

FLIGHT PATH

JULY 2022 / VOL. VII



RE ALIGNED BORNE



CG, PAF
MESSAGE



NEW SPEARHEAD
OF ATTACK



RESPONDERS TO
TRANSFORMERS



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CG, PAF MESSAGE

During these unprecedented and difficult times, I cannot help but be reminded of a quote from Peter: "And the God of all grace, who called you to his eternal glory in Christ, after you have suffered a little while, will himself restore you and make you strong, firm and steadfast." Peter's words remind us that hope is an act of God, built on the foundation of prayer and good works. Hope, then, is not about resilience or "pagtitiis" rather, that we pray to be serene to accept the things we cannot change, the courage to change the things we can, and the wisdom to know the difference. As Christ entrusted Peter to lead His Church, we are also entrusted by the Filipino people to be "Guardians of our Precious Skies, Bearers of Hope".



LTGEN CONNOR ANTHONY D CANLAS SR PAF

The Flight Plan 2040 is a culmination of the PAF's hopes. It is a product continuing from our efforts for organizational change, laid out painstakingly through the efforts of our PAF personnel, our leadership, enlisted personnel and our civilian human resource. They have given us both an anchor and a beacon for our future airmen, so we may be grounded on our core values as well as strive to be better.

Though the pandemic has shown us our current limitations, it has also given us a glimpse of our untapped potential as a Major Service, and showed us that we are able to reach places thought to be unreachable and that we are able to anticipate challenges thought not to come. As we begin our new journey towards becoming a learning, capability-driven organization, it is incumbent on our airmen to stay the course as detailed in our Flight Plan. By focusing on our areas of excellence all while exploring new possibilities, the PAF will soar to new heights.

The flight path we are to navigate will be always be full of uncertainties and surprises, but our noble purpose to serve and to deliver remains unchanged ever since we chose to be with the PAF. Hope challenges us to steer ourselves towards excellence and integrity. It is my fervent wish that this Flight Plan will open new doors for us to better serve our country and its people.

Ipagpatuloy lang natin ang matayog na pagLIPAD ng Hukbong Himpapawid!

A handwritten signature in white ink, appearing to read "Dane", written over a faint background of the PAF logo.

LTGEN CONNOR ANTHONY D CANLAS SR PAF
Commanding General, Philippine Air Force



COL JOYCELYN P ANTIG PAF (MNSA)

“Reborn” is a term that is often associated with reinvention, yet it holds a lot of weight. Most military organizations see it as a daunting, even unsurmountable task to undergo. However, it is simply a cat casting a lion’s shadow.

While some believe being reborn is tossing out the “old” — our previous roles, experiences, ethics and even work identity — and exchanging it for something completely new, it is not.

Instead, the best power of being reborn lies in leveraging everything we have ever done —the successes and failures. It taps into the very real, and often unappreciated and unarticulated skills, insights and expertise we have gained along the way. We never need to try to create a new personality from ash just to be reborn.

The trinity of the LEAD ONE, InSTEP and Padayon Command Frameworks has propelled the Philippine Air Force (PAF) into greater heights. Rallying behind these has been making the PAF more agile in its mandate as it continues to be a dependable partner in peace, security and nation building. This gave birth to the LIPAD PAF Command Framework.

**This is PAF
being reborn.**



This 7th edition of the Flight Path Magazine features all the Flight Plan accomplishments together with the LIPAD PAF Command Thrust. Despite all the challenges we have faced which are inevitable, we never accepted defeat as an option. As we become the lead Philippine force element, we are prepared in giving our nation and its leadership unmatched options to confront the challenges of an unpredictable future.

COL JOYCELYN P ANTIG PAF (MNSA)

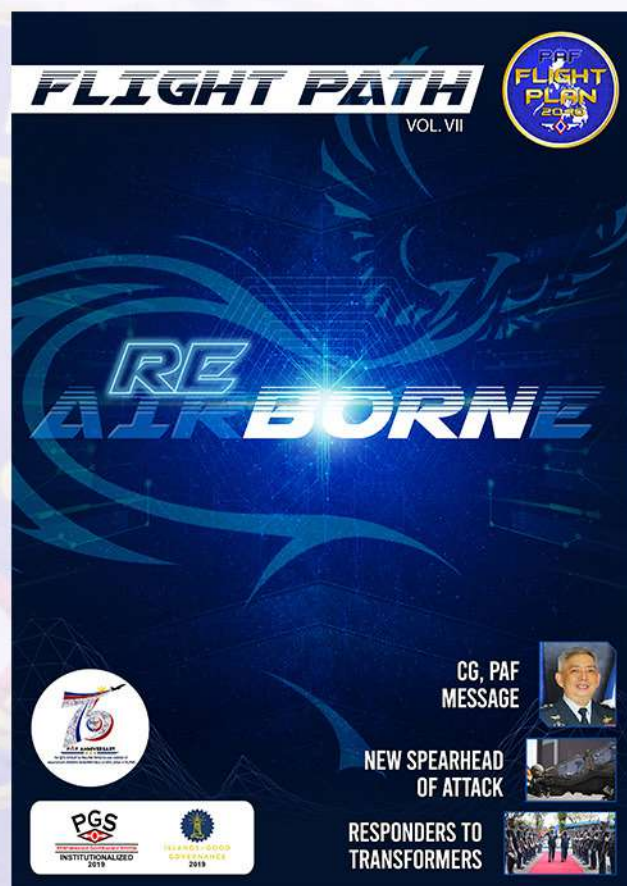
Chief, AFSMO

ABOUT THE COVER

Being airborne is something carried by the air, supported especially by aerodynamic forces. The Philippine Air Force (PAF) is always synonymous with being airborne based on the original nature of its operation. When air moves faster over the top of the aircraft's wing, the pressure of the air decreases. The difference in pressure on the top and bottom of the wing creates a force on the wing that lifts it up into the air.

In the middle of its sustained air operations for 75 years, the PAF, while "airborne", is suddenly being "reborn." Coinciding with its anniversary celebration, the PAF is being transformed with a new vision of becoming "A Credible and Agile Air Force Adaptable to Modern Warfare and Responsive."

Just as what the mythical bird "Phoenix" symbolizes, the PAF will be reborn, not from its ashes, but from its years of experience and successes as the defender of our nation through the control and exploitation of air and now, cyberspace and space domain.



