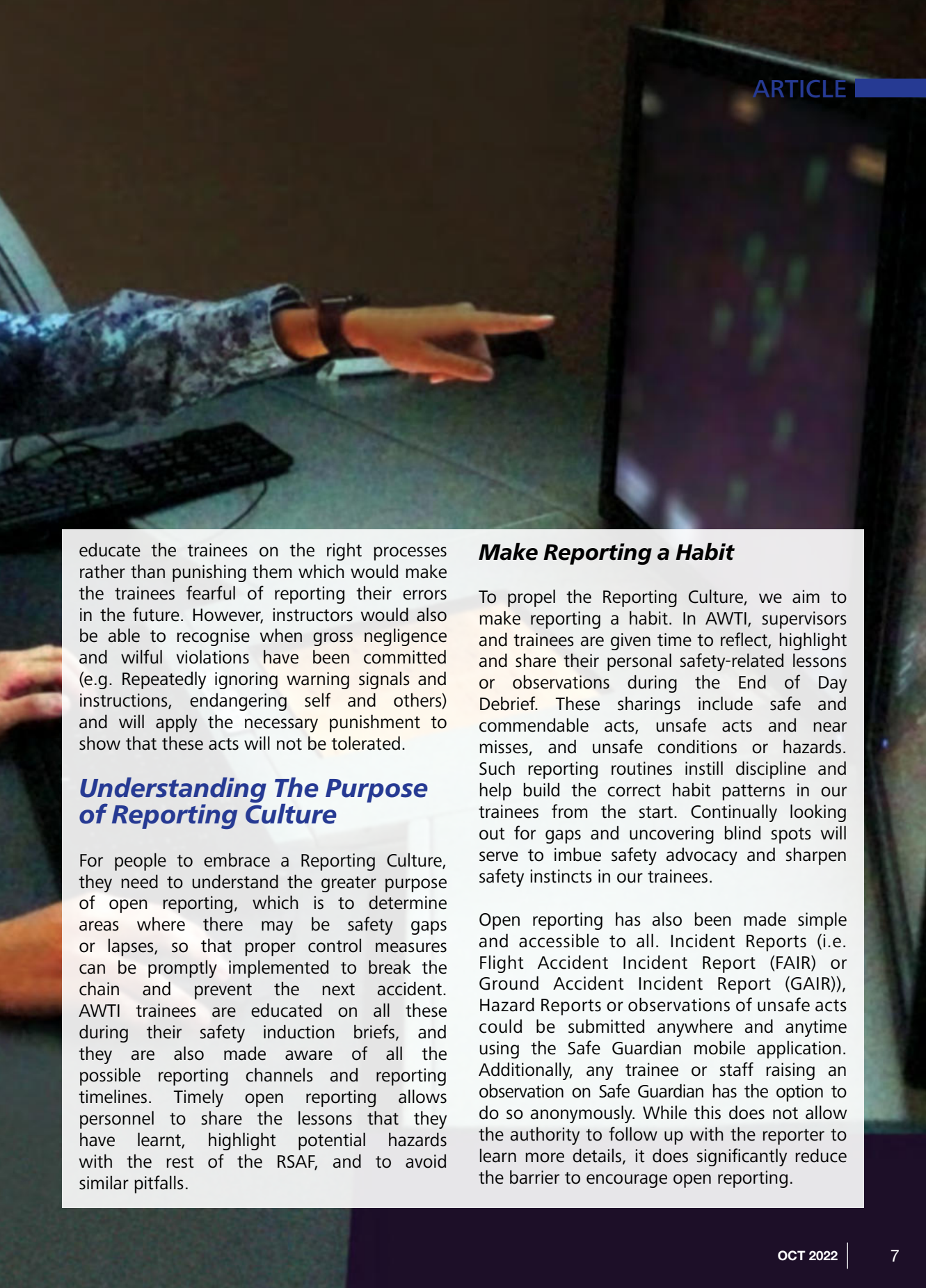
Figure 2: AFTC Safety Culture Implementation Framework

Safety Education and Just Culture

Airmen inducted into AFTC will first go through the Airmen Orientation Programme (AOP) where they will be introduced to safety as one of the RSAF's core values. They will also learn about the RSAF and AFTC Safety Mission, Safety Principles, and SMS. In particular, an educational package on Just Culture is delivered to formally brief our people on what it entails and why it is important to adopt Just Culture in the RSAF. Similarly, annual refresher briefs are also conducted to remind new and existing personnel of the purpose of Just Culture and how to consistently apply and practise it.

Building Trust

When Just Culture is first introduced to trainees, they may not completely trust the system and may still fear reprisals. Hence, the trust between those who openly report, and the supervisors, instructors and commanders who are responsible for the management of the reports must be firmly established for Just Culture to work. For that reason, School Commanders in AWTI take a clear stance and demonstrate consistency in their actions and decision-making based on the RSAF Just Culture Guide. They are also committed to move away from blame culture, where one solely pins the blame on an individual's error, but instead show readiness and commitment to carry out holistic reviews to address any gaps, even at the management level. In addition to publicising and explaining to trainees how Just Culture should be applied, AWTI instructors and supervisors also lead by example in their efforts by advocating Just Culture on the ground to ensure that the trainees learn the correct traits and habits from them. For example, during our Ground Based Air Defence (GBAD) deployment training, AWTI instructors recognise that the trainees may commit honest mistakes such as missing out a step in the system deployment due to their lack of experience and training. By applying the Just Culture Guide, the instructors would



educate the trainees on the right processes rather than punishing them which would make the trainees fearful of reporting their errors in the future. However, instructors would also be able to recognise when gross negligence and wilful violations have been committed (e.g. Repeatedly ignoring warning signals and instructions, endangering self and others) and will apply the necessary punishment to show that these acts will not be tolerated.

Understanding The Purpose of Reporting Culture

For people to embrace a Reporting Culture, they need to understand the greater purpose of open reporting, which is to determine areas where there may be safety gaps or lapses, so that proper control measures can be promptly implemented to break the chain and prevent the next accident. AWTI trainees are educated on all these during their safety induction briefs, and they are also made aware of all the possible reporting channels and reporting timelines. Timely open reporting allows personnel to share the lessons that they have learnt, highlight potential hazards with the rest of the RSAF, and to avoid similar pitfalls.

