



# KERIS TERBANG



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**VISION**  
TO DELIVER A ROBUST, RESPONSIVE AND  
RESOURCE EFFICIENT AIR FORCE

Assalamualaikum.

Welcome to Issue 5 of Keris Terbang.

2020 was a remarkably challenging year for the nation and the whole world in general. Although the pandemic has still not slowed down, we continue to push forward with both resilience and solidarity and adapt to this new "norm". Here we are ushering in another year with new challenges and new ways of doing things.

While we adjust to these new norms, the RBAirF keeps its head high and soldiers on by ensuring our mission is accomplished through teamwork, service above self and excellence.

2021 has also ushered in a few more surprises, one of which is the restructured team for Keris Terbang. We bid farewell to the previous Chief Editor Lt Col (U) Don Giovanni, the Deputy Chief Editor and a few key members of the team who had worked tirelessly in providing all of us with great articles to read through each quarter. We appreciate and thank you for your contributions to the magazine and wish you all the best in your future endeavours.

In this edition of Keris Terbang we have a feature interview with our Head of Flight Safety as well as an interview with a former RBAirF senior officer to discuss women in operations. We also look at changes in leadership, experiences on the field and many more exciting articles to read through.

We hope you enjoy our fifth instalment of Keris Terbang as we aspire to motivate the men and women of the RBAirF. A story and its lessons are only useful if shared, so do continue to support us by reading through and sharing your stories and also your pictures for our photo of the quarter section.

Wishing everyone a great year ahead, clear skies and calm winds. Stay safe!

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

*“Embracing change as part of continuous development towards a robust, responsive and resource efficient Air Force”*

First and foremost, I would like to convey my congratulations to the Keris Terbang team for putting life back into the Keris Terbang magazine. Since its revival last year, it has become a platform where anyone, be it the committee members, the writers, and the readers can benefit from.

With so many tasks at hand, some of us may not have the opportunity to participate in exercises and events that the organisation is involved in due to the varying vocations and work commitments. This is where the existence of Keris Terbang becomes valuable to us. It documents our involvement and enables us all to be in the know, read other people's experiences and learn a thing or two from their involvement.

The magazine covers such a wide range of articles (leadership, health and safety, airpower, religious reflections) that anyone who reads it will definitely learn something new. It raises our awareness of what else is going on in RBAirF and helps us understand the tasks of those of whom we don't work directly with in working towards the same objective.

With COVID-19 hitting the world hard, it has however brought about new norms to everyone's lives. The country has had to quickly shift towards a more virtual/online way of doing things to avoid any unnecessary physical contact. This includes (but not limited to) those in academia, medicine, and business. The same can be applied to us in the RBAirF where the new norms should not just be about adapting to effects of COVID-19 but also a time for us to reflect and reassess how we conduct our daily business. My advice to our personnel, myself included, is to remain abreast with the times, educate ourselves, and instill changes especially if those changes bring about efficiency and good results.

Looking ahead, I hope that the Keris Terbang team will keep up the momentum and continue to produce quality work. And to all our airmen and airwomen, I wish you all a good year ahead and pray that we all remain under His protection.

# ORGANISATIONAL RESILIENCE THINKING

Lt Col (U) Schufin

During last year's Flight Safety Day on 20 July 2020, I was given the opportunity to present any topic that would be suitable to the theme "Agile Flight Safety in a Challenging Environment".

After consultation with the officers in No. 5 Wing, I had played around the idea for a topic revolving around 'engineering' and 'resilience' with the intent to provide quick simple tips on how to build organisational resiliency. After much thought and some literature research, the above-mentioned topic was finally presented. This topic, I felt was especially relevant not only because the theme for that day represented one of the many functions of resilience, but also that in tackling almost all daily challenges in any organisation always begins by having the correct mindset, paradigm or way of thinking.

It was early days and with limited number of audiences in order to comply with the government's COVID-19 protocols for events and the associated technical difficulties with VTC during those times, I felt that it would do justice that an article of the same topic is contributed into this magazine to further socialise the main points.

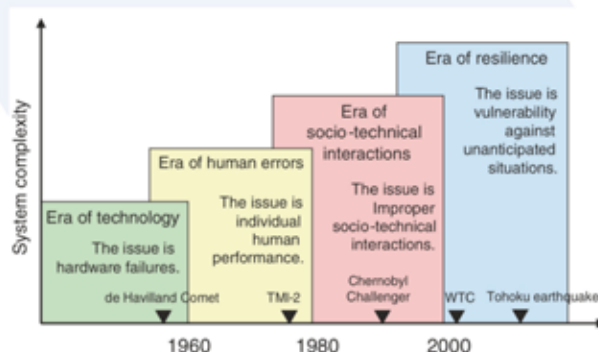
"To maintain and to provide airworthy aircraft to fulfil flying requirements (operational and training) at all times", is the mission of No. 5 Wing. The key word is **Airworthy**, and to me it is also about **Quality Assurance**, and with it comes a need to instill a culture of continuous improvement - a learning organisation, sharing of best practices, guided by the principles of transparency, traceability and accountability. We have regulations, manuals, SOPs, systems and processes, service bulletins and so on in place, all in all for our aspiration to be proactive, "to fix BEFORE it breaks" rather than "to fix WHEN it breaks", turning what we call Conditional - Unscheduled Maintenance into some kind of Scheduled - Predictive Maintenance.

**"Safety is a Dynamic Non-Event! We have to work very hard so that nothing happens"** (Professor James Reason), sums up the daily struggle in No. 5 Wing. In a nutshell, it is a hive

of activities with many human to human interactions and work done behind the scenes to make it happen - so that nothing happens. Looking ahead, forecasting and strategising depth maintenance operations to optimising manpower allocation and subsequently allocating flying hours, putting in early demand of spares for stocks, executing maintenance work packages, inspecting parts with meticulous detail, knowing that even a single micron of error can be disastrous, keeping technical records correct and up-to-date and the anticipation of unscheduled repairs. Channeled through to No.4 Wing which links in with Finance who monitors our budgetary usage, which links in to RBTS and other certified suppliers and repair organisations all around the world. Overall, the Engineering Standards Cell ensures that we capture best practices and do not deviate from engineering standards and procedures.

A safer and more resilient RBAirF implies that there will always be a learning curve for each of us. Although executive discussions have always alluded to the topic of organisational resilience, it is not yet frequently talked about holistically in an academic sense amongst peers and seniors. In short, the literature indicates that there are a multitude of ways and formulas to build in resiliency. But that study itself would take up more than just an article in this magazine. As such, I have taken the liberty to pick a few out of the many, which was found to be comprehensive and yet easy to understand.

## A SHIFT IN THE FOCAL POINT OF SYSTEMS SAFETY



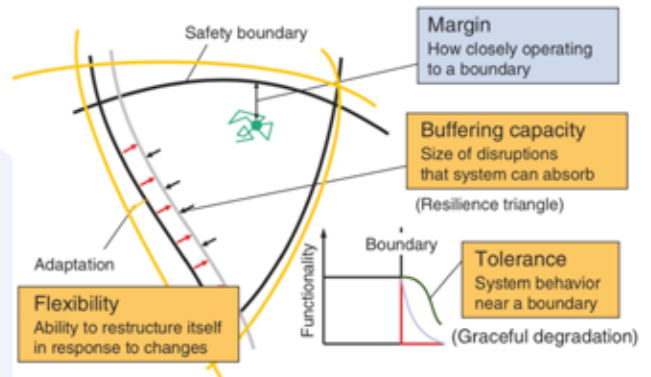
To set the scene in the global scheme of things, since half a century ago, failures were mostly focused onto the technical aspects. With the increasing complexities of systems, this focus shifted to human factors and subsequently the interaction between human and machine. Not that none of them exist anymore, but why complex systems fail nowadays is now mainly focused to the lack of resilience, or our vulnerability against unanticipated situations. It is not a perfect world, and there will always be unpredictabilities that we are not immune to. The thing is, the more we know about the future, the more we can be proactive. There will always be unforeseen crisis, mishaps, the obscure or ambiguous nature of operations, the weather and so on and so forth. For such eventualities, we enter into the realm of the unknown, when predicting the future becomes more like fortune telling, or should I say "Intelligent Guesswork".

### IN THEORY

"Be like a bamboo, bend but do not break" is a definition of resilience. It is to adjust easily to misfortune or change, or to adapt successfully to challenges. Strength, confidence, adaptability, agility, endurance, will power, ability to learn, flexibility and so on are all functions of resilience. It is about creating a hard exterior, having the ability to absorb and withstand extreme pressures. It is also about having a soft interior that allows for the flexibility to reconfigure and adapt to extreme conditions. It also means to anticipate and avoid and to restore and recover.

Individually, our own resiliencies are due to health, the quality of relationships, friendships, faith, meditation, family and so on. It creates engagement, meaning, achievement, vitality, and positivity in the physical, social, mental and emotional dimensions - Maslow hierarchy of needs. That said, individual resilience has similarities to organisational resilience. Low organisational resilience is evident when there are signs of talent loss, absenteeism, low morale, disengagement and loss of productivity. We become more resilient when we begin to master stress through stable and focused clarity, having organisational vitality, emotional engagement through resonant leadership and culture, flexibility, speed of execution and ultimately achieving our aspiration towards a

sustainable, world-class organisation.



Essentially, resilience means having to operate within the three margins of adaptability, safety and functionality. In crisis, when we suddenly find ourselves operating outside of any of these three boundaries, the faster we recover from damage indicates the strength of our resiliency.