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PAF 2040 VISION

**A Credible and Agile Air Force
Adaptable to Modern Warfare and
Responsive to National and Regional
Security and Development**

FLYING ACROSS THE RUBICON: THE PAF STRATEGY REFRESH 2022

Long-term development necessitates periodic lookbacks and evaluations to gauge how well an organization is treading its desired path. After all, an organization is still made up of people and people-made systems, and as such, perfection is conceptually impossible. The best organizations, especially those in service to the public, tend to rise because they have systems for self-reflection and knowledge management, and as such are actively learning from their successes and failures throughout their existence. The Philippine Air Force is more acutely aware of this than ever, as it aims to rise to the high level of service required by the people it serves. Thus, even in long-term strategies, it has implemented analyses to forge a better plan for the unwieldy future. This is the impetus of the PAF Flight Plan Strategy Refresh.



3-Day Strategic Thinking Workshop (07,08 &10 September 2021)

It was during the leadership of the former PAF, Commanding General, LTGEN PAREDES that the conduct of a Strategy Refresh began, in order to project our Flight Plan targets up to 2028, as well as identify the objectives for the extension of the Flight Plan up to 2040. AFSMO, together with the PAF Planning Staff, started determining the process for the Strategy Refresh through a review of the previous evaluation processes, a series of benchmarking sessions with the other Major Services, and seeking guidance and assistance in facilitation from a third-party agency



FLIGHT PLAN 2040 STRATEGY MAP

VISION: A Credible and Agile Air Force Adaptable to Modern Warfare and Responsive to National and Regional Security and Development

Enhanced **Air Operations Readiness**, Responsive to an Effective Joint and Combined Warfighting, Inter-Agency and Multi-National Operations

Sustain a Robust and Resilient Command, Control, Communications, and Cyberwarfare Systems	Fully Integrate Air Defense Capabilities to Detect, Identify, Intercept, and Neutralize Threats	Increase Capability for Situational Awareness and Information Dominance including Space Systems	Strengthen Capability for Search, Rescue, and Retrieval	Provide Enhanced Mobility Capability to Support Core Systems' Requirements	Enhance Air Strike and Special Operations Capabilities to Support AFP Operations
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Strengthen **Integrated Logistics Management and Support Systems**

Institutionalize a Strong Learning Organization and Leadership Culture	Ensure Responsiveness of Doctrines to AFP Joint & Combined Operations	Ensure a Responsive Organizational Structure	Develop Highly Skilled Personnel Capable for Multi-Domain Operations	Select, Place, and Sustain Values-driven & Professional PAF Personnel	Establish Generative Safety Culture in PAF	Strengthen and Integrate Reserve Force	Institutionalize a Robust Research & Development Capability	Optimize Stakeholder Engagement and Strategic Partnerships for Capability Development
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Enhance **Resource Generation Mechanism** to Support Flight Plan Objectives

MISSION: To organize, train, equip, maintain and provide forces to conduct prompt and sustained air operations to accomplish the AFP Mission.

CORE VALUES: Integrity, Service Above Self, Teamwork, Excellence, Professionalism

specializing in organizational strategy reviews and evaluations – Reyes Tacandong & Co. Strategic Processes, Inc. (RT & Co. SPI).

RT&Co SPI is a strategy management consulting and human capital development firm which has worked with numerous private organizations as well as public agencies such as DTI and the Philippine Navy. Their concept is based on the Strategic Thinking Model which determines an organization's strategic profile to effect Key Drivers the organization must pursue to reach its vision. The Strategic Thinking Model is an analogue to the Balanced Scorecard process that the PAF has already adopted in the implementation of the Flight Plan. The agency's mastery of the Balanced Scorecard, coupled with their homegrown tools and evaluation practices, served as a good fit for collaboration in dealing with the Refresh.

The Strategy Refresh was conducted in three (3) phases.

- **PHASE 1** consisted of a Structuring Meeting to properly engage the organization and create a baseline of information to go from, as well as to identify the critical participants for the process. Participants were briefed and coached on the data gathering required and the determination of the critical scenarios in the process. Its aim was to define the current operating model of the organization and explore the look of its future operating environment which will be crucial in the 3-day strategic thinking workshop;

- **PHASE 2** was intended to assess the forces, trends, opportunities, and threats in the external environment, and looking at how and how well the organization's current profile and services meet customer and other stakeholder needs, as well as determining how well it can respond to the future operating environment (onwards 2040). This culminated with the conduct of the 3-day Work session for Strategic Thinking to develop the Strategic Blueprint of the organization, which is to be the basis for the organization's Strategic Objectives; and lastly,

- **PHASE 3's** objectives was to implement critical issues review, strategic product/service innovation, and situation management (facilitated operational level decision-making) to tackle more complex critical issues and to envision the future of the PAF by translating critical outputs generated in phase 2 into documents necessary for governing the organization. It had thorough review of critical issues and innovation opportunities, entails translating that blueprint into the products we use currently: the Strategy Map, the Scorecard, and Strategic Initiatives.

The Strategy Refresh was attended by various PAF officers, enlisted personnel and civilian human resource, each representing PAF Staff, Offices, and Units numbering over (insert number of participants here). After each presentation, their outputs were interpellated by the CG, PAF and PAF Senior Leadership. Hence, the major outputs were:

- Strategic Assessment Report (Phase 2)
- Refreshed Strategy Map (Phase 2-3)

Moving forward with the approved outputs, the organization will now be able to tackle the remaining components of the Flight Plan, which are critical in monitoring and implementing the Flight Plan:

- Refreshed CG, PAF Scorecard (Phase 3)
- Refreshed Strategic Initiatives (Phase 3)
- Initiative Prioritization and Fund alignment (Phase 3)

As can be seen, the PAF Strategy Refresh Activities were meticulous and in-depth as the PAF plots its future. The paramount importance of the Flight Plan cannot be overstated as it will significantly contribute to the overall goal of charting the future course of the PAF in order to continue its role of as a partner of national development and regional stability.

Throughout the rigid journey of Strategy Refresh, we will be able to lay down the foundation for our strategic direction until 2040 and we will continue our transformation with Flight Plan 2040.

AUTHOR: Air Force Strategy Management Office



Foyer Honors rendered to LTGEN CONNOR ANTHONY D CANLAS SR PAF during the Reorganization and Activation Ceremony of AIBDC last 22 February 2022.