Make Reporting a Habit

To propel the Reporting Culture, we aim to make reporting a habit. In AWTI, supervisors and trainees are given time to reflect, highlight and share their personal safety-related lessons or observations during the End of Day Debrief. These sharings include safe and commendable acts, unsafe acts and near misses, and unsafe conditions or hazards. Such reporting routines instill discipline and help build the correct habit patterns in our trainees from the start. Continually looking out for gaps and uncovering blind spots will serve to imbue safety advocacy and sharpen safety instincts in our trainees.

Open reporting has also been made simple and accessible to all. Incident Reports (i.e. Flight Accident Incident Report (FAIR) or Ground Accident Incident Report (GAIR)), Hazard Reports or observations of unsafe acts could be submitted anywhere and anytime using the Safe Guardian mobile application. Additionally, any trainee or staff raising an observation on Safe Guardian has the option to do so anonymously. While this does not allow the authority to follow up with the reporter to learn more details, it does significantly reduce the barrier to encourage open reporting.

Recognition

Giving due recognition is also an important way to encourage and publicise the positive impact of open reporting. For example, one of our GBAD instructors openly reported that he did not ensure that an asthmatic trainee carried his inhaler with him where it could have been potentially fatal if the trainee suffered an asthma attack during training and was unable to relieve the symptoms timely. Such open reports are strongly endorsed by Commanders and the personnel who raised these reports are openly commended as their actions allowed the management to intervene and address these safety gaps timely before an accident happens. Likewise, Training Schools will recommend appropriate safety awards for deserving personnel in recognition of their “good shows”. For example, during the conduct of a Physical Training lesson, a GBAD instructor, LTA Jonathan Chen, responded swiftly and decisively to prevent the deterioration of a heat injury case. He was recognised for his actions and awarded the Safety Letter of Commendation from the Commander of the Air Warfare Officer (AWO) School.

Prompt Response

As much as we would like to encourage people to openly report, it is also important to respond to these reports timely and promptly as well. When our personnel see that the management is quick to resolve issues efficiently, they will see the importance of reporting incidents expeditiously when they occur. They will also have the assurance that all open reports are taken seriously.

Creating a Psychologically Safe Environment

To promote an Open Reporting Culture, it is also important to create a psychologically safe environment for people to speak up. A psychologically safe environment can be defined by four stages¹, in which airmen

¹ Source: Timothy R. Clark, The 4 Stages of Psychological Safety: Defining the Path to Inclusion and Innovation, (Berrett-Koehler, March 2020).





feel included, safe to learn, safe to contribute, and safe to challenge the status quo, all without the fear of being embarrassed, marginalised, or punished in some way. Therefore, instructors in AWTI are urged to seek safety feedback from trainees and practice active listening so that trainees will feel included and encouraged to share their thoughts and opinions. Instructors are also reminded to conduct themselves professionally and avoid being condescending, demeaning or displaying belittling behaviour towards trainees as this will only cause them to shy away from open reporting. AWTI trainees are also encouraged to adopt a “*Dare to Care*” attitude, and are empowered to call a safety pause or call out any unsafe acts made by their fellow peers or even instructors.

Learning the Right Lessons

To promote a Learning Culture, we need to learn the right lessons and make learning enduring. We need to make it a habit to thoroughly analyse all open reports as they are raised for the purpose of accident prevention. Hence, it is necessary to establish the cause of accidents/incidents or near misses so that appropriate control measures can be implemented expeditiously in order to prevent similar reoccurrences. In addition, it is also important to conduct trend analysis to seek a better understanding of the behaviours, conditions and latent issues that may exist within the Training Institute.

Make Learning Enduring

All incidents or near misses are considered as learning opportunities. In order to make the learning enduring and prevent repeats of incidents, it is important to build organisational memory. In AWTI, discussion and analysis of past incidents, in the form of case studies, are conducted during Unit Safety Day or during Courses’ safety lessons with the aim of making safety sharing and learning a habit. The Training Schools also conduct annual refresher briefs on significant GAIRs and FAIRs that occurred in AWTI and AFTC. This serves as a reminder to all personnel of the lessons learnt, and not to repeat those mistakes. Relevant and significant FAIRs and GAIRs made by operational units are also shared with trainees, drawing parallels between their ab-initio training and the operations that they will be dealing with, emphasising the fact that mission success and safety goes hand in hand.

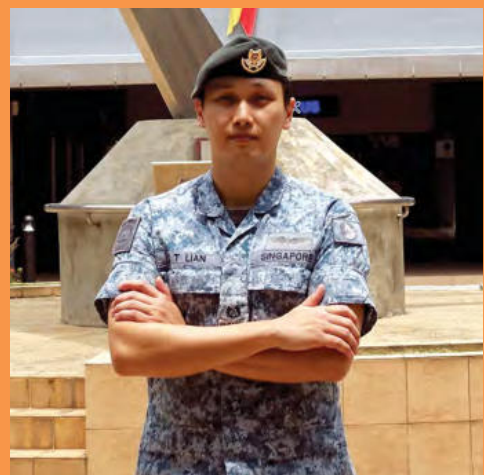
Command Emphasis

Commanders and instructors lead by example and ensure a safe environment for trainees to train in. They demand high safety standards from their trainees, and also of themselves, and serve as role models to their trainees. In turn, instructors would imbue within the trainees the drive to demand high safety standards of themselves and enforce safety compliance. This is particularly important so that the trainees can carry this mentality with them when they eventually graduate and become commanders or instructors in the future.

Consistent effort and emphasis is needed to maintain a strong safety culture and prevent it from eroding over time. To address this, Commanders “walk the ground” regularly to maintain constant oversight of training and enforce discipline in the adherence of Standard Operating Procedures to combat routinisation, complacency and missionitis. Commanders also drive team enforcement of attitude, behaviours and team Crew Resource Management as the bedrock of the School’s safety culture. Lastly, bad practices are also addressed and weeded out timely in order to prevent them from becoming an accepted norm. A culture can only last as long as the people in the system want it to last.