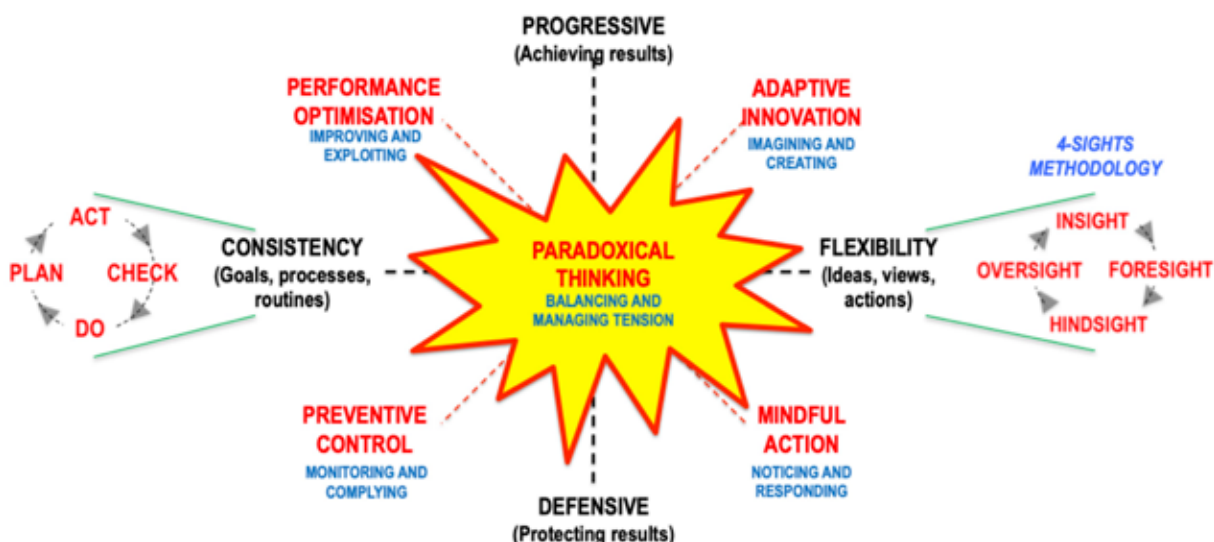


The main point here is about having high organisational elasticity, where it can be strengthened by having larger safety boundaries, increased functionality and those we allow for greater and more flexible room for adaptation. The latter represents our buffering capacity, our flexibility and ability to restructure ourselves in response to changes.

To illustrate the case of No. 5 Wing, faced with limited depth maintenance capabilities we are urged to constantly find ways to improve our functionality and adaptability, not just by creating new or to improve existing tools, but also the way we work, our processes, procedures, and even policies for cost effectiveness, faster turnaround times, improved accountability, traceability and transparency, and most of all without compromising quality and flight safety.

Last year, we have recorded the number of innovations and summed up the recurring savings at work resulting in improvements to in-house capabilities, omitting the need to send components for very expensive out-of-state repairs. Based on statistics and data on mean-time-between-failures of components and cost of repairs, revealed that we have and will save the RBAirF an estimate of half a million Brunei dollars every year. When we include the savings from improvements which were for non-recurring on-condition component servicing, very roughly we have saved around two million Brunei dollars last year alone. Most importantly, by doing it locally we have reduced the turnaround time drastically, *Alhamdulillah*.

### THE ORGANISATIONAL RESILIENCE “TENSION QUADRANT”



To begin to strengthen our organisational resilience, we must first understand how we should think about organisational resilience. A study by BSI and Cranfield School of Management in the UK has identified that high performing organisations inherently adopt two core drivers at the vertical axis, and two core approaches at the horizontal axis to organisational resilience thinking.

The first driver is the **Defensive agenda**, *stopping bad things from happening*; and its opposite second driver is the **Progressive agenda**, *making good things happen*. The two approaches to this is **Consistency**, maintaining current practices - *doing things better*; and its opposite approach, **Flexibility** is about developing new, improved practices - *doing better things*. This results in the four Driver - Approach quadrants to organisational resilience thinking as below.

**Preventive Control** is about having systems and processes in place. **Mindful Action** is about being alert, attentive, careful, and mindful of what we were doing. Noticing problems in the surroundings, able to raise concerns and where those concerns are listened to and having people who are empowered to act. The online RBAirF Occurrence Reporting and the RBAF Hazard Observation Cards were designed to encourage this. **Performance Optimisation** is about the organisation doing what it does with existing technologies and processes, but doing it better; and **Adaptive Innovation** is very much about doing something different - doing better things. Not to say that we are not doing all of this anyway, but we must realize that all sides are always in tension with each other.

To explain, when faced with crisis, the tendency for most organisations is to maintain the consistency approach and to retreat into the bottom left quadrant by putting more systems and processes in place, controlling resources and people even more. However, this unintentionally drives out the flexibility approach that is needed to perform well in a dynamic and changing environment.

Likewise in the opposite sense, when an organisation embarks on any new undertaking in the form of projects, capability acquisition, initiatives or anything new and innovative, there usually comes along with it the excitement, eagerness and pressure that can unintentionally drive out the consistency approach. To rush things through, to not think things thoroughly, skipping 'obvious' protocols, overlooking basic well-established processes and procedures which exists for good reasons, all of which will consequently risk ourselves being called back into account for possible negligence in any future audits.

The 'fifth' quadrant on **Paradoxical Thinking** is thus needed to be both consistent and flexible - to balance and manage these tensions for a more holistic, fit for purpose approach in the context of the challenges faced by the RBAirF and the RBAF as a whole. So, if we find ourselves preoccupied with just one particular perspective on organisational resilience thinking, that probably means that there will be some blind spots and some weaknesses that we are not identifying.

#### **EMPHASIZING THE FLEXIBILITY APPROACH: THE 4-SIGHTS METHODOLOGY**

Traditionally, organisations are good at being consistent using the Plan - Do - Check - Act methodology. However, there is an additional methodology that will drive the flexibility agenda and improve our resilience, and it is the 4-Sights Methodology. **Foresight** is about **anticipation**, knowing what to expect, anticipating the threats and opportunities that we will face in the future. **Insight** is about **response**, knowing what to do and to understand our present conditions, what the situation is and how people are behaving. **Oversight** is about **monitoring**, knowing what to look for, measuring and monitoring the systems and having the checks and balances in place. It is essentially the same with the 'Check' in the consistency approach. **Hindsight** is about **learning**, knowing what has happened and learning from experience.

The recommendations from the Charles Haddon Cave Report, post the tragic air accident of the RAF Nimrod above Afghanistan airspace in September 2006 and adopted in 2009 resulted in a huge paradigm shift in the RAF. An article regarding this topic

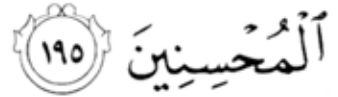
in "The RAF Total Safety Magazine, Air Clues" (Issue 22), commended that a lot has been done, but it was also admitted that a lot more still needs to be done. But overall, it has helped promote the necessary Questioning, Reporting and Learning aspects of an **Engaged Safety Culture** in the RAF. On reflection, this shift in mindset shows all the characteristics and emphasis of the Flexibility approach - Mindful Action and Adaptive Innovation and in some ways driven using the 4-Sights methodology for a more resilient RAF organisation.

On Mindful Action, we learn that one of the basic principles of resilience is that safety is not the absence of failures and incidents, but rather the presence of actions, behaviours and culture. Last year's RBAirF Flight Safety annual report on Occurrence Reporting indicates that most Occurrence Reports were technical in nature. While the BAF700 aircraft document remains the primary document for any reporting of technical snags, Occurrence Reporting complements this and should not be vice-versa. The latter remains a good avenue to study trends and identify commonly reported areas where there could potentially be deeper latent root causes of occurrence. Lack of Occurrence Reports by technicians or engineers are probably due to our tendency to fix right away and move on. "*Wisdom only comes after Hindsight*" - by employing the 4-Sights Methodology, I would implore our engineers and technicians to report what could have happened but did not happen because we did something about it. There is greater value and lessons that can be learnt from 'near-misses' because not only that they can act like safety 'vaccines' for the RBAirF, but also because they happen more often than actual systematic failures and they provide a lot more data on latent failures. They can also act as powerful reminder of hazards to keep us at a constant sense of unease that is needed to provide resilience in a system. Learning with hindsight and applying oversight will definitely promote the enhanced insight and foresight, which ultimately can have a positive side effect on the culture of the organisation and sending the message that admitting to making a mistake is acceptable and encouraged.

## CONCLUSION

The key message here is that we want to build resiliency in the RBAirF by cultivating a healthy culture of innovation and a commitment to continuous learning and productivity as a way of life and to uphold the prestige of this organisation as one which is proactive and dynamic. We need to self reflect to think about what we should be, our purpose, what went well and what could be done better. Allah s.w.t. says in Verse 195, Surah Al Baqarah:

وَأَنْفِقُوا فِي سَبِيلِ اللَّهِ وَلَا تُلْقُوا بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ وَأَحْسِنُوا إِنَّ اللَّهَ يُحِبُّ  
 الْمُحْسِنِينَ



*Translation by Sahih International: And spend in the way of Allah and do not throw [yourselves] with your [own] hands into destruction [by refraining]. And do good; indeed, Allah loves the doers of good.*

A timeless and all-encompassing verse for humanity. In the RBAirF sense, what this translates to is Flight Safety, Health & Safety; Managing Risks are all literally in our hands. Safety first. Safety is everybody's responsibility and continuous improvements, no matter how small or how big are all implied to in this verse.