RESPONDERS TO TRANSFORMERS:

BIRTH OF THE AIR INSTALLATION AND BASE DEVELOPMENT COMMAND

Sixty-five (65) years ago, on 23 November 1956, a Wing was conceptualized to delineate the tactical functions of the 205th Composite Wing and the service support functions of maintaining the Nichols Air Base. But it was only on 1 August 1966 that the 520th Air Base Wing "Responders" was established and operationalized when logistical requirements were made available, whose main function was to provide security and maintain base-wide services and facilities in Nichols Air Base. Its first Wing Commander, COL RAFAEL N DIAZ, took the controls with the headquarters of the 205th Composite Wing. It served as its first home before moving to its new building situated at the old Andrews Avenue. The old 520th ABW thrived there for forty years until it transferred to its present headquarters inside Colonel Jesus Villamor Air Base.

For 55 years, it underwent several reorganizations; some changes were short-lived due to the demands of prevailing situations, while some stood the test of time. Similar to vibrant organizations, these changes were meant to adapt to how the Philippine Air Force changed through the years. The 520th Air Base Wing has been a witness and a host to the growth of the Headquarters of the Philippine Air Force, making sure that the seat of power of the Philippine Air Force remains secured, kept, and fortified.

The reorganization of 520th ABW is another milestone that does not necessarily mean the end but rather a transformation and a rebirth into a bigger organization whose tasks shall even be greater. The new Air Installation and Base Development Command "Transformers" will foster better opportunities by taking the lead across the archipelago in providing base support services to all PAF major bases, with the help of all the airbase groups. However, it is expected



Turnover of cased 520th ABW Unit Color to the Chief, Cultural and Historical Affairs during the Reorganization and Activation Ceremony of AIBDC.

that there will be significant changes, especially in terms of the command relationship of the airbase groups with their former parent units. Still, the very essence of its existence will remain the same. Further, the AIBDC will allow a centralized system of managing base support services and provide oversight on all base development projects in accordance with the PAF and AIBDC Flight Plan 2040.

The Command embraces its new role perfectly described by the letters that the AIBDC stands for

**AGILE,
INNOVATIVE,
BALANCE,
DEPENDABLE,
and CAPABLE.**

Foremost, every member of the AIBDC is urged to be AGILE by embracing changes and constantly adapting to the VUCA world. The second is to be INNOVATIVE by continuing to create something new or adopting new methods and approaches that can improve the performance of its mandate. The third is BALANCE. Everything that needs to be done is essential to have stability. The AIBDC needs to balance overseeing its day-to-day operations and to supervise its plans' realization. Fourth is DEPENDABLE. As a base service support provider of all PAF major bases, AIBDC must maintain its credibility as a reliable partner for peace and development to the best of its abilities and available resources. Last is to ensure that the AIBDC is truly CAPABLE by continuously enhancing its Doctrines, Organizations, Personnel Leadership, Training, Materiel, and Facilities.

As the former 520th ABW evolves into a more prominent organization, it will rise above the ashes of its predecessor like a Phoenix as it faces the challenges of rebirth. Real change entails sacrifices and a willingness to learn. Nonetheless, the Men and Women of the Air Installation and Base Development Command are resilient enough to overcome these challenges. **Ω**

AUTHOR: 2LT PATRICK L MUNAR PAF, AIBDC

BGEN MICHAEL J LORENZO PAF during the traditional unfurling and waving of Unit Color following the successful activation of Air Installation and Base Development Command.



NEW SPEARHEAD OF ATTACK

The years 2021 and 2022, despite the pandemic, are years full of hope and triumph for the modernization projects of the AFP. Despite the challenges, the newest addition in the PAF's attack air assets is now soaring the skies – the T-129 ATAK Helicopter. The arrival of the Philippines' first brand new dedicated attack helicopter marks a breakthrough in the performance of Surface Strike Missions by the PAF. It is expected to



boost further the PAF's capability to protect the state against insurgents and terrorists, complementing the capabilities of the existing PAF attack air assets.

The country has a pressing need for more lethal and precise strike capability; thus, its shortcomings in these areas during a five-month urban battle against terrorists and extremists in the City of Marawi in 2017. The lack of more lethal firepower and precision munitions slowed the ground troops' campaign to retake the City, resulting in an extended drive and significant collateral damage. These emerging security situations complicated by the evolving operational environment steered the Government to acquire "dedicated" attack assets with enhanced capabilities.

The acquisition of the "ATAK" helicopters is part of the priority projects under Horizon 2 of the AFP Modernization Program. The contract for acquisition of six (6) helicopters was signed by the AFP-DND and the Turkish Aerospace Industries (TAI) in mid-2020.

So far, the T-129 ATAK helicopter is the largest Attack Helicopter Acquisition Project, valued at almost a 13.7-Billion pesos. This acquisition follows a total package approach and includes complete Integrated Logistics Support (ILS) such as spare parts for two years of operation, training for pilots and crew, ground support equipment and tools for main and forward operating bases, technical support, and warranty.

The T-129 ATAK helicopters will fill in the gaps for the much-needed helicopters with multiple hardpoints for additional munitions loading, an extended range for broader coverage, faster speed



for a prompt response, increased night situational awareness, and enhanced target acquisition capability during focused military operations at night and in urban warfare. It will allow for more lethal and precise firepower to deliver during low to medium levels of conflict.

The T-129 ATAK is a day and night capable helicopter with a dual-engine speed of 140 knots. It has a range of 250 nautical miles that can extend to more than 400 nautical miles with auxiliary tanks installed.

The T-129 features an integrated targeting and cueing system with a sensor turret that contains electro-optical and infrared cameras with a laser designator and laser spot tracker.

Its Targeting Sight Unit captures high-quality video images and can multiple target tracking. This advanced targeting system calculates target position, distance, course, and speed parameters designated and/or measures the target range for accurate delivery of rockets and 20mm munitions.

The Helmet Integrated Cueing System generates a symbology for pilots to increase their situational awareness during day and night flying. It provides head tracking information which enables the helmet to be slaved to the Turreted Gun or Targeting Sight Unit for immediate target acquisition.

This dedicated attack helicopter is designed for counter-insurgency operations and can equip with a wide array of munitions. The most notable difference between the existing rotary attack helicopters of the 15SW and the T-129 ATAK is its five (5) hardpoints that can carry up to 750 kilograms of weapons and munitions. These include the 20-mm gun turret, rocket launchers, air-to-ground missiles, and short-range air-to-air missiles.

Equipped with integrated aircraft survivability equipment, it is built to operate in a challenging environment. Its electronic



CG, PAF accepting the T-129 ATAK Aircraft Records during the Turn-Over and Blessing Ceremony.

warfare system that can detect and dispense countermeasures against approaching missiles, combined with its capability to deliver stand-off munitions, makes the T-129 ATAK a dreadful helicopter capable of Suppressing Enemy Air Defense.