Conclusion

The RSAF has established a reputation for its outstanding safety record and achievements. A strong safety culture is essential to build the foundation for continued mission success. The success we see today and the success we hope to see in the future are strongly dependent on the people in the organisation. Building an enduring safety culture is thus a continuous journey that involves every individual being invested in a common goal, achieving mission success safely.



ABOUT THE AUTHOR

MAJ Lian Zhengting is an AWO (ATC) by vocation and is currently the Group Safety Officer of Air Warfare Training Institute (AWTI). He has served as the S3, Officer Commanding (Civil-Military/SAR) and Unit Safety Officer in 203 SQN, as well as a staff officer in Air Plans Department (APD).

Strong Safety Instincts Keeps One Safe!



MWO Bernard Tang
Command Chief
HQ HeliG



Introduction


My strong belief in leading by example and always striving to become a better version of myself has served me well today as Command Chief of Helicopter Group (HeliG) and during my tour as Command Chief of 126 SQN. Having served as a senior Air Crew Specialist (ACS) in a Search and Rescue squadron, I was constantly faced with the added responsibility of ensuring that the ACS under my charge were physically and psychologically ready 24/7 to respond to life-saving rescue missions whenever called upon.

As we hone our skills during training and put them to the test during operations, our ACS would have to possess a variety of skillsets and operate various critical equipment during flying operations. These include winching safety harnesses, stretchers and rescue baskets for winching training, as well as the rappelling attachment device for rappelling tasks. In addition to applying the knowledge of operating our equipment effectively and efficiently, it is also essential for us to ensure that they are always in good working condition, as any defects could potentially endanger the lives of our aircrew and casualties whom we rescue. As such, I am always on the lookout to ensure the optimal serviceability of equipment that we utilise for training and operations.



My Safety Achievements

I was honoured to receive two Outstanding Safety Awards and one Safety Letter of Commendation within a year for demonstrating strong safety instincts during my course of work. I owe this to the good training that I received from my instructors and role models over the years. They helped me develop my fundamentals and strong safety instinct, and as an experienced ACS today, it is now my responsibility to ensure that these safety instincts continue to be handed down to the



next generation of ACS by (1) ensuring strong fundamentals and knowledge of their systems and equipment, (2) inculcating safe work habits right from the start, and (3) encouraging our ACS to adopt the right attitude by being proactive and inquisitive in safety.

While I am grateful for the awards, what gave me the most satisfaction was that I had a part to play in preventing potential incidents that could have resulted in damage to equipment or injuries to personnel. Looking back, I would like to share my personal thoughts and reflections on each of them to spur the ACS community and all future generations of airmen to hone similar safety instincts in their workplace as well.

First Award - Safety Letter of Commendation for Noticing a Wrongly Installed Adjustment Strap on a Winchman Safety Belt

Paying close attention to the condition of my equipment paid dividends on 24 Feb 2021 when I booked out a Winchman Safety Belt (WSB) in preparation for a flight. While adjusting the WSB, I noticed that the adjustment strap was installed on the wrong end of the belt. This discovery might have seemed minor at first glance, but this installation error could have potentially resulted in precious seconds lost during an emergency, where the ACS would have to rely upon muscle memory to quickly release the WSB to egress from the aircraft.

In this case, my diligence and vigilance in the pre-flight checks allowed me to spot an inconspicuous but significant error before walking out for flight. For this display of strong safety instinct, and identifying the issue for it to be resolved in future installations, I was awarded the Safety Letter of Commendation by my unit Commander.

Second Award - Outstanding Safety Award for Discovering Free Play in One of the Six Wing Bolts Securing the Rappelling Attachment Device During a Rappelling Sortie

On 14 Apr 2021, I was one of the ACS crew planned for a rappelling tasking sortie. During routine safety checks conducted by the troops at the start of the 11th wave of the sortie, I noticed a slight lateral movement of the Rappelling Attachment Device (RAD). This check on lateral movement was done earlier on the ground as part of pre-flight checks with no anomaly detected, and this check was not

called for in subsequent in-flight checks. During the pass for the 11th wave, I conducted the in-flight check and made an additional effort to check on the security of the RAD. It was then that I observed that the slight lateral movement of the RAD was becoming more pronounced, which led me to further examine the cause. I subsequently found that there was free play on one of the six wing bolts securing the RAD to the aircraft floorboard. The crew collectively called a Knock-it-Off and the sortie was terminated as the security of the RAD was no longer assured. The security of the RAD is paramount as the rappelling ropes, from which the troops descend from, are attached to the aircraft via this device.

For my vigilance and dedication in paying additional attention to the security of the RAD in this incident when it was not required, particularly when the first ten sticks proceeded uneventfully (which could have easily led one to have a false sense of security), I was awarded the Outstanding Safety Award. Being proactive and vigilant in this case might very well have prevented an incident that could have resulted in serious injuries.



TO OPEN PULL
AND TURN

Third Award - Outstanding Safety Award for Discovering the Snap-Hook on the Winchman Bosun Seat was Inadvertently Released during a Night Winching Sortie

The workload in a confined helicopter cabin space with passengers and equipment on-board can be very high during critical stages of the flight, especially when we prepare to lower a winchman “down the line” to conduct a rescue. A small error or discrepancy could prove catastrophic. One such incident occurred on 29 Sep 2021, when 3SG Rachel Rodrigues and I were the ACS on-board a Night Vision Goggles (NVG) Winch sortie conducted at Sembawang Air Base (SBAB). 3SG Rachel had just joined the squadron and she was going through her role qualification course. In this sortie, I was the winch operator and 3SG Rachel was the winchman who would proceed “down the line” for the pick-up of a simulated casualty. Upon the completion of the safety checks, 3SG Rachel positioned herself on the aircraft step to get ready to be winched down to the ground from a height of 50 feet. However, on the aircraft step, she felt that her bodyweight was unevenly distributed and the Bosun Seat harness was loose. This sensation was very different from what she had experienced during the dry run on the ground. Sensing that something was amiss, 3SG Rachel paused from releasing the aircraft strut bar for the descent. Although she was no longer equipped with her NVG for the descent, she maintained her composure and mindfulness to hold onto the aircraft strut bar.