To conclude, the key to Organisational Resilience is to be able to operate within the boundaries of adaptability, safety and functionality. To expand the boundaries by striving for consistency and flexibility and managing the inherent tensions between them, stopping bad things from happening and making good things happen not only by doing things better, but also by doing better things. Introducing the 4-Sights methodology, promoting quality and innovation, leading to operational effectiveness. In the end, we may ask ourselves, how do we know if we have achieved Organisational Resilience? At this point, I will suggest that Organisational Resilience is a never-ending journey. It is something that is not static, but dynamic and must constantly be worked on so that we are always able to achieve the purpose of why we were established. Appreciation and gratitude go out to all the airmen and airwomen for the sacrifices, commitment and professionalism that have been given throughout the years. In the end, all our accomplishments and achievements does not belong to us. It belongs to Allah s.w.t. However, the struggle is ours, and we pray that Allah s.w.t protects us and helps us in this struggle. *Aamiin Ya Rabbal Alamin.*



## GPMG FIRING TRAINING

By: Lt (U) Fuad

The sound of the rotor blades can be heard from the ground, as the Blackhawk S-70i helicopter manoeuvres around the terrain, banking left and right. From the side of the aircraft, a crewman peers out the open gunner window, his hands resting on the handles of a General-Purpose Machine Gun (GPMG). As the helicopter comes to a stop and hovers, the crew barrages bullets onto a target on the ground, firing until the weapon has expended its supply of ammunition. The rattling sound of the gunfire echoes throughout the Field Firing Range (FFR).

11 Squadron held their Air-to-Ground GPMG firing training on the Blackhawk S-70i at the FFR, Penanjong Camp. The objectives were to train and enhance proficiency and maintain currency on the weapon system for the pilots, as well as, crewmen in conducting Air-to-Ground Firing. The week-long training session utilised the GPMG from the rear gunner window position. The GPMG has a simple design being belt-fed, gas-operated gun and fires the standard 7.62 mm round. This training tested the coordination between pilots and crewmen in engaging a target from a hovering position and moving aircraft.

The onset, by ensuring everyone is organised, trained, equipped and then led into the operating environment in a way that is instilled with confidence from day one. The RBAirF is counting on everyone to courageously lead, to deliver with clarity and focus on safely accomplishing any given mission. Once this is achieved, the end state will undoubtedly be accomplished.

The role of the GPMG firing is to provide direct and accurate suppression of fire for ground troops by engaging ground targets such as enemy infantry, military vehicles as well as other valuable targets. In Air Power, Height, Speed and Reach are the three main attributes associated with air assets.

Height can be exploited as the S-70i can manoeuvre with the vertical flexibility to avoid and evade the surface threats by exploiting the vertical dimension and at the same time be able to identify and suppress the enemy with the weapon on board.

The S-70i possesses Speed as well, to be able to respond almost instantly providing air support when required. At high ground or low, urban or jungle setting, the S-70i will be able to provide air support at any point on the surface of the earth. This is the Reach attribute. The continuation of the Air-to-Ground firing training will ensure the members of the 11 Squadron maintain this critical operational skill.



# FORWARD OPERATING BASE (FOB) DEPLOYMENT

By Cpt (U) Hamizan

The Forward Operating Base (FOB) Deployment was last carried out during *Hikmat Bersatu* (HB) II. This year in 2021, the Royal Brunei Air Force started off the year to set-up and establish an FOB at Tutong Camp. The responsibility to lead the deployment was given to the No. 1 Wing, Operations Group and closely supported by the Support Group. The aim of the deployment was to reassess the existing Standard Operating Procedure (SOP) documents to test its validity and feasibility in conducting daily operations from the FOB particularly its relevancy in the modern evolving operational setting. The deployment was carried out in the following phases:

- Phase 1: Preliminary and Planning
- Phase 2: Deployment
- Phase 3: Operations
- Phase 4: Return to Base

On Sunday, 10<sup>th</sup> January (D-Day) the actual FOB deployment has a different rhythm to it. Everyone was in their high spirits and in full-fledged setup during the deployment towards establishing Tutong camp. Appointment holders had the opportunity to discuss and address issues as a team, which made a big difference.

Daily operations were managed to be carried out in an orderly manner despite being in a relatively new unfamiliar environment. The observations made at the end of each day gave indication to a number of factors such as fatigue and maintenance of morale. These factors arise as a result of small separate pieces coming together such as comfort, ratio imbalance between facilities and people and it could have accumulated and led to major issues that would have had huge impacts on the efficiency and quality of carrying out duties, which ultimately could lead to breach of safety, if not properly attended to and addressed.

• EXERCISE •

The experience was an eye opener not just for the participants but also for everyone, including from the higher levels of management regarding carrying out orders. Despite these factors, it also helped to identify first hand the gaps and loopholes that could only be identified by being on the ground.

Nevertheless, it is all aimed towards the positive change and adaptation to a fast changing environment, not just focusing on conventional scenarios but also towards non-conventional threats in the future which has been acknowledged by the appointment holders in improving the current SOP for future deployments.

Each member of the Royal Brunei Air Force involved, ranging from the aircrews from No. 1 Wing, Base Defence troops from No. 2 Wing, Signal Squadron from No. 3 Wing, Logisticians from No. 4 Wing, Engineers from No. 5 Wing and Regimental Police from No. 6 Wing played their roles towards the success of the deployment. As the saying goes, with any organization. As the saying goes, the people are the most valuable asset.

Overall, the objectives of the deployment which was to practice and rehearse the theories within the SOP to prepare for future deployments and make adjustments where necessary have relatively been met. It is also hoped that these FOB deployments will continue to be a part of the RBAirF training calendar.



Administration and planning phase brief



Preparing for tasking



Support crew during the deployment

# REMEMBERING P.A.S.S.

By: Lt (U) Pg Afiq Ikram

## “P.A.S.S. CAN SAVE LIVES!”

It is crucial for every personnel to understand and be familiar with the use of fire extinguishers which are placed on every floor inside buildings. It is also important to note that there are various types of fire extinguishers each with their own suggested application to fight fire. This handheld device is a crucial tool and can help save multiple lives and extinguish small fires in emergency situations when used properly.

In the event of fire, all personnel inside a building are urged to evacuate to the fire assembly point that has been directed and designated by the Fire Warden on duty. It is also advisable to grab a fire extinguisher in case there is a small fire obstruction along the way and for any emergency situations. Additionally, if the person is trained and qualified, they can attend to and extinguish small fires. Therefore, it is imperative for all personnel to have this knowledge of using fire extinguisher by first understanding the procedure. Most fire extinguishers operate using the following **P.A.S.S.** technique:



Proper usage of fire extinguisher

**P** - PULL (By pulling the pin to release the locking mechanism and break the tamper seal).


**A** - AIM (Hold at the nozzle and point directly at the fire base).

**S** - SQUEEZE (Gently squeeze and grip onto the trigger to release the extinguishing agent).

**S** - SWEEP (Swing the nozzle from side to side at the base of the fire until it appears to be out. Watch the area. If the fire re-ignites, repeat again).

However, if you have the slightest doubt on the ability to fight the fire, it is advisable to EVACUATE IMMEDIATELY.

To better understand the different classes of fire extinguishers and its intended use, please refer to the diagram below.

 Type Extinguisher Type	Fire Type						Businesses that may need this type of Extinguisher
	Class A Organic Materials (e.g Paper & Coal)	Class B Flammable Liquids (e.g Petrol & Paint)	Class C Flammable Gases (e.g Butane & Methane)	Class D Flammable Metals (e.g Lithium & Magnesium)	Electrical Electrical Equipment (e.g Computers & Servers)	Class F Cooking Oils (e.g Olive Oil & Fat)	
Water	✓	✗	✗	✗	✗	✗	- Schools - Hospitals - Offices - Shops
Foam	✓	✓	✗	✗	✗	✗	- Apartments - Hospitals - Offices - Shops
Dry Powder	✓	✓	✓	✓	✓	✗	- Garages - Welding - Boiler Rooms - LPG Plants
CO <sub>2</sub>	✗	✓	✗	✗	✓	✗	- Server Rooms - Offices
Wet Chemical	✓	✗	✗	✗	✗	✓	- Kitchens - Canteens

Fire extinguisher types and intended use



Commonly available fire extinguishers



## EXERCISE PERISAI BERSATU 2021

By **Cpt (U) Zaki**

"ENDEX on 290100H Jan 2021. "Music to my ears when the Exercise Director also the Commanding Officer No 2 Wing, Lt Col (U) Awang Suhaimi bin Awang Jamali gave the order to pack up. The exercise truly was an eye opener, definitely an exercise that we can all ponder upon. A combined exercise that had not been conducted for a long time, and it surely will not be the last.

As an Air Defence Troop Commander, conducting a wing level exercise is way beyond my pay grade but nevertheless, it was like any other day, another stepping stone in my progressing career. As we like to say in the Regiment tongue, "Layan saja, alum cuba alum tahu". Both No 2 Wing (Air Regiment) officers and other ranks are groomed into this abnormal culture, and it is the right mindset and attitude to have no matter the vocation. This was my first time conducting an exercise, not to mention at a large scale and it is my pleasure to share the experience first-hand.

All administration and preparation had been done weeks prior to the exercise. Paperwork, meetings and more paperwork were the easy bits. My first and biggest challenge yet was to coordinate a storyline that balances the involvement of all specialists including Airspace Control Early Warning Squadron (ACEWS) from No 3 Wing and Regimental Police (RP) from No 6 Wing. Not all junior officers moreover some officers have the experience and opportunity to do so including myself. To think of it, I was glad that I had all three specialists in my team i.e. Air Defence, Base Defence and Drone Jammer. That way coordination was easy as cake and execution can be decentralised. An ease of mind to know that you can count on your senior ranks to independently execute the tasks at hand.

More than a few times, things didn't go as planned. Vehicle breakdowns and drones unable to fly due to rain are some of the day-to-day examples. In order to achieve the mission as Exercise Control (Ex Con), other than being decisive, it is also important to be flexible and quick on his feet. Being a realistic optimist, there is one thing that I always neglect – a contingency plan. Contingency plans have saved me from many setbacks in the past thus I can't emphasise how important it is to keep it handy. The world is never perfect especially the military world. Hence is why we tend to see a majority of soldiers are relatively pessimistic and I don't blame them. However seeing the negativity in things is one thing, but taking action to resolve the problem is the more desirable outcome.