The first two (2) T-129s and its first batch of ILS were delivered via heavy cargo aircraft at Clark Air Base on 09 March 2022. The remaining four (4) aircraft will be delivered in 2023 and 2024.



Familiarization Flight of the CG, PAF

The T-129 ATAK helicopter, which was formally turned over to the PAF last 06 April 2022, will boost the MD-520 MGs, AH-1S Cobra, and AW-109AHs as rotary attack aircraft used by the PAF in day and night surface strike missions.

In 2021, the first batch of aircrew composed of four (4) pilots, three (3) maintenance officers, eight (8) mechanical technicians, four (4) weapons technicians, and four (4) avionics specialists completed their T-129 ATAK original equipment manufacturer training at the TAI Training Facility in Ankara, Turkey. TAI will train up to 13 pilots over the next two (2) years while Local Pilot Training of four (4)

locally Pilot-T-129 ATAK Armaments and Munitions Ground Academic Phase of Local Pilot Training Gunnery commenced last March 2022 and are expected to be completed soon.

Facility preparations such as repair and construction of hangarage and storage facilities and widening of helipads are in full swing and to be completed before the T-129 ATAK deployment.

The first two (2) helicopters will be operational in July 2022. They will be deployed to support combat operations in the Southern part of the country, performing roles such as day and night Close Air Support, Precision Strike, Deep Strike, Territorial Defense, Military Operations on Urban Terrain, and Air-to-Air Warfare.

As the 15th Strike Wing is "coming-in hot" towards realizing the PAF Flight Plan's Waypoint 2022, the full operationalization of the T-129 ATAK embodies the actualization of a modern and formidable Force capable of guarding the priority areas with a whole new level of lethality and precision.

AUTHOR:
Raptor Lead,
15th SW

A new surface strike force is at hand to give the enemies a fatal blow that they have never seen and felt before.



Visually Identified the Unknown track as a US Navy aircraft (P-8 Poseidon) with tail number LC336

COMMAND AND CONTROL SYSTEM FOR SECURED PHILIPPINE AIRSPACE

The finest FA-50PH jets of the Philippine Air Force are constantly on watch over our Philippine Air Defense Identification Zone (PADIZ) to all unknown aircraft flying without proper clearance. On 02 September 2021, the Philippine Air Defense Control Center (PADCC) issued a scramble order to one (1) element on-standby alert FA-50PH jets stationed at the Air Defense Alert Center (ADAC) in Basa Air Base, Pampanga. Its mission was to intercept the unknown aircraft for visual identification (ID) detected flying 83NM West of Bolinao, Pangasinan. The unknown aircraft was at 21,000 feet, flying with a speed of 265 knots, heading northeast.

Upon correlation, the Civil Aviation Authority of the Philippines (CAAP) classified it as an unknown aircraft having no flight plan and airspace clearance. Despite numerous challenges from the Air Defense Direction Center (ADDC) at Paredes Air Station (PAS), the unknown aircraft was unresponsive and continued heading North and accelerated its speed by up to 400 knots, and eventually exited the PADIZ. The FA-50PH jets were advised to terminate visual ID and was diverted to their regular mission of the day (Basic Fighter Maneuver Training) after the intercept.

The scramble-intercept mission of PAF FA-50s may be considered successful as it could have possibly forced the intruding aircraft to change course by heading north and increased its speed to 400 knots. The unknown aircraft exited the PADIZ, which may have sensed that a scramble was in effect.

In recognition of the PAF's efforts to successfully intercept intruding aircraft, the PADCC and ADC will continue to adhere to their mandated mission to **"conduct Air Defense operations in support of the AFP Mission."** Likewise, it will monitor air traffic movement, analyze all flight data received

ADC Battle Staff briefing during the actual scramble on 02 September 2021.



within the Philippine Air Defense Identification Zone (PADIZ), and perform identification procedures that utilize the acquired Air Defense Surveillance Radars and interceptors under the AFP Modernization program toward achieving our breakthrough goal of PAF Flight 2028.

GUARDIANS OF OUR PRECIOUS SKY

On 09 February 2021, two (2) FA-50 aircraft of the 5th Fighter Wing conducted a Visual Identification Mission on Multiple Tracks detected flying 59NM West of Lubang Island, Mindoro Occidental.

The Philippine Air Force, through the Air Defense Direction Center (ADDC), Gozar Air

Station (GAS), and Philippine Air Defense Control Center (PADCC), detected an Unknown Track (UT) flying 59NM West of Lubang Island. PAF immediately executed the established Air Defense protocols and performed its mission.

“Guarding our Precious Sky”

Data Correlation of Track of Interest (TOI) at Civil Military Liaison (CML), CAAP

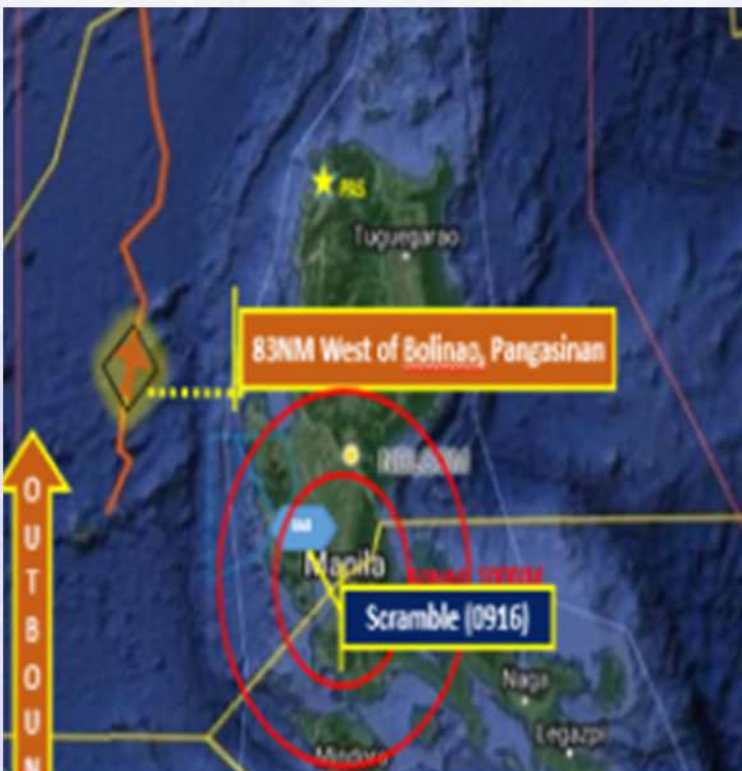


The Air Defense protocol started with the Air Weapons Controller (AWC) of ADCC executing radio call challenges over guard frequencies to warn the pilot of the Unknown Track and require information related to its identification and intention. Despite the multiple radio challenges faced by the AWC, the pilot of the Unknown Track remained uncooperative and unresponsive, which prompted the Battle Staff to alert one (1) element of FA-50PH aircraft for a possible scramble for visual identification.