At this juncture, I could sense that something was wrong and my instinct told me that I should not winch her down. Without any hesitation, I immediately pulled her back on-board the aircraft and terminated the winch. Once she was safely back in the aircraft, we discovered that the Winchman Bosun Seat snap hook had been unlatched. As the crew was unable to conclusively ascertain as to how the snap hook became unlatched, I called for a Knock-it-Off, and the sortie was terminated. A technical discussion was conducted after this discovery and it was later discovered that due to a design flaw in the snap hook, there was a chance that the snap hook could be unlatched in flight. As a result of this incident, an additional safety carabiner was later added to enhance the security of the Bosun Seat.

Both 3SG Rachel and I handled the incident well in the challenging dark night environment and I was able to expeditiously pull 3SG Rachel back on-board to ensure her safety. Despite the NVG tubes limiting my field of vision, my safety instincts kicked in which allowed me to quickly identify the unsafe situation and handle it safely. My decision to call for a Knock-it-Off was correct, and my professionalism and safety instincts were crucial in preventing a hazardous situation, which could have resulted in 3SG Rachel dangling precariously from the cable, or worse, falling from height. More importantly, 126 SQN’s safety culture has empowered crew members at all levels to highlight any discrepancies, even to the extent of calling it a Knock-it-Off to prevent an unsafe situation from occurring. For our professionalism and strong safety instincts in handling this incident, both 3SG Rachel and I were awarded the Outstanding Safety Award.

Reflections

The role of an ACS is an important and challenging one. Besides serving as an extra pair of eyes for the pilots, we have to manage heavy workloads in flight. As we are required to bring on-board many different types of training aids and mission equipment for a variety of missions, we have to be very vigilant on their serviceability and security. We also need to be very mindful of the potential for introducing Foreign Object Debris (FOD) and Things Falling Off Aircraft (TFOA) when we handle these equipment.

The high training standards that we demand from our people and the valuable mission exposure we provide for them will allow them to reap benefits when they are equipped with strong safety instincts as they progress through their careers. While my personal experiences have demonstrated the value of honing our individual safety instincts so that we make flying safe, we must also be mindful that safety is not just an individual, but a team and command responsibility. It is through the constant building of our safety instincts collectively as an organisation, that we will continually reap the rewards of *Mission Success, Safety Always*.

*Ready & Able
Cougars!*



ABOUT THE AUTHOR

MWO Bernard Tang is currently the Command Chief at HQ HeliG. He was previously the Command Chief at 126 SQN for 9 years. MWO Tang is a senior ACS who has over 4000 hours of flying hours operating on the UH-1H, AS332 and CH-47.

Resuming Our Overseas Multilateral Exercises Safely



CPT Ong Zile
UAV Pilot
UAV Training School

Introduction

At the dawn of 7 Mar 2022, the unique humming propeller beat of the Heron 1 Unmanned Aerial Vehicle (UAV) could be heard afar taxiing automatically on the airfield of Khok Kathiam Air Force Base (KKT AFB). Shortly after the Heron 1 had lined up on the runway and following take-off clearance by KKT Tower, the UAV took off into the clear skies of Lopburi and marked the start of Heron 1 operations at Exercise COPE TIGER 2022 (XCT 22).

XCT 22 marked the resumption of the trilateral air combat large force deployment involving the Republic of Singapore Air Force (RSAF), Royal Thai Air Force (RTAF) and United States Air Force (USAF). With the last iteration of the exercise held in 2019, all three air forces have placed added safety emphasis following the two-year hiatus as we transitioned from the COVID-19 pandemic to an endemic state.

I am CPT Ong Zile, a Heron 1 UAV Pilot previously from 128 SQN. I was entrusted with the role of Heron 1 Detachment Safety Officer and Deployment Mission Lead for XCT 22, and

I would like to share my experiences on how we achieved the exercise outcomes safely through thorough planning, strong fundamentals and team excellence.

Identifying Challenges

Impact of COVID-19

One of the biggest challenges for the exercise was the long lay-off due to the COVID-19 pandemic. Due to this long lay-off, significant emphasis and preparation was expected from everyone to ensure that we would be well-prepared for the exercise. Compared with previous iterations of XCT, where the squadron could easily tap on the fresh wealth of experiences from personnel who attended the previous deployment, our squadron had limited exposure and experience, with many of the junior personnel yet to experience their first overseas deployment. As such, we had to ensure that we were thorough in our pre-deployment planning and progressive in our training to manage uncertainties on the ground and ensure that the detachment was conducted safely.



New Operating Environment



XCT 22 also saw the Heron 1 detachment deploying to a new site within KKT AFB. Since our last detachment in 2019, KKT AFB had undergone several infrastructural developments and our detachment was assigned to a different aircraft hangar and deployment sites for our Ground Control Stations. Being assigned to a different location in the base required us to review procedures and our safety risk assessment, especially for the Heron 1's Automatic Taxi and Automatic Take-off and Landing (ATOL) procedures where we conducted extensive ground mapping and data link line-of-sight surveys to ensure that our flying activities would be able to proceed smoothly and safely.

Planning Ahead

Using Safety Tools for Identifying Hazards and Managing Risks

As the Heron 1 Detachment Safety Officer, risk assessment tools such as the Task Safety Analysis (now known as Safety Risk Assessment (SRA)) and Risk Assessment Matrix (RAM) became useful instruments and mental frameworks for me to sense-make the risks and

recommend mitigating measures. These risk assessments were regularly reviewed after each key deployment milestone to ensure that they remained relevant and accurate, such as the on-site recce, ATOL ground mapping, and the actual flight. More importantly, these tools not only provided comprehensive assessments in identifying the potential hazards and the respective control measures to manage the risks, but they also raised the belief and confidence in myself and the detachment crew to operate safely in a new environment.