***“There are no secrets to success. It is the result of preparation, hard work, learning from failure.” — Colin Powell.***

Geographically speaking, the weather was unpredictable throughout the week. Most days were searing hot, some days were pouring and other times it drizzled. Another key takeaway for future Ex Cons, always keeps a thunderbolt handy. The decision to pause exercise due to thunderstorms needs to be swift without hesitation as our air defence personnel are deployed at high-risk areas. One is never a fool to prepare ten safety measures, but he is truly ignorant to prepare only the least.



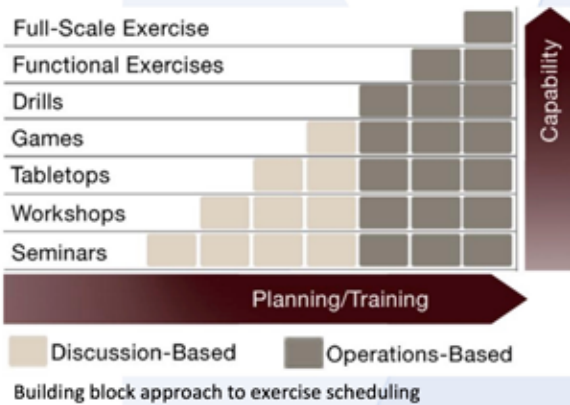
Commander RBAirF listening to the Command Post brief



Group photo of 236 Squadron exercise participants

Another risk to bear in mind is a bushfire. On the third day of exercise, the rear end of the Bukit Agok firing range caught fire and it was so hectic that I took a trip to Piccadilly Circus. When I came back to my senses, paused the exercise and immediately ordered to evacuate all personnel within the vicinity. Sad to say we neglected the one percent chance of fire and not to mention that there was no safety officer appointed to rectify the situation. Furthermore there was no mitigation readied prior to the conduct, another key takeaway for future Ex Cons. Everyone was calling anyone they can get hold of and fortunately both Royal Brunei Air Force (RBAirF) and Civil Fire and Rescue Department responded to the matter. An overkill I might say but surely when it comes to safety, the more the merrier I guess. Post incident, a short debrief was given on safety and Immediate Action (IA) drills in case of another fire. Following that, a safety officer (OHS trained) was also assigned on the spot with an Incident Hazard Investigation Report to follow. It was undoubtedly a serious matter that No 2 Wing will not take lightly in the future.

• EXERCISE •



Apart from this unpredictability, there are also some issues worth mentioning from the operational perspective. A lot was due to the trial of the recently introduced Airspace management plan and outdated Base Defence plan, as well as the development of a new Drone Jammer Standard Operating Procedure (SOP).

In addition to that, it has been more than one year that we have not conducted any exercise due to the outbreak of COVID-19. Veritably we expected issues was bound to happen thus the conduct of Tabletop exercise (TTX) and Command post exercise (CPX), a week prior to the Field Training Exercise (FTX).



Delivery of Air Defence orders

Again a significant takeaway to consider prior to conducting a full-scale exercise is the building block approach towards exercise scheduling. However, the TTX was deemed insufficient and the aim of the exercise was only partially accomplished. Therefore the collaboration will further be trialled at the squadron level prior to major exercises in the near future. A thing to note as well as the gap between conducting TTX and FTX which was considered too close apart making it difficult to reflect on any issues at hand.

Post-exercise took longer than expected – about 13 hrs total to finish up. This was due to the lack of time management and prioritisation of tasking by leaders at all level. Post exercise, first priority will always be weapons, ammunitions and pyrotechnics, followed by STAR Items (eg. NVG, Anti-lightning & other equipment). It was my job to ensure everything and everyone is accounted for before dismissal. However only then did I realise, that only ten percent of the total ammunition were used throughout the exercise. The lawful but dreary thing to do was to return the rest of unused ammunitions back to the ammunition store, and so I did it. A good example of “this is what we are accustomed to” scenario does not apply all the time. Another main takeaway from the above is to always ensure everything is carefully thought of from the start inclusive of all A, Q and G up to the smallest detail possible.

One of the many things that made the exercise smooth sailing was the division of tasks into administration and operation. Administration and logistic requirements including VIP visits were handled by outgoing No 2 Wing Administration Officer, Cpt (U) Mohd Yusran bin Isak and on the other hand, I was able to fully focus my attention on Operations. Apart from that, the exercise would have been at par with “The Last Air Bender 2010” movie – downright disaster, if it wasn’t for the continuous guidance and support from our competent senior officers. Many thanks to Maj (U) Amierul Halpi bin Talip and Maj (U) Muhd Isyhak bin Haji Ismail for making it a breeze.

Lots of grumbling and complaints were heard throughout the exercise, mostly about the unconventional way of conduct and needless to say sleepless nights. On the other hand, if smiles were seen instead, then there is certainly something wrong with the exercise. The Commanding Officer No 2 Wing’s final comment was “The best way to end an exercise, is to say that we are not good enough. That is the only way we can improve, otherwise we will always be comfortable and complacent”. In the end, it is not by staying inside our comfort zone that pushes us to become better, but by going the extra mile only to fail and fail again, until success is finally earned.



## DEFENDING THE BASE!

By **Cpt (U) Mohd Yazin**

The Regimental Police (RP) under No 6 Wing is a specialised unit capable of operating across a wide range of Royal Brunei Air Force's (RBAirF's) operations. As the name implies, its primary role is to maintain the security of airbase, both in terms of personnel and assets whilst maintaining overall stability. Continuous training and equipment upgrades have allowed the RP personnel to perform their roles more efficiently and effectively.

Exercise Perisai Bersatu was the first exercise conducted in 2021 in collaboration with No 2 Wing. The exercise took part over a period of five days commencing from the 25<sup>th</sup> of January until the 29<sup>th</sup> of January 2021. The concept of the exercise was non-conventional warfare whereby participants from both No 6 Wing and No 2 Wing had the opportunity to test their proficiency, adapt to new concepts and technologies and more importantly to establish a joint Standard Operating Procedure (SOP) for a proposed centralised Base Defence Plan.

Throughout the five days, RP conducted their primary role as the first line of defence in ensuring the security of the airbase, particularly at the main gate area. The main gate can be considered as the critical point within RP's jurisdiction as it is the only single point of entry and exit for the base, thus requiring RP to perform a number of tasks including Vehicle Check Point (VCP) and visual observations. To further supplement the base security mission, routine patrols were also conducted with the support of 236 Squadron of No 2 Wing. In situations where a Safe Haven is to be activated in the airbase, the Base Commander will automatically entrust the RP to designate routes within the airbase for military personnel and VVIPs. This will then be disseminated to all relevant parties within the airbase.

With regards to incidents happening within the base such as bomb threats or suspicious activities, the RP's first response will be to secure and close the main gate to prevent the suspect from leaving the airbase. They will also be deployed immediately to the incident site to produce an outer cordon alongside 236 Squadron's inner cordon.

As for riots, the disposition of RP will be along the main gate with the initial purpose of preserving security and preventing breaches. 236 Squadron will then take over as anti-riot troops whereas RP will then act as the layer of protection behind 236 Squadron, providing support and replenishment where required.

The exercise has not only provided a platform for both No 6 Wing and No 2 Wing to not only enhance their joint cooperation, but also the opportunity to collectively develop new plans and procedures which are more relevant and suited to the current security threats. The personnel involved have also acknowledged the training values achieved such as improved communication, command and control, leadership qualities.

# FIT FOR RAMADHAN

BY CAPT (U) MOHD ALIFF



The Royal Brunei Air Force strives toward excellence by conducting missions to the highest standards as well as emphasising on safety especially with the risks that follow with air operations. With the upcoming month of Ramadhan, it is imperative that some of the focus shifts to managing the increased risks of fatigue when operating during the fasting month. This can be achieved by raising awareness of fatigue, proper planning of nutrition, activities and rest, along with vigilant monitoring of crews by squadron executives.

The risk of getting fatigued is present everyday. However, it is more pronounced during the fasting month. Firstly, Ramadhan is filled with activities such as late night prayers, Quran recitations and Suhoor (Early morning meals before the fasting starts), as well as failure to adjust the sleeping schedule. Hence, individuals tend to get less sleeping hours resulting to sleep deprivation.

Secondly, people tend to gorge during iftar, often with food bought from the annual Ramadhan market, which is usually not the best choice in terms of fuelling the body for optimal performance. The lack of sleep mixed in with effects from poor nutrition, individuals might just lack the motivation to exercise and become sedentary, more often than being too active during the fasting month. The combination of poor choices individuals make during Ramadhan significantly increases the risk of fatigue, however, this could surely be mitigated through proper planning and self-discipline. Here are some guidelines and recommendations on how to be fit for duty during Ramadhan.

## EAT HEALTHY

Eating highly nutritious diet contributes to optimal performance. Eating balanced and highly nutritious foods within the eating window, massively improves energy levels during the fast. Try eating a balance of complex carbohydrates, lean proteins and a serving of healthy fats for the daily meals.

## HYDRATE

Drink at least 2 Liters of water per day, taking sips throughout the allowed eating window. Studies show that dehydration even by 2% decreases mental acuity and productivity. Avoid caffeine as it is a natural diuretic, the body will lose more water from caffeine consumption.

# WHAT HAPPENS IF YOU STOP EXERCISING IN RAMADAN?



**1 NEGATIVE MOOD**  
If you exercise regularly, after just 2 weeks of suddenly stopping exercise, your mood can be negatively affected.



**2 FEELING FATIGUED**  
You may feel more lethargic and tired after quitting your exercise routine.



**3 LOSS OF CARDIO CAPACITY**  
Studies show a decrease in endurance and aerobic capacity after as little as 12 days of quitting working out.