Within five minutes after being alerted, the two (2) FA-50PH aircraft with callsign BULLDOG 31 started the engine and swiftly took off to intercept and visually identify the unknown track. BULLDOG 31 carefully closed in and visually identified the unknown track as a US Navy aircraft (P-8 Poseidon) with tail number LC336. The pilots of BULLDOG 31 successfully established radio communications with the pilots of the US Navy aircraft and declared to have three (3) crews on board.

The Philippine Air Force successfully protected our country by performing its mission aligned with the objectives of the PAF Flight 2028.

AUTHOR: PADCC



HARNESSING SPACEPOWER FOR NATIONAL SECURITY AND DEVELOPMENT



The Philippines, with the support of Hokkaido University and Tohoku University in Japan, launched the Diwata-1 which is a small satellite system for scientific Earth Observation.

“Freedom of action in space is as important [to the United States] as air power and sea power”

- George W. Bush

Spacepower is a concept that has been discussed thoroughly by foreign Air Forces together with military capability developers and military science enthusiasts. It has also been widely talked about in the country as the Department of Science and Technology (DOST) spearheads the 10-year Master Plan to make the country "space-capable". But what exactly is Spacepower, and why has it become a buzzword in the defense sector in the country? We look at the literature of research from the United States Air Force. MAJ Smith (2002) of USAF provided his propositions on the nature of Spacepower. We will pin down specific propositions that must have been actionable in the local context for this article.

SPACEPOWER HAS A DISTINCT OPERATIONAL MEDIUM. Smith (2002) emphasized that space is intrinsically different from all ground and air mediums. He added that in space, orbital operations are affected contrarily by what laws of

physics apply on Earth. It is important to note that Spacepower, as in military capability, will not continually be operating in the medium of space. MAJ Robinson (1998, p. 23) noted that the space medium 'goes beyond the atmosphere where the laws of astrodynamics rule the motion of objects.' The operational term used here is astrodynamics to categorize the characteristics of military space capabilities that are not necessarily operating in orbit per se.

SPACEPOWER IS A TOOL FOR GLOBAL ACCESS AND GLOBAL PRESENCE. As it is very important for Air Forces and any military services to conduct intelligence, surveillance, and reconnaissance (ISR) for military operations, Spacepower offers a significant utility to ISR by setting up space satellites that provide access and information to any location on the Earth's surface (Petersen, 1991). Global hegemonies and even non-state actors have access to many satellites currently orbiting around the Earth to simultaneously extract real-time data in any part of the world. Lupton (1988) believes that the term Global Presence, as opposed to Global Access, is more representative of the military to uphold liberal democratic principles practiced by many countries.

SPACEPOWER REQUIRES TOTAL SPACE ACTIVITY. Managing space capabilities involves the collaboration of all sectors, especially the government and private



President Duterte signs RA 11363, creating the Philippine Space Agency.

sector's research and development, science, and technology teams. It also requires a solid education system that starts the youth to be more engaged in studying Spacepower and its capabilities (Smith, 2002). In other words,

Spacepower requires a 'whole-of-nation approach.'

SPACEPOWER IS A COERCIVE FORCE. With Spacepower providing global access and global presence, the existence of space assets technically becomes a coercive agent against those who cannot harness the same capability. Coercion can manifest in two forms: compel or deter (Walker, 1997). Spacepower can compel due to its data-gathering capabilities; it can also interfere because it can counter any action, especially when weaponized. Today, many defense industries are moving to integrate their current airpower capabilities to Spacepower as the potential for a sensor-to-shooter loop is colossal to current sensor mechanics. These modernization efforts would deter or compel an aggressor to think twice before acting.

Given the propositions on the nature of Spacepower, it is sufficient to say that Spacepower has the potential that must be tapped by any nation that wishes to fortify its presence in the international arena. Fortunately, with diligent work planned and executed since 2012, the country's legislators passed in 2019 the Republic Act No. 11363 or "An Act Establishing the Philippine Space Development and Utilization Policy and Creating the Philippine Space Agency, and for Other Purposes."

The law covers the protection of Philippine sovereignty, territorial integrity, national interests, and support for space science and technology. The law is a step closer to better engagements and developments that have anything to do with Spacepower for the country. Additionally, national policies are now leaning toward developing space technology as the Updated Philippine Development Plan of 2017-2022 includes advancing science, technology, and innovation. In Chapter 14, more than addressing the needs of Filipinos for science, especially during the pandemic, also highlighted the needs of the Philippine Space Agency and all other private and governmental stakeholders concerned in the development of Spacepower.

With local advancements in space technology through the establishment of the PhilSA, what does this mean for the Philippine Air Force (PAF)? Going back on the prepositions on the nature of Spacepower, it is an independent form of power that needs its capabilities, doctrines, and even workforce. However, as the Philippines continues to mark down on something as significant as Spacepower, the government and its stakeholders can continue to corroborate efforts in support of its development. Taking a look at the key development areas (KDA) regarding the development of space science and technology, the first KDA is national security and development, a playing field for the AFP and its major services.

As a way ahead and to add to the literature of discussion on Spacepower for the PAF, we can list down a few possible steps to nurture the organization's contribution to a space-capable country.

- The PAF must continue to research and write on military and defense literature that highlights the use of spacepower capabilities or space weapons.
- The Command must also nurture its relationship with PhilSA and strengthen linkages between current academic partnerships that focus on S&T or R&D.
- Integrate Spacepower as a possible element in the PAF's Flight Plan and related strategic plans.

To reiterate, Spacepower is an independent power that requires the intelligence of many key players in S&T and R&D, and even politicians are considered major players as national policies will most likely affect how the country sees Spacepower in the future. Despite it not necessarily being an extension of airpower, the PAF has a lot at stake as the opportunities in Spacepower significantly strengthens its way of doing air operations, especially ISR.