Progressive Training

Progressive training amongst ourselves and RTAF counterparts was extremely crucial to ensure the safe conduct of the exercise after a two-year hiatus. Training started two months prior to the exercise, ranging from classroom-based revision of the Heron 1 ATOL procedures with reference to KKT AFB's Standard Instrument Departures (SIDs) and Standard Arrivals (STARs) to simulator training to familiarise ourselves with the Area of Operation (AO). In-theatre, Table-Top Exercises, sharing on manned-unmanned operations, and rehearsals on contingency management plans, were also conducted with our RTAF counterparts.





Preparing for the Worst

Responding to Dynamic Environment Conditions

XCT 22 had also shown first-hand that unforeseen safety risks and new challenges would always be lurking around the corner, and hence we must practise proactive Crew Resource Management (CRM) as a team to look out for one another and respond assertively and timely in order to avoid being blindsided. One example was the weather. While a key concern of the previous XCT was heat exhaustion, XCT 22 saw the rare onset of rapid thunderstorm build-up and strong winds that occurred midway through the detachment. Despite the earlier part of XCT 22 going smoothly without weather issues, the detachment did not succumb to complacency, and worked closely with one another in the monitoring of weather. This was done through the requisition and provision of more frequent weather updates from the meteorological office and Pilot Reports (PIREPs) from other aircraft in the area which allowed us to plan for timely recoveries of the aircraft. Additional precautions were also taken to enhance our safety, such as strengthening of holding points of the ground equipment and additional routine checks after the bad weather.

Keeping COVID-19 at the Back of our Minds

To ensure that the detachment could cope with a potential COVID-19 outbreak, I took it upon myself to recommend additional mitigating measures to ensure operational continuity. For instance, while the Air Working Group had provided single accommodations for operationally critical personnel, I took the initiative to improve the measure by implementing physical separations of the usage of toilets and common corridors between the two shifts. Drawer plans were also prepared should the detachment be required to activate the contingency of operating with a single shift due to the shortage of manpower. To keep the COVID-19 virus at bay, continual emphasis was placed to ensure that all personnel adhered to safe distancing, and adopted good hygiene practices such as the sanitising of hands and avoiding crowded areas.





Reflections

Importance of Safety Education and Training

Looking back at my experience as the Heron 1 Detachment Safety Officer for XCT 22, I am grateful for the safety education and training that I had received throughout my career in the RSAF. It has not only equipped me with the knowledge and skills to robustly plan for such high-end exercises safely, but also enabled me to make sound and timely decisions amidst uncertainties based on the safety principles. That said, the detachment would not have been as successful had it not been for our strong fundamentals and team excellence.

Strong Fundamentals

While this exercise provided an exciting opportunity for us to conduct mission-oriented training in a large airspace and target-rich AO, we did not lose sight of the need to maintain our type fundamentals. We continued to hit the books to strengthen our knowledge on our systems and procedures, while quizzing each other on our Standard Operating Procedures to ensure that the orders were internalised. In addition to the simulator

training we conducted as part of our workup for the exercise prior to deployment, all pilots also regularly flew general handling and emergency procedure sorties to keep themselves current. All these accumulated to form our strong fundamentals, consisting of extensive knowledge and strong expertise, which enabled us to deploy and operate the Heron 1 to achieve mission success safely, regardless of the environment or uncertainties.

Team Excellence

XCT 22 was the first time I truly experienced how team excellence, stemming from the strong Operations-Logistics (Ops-Logs) relationship, contributed to mission success. Our UAV Pilots, Air Imagery Intelligence Experts and Air Force Engineers spooled their wealth of experience and expertise to ensure a smooth deployment. Coupled with the strong instinct of our airmen's *Dare-to-Care* attitude to keep a lookout for each other's "sixes" for any potential hazards, we were able to achieve the mission objective safely. On one occasion, prior to lining up for take-off, a Flight Line Crew (FLC) spotted a stray dog approaching the runway and immediately called for the internal crew to hold at the current position. The FLC then coordinated with KKT Tower and proceeded to lead the dog away to a safe



Heron 1 Detachment crew in XCT 22

location before informing the internal crew that the runway was cleared. Such cases of *Dare-to-Care* attitude and strong Ops-Logs cooperation has served as a safety net in preventing a potential accident from occurring. More importantly, this example is a display of the RSAF's strong safety culture in ensuring that safety is everyone's responsibility, regardless of rank, appointment or role.

Conclusion

XCT 22 has shown us how a strong core, supported by thorough planning, deep fundamentals, and team excellence, enabled our Heron 1 detachment to forge ahead safely in this time of uncertainty and fluidity. Our enduring safety culture developed over the years guided us during XCT 22, ensuring that we were well-prepared for the exercise. The experience gained in this exercise will also contribute towards building an enduring safety culture through the exemplary example of how we imbue safety as a habit in any local or overseas training/exercise that the RSAF conducts. As we continue to push our limits and strive for greater heights, this strong core and safety culture will continually serve as an anchor to secure us to the motto of "*Mission Success, Safety Always*".



ABOUT THE AUTHOR

CPT Ong Zile is a UAV Pilot by vocation and qualified on the Heron 1. He was previously the Deputy Unit Safety Officer in 128 SQN and is currently a Qualified UAV Instructor in Flying Training Institute (FTI)/UAV Training School (UTS).

Guarding Against Wildlife Hazards – Perspective of a Force Protection Squadron



3WO Hong Weijie
Military Police Specialist
605 SQN

When we talk about Force Protection (FP) in the SAF, what would we normally think of? We would say that FP squadrons “provide protection against threats directed at the air base and its assets”, but what exactly are these threats? “Intruders, terrorists, or bombs” are typically what might be everyone’s first thoughts which would naturally come to mind when one thinks about threats.

However, in 2020, Tengah Air Base (TAB) encountered a different kind of threat altogether. It was a persistent threat that affected the air base and potentially could have had an impact on our air operations. Yet, it did not fall into any of the threats mentioned earlier. Surprisingly, it has been described by many as “Man’s best friend.” Have you guessed it yet? Yes, this threat is none other than the furry creatures that exist in almost every single neighbourhood in Singapore – Dogs.