**4 LOSS OF STRENGTH**  
Your muscular strength is more resilient than your cardio capacity, and it takes longer to lose it. But sports-specific muscular development can show deconditioning in as little as 2 weeks without exercise.



**5 IMPACTED COGNITIVE FUNCTION**  
Exercise withdrawal can result in decreased blood flow to areas of the brain in athletes, including the frontal lobes, which are involved in executive brain functions, such as planning.



**6 DECONDITIONING IN OLDER ADULTS**  
One study found that older adults may lose strength up to twice as fast as younger individuals.



**7 LOSS OF HABIT CONSISTENCY**  
Restarting after Ramadan inactivity, your performance may be worse, tough cardio will be even harder, and you may have experienced strength losses. This makes it very difficult to sustain motivation and consistency.





**AMANAH FITNESS**

**VISIT [WWW.RAMADANRESET.COM/EXERCISE](http://WWW.RAMADANRESET.COM/EXERCISE) TO LEARN HOW TO EXERCISE IN RAMADAN!**

## EXERCISE

Find time to exercise, Ramadhan should not be a reason to be sedentary. Get at least 30 to 45 minutes of exercise everyday, reducing the intensity around 40% less than usual. This would provide ample intensity and volume for one to still be physically active without the risk of fatigue. The training intensity should be enough for the body to easily recover from, preventing the body from overtraining which could lead to fatigue. The body will benefit greatly from this de-load month, giving it the necessary break for future intense training sessions post Ramadhan.

In terms of exercise timing, train at least 1 to 1.5 hours before iftar. Activities such as fast walks, slow jog or even light to moderate intensity resistance training are examples of physical activities that are well suited during the fasting month. If the only available time to train is at night, spare at least 2-3 hours before bed. Exercising closer to bedtime causes one to be mentally awake which might affect the scheduled sleep time.

## GET ENOUGH SLEEP

Studies show that moderate sleep deprivation, produces impairment equivalent to those of alcohol intoxication. These negative effects may and do lead to aviation errors and accidents. It varies from person to person, some individual need 8 hours of sleep per day but try to get at least 6 hours in to fully recover and function. Especially during Ramadhan when days are filled with late nights and early morning prayers, proper planning of the sleep schedule is required in order to get adequate hours of sleep without preventing individuals from performing the obligations of Ramadhan. For example, when planning to wake up early for tahajjud or Qiyamulail, sleep earlier than usual. Getting enough sleep impacts greatly on recovery and energy for the following day.

## EASE INTO IT

The body takes a few days to adapt to the new condition, set aside one or two weeks before the start of Ramadhan to practice and try to engage on how the body feels. Record daily journals on how the body reacts especially energy levels and mood, and just stick to what feels best. Take this practice run to experiment with nutrition, exercises and sleeping hours.

**ROYAL BRUNEI AIR FORCE**

# **FLIGHT SAFETY POSTER COMPETITION**

**HOW MUCH DO YOU CARE ABOUT  
SAFETY?**

**SUBMISSION DEADLINE  
18TH JUNE 2021**

## **HOW TO ENTER:**

- **Produce a Poster to illustrate any flight safety related matter and of any theme**
- **Poster must be in ENGLISH**
- **Entries must be submitted in PDF format**
- **A3 Printable**
- **No limit for submission per person**
- **Open to RBAirF personnel**



**PRIZES TO  
BE WON!**

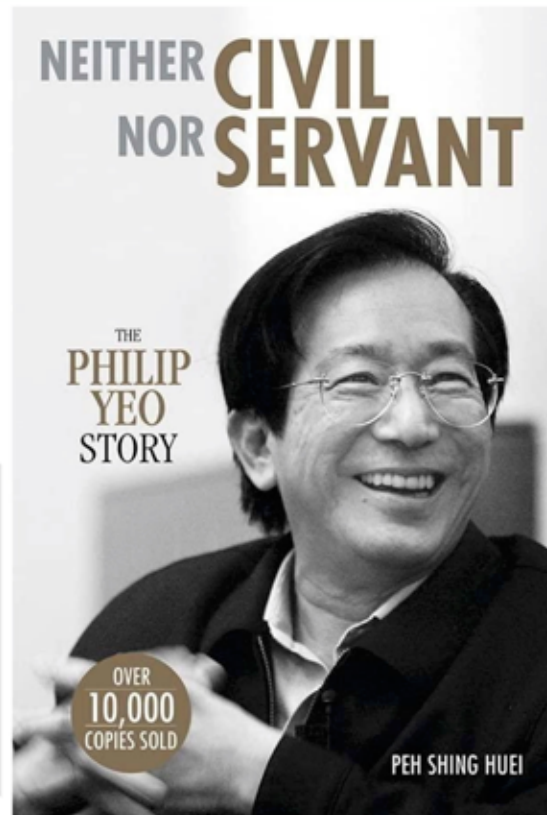
**SUBMIT POSTER TO:**

**RBAIRF.FLIGHTSAFETY@GMAIL.COM**

**FOR FURTHER INQUIRIES, CONTACT  
CPT (U) QAMARUL AT 7230130**

# BOOK REVIEW: A NEW JOURNEY

By: Cpt (U) Izdihar



"Don't call me a civil servant. I consider that an insult. I was neither civil nor servant." – Philip Yeo

OVER 10,000 COPIES SOLD

"That's not much is it? Who is this guy..." That was the first thought running through my head when I first picked up the book from my brother-in-law's bookshelf.

I turned the book around and started reading the synopsis with an open mind. By the time, I finished the last sentence I was already sold. I started to skim through the first few pages of the book and I realised I could not stop reading. I could not figure out if I was more intrigued by Philip Yeo himself, the magnitude of his challenges, his gung-ho style of getting things done, his contributions towards the overall success of Singapore as we all know today. I would personally say...it was all of the above.

Philip Yeo is unlike any civil servant. He prefers action over talk, cartoons over words and speed over due process. The maverick was blunt, direct and not afraid to challenge the status quo, earning him a reputation not only as one of Singapore's most accomplished government officials, but also among its most colorful bureaucrats. This was evident when Philip Yeo's grand vision of creating "The Sim Lim Square of Petrochemical" in which everything will be under one roof, and companies will feed off one another through "vertical integration" by leveraging on Singapore Megaport's massive distribution networks for international market. The most impressive part of this was...the island did not exist. Yet, Philip Yeo successfully negotiated a USD2 Billion deal with Exxon Mobil to invest in a petrochemical plant on a non-existent island. This dream costs Singapore government SGD7 Billion to create the island and today, it has brought Singapore SGD47 Billion in investments, 26,000 jobs and 70 interconnected companies with common services.

When I was reading through this book, 'Defending the Nation' chapter was the most exciting one for me personally. Not because of the title of the chapter of course, but rather it was his exploits and how Philip Yeo became the pioneer of Agency of Science, Technology and Research (A\*STAR). His 'adventure' in the early days as a Branch Head in MINDEF Logistics Division was comedic yet brilliant at the same time. A Branch Head with 4 staff and less than a year later, the branch had 250 'system engineers' without paying a single cent. Philip Yeo took the saying 'Even a broken clock is right twice a day' to a whole new level when he struck deals with SAF logistics commanding officers to transfer non-combat-fit (or Medical Board as we know it here) but engineering trained personnel to join his division. When Philip Yeo bought 151 AMX-B Tanks from the Swiss military, he took one of the tanks for his newly formed 'engineering team' to reverse engineer the entire tank and successfully developed Singapore's own tanks, the AMX-13 Tanks. This 'mini project' gave these non-combat-fit personnel a new lease of life on their career which was instrumental as it served as the catalyst for the rise of the world renowned ST Engineering as we all know today. In short, he was Tony Stark!

Neither Civil Nor Servant captures the half a century career of the former Economic Development Board chairman, telling the stories of brilliant achievements almost unparalleled in the history of the Singapore civil service. Yeo was the man who turned Batam into a household name in Singapore, created Jurong Island from seawater and put the country on the biomedical map globally with its iconic Biopolis. 20 years since the inception of Biopolis, what started off as a dream for Philip Yeo has now produced 292 patents per billion of spending in R&D (to put things into perspective, this is more than Harvard and MIT combined) and currently the home to 16,000 scientists, researchers and innovators.

The famous rule breaker bulldozed his way through the bureaucracy he was a part of, blazing new paths in a manner more akin to an entrepreneur than a civil servant. In the process, he offended more than a few and was never afraid to challenge naysayers publicly, regardless of status and background. In the hands of acclaimed journalist and author Peh Shing Huei, this authorised biography brings out Philip Yeo the private man behind the public figure and uncovers the behind-the-scene stories of some of Singapore's biggest post-independence military, economic and political adventures. Neither Civil Nor Servant is an engaging and enthralling book, offering fascinating insights into one of Singapore's most unconventional pioneer civil servants. When he was asked in one of the interviews on how will he be remembered in Singapore, he simply responded "Not my problem." Like him or not, Philip Yeo does not care. He only cares about what is best for the future of Singapore.

This book has been a very exciting read and a true page-turner for me personally. A no-holds-barred biography on the rise of a simple and private man's contributions to Singapore's economic growth. A highly recommended read for someone who wants to get into the brilliant mind of Philip Yeo. A true Singaporean Maverick.