AUTHOR: Mr. Juan Teodoro A Martinez, CivHR



KDA for the National Space Development and Utilization Policy



PhilSA at the Air Force Symposium 2022

The Philippine Space Agency (PhilSA) has already embarked on major projects and programs that are aimed to help develop the country's domestic space technology and industry, to support the creation of Security. During his presentation at the Air Force Symposium 2022, PhilSA Director General Dr Joel Joseph Marciano discussed the different Key Development Areas under the Philippine Space Policy, highlighting the agency's role in national security and development. Among PhilSA's many endeavors is the Build Build Build in Space (B3iS) program, wherein, one PAF Officer is currently training with the agency in building nano satellites.

Furthermore, PhilSA's programs on space science and technology and applications (SSTA) already involves efforts towards supporting the AFP's C4ISTAR programs particularly on ISR and communications development, as well as space systems research and development under the AFPs Self-Reliant Defense Posture Programs.

PhilSA is also actively taking part in the PAF's strategy management initiatives as a member of the Multi-Stakeholder Advisory Board of 300th AISW and 950th CEISG.



GUARDING THE SKIES, THEN AND NOW

In 1955, the Philippine Air Force entered the jet age and became a formidable air force to be reckoned with in the Southeast Asian region. Several jet aircraft were once part of the PAF's inventory, like the F-86 Sabers, F-8 Crusaders, and F-5 Freedom Fighters. It was said to be the glory days of the Philippine Air Force. A testament to its prime is the interception of a Russian TU-95 "Bear" in the '80s. The capability has waned with the decommissioning of the F-5s which led to the downgrading of Territorial Defense Units in 2005. Currently, the PAF is slowly regaining its core competence in fighter operations as it operates its interim fighter aircraft, the FA-50s. These aircraft usher the required aircrew training while limitedly addressing the PAF's capability requirements in Air Defense.

On 02 September 2021, on or about 0927, pilots relayed a scramble order to 5FW Air Defense Alert Center. The alert pilots immediately performed scramble procedures and took off from its Main Operating Base in Basa Air Base (BAB). The Air Defense Direction Center (ADDC) supports the Bulldog Flight based in Paredes Air Station. Picture calls relayed an unknown track located at Bullseye 120 nautical miles west of the coastline of Bolinao, Pangasinan.

The flight tuned in to Clark Approach and was cleared to climb 28,000 ft. upon airborne, and the flight was handed over to Manila Control. Simultaneously, the flight tuned in to Ground Control Intercept (GCI) frequency stationed at Paredes Air Station (PAS). However, the flight established no radio contact with Manila Control and Paredes AS (Callsign SAPAT) for four (4) minutes from 15,000 ft to 25,000 ft. Seven (7) minutes from take-off, the flight established radio contact with both agencies—Paredes AS vectored the 5FW Pilots to heading towards the



5FW Pilot getting ready for scramble at Air Defense

Alert Center (ADAC).

On or about 0947, Paredes AS radioed, signifying to terminate the Visual Identification. Upon confirmation, Bulldog Flight completed the mission and proceeded for the alternate Basic Fighter Maneuver (BFM) training mission to burn fuel before moving back to BAB.



Detection of unknown tracks has picked up recently, keeping the 580ACWW Weapon Controllers and 5FW pilots on their toes. More of these scenarios may be expected to consider regional developments involving the concerned state actors. Clear and present danger may escalate, for which frontline assets must be well-equipped. While the FA-50 is a capable platform, a more



F-16 "Flight Falcon" and SAAB JAS 39 "Gripen"

superior multi-role fighter will be ideal for these mission sets. As the Wing awaits its eventual acquisition through the AFP Modernization Program, local and bilateral training exercises contribute to sharpening its core competence in fighter operations. From the experiences and lessons learned from these Exercises, the Wing continues to develop bilateral training exercises contribute to sharpening its core competence in fighter operations. From the experiences and lessons learned from these Exercises, the Wing continues to develop relevant doctrines and techniques, tactics, and procedures to guide its process and training.

The 5th Fighter Wing, as the premier fighter unit of the Philippine Air Force, fervently awaits its long-overdue capability upgrade. Verging into the third horizon of the AFP Modernization, the Wing is optimistically expecting the realization of a squadron of Multi-Role-Fighter (MRF) aircraft added to its inventory very soon. As the AFP transitions its focus on territorial defense, the MRF will become another gamechanger that will eventually catapult the AFP to regain credible deterrence. A status that the PAF once held and basked.

AUTHOR: 2LT BENEDICT D AUSTRIA PAF, 5th FW

MY LIFE AS A PAF RESERVIST

When friends or relatives learn that I am commissioned as a Lieutenant Colonel with the Philippine Air Force Reserve (PAFR), their typical reaction is one of genuine approval with a bit of confusion. They ask: What do I do as a reservist? Is it similar to an extracurricular activity or socio-civic club? Others inquire whether I can now fly planes. I sometimes respond to this last question jokingly -- that I am highly skilled at finding the lowest online fares.

But seriously, the reserve is much more than a club. It is a bit closer, perhaps, to a training team for a national sports league or the diaconate in religious life. While having different day jobs, reservists share in the deep commitment of regular officers and enlisted personnel to defense and security. Being a reservist has become an intrinsic part of who I am, how I choose to serve my country, and how I think about issues that relate to national security.



LTC Antonio Joselito G Lambino II (MNSA) PAFR

I share with many fellow reservists a steadfast conviction that serving in this capacity has become part of who we are. It is not incidental to a career in public service -- which was the source of my first commission as Major -- but a complementary and distinct identity. I remain a civilian and civil servant, but can also be called on to serve in various military capacities, from contributing to strategic and policy discussions as a member of the PAF Commanding General's Multi-Stakeholder Governance Council and as a force multiplier for Civil-Military Operations, disaster relief, and emergency response, such as reporting for checkpoint duty in Malabon during the early days of the COVID-19 pandemic and distributing relief goods in Cagayan Valley in the aftermath of Typhoon Ulysses in November 2020.



Sgt Lambino PAF Res was pinned the rank of Sergeant during the Closing Ceremony of Special Basic Citizen Military Training (SBCMT) with MGEN CONNOR ANTHONY D CANLAS PAF as Guest of Honor and Speaker last 07 February 2020.

The PAF and other branches of the AFP regularly hold information sessions and training workshops to prepare reservists for what we all hope and pray is the unlikely event of war. When regular officers and enlisted personnel are fighting at the frontlines, reservists are expected to ensure that our military bases continue to run efficiently and effectively. This readiness training is core to courses I have taken from the 1st ARGEN (SBCMT), the Master of National Security Administration (MNSA) of the National Defense College of the Philippines (NDCP) which

graduated its first executive class in 2021, ARESCOM (pre-commissionship training for my MNSA class) and currently, in the Command and General Staff Course Class 71 of the AFP Education, Training, and Doctrine Command.