Wildlife animals such as birds, wild boars, and stray dogs pose a perpetual hazard to the safety of flying operations. RSAF personnel might recall instances where wildlife intrusions had resulted in the suspension of runway operations and even damaged our air assets. To better manage wildlife intrusions, the RSAF has since strengthened its Wildlife Hazard Intervention Programme (WHIP) efforts over the years to ensure that these animals do not disrupt our operations.



A security trooper from 605 SQN with an Arms and Explosive Search dog preparing to search through suspicious parcels.

With new developments being built around the TAB area since 2020, stray dog sightings in TAB have become increasingly recurrent, with increased incidents of stray dogs entering our air base by dashing through our vehicle access control points. Each time this happened, it was a headache for everyone in our squadron. I recalled instances where squadron personnel had to drive their personal vehicles within the air base in search of the stray dogs. Even worse was when these stray dogs entered our airfields and runways. The usage of the runway had to be temporarily suspended if the stray dogs were spotted in the vicinity, and resumption of operations could only be possible if the dogs were chased away.

The sheer size of TAB also meant that it was not an easy feat to detect and chase these "intruders" away from our sprawling ground. Even with daily vehicular patrols and countless pairs of vigilant eyes, the management of the

stray dogs' situation was still a very tough challenge. At its peak, TAB witnessed a record high of 20 stray dog sightings in a month. The steady increase in the frequency of dog intrusions meant that we could no longer afford to view them as isolated incidents. If left to fester, the situation could threaten the stability and sustainability of air operations in TAB. In light of these repeated intrusions, our squadron started to link up and worked closely with TAB's WHIP Office. We held weekly meetings with them to monitor the situation and strengthened measures to make the air base less attractive to the wild dogs through the proper management and removal of food waste and potential water sources.

Our commanders also convened meetings to collectively devise possible solutions to this problem, and I was roped in to brainstorm for ideas. It is often said, "Experience is the



◀ Ultrasonic Wildlife Repellent

The Ultrasonic Wildlife Repellent used to deter wildlife from entering.

teacher of all things". I recalled that back in my previous unit in the 2nd People's Defence Force, we had also faced the similar issue of stray dogs in Clementi Camp. Eventually, we discovered and utilised a device known as Ultrasonic Wildlife Repellent – commonly used in private estates to deter wildlife from entering – which demonstrated great efficacy in deterring the stray dogs from entering. I proposed this solution to my commanders and we obtained their support to see if this was feasible for TAB. We subsequently began to conduct research on the device and found that the Ultrasonic Wildlife Repellent operates by emitting short wavelength, high frequency sound waves that are inaudible to humans but are effective in chasing the dogs away. The device does not cause any harm to the dogs and was readily available as a commercial off-the-shelf product. We proceeded to purchase one device for trials and they indeed proved to be very effective.

After the successful trials, we began implementing these devices at our various access gates around TAB. Together with other existing measures developed with TAB's WHIP office, such as the sealing of gaps and reinforcing the wire mesh grills at our gates, we have managed to successfully reduce the number of stray dogs sightings down to zero. It has been more than a year since the implementation of the solution, and fortunately, there were no recurrences of the situation.

So, what has this episode taught us? Firstly, each and every one of us can contribute towards building an enduring safety culture in the RSAF by proactively seeking ways to improve our safety systems. Next, innovation, especially in safety, is not something that is out of reach for us. We often imagine innovation

to be costly, exorbitant and highly technical, and sometimes even prohibitive or restrictive. The truth is that problem solving does not necessarily require cutting-edge technology or state-of-the-art devices. Sometimes, we just need to keep our eyes and minds open to what is already available around us – and *voilà!* An easy yet effective solution may be within reach. All it requires is a proactive and inquisitive mindset to want to continually look for ways to improve the safety gaps and blind spots around us!



ABOUT THE AUTHOR

3WO Hong Weijie is a Military Police Specialist by vocation. He is currently serving as Platoon Commander of the Military Working Dog Section in 605 SQN, Perimeter Protection Flight. He was previously the Company Sergeant Major of the Military Working Dog Unit in Military Police Command.

Outstanding Safety Award



COL Teo Soo Yeow, Comd PC, presenting the award to MAJ Low (right)



COL Teo Soo Yeow, Comd PC, presenting the award to CPT Koh (right)

On 8 Apr 2022, MAJ Low Kah Yong and CPT Koh Chong Han from 120 SQN were planned for live firing on the AH-64D Apache helicopter. The crew had completed the mandatory range sweep and ascertained that the range was clear before proceeding. The crew then proceeded to hover at the firing point to prepare systems for the live firing.

Prior to pulling the trigger, the crew visually spotted a recreational vessel that was entering the live firing template. Although the vessel was not within the aircraft sensor's field of view, the crew determined that it was within the weapon's firing template based on visual references. Instinctively, the crew terminated the live firing and observed four other recreational vessels transiting through in succession subsequently.

Despite having just conducted the range sweep less than 10 minutes ago, the crew did well by not assuming that the range was clear and conducted another visual check prior to releasing live ordnance. Their timely intervention prevented a potential firing of live ammunition into close proximity of the recreational vessels.

The crew had demonstrated professionalism and high levels of safety awareness in preventing a dangerous situation from occurring. For their vigilance and strong safety instincts, MAJ Low and CPT Koh were awarded with the Outstanding Safety Award.



LTC Neo Xianqin, Oakey Det Comd, presenting the award to CPT Yew (right)

On 13 Apr 2022, CPT Stewart Yew Wei Lun from Oakey Detachment, was the CH-47 aircraft captain for a training sortie. During the pre-flight walk-around checks, CPT Yew noticed that the No.2 engine outboard access panel appeared irregular and informed the Flight Engineer to conduct a detailed inspection.

CPT Yew informed the flight engineer and asked him to conduct a detailed inspection. Upon closer inspection, it was discovered that the panel was not fully secured. The squadron executive officer was informed and the aircraft was rejected for flight.

It was a remarkable observation by CPT Yew to notice the anomalies as the security of the panel could not be easily differentiated between a fully secured panel and an unsecured panel. If the error was not detected during the pre-flight check, the engine cowling could have potentially opened in flight and caused damage to the airframe or rotor blade.