**Rating: 4.5/5**





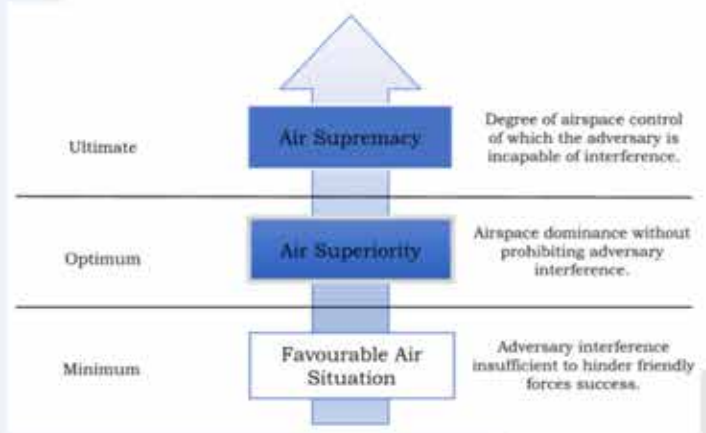
# AIR POWER

By Maj (U) Faiz

Air Power is delivered via its roles and missions. With reference to the RBAirF Air Power Doctrine, a *Role* outlines the core component of Air Power. Knowing the roles is the basis towards understanding Air Power. Missions on the other hand is the type of air operation carried out in adhering to the roles. While a sortie is the flight conducted by a single military aircraft during operations and training.

Air Power consists of four main roles. In this edition of *Keris Terbang*, we will look at the first role stated in the Doctrine – *Control of the Air*.

Achieving and maintaining a required degree of control of the air is vital for mission success. There are three recognised degrees of control. A pictorial view of each degree is seen in the diagram to the right.



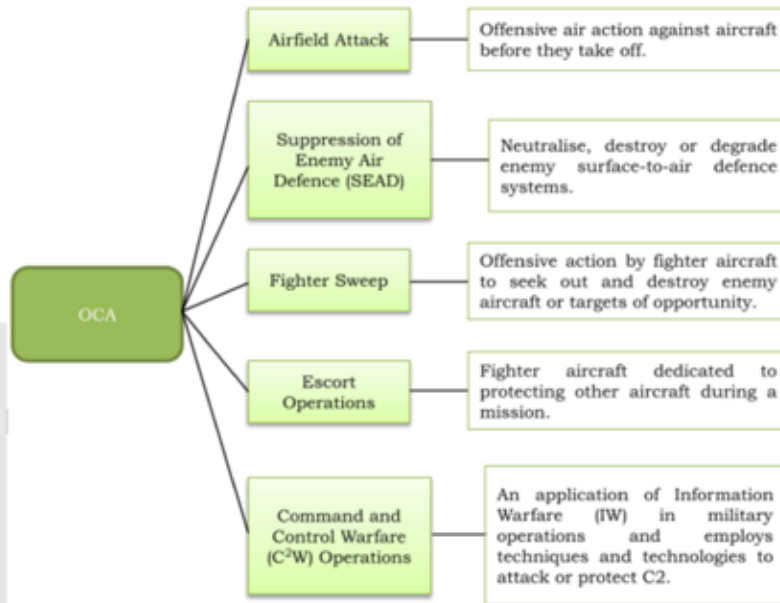
Degrees of Control of the Air



RBAirF Air Traffic Controllers exercising airspace control



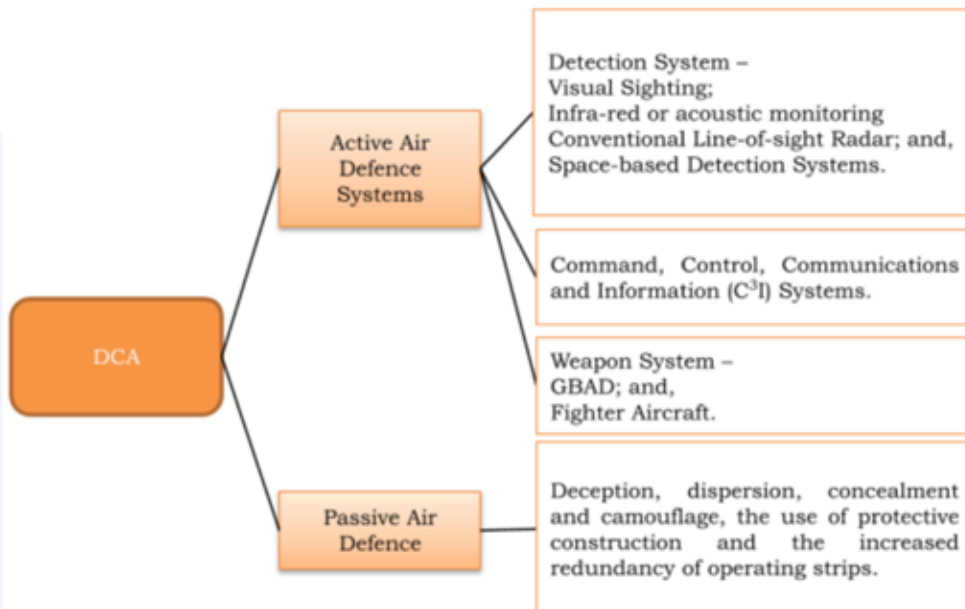
RBAirF DCA GBAD Capability training



Offensive Counter-Air Operations

In handling control of the air, airspace control is required for organisation and planning procedures. Having airspace control will mitigate and minimise risk and the effective use of the airspace. Be it positive control of airspace or procedural control of the airspace, both are important in maintaining the efficient and flexible use of airspace by differing air assets.

Control of the air is manageable through a combination of offensive and defensive measures. These measures are vital in counter-air operations. Counter-air operations consist of Offensive Counter Air (OCA) and Defensive Counter Air (DCA). For easy consumption, an extraction from the ADP 3.00 Air Operations Doctrinal Publication, intricately summarises these two operations below.



Defensive Counter-Air Operations

# WOMEN IN OPERATIONS

By: Lt (U) Athifah



Interviewee: 303 Lt Col (R) Hjh Wan Shahlimar

*“if you want to be a leader and safeguard your nation, RBAF is the entity and the place that will teach you perseverance, sustainability and brings you out of your comfort zone.”*

**KT: Puan, can you tell me about yourself and your background?**

In 1984, I joined the RBAF as 'other rank' with a vocation of Aircraft Technician specialising in Airframe and Engine. During that time, the Air Force (formerly known as Air Wing) collaborated with *Pusat Latihan Teknikal Brunei* (currently known as IBTE), where I was part of a rare classification and pioneer, for being the 1<sup>st</sup> batch of the field to be trained locally.

**KT: What motivated you to join the military and how long did you serve in the service?**

The motivation comes from wanting to be a pilot but I was lured by default to a different path. I did not get to achieve what I wanted because back then, there were no female pilots needed. I was then commissioned as an Officer in 1987 from the Royal Military Academy Sandhurst, England and was posted to RBN as Staff Operational Officer in 1993 and came back to RBAirF in 1994 until my retirement and served in the military for a good 29 years.

**KT: Do you recall your first days in the service? What was it like?**

During my first days of service, I was working with an operational helicopter under the supervision of engineers coming from different parts of the world. I was nervous and did not have the full confidence but with sheer dedication and strong determination, I was able to adapt quickly and get acquainted with the environment.



**KT: To which unit were you assigned to and how was the experience overall?**

The first unit I was assigned to was working on the shop floor of Bell 212, No. 1 Engine Squadron for 4 years, before I was commissioned as an Officer in 1987. Overall, the experience during my first assigned unit taught me that safety can't be compromised, the responsibilities that we had to carry as engineers and technicians were quite heart-wrenching at every passing moment.

**KT: How does your previous experiences contribute to where you are today?**

It has been 8 years since my retirement from the RBAF and I have been enjoying it ever since. Despite not being in the military, I still maintain to stay active, physically and mentally, ever since I first enrolled. I always had a passion for Netball and this has led me to contribute towards joining the Brunei Netball Association. It was just my first week of retirement and I am holding the position of President



**KT: Tell me about an accomplishment you weren't sure you could achieve, but you did.**

To name a few, I never thought I was going to be promoted to Lt Col and holding a CO's appointment leading 476 personnel with a majority of male in it. In the history of RBAF and RBAirF, I was the 1<sup>st</sup> Lady Officer to be given CO's appointment for Operational Unit and was the 1<sup>st</sup> Lady International Officer to attend the Command Staff Course I SAFTI Military Institute Singapore.

**KT: How do you spend your spare time during your retired life?**

Ever since retirement, my time has always been occupied with packed schedules and it differs from when I was working. I am quite content and relieved that now I have more time for my family.



**KT: What would you advice those who want to pursue a career in the Armed Forces?**

As a mother, I am proud to have my son who is in the RBAirF following my footsteps to serve our loving nation. My advice to those who wants to pursue a career in the Armed Forces; if you want to be a leader and safeguard your nation, RBAF is the entity and the place that will teach you perseverance, sustainability and brings you out of your comfort zone.



*"If you can adhere to the military's strict discipline, uphold military honour in all aspects of your active military duty, be willing to sacrifice all for your country, then this is the right career path for you."*

Interviewee: 431 Maj (R) Roszeda Hj Hamdan

**KT: Tell me about yourself and your background.**

My name is Maj (R) Roszeda Hj Hamdan, with an 'A' Level qualification retired as a RBAF military officer. My rank before retirement was Major, and last appointment was OC Admin Wing of RBAirF Headquarters. A RBAirF officer with a logistic background of more than 15 years' experience, and had the opportunity to hold posts such as OIC Supply Control Accounting Flight, OC Domestic Supply Flight, OC Supply Sqn and SO2 A4, RBAirF Headquarters.

**KT: What motivated you to join the military and how long did you serve in the service?**

My motivation to join the military first stemmed from an appreciation of the military uniform, as well as the discipline and commitment portrayed by military officers back then. Very few women applied and I thought, why not? I served for 21 years since my recruitment in 1992.

**KT: To which unit were you assigned to and how was the experience overall?**

After officially completing Officer Cadet Training in Singapore, we returned to Brunei and I was attached as the Platoon Commander/Admin Officer in the Women's Company for a year before being posted to the RBAirF Logistic Wing as the Technical Adjutant. My first tour was quite the challenging learning curve as I was the Technical Adjutant looking after the discipline including fitness and updating and monitoring the personnel records of Logistics Wing personnel with strength of about more than 400 military personnel of both Engineering and Supply background.