Whether in anticipation of emergencies or armed conflict, striving to maintain a continuous state of readiness is part of who I am as a reservist. This is an awareness I carry with me every day. At the same time, we need to do all we can to promote peace and security among Filipinos and between the Philippines and other countries.

Reserve officer duties and responsibilities are also part of how I choose to serve my country. Having been designated as Group Commander of the 21st Air Force Group Reserve (AFGR) in Northern Luzon -- under the 2nd Air Force Wing Reserve and 2nd Air Reserve Center -- helps me keep my boots on the ground. I deeply admire the decades of commitment demonstrated by the women and men of the 21st AFGR. Despite many obstacles, they carry on with unrelenting initiative and optimism with which they forge partnerships with local governments and community organizations in their respective areas. The reservists of the 21st so willingly give of themselves through participation in blood drives, sustainability projects, and as security augmentees whenever there is an emergency or disaster, or a surge in human activity during religious celebrations and local festivals.

The combination of reservist training and service opportunities has had formative impact on my thinking. Viewing issues of public importance with a holistic security lens is becoming increasingly second nature to me. A prime example is the analytical toolkit that the NDCCP faculty taught us – the PESTEM framework provides the intellectual scaffolding with which we can appreciate the linkages among the Political, Economic, Sociocultural, Technoscientific, Environmental, and Military dimensions of a security issue.

When considering an economic or environmental problem, such as the economic impact of the COVID-19 pandemic or the need for green financing, my mind now automatically



LTC LAMBINO PAF RES (MNSA) has also encouraged current and former colleagues to join the PAF Reserve Force, such as Sgt Valerie Brion PAFR, former Director in Asec Lambino's office and now Assistant Secretary of Finance, and Sgt Geneva Cruz PAFR, former Smokey Mountain co-member and now an actress, singer, and songwriter. He referred both to the 1st ARCCen for recruitment.



LTC LAMBINO PAF Res (MNSA) was designated as Group Commander of the 21st Air Force Group Reserve (AFGR), 2nd Air Force Wing Reserve, and has met with his fellow officers face-to-face (in Baguio City) and virtually to plan, implement, assess efforts of the 21st AFGR. Recent initiatives include delivering relief goods to far-flung areas, supporting blood donation drives, and participating in a Brigada Eskuwela activity for a high school in Baguio City. He also represents the 21st AFGR in meetings and information sessions organized by the 2nd ARCCen.



Sgt Lambino started his SBCMT training at the 1st ARCen in CJVAB, being one of very few public officials who attended his reception rites, and completed the course in Clark Air Base.

searches for possible connections to the other PESTEM dimensions. Conversely, while discussing a military topic in CGSC classes or other contexts, my mind does a quick inventory of possible PESTEM linkages. This discipline of broad and integrated analysis helps me gain more clarity in my work at the Bangko Sentral ng Pilipinas and as a reserve officer of the PAFR.

When I am asked to speak at events where there are regular officers and enlisted personnel in attendance, I often start by saying that I am proud to be in their reserve. The reason for this is captured in powerful and poignant prose by Francis Fukuyama in his book entitled "Identity", in which he recounts that in "the reality of most civilizations around the world... warriors were seen as morally different from shopkeepers because of their virtue; they were willing to risk their lives for the public good."

Being a reservist is part of who I am, integral to how I choose to serve my country, and has influenced how I analyze issues relevant to national security and development. To the women and men of the Philippine Air Force and the Armed Forces of the Philippines,

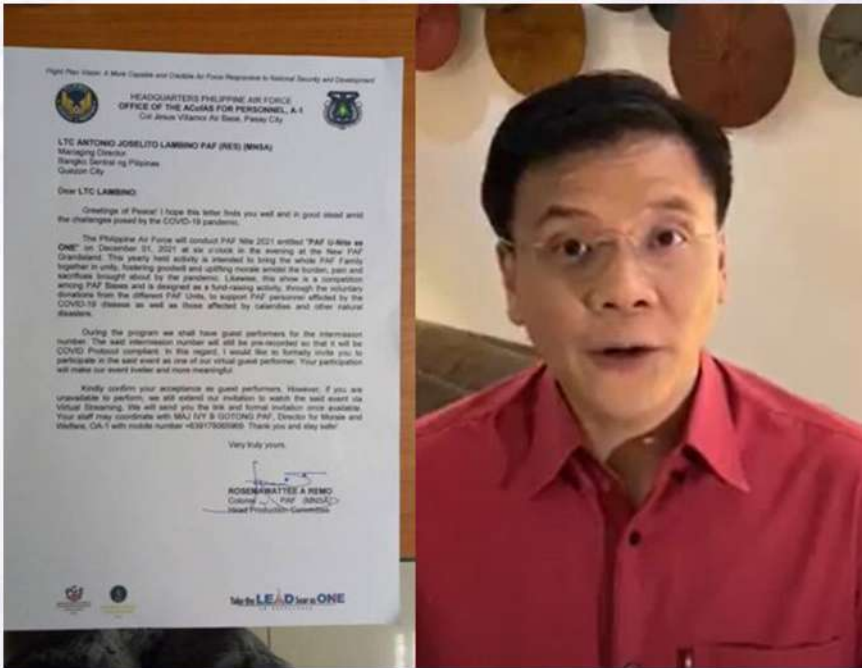
AUTHOR: LTC Antonio Joselito G Lambino II (MNSA) PAFR



Major Lambino PAF Res attended the Closing Ceremony of the Master in National Security Administration Executive Course 01 of the National Defense College of the Philippines and Donning of Rank with the Rank of Lieutenant Colonel at Lapu-Lapu Grandstand, Camp Aguinaldo, Quezon City with MGEN CONNOR ANTHONY D CANLAS PAF last City 05 August 2021. He received exemplary academic performance (for all three semesters) and meritorious thesis citations, and graduated with honors and the bronze medal for best thesis. He also served as class treasurer

I am proud and humbled to be in your reserve.





LTC LAMBINO PAF RES (MNSA) contributed a number for the celebration of PAF Nite 2021 last 01 December 2021. He performed the patriotic song “Sabihin Mo”, which was his solo piece in the first Smokey Mountain album. Earlier, he was also able to contribute a message and song number for the PAF Virtual Fund Raising Musicales 2020 for COVID Warriors entitled “Pasasalamat sa Panahon ng Pandemya Ngayong Pasko” held on 11 December 2020, for which he was awarded the Gawad sa Kaunlaran.