For his vigilance and attention to detail while conducting his pre-flight walk-around checks and preventing a potential Things Falling Off Aircraft incident, CPT Yew was awarded with the Outstanding Safety Award.

Outstanding Safety Award



On 10 Jun 2022, a work-up-training sortie for the National Day Parade reserve flag flypast was conducted at SBAB. During the pre-flight check on the underslung hook of the Super Puma, 3WO Solomon Loh Yong Hock from 126 SQN noticed that the safety plunger for the underslung hook was not responding to inputs when he attempted to disarm the hook. 3WO Loh instinctively proceeded to investigate the cause and uncovered that the mechanical teleflex cables controlling the

cabin safety and cockpit hook release mechanisms were incorrectly installed in the opposite sense. The aircraft captain was informed and the aircraft was rejected for flight.

3WO Loh's safety instincts and strong fundamental knowledge on the underslung hook was exemplary. In recognition of his contributions which averted a potentially dangerous situation from occurring, 3WO Loh was awarded with the Outstanding Safety Award.



2WO Lim (left) receiving his award from LTC Rajpal Singh, CO 126 SQN.

On 26 Jul 2022, 2WO Lim Kah Poh from 126 SQN was the Aircrew Specialist for a rappelling live task sortie. While 2WO Lim was preparing for the 11th stick of the live rappelling task, he observed that the Rappelling Attachment Device (RAD) release handle mechanical stop was bent with cracks on both ends.

The RAD release handle would normally be checked on the ground during the pre-flight inspection and subsequent in-flight checks do not call for checks on the condition of the handle. In this case, despite completing 10 sticks uneventfully, 2WO Lim conducted his own additional safety checks and detected the bent mechanical stop. He immediately informed the aircraft captain, and the sortie was terminated as the mechanical stop could have broken off from the handle, resulting in Foreign Object Debris (FOD) in flight.

2WO Lim continued to be proactive and diligent in carrying out his duties thoroughly despite successfully completing 10 uneventful sticks prior. His attention to detail also serve as a positive example for all to follow. For his vigilance, mindfulness and strong attention to detail, 2WO Lim was awarded the Outstanding Safety Award.

02/22 CAF Quarterly Safety Forum

The 02/22 CAF Quarterly Safety Forum (CQSF) was conducted at Temasek Club and via Virtual Teleconferencing on 20 Oct 2022. The CQSF's safety theme was "Strengthening Fundamentals and CRM for a Safer RSAF".

The forum allowed our personnel to understand the RSAF's safety performance in the last quarter, discuss and share the safety incidents/issues that have occurred, and become aware of the watch areas to look out for in Q3 WY22/23.



Annual Safety Workshops

The Annual Safety Workshops were successfully organised in the months from Aug to Oct 2022. The workshops provided an opportunity to promote Safety Awareness and encourage communities to discuss safety-related issues concerning their Type Group. In addition, a new "Lest We Forget" segment has been included in this WY's series of workshops. The segment was intended for Type Groups/Communities to revisit a significant past case study so that lessons learnt are refreshed for newer members of the community.



Fighter Group
12 Aug 2022



Transport Group
16 Aug 2022



Unmanned Aerial Vehicle Group
24 Aug 2022



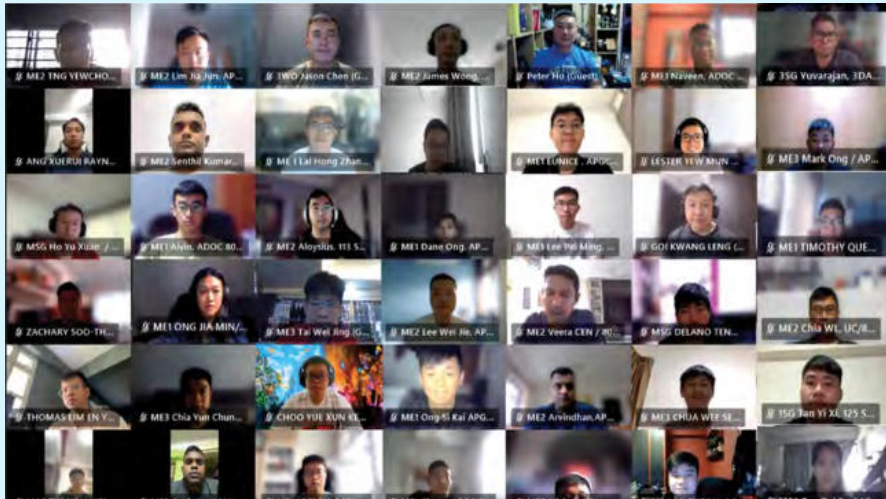
Ground Based Air Defence Group
22 Sep 2022



Force Protection Group
13 Oct 2022

RSAF Safety Warriors' Course

The RSAF Safety Warriors' Course was conducted from 23 Aug to 3 Sep 2022 via Video Teleconferencing with 50 Warrant Officers, Specialists and Military Experts successfully completing the course. The course aims to equip the participants with knowledge of the current RSAF safety programmes and initiatives, human factor conditions affecting safety, and workplace safety and health knowledge for carrying out their safety appointments effectively in their respective units.



RSAF Auditors' Conference 2022

The RSAF Auditors' Conference 2022 was held at Temasek Club on 26 Sep 2022. The conference allowed the participants to learn and share auditing knowledge and experiences. It also aimed to strengthen the auditors' identity and provide a platform to recognise the auditors' invaluable contributions towards strengthening the systems and processes in the RSAF.



IAF-RSAF Safety Exchange

As part of the RSAF's efforts to forge stronger safety ties with established Air Forces, AFI conducted the 7th Indian Air Force (IAF)-RSAF Safety Exchange via Video Teleconferencing on 21 Sep 2022.

The safety exchanges allowed safety personnel from the respective air forces to interact closely with one another and cross-share safety-related matters and issues.



RSAF-TNI AU Safety Exchange

The 19th RSAF-TNI AU Safety Exchange Visit (SEV) between the RSAF and the TNI AU was successfully conducted in Singapore from 16 to 18 Oct 2022.