**KT: How do your previous experiences contribute to where you are today?**

As a former military officer, regardless of where you decide to go after you retire, you would and should have developed strong work ethics, commitment and discipline for your tasks. I carry those core beliefs even to this day. And also with a Logistic specialist background, attended courses in Singapore Armed Forces (Basic Logistic and Advance Logistic Course), RAF College Cranwell, UK (Supply Officer Training and Intermediate Logistic Management Course) and including Cataloguing Course in *Angkatan Tentera Malaysia*, I was able to understand more on the process, management of logistic for both daily routine as well as operational requirement.



**Can you relate your military career to what you are currently doing?**

Yes, as my experiences were mostly in the field of logistics throughout my military career, this has given me an added advantage to my current position as HOD in TEMD's Supply Control Cell Department. Since I understand the logistic procedure and processes and am able to identify the problems that No 4 Wing is currently facing, I try to work together with the No 4 Wing Logistic officers as well as procurement officers to find solutions to best resolve any logistical issues and to improve on the processes/approval, and hence to support the operational requirement of No. 5 Wing in aircraft serviceability.

**KT: What would you advice those who want to pursue a career in the Armed Forces?**

I would encourage and welcome them to join and be prepared for the challenges that will definitely come with it. If you can adhere to the military's strict discipline, uphold military honour in all aspects of your active military duty, be willing to sacrifice all for your country, then this is the right career path for you.



**KT: How do you spend your spare time during your retired life?**

Retirement has allowed me to slow down, to enjoy life a little bit more without the constraints of being on-call, to travel the world more as well as catching up with former military officers who had retired along with me.



# AB-INITIO TO AIRCREW COURSE

By: Lt (U) Adi Mahfuz



Aircrew composition in a helicopter typically comprise of pilots and crewmen. Both have their respective roles and responsibilities in order to ensure the successful conduct of the mission and most importantly the safety of all involved. Prior to being airborne, the rear crew has the responsibility to ensure the aircraft is fitted for the role of the mission, secure any oncoming passengers and determine placement of cargo. In the air, they are the extra set of eyes in sky, working closely with the pilots, they will help navigate towards the selected target. Lastly on the approach to the target, they become the voice of conscience, as they patter the pilot into the Landing Point.



QCI conducting an aircraft familiarisation class

The potential crewmen and crewwomen are to be trained under 73 Squadron, No. 7 Wing. Here they would have to undergo a 6-month training course consisting of different flying elements such as confined area training, as well as pattering and navigation. Prior to selection for the course, the candidates would have to go through a series of tests which included subjects in Mathematics, Physics, English as well as a Psychometric Test (Dominoes Test).



Ab-initio intake 33 taking entry test

Physical fitness is also an important criteria to be a crewman. The long hours and multiple daily taskings would require someone who is not only physically but also mentally fit in addition to possessing extensive mental capacity and situational awareness. Like most professions, it is very challenging and demands the highest commitment and motivation to be an aircrew. Anything that is worth working for usually is. To be able to have the sky as your office is something to look forward to and all the course participants hope to finish the course with flying colours.

"The most challenging part is when we were given a lot of task in one go, the constant pressure and at the same time having to learn new things. The most difficult task was when we had to navigate our flying route accurately with our very limited experience" – ab-initio of intake 34.

# BASIC AND ADVANCED JRT COURSE AND JUNGLE NAVIGATION

By: Lt (U) Akmal Izzat



TEMBURONG, MONDAY 1<sup>ST</sup> MARCH 2021 - 13 members from the Parachute Airborne Tactical Delivery Unit (PATDU), 31 Squadron along with 2 members from the Signal Squadron and a member from the Medical Reception Station (MRS) combat service support, have completed their basic and advanced course in Jungle Rescue Training (JRT) which lasted for three weeks starting from 15 February 2021 to 8 March 2021. The course was divided into two phases. Phase 1 comprised of theoretical and practical lessons for two weeks at the Rimba Air Base. Consequently, Phase 2 involved a week's training in the Temburong jungle with the aim of producing personnel who are proficient in Search and Rescue (SAR) operations in the jungle. Jungle SAR aims to rescue distressed personnel in remote areas that are not accessible by land transport and also to give early medical treatment to preserve lives before being transported to the nearest medical centre.

The course started with a briefing on the mission procedures in SAR for the victims of aircraft crashes in the jungle with the use of JRT equipment. The fundamental component of the course was to have participants develop the ability to implement the procedures effectively and safely in the given scenario. These procedures included being able to execute the Single Rope Abseiling (SRA) procedure – particularly using the Marlow rope and safety harness found typically in an aircraft, Tripod Rescue – lowering and rising, assign specific area for the wounded – LP clearance, administering basic first aid, operating the RF 5800V HH radio, handle pyrotechnics, map reading and navigation throughout the jungle.



The Jungle Rescue Team (JRT) performing a Single Rope Abseiling (SRA) descent using marlow rope in a safe area near the scene of the accident



Navigating towards the scene of accident in teams



**EXCLUSIVE INTERVIEW WITH OUR LOAN SERVICE OFFICER LT COL ROB JOLY, SO1 AVIATION SAFETY FOR ROYAL BRUNEI AIR FORCE**

Lt Col Rob Joly, a Loan Service Officer from the Royal Air Force (RAF), joined the Royal Brunei Air Force (RBAirF) family in August 2018. He has served with the RAF for 29 years and has been in numerous overseas tours in countries such as Germany, Netherlands, the Middle East, the Falkland Islands and Bosnia Herzegovina. He then worked with RBAirF within the Inspectorate Unit as Head of Aviation Safety. Lt Col Rob Joly finished his RBAirF tour in April 2021.

Keris Terbang Committee had the pleasure to sneak a farewell interview with sir Rob and he has shared some insights of his career with the RBAirF.

**KT: Time really flies sir and it feels so sudden that we already have to bid you farewell. We really hope you and your wife had a pleasant stay so far.**

LTC Rob Joly: Our time living and working in Brunei has been simply fantastic. The 2 years and 8 months has flown by! We have been lucky enough to explore the primary jungle of Brunei – it is absolutely beautiful, and hot – and also the wider parts of South East Asia – before the pandemic struck.

**KT: Sir, always been curious, how did you come to RBAirF? Is it through some sort of RAF oversea detachment program?**

LTC Rob Joly: The SO1 Flight Safety post is rotated through different RAF Officer Branches, including Flying, Engineering and Operations. I was lucky enough to apply for the opportunity when it was advertised for the Engineer Branch back in 2017. The advantage to the RBAirF of having the post filled by different branches is that it gets a different safety perspective from each successive incumbent.



Flight Safety Team

*LTC Rob Joly: 3 Top Tips. Enjoy every single day of your life as if it were your last – **Seize the Day**. Push yourself outside of your professional and personal comfort zone – **Who Dares Wins**. And finally, especially in the context of the global pandemic – **Stay Safe**.*

**KT: So how did you find your tour in Brunei so far?**

LTC Rob Joly: Professionally very challenging, a big portfolio to grasp with each pillar of the Safety Management System requiring significant proactive effort to manage. I have really enjoyed working with all the different aviation stakeholders in Brunei: Shell Aviation, His Majesty Sultan Flight, 7th Flight Army Air Corp, and Royal Singapore Air Force.

**KT: Besides maintaining the pillars of the Safety Management System, what do you think the main challenge is becoming the RBAirF Head of Aviation Safety?**

LTC Rob Joly: Maintaining good Situational Awareness (SA) of aviation matters across the operation: flying, engineering, operations and administration/training. Given that the operation is 24/7 day/night, the battle to keep good SA has been constant.



JABATAN PENKRANGAN  
NEGARA BRUNEI DARUSSALAM



Flight Safety Day 2020

**KT: In terms of flight safety, what do you think are the priorities for RBAirF at this point in time?**

LTC Rob Joly: Three things. Consolidation of good practice, further development of a Just Culture and a persistent drive to do the basics really well.

**KT: Sir, what do you think you will miss most from Brunei?**

LTC Rob Joly: I have to say it's the camaraderie, the high profile role, the adventure of tropical living, and seeing the sun every single day of the year!

**KT: And after this, what is your next appointment in RAF?**

LTC Rob Joly: I am going to be the Military Continuing Airworthiness Manager and Chief Air Engineer at RAF Valley, in North Wales. RAF Valley is the home to the RAF Top Gun school and operates a fleet of Hawk T Mk 2 and Texan T-6 Mk 1 training aircraft to deliver Basic and Advanced Flying Training for future RAF pilots.



Farewell gift for Lt Col Rob Joly

**KT: Sir, once again on behalf of RBAirF, we are really grateful for your contributions these past few years and in ensuring RBAirF's aviation operations are as safe as possible during your tenure. KT committee wishes you and family the very best in your next chapter and do stay safe.**

LTC Rob Joly: Thank you RBAirF and KT for the wonderful opportunity.

# CANNIBALISATION: IS IT A NECESSARY EVIL?

By Lt (U) Nur Aqidah Azmi

Cannibalisation or in RBAirF terms "robbing" was the topic of choice for No 5 Wing's flight safety talk that was held on Thursday, 11 February 2021.

Cannibalisation can be defined as removing a serviceable component from one aircraft (donor aircraft) to another (recipient aircraft) in order to make it serviceable. This is typically practiced as it is faster compared to waiting for the arrival of a spare component through the supply chain.

However, this is not a practice that RBAirF encourages as stated in the RBAirF Engineering Orders and Instructions (EOI), which is a document that should be strictly followed to ensure the safe operation of aircraft. It states that the transfer of aircraft components should be strictly controlled so as not to introduce unnecessary disturbance of serviceable aircraft systems. In addition, "robbing" can hide a shortfall in supply provisioning if the system is abused and the act of "robbing" should only be considered as a last resort solution and therefore be kept to a minimum.