LTC LAMBINO PAF RES (MNSA) is currently a student officer under the AFP Education, Training, and Doctrine Command (AFPETDC) as a member of the Command and General Staff Course (CGSC) Class 71.



LTC LAMBINO PAF RES (MNSA) has been a member of the PAF Multi-Stakeholder Governance Council (MSGC) since 2020, when he served as Assistant Secretary of the Department of Finance. As vice-chair of the MSGC’s Strategic Communication Committee, he recommended a series of consultative workshops with Filipino student leaders on the PAF long-term vision and joined a brainstorming session to help finalize a PAF media statement on the results of the investigation of the C-130 accident that occurred last July 2021.



960TH AMDG: MODERNIZING CAPABILITY THROUGH LIPAD PAF

At present, the 960th AMDG possesses five (5) 20mm M39 Cannon with a platform categorized as a Closed-In Weapon System, currently deployed at tactical areas within the archipelago to provide point air defense and to protect vital installations and the populated regions.

The 960th AMDG continues to conceptualize and propose possible measures based on the Air Defense Command's Concept of Operations and Doctrinal Employment of its subordinate units, such as 5th FW; using MRF Aircraft's ability to intercept; 580th ACWW using ADS RADAR's ability to detect; and 960th AMDG's GBADS ability to neutralize and shutdown.

To fully operationalize the three (3) GBADS Batteries, the 960th AMDG must initially achieve the assimilation training and the support equipment for deployments, establish MOB, available IFF, and secure connectivity line the command and control.

DOCTRINE

Enhancement of Doctrine, the 960th AMDG is currently developing Standard Operating Procedures (SOPs) and Manuals relevant to Air and Missile Defense (AMD) Operations applicable in stand-alone and joint operations. These SOPs and Manuals will guide the Missile Operators once the SPyDer Air Defense (SPADS) is acquired by the Philippine Air Force and scheduled to deliver in the 2nd Quarter CY-2022.

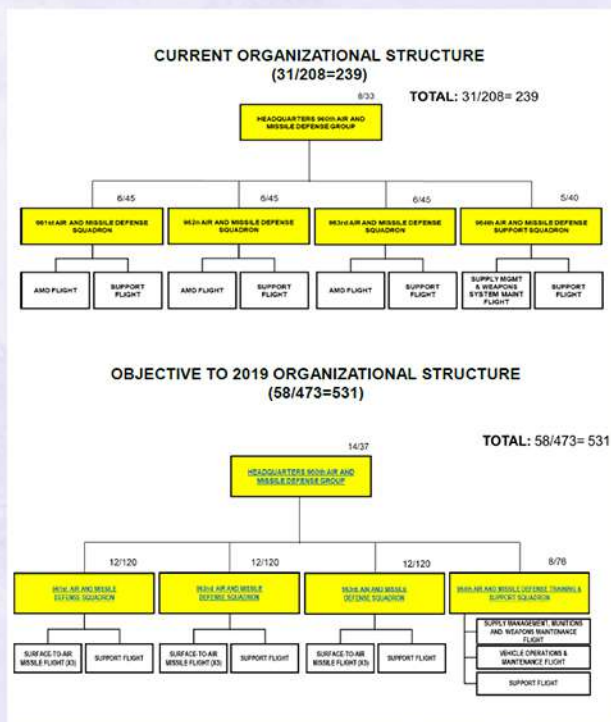
No of Activity	Creation of RMI, SOPs, Manual, Plans, Tables	Loading of RMI into RMI, PMT	Review of RMI, SOPs, Manual, Plans, Tables on an ongoing basis	Presently Approved/Issued	Approved by JC Staff, AMDG	Reviewed by JC Staff, Operations and Logistics	Approved by JC Staff, Operations, ADC	Finalization of the SOP/Manual/Document	%
1. GBADS Convoy Operations Management									100% 50% to 2021 2nd Quarter October 2021
2. GBADS Review in the 15th Weapons/ACR CONOPS									
3. GBADS Review in the 15th Weapons/ACR CONOPS									
4. GBADS Review in the 15th Weapons/ACR CONOPS									25% On progress of development
5. GBADS Review in the 15th Weapons/ACR CONOPS									
6. GBADS Review in the 15th Weapons/ACR CONOPS									
7. GBADS Review in the 15th Weapons/ACR CONOPS									
8. GBADS Review in the 15th Weapons/ACR CONOPS									
9. GBADS Review in the 15th Weapons/ACR CONOPS									
10. GBADS Review in the 15th Weapons/ACR CONOPS									25% On going research and development for the GBADS Operator and Weapons Employment
11. GBADS Review in the 15th Weapons/ACR CONOPS									
Total For Contract									65%

The revision of the AMDS Manual was already approved and is currently in the stage 4 research & development phase. Likewise, AMD Operations and Weapons Employment SOP development are currently on stage 2 (leveling of 960 AMDG PMT). With this, it will serve as an essential guide to the utilization of the Ground-Based Air Defense System (GBADS) as a means for the protection of the nation's vital installations and assets, other government installations, and protected areas of interest.



ORGANIZATION

Organization Development Group submitted reports to Headquarters ADC indicating manning allotted only for the Group headquarters and two (2) squadrons. Even after the activation of the two additional squadrons (962nd AMDS and 963rd AMDS) last 02 April 2020, which comprised 239 personnel (31 Officers / 208 EP), it is still used as a basis for all the reportorial reported to higher Headquarters. As a result, the reports do not reflect the actual personnel readiness. They may conceal the personnel requirements, which will significantly impact the operational readiness of this Group, especially once the Ground-Based Air Defense System is delivered in the 2nd Quarter of CY-2022.



TRAINING

To be equipped with the necessary skills and knowledge on how to man and operate the system/batteries professionally and tactically proficient, the following training/courses are relevant and needed by the 960th AMDG personnel:

a. **Explosive Ordnance Disposal Officers and EP Course.** This course is preparatory training for this Group's personnel to know about the proper maintenance warehousing, preparation, and critical thinking skills in handling explosive materials. They will be primarily responsible for the surface-to-air missiles that the 960th AMDG will receive upon arrival on the GBADS platform.

b. **Missile System Officers Course.** This course seeks to equip the Officers with the necessary skills and operational knowledge and produce capable Missile System officers to perform the mission