HAFI COL Nick Wong hosted the TNI AU team in MINDEF GOMBAK and the SEV allowed the RSAF and the TNI AU to forge stronger safety links with each other.

The key topics covered during the meeting included an overview of both the RSAF's and the TNI AU's safety structures, safety management systems, accident rates and trends, and the sharing of investigation processes and case studies.



4 Pics 1 Word

What word can you derive from the 4 pics?



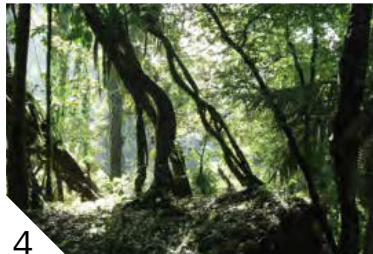
1



2



3



4

--	--	--	--	--	--

H	R	F	E	D	U	T
E	S	M	G	L	I	C



5



6



7



8

--	--	--	--	--	--

D	L	N	G	C	M	R
T	O	E	L	A	U	F

We welcome your feedback, contributions of safety-related stories, cartoons, suggestions, experiences, or concepts that you can share. Email us at apb_pub@defence.gov.sg with your full name and contact number.

The images used on this page are licensed under CC by 2.0, and links can be accessed via the digital version of this issue.

1. "Secure" by "Jeff Jarvis"
2. "secured" by "Peter Brown"
3. "Seat Belts" by "Vincenzo Petrucci"
4. "jungle" by "Léo Martinez"
5. "Danger" by "Patrick Milan"
6. "Danger" by "Jeremy Brooks."
7. "Keep out" by "Elijah Brand"
8. "Untitled" by "Rafaella Kouka"

Permission was granted by LOTUM GmbH to publish 4 Pics 1 WORD in **FOCUS**

WIN!
S\$30
 WORTH OF
 VOUCHERS!

Crossword

Email your answers with your Rank/Name, Unit, Contact number and last 4 digits of your NRIC to AFI (ME3 Su Xinyi) by 6 JAN 23. All correct entries will be balloted and 3 winners will receive S\$30 worth of NTUC FairPrice vouchers each.

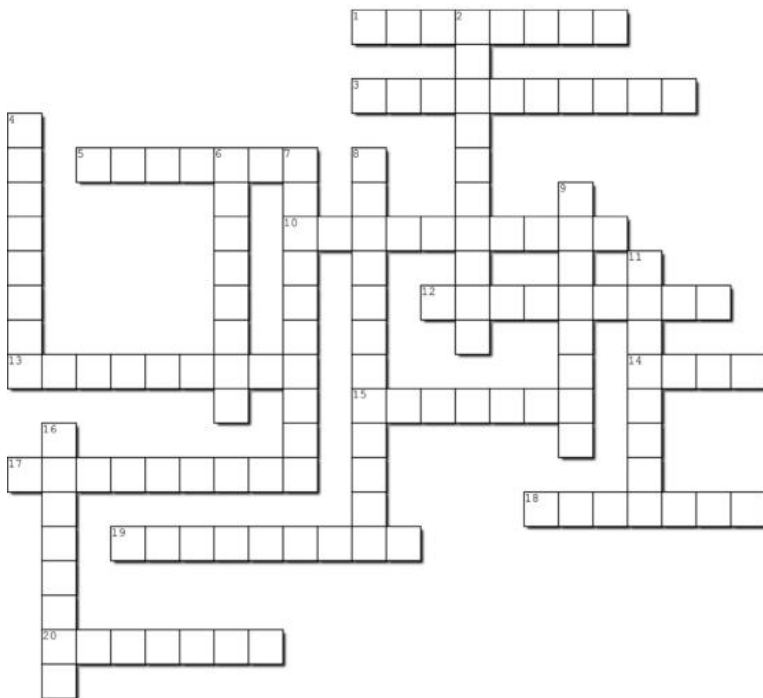
The crossword puzzle is open to all SAF personnel except personnel from AFI and members of the **FOCUS** Editorial Board.

FOCUS 112 WINNERS

ME2 Tan Shi Qiang,
 200 SQN

ME2 Tham Yoke Mun,
 AFTC/CES

ME3 Yeoh Ruo Lin,
 808 SQN/FCF



Across

1. These include _____ safety harnesses, stretchers and rescue baskets for winching training.
3. Without any hesitation, I immediately pulled her back on-board the aircraft and _____ the winch.
5. A strong Open Reporting culture will then provide the _____ and resources...
10. When Just Culture is first _____ to trainees,
12. The steady increase in the _____ of dog intrusions meant that we could no longer...
13. All these accumulated to form our strong fundamentals, consisting of extensive knowledge and strong _____
14. As we _____ our skills during training and put them to the test during operations
15. Our strong safety _____ has been built methodically over many...
17. To ensure that the detachment could cope with a _____ COVID-19
18. Consistent effort and emphasis is needed to maintain a strong safety culture and prevent it from _____ over time.
19. Open _____ has also been made simple and accessible to all.
20. We need to make it a habit to thoroughly _____ all open reports...

Down

2. _____ and instructors lead by example and ensure a safe environment...
4. I proposed this solution to my commanders and we obtained their support to see if this was _____ for TAB.
6. To keep the COVID-19 virus at bay, continual _____ was placed to ensure that all personnel adhered to safe distancing,
7. XCT 22 marked the resumption of the _____ air combat large force deployment involving...
8. While I am grateful for the awards, what gave me the most _____ was that I had a part to play...
9. Being assigned to a different location in the base _____ us to review procedures and...
11. These components are _____ to a strong safety culture which includes...
16. The _____ in a confined helicopter cabin space with passengers and equipment on-board...

DRINK »» OR «« DRIVE YOU DECIDE



**DON'T LEAVE IT TO CHANCE.
DON'T DRINK AND DRIVE.**

A community message
brought to you by:



**SINGAPORE
POLICE FORCE**
SAFEGUARDING EVERY DAY



**SINGAPORE
ROAD SAFETY
COUNCIL**