Before cannibalisation is even opted for, there is a non-exhaustive list of factors to be taken into consideration as guided in the EOI. This includes taking into consideration whether cannibalising is of an utmost necessity for that particular aircraft operation, whether the aircraft component can be cannibalised, and how this act will affect the recovery of the donor aircraft.

Despite cannibalisation being a quick fix solution and allows engineers to meet their maintenance time frame, the drawbacks and risks that arise from such a practice should not be ignored. Cannibalisation has the potential to mechanically damage the aircraft system whilst in the process of gaining access to the component to be cannibalised, it increases maintenance workload with the added assurance tests and checks to be carried out to ensure safety, and it can result in the disturbance of maintenance progress and in turn prolong the down time of the donor aircraft. Additionally, it hides the issue of long lead times for spares and repairs.



One of the presenters during the talk

Generally, parts that are cannibalised are those that are of high value, no-go items i.e. an aircraft cannot fly without it, and parts that only undergo on-condition maintenance making it uneconomical to have stock piles of it in stores.

However, conducting a study and analysing the mean time between failure and mean time between repair of these aircraft components could help determine the quantity of items that can be kept in stock. This study could in turn shed some light on the performance reliability and enable RBAirF to have a better understanding of aircraft parts and create better blanket order agreements and G2G logistics agreements tailored to the organisation's specific needs.

As with any risks that arise in engineering related work, it must first be mitigated and managed as best as possible to ensure that the safety and airworthiness are not compromised. Additionally, it must be emphasised that cannibalisation is only a temporary solution as our assets are in fact meant to be flown and not to be stripped for parts.



Discussion session after the safety talk



## AIR DEFENCE INSTRUCTOR AND BASE DEFENCE INSTRUCTOR COURSES

By Cpt (U) Zaki

On the 1<sup>st</sup> of February 2021, the Air Defence Instructor (ADI) and Base Defence Instructor (BDI) courses were initiated by 77 Squadron, No 7 Wing. The courses, conducted simultaneously in order to meet the operational demands of No 2 Wing, aimed at producing capable and competent air and base defenders for the Royal Brunei Air Force (RBAirF) as a whole.

The ADI course was introduced in 2009 and has been running for four series prior to this, whereas the BDI course is a newly introduced course. The introduction of this new course signifies the continued development and expansion of 77 Squadron in line with its motto of "Striving Towards Excellence".

In order to achieve the set training objectives, both courses were designed with the first module focusing on instructor roles and responsibilities including subjects such as Method of Instruction (MOI) and Systems Approach to Training (SAT). The second module looks to develop further the instructors' command and staffing which comprise of areas such as understanding operational Standard Operating Procedures (SOPs) for the conduct of future exercises and also staff duties.

The courses were designed to be challenging especially during the first and second modules. The assessment during the first module was in the form of teaching a lesson and producing a SAT folder. Moving on from that, the second module focuses more on the operational aspect requiring participants to produce their own pocket handbook or aide memoire for operations.

During the final phase, the participants will be taught and assessed on the Individual Military Appreciation Process (IMAP) for both air and base defence operations. This is to ensure that both the air defence and base defence instructors will not only be competent during the operational stage but also in the planning stages. Specifically for the base defence instructors, they were also lessons on the Base Defence Plan. Whereas the air defence instructors were taught on of Air Defence Estimate.



BDI students during the assessment



## MISTRAL TECHNICIAN COURSE

By Lt (U) Suranizam

The Mistral Technician course is a compulsory requirement for Air Defence engineers to qualify them to perform engineering tasks on the Mistral Air Defence system operated by 238 Squadron, No 2 Wing. Upon completion of the course, participants will be equipped with knowledge and skills required as supervisors in handling Mistral maintenance and repairs.

The course is conducted over a period of four weeks consisting of mostly classroom-based lectures, presentations, exercises and as well as practical tests. It is conducted by 75 Squadron, No 7 Wing which works closely with 255 Squadron to ensure the relevancy of the course to current operations. The latest edition of the course was conducted from 25 February to 26 March 2021.

Among the subjects included in the syllabus are Introduction to the Mistral Manpad System, Mistral Test Set, Acquisition Tracking Practice System (ATPS), Overpressuriser Functions, ERICA MP as well as the Mistral Simulator System. The finale of the course is the conduct of Air Defence Command Post exercise where the participants were assessed on their critical thinking in dealing with problems associated when an operational Mistral system becomes faulty.



Practical extraction of Argon gas bottle



Troubleshooting faulty Mistral Test Set



Mistral Firing Station maintenance

# COMMANDING OFFICER NO. 6 WING HOTO CEREMONY

By Cpt (U) Alli Farid



On Friday, 19 March 2021, the Handing Over and Take Over (HOTO) Ceremony of the Commanding Officer (CO) of Number 6 Wing (No. 6 Wg) took place at the Air Movement Centre (AMC), RBAirF Base.

The outgoing CO, Lt Col (U) Don Giovanni Abdul Rahman assumed command since December 2019 and has been in command for 1 year and 6 months. He has been posted to the Public Relations Unit where he will take up the post as spokesperson.

The command of No. 6 Wg was taken over by Maj (U) Ak Hairol Iskhandar bin Pg Ahmad, who was previously the 2IC of No. 6 Wg.

The Keris Terbang team would like to wish both officers good luck and all the best for their upcoming endeavours!



Lt Col (U) Don Giovanni delivering his farewell speech



Signing of the HOTO document



Outgoing and Incoming COs with the HOTO document



# COMMANDING OFFICER NO. 7 WING HOTO CEREMONY

By Lt (U) Syarafur

The Handing Over and Take Over (HOTO) Ceremony for the Commanding Officer (CO) of Number 7 Wing (No. 7 Wg) took place on Friday, 26 March 2021 at the Air Movement Centre (AMC), RBAirF Base.

The post of the CO No. 7 Wg was taken over by Maj (U) Pg Mohd Zulhusmi bin Pg Mohd Roslan, who was previously the 2IC of No. 7 Wg. Throughout his tours he has assumed various posts, notably the OC of 73 Sqn, responsible for producing pilots for the RBAirF as well as being one of the Directing Staffs at the Defence Academy (DA).

He replaced the outgoing CO, Lt Col (U) Mohd Khairul bin Pehin Dato Hj Sulaiman, who has been posted to the DA where he will be taking the post as a Directing Staff.

All the best for the upcoming undertakings!



Both COs with the HOTO document



The outgoing CO of No. 7 Wg



## FIXED WING UNDERWATER ESCAPE TRAINING (FWUET)

By SSgt (U) Erwan

One of the mandatory courses for 15 Sqn aircrew is the Fixed Wing Underwater Escape Training (FWUET) course; one that both pilots and crew are to take once every 2 years in order to keep their knowledge and skills on escape procedures and actions to be taken in a ditched/capsized situation current and up to date.

The two-day course took place at MEGAMAS Training Company Sdn. Bhd., Kuala Belait where participants had to declare themselves medically fit prior to attending the course as it has been known that the training can be mentally and physically challenging for some.

The course included both classroom and practical based learning phases that covered topics on the hazards of operation over water, the aircraft safety, the ditching preparation and evacuation procedures, and the actions on for passenger evacuation, inflation of lifejackets, and capsizing in water. This also included getting to know the survival equipment brought on board and the relevant procedures needed to operate the equipment safely.

The practical based learning phase took place in the swimming pool, which gave participants the opportunity to practice the underwater egress procedures taught in class. Starting off with a refresher session on the proper operation of an Emergency Breathing System (EBS) in the event the aircraft had to ditch in water from an attempt at controlled ditching or uncontrolled water impact.

Egress training was carried out in a dunker, which is an aircraft fuselage simulator that can be submerged at various levels under water. It also has the capability to rotate 180 degrees but fortunately, only a 90-degree rotation is required for FWUET. It was a unanimous decision to preserve the simulator to ensure that rotary wing pilots and crew (who'll need to go through a 180-degree rotation during training) get the full experience and dunker performance (You're welcome 11, 12 and 14 Squadron).

Despite having attended the course multiple times before, the same nerve wrecking feeling is always felt. Let alone having to experience the situation in real life. Therefore, it's imperative that both pilots and crew are equipped with the knowledge, skills, and training to ensure that they are always prepared and can perform in the event of an emergency.

# PHOTO OF THE QUARTER

*Have you ever taken photos that you have always wanted to share with everyone? Send us your best photographs and we will showcase the best one every quarter of Keris Terbang!*

## ? How to Enter:

Please submit photographs via email to:

[abdqawiy.yakub@mindef.gov.bn](mailto:abdqawiy.yakub@mindef.gov.bn) along with a simple declaration in the email that you are the sole creator and copyright owner of the submitted photograph/s.

You may submit up to 3 photographs. In order to be judged by the editorial committee without being stretched or distorted, each photograph must be submitted in .jpeg, or .jpg format and no larger than 10 MB.

## ? Who may enter:

All RBAirF personnel, TEMD and Civillian staff may enter.

## ? What to enter:

Picture submissions must be RBAirF-related.

Any photograph taken with a mobile device (phone or tablet) is accepted. The contestant certifies that he/she is the sole creator and copyright owner of the submitted photograph.

Cropped photos are eligible. We will not accept digitally or otherwise enhanced or altered photos. Minor adjustments of pictures, including sharpening, contrast, toning, slight color adjustment and conversion to grayscale are acceptable.

For a photo in which a person is recognisable, you must be prepared to provide a model release from the subject in the form of permission, whether written or verbal. Photos that violate or infringe upon another person's rights, including but not limited to copyright, are not eligible.



**KERIS TERBANG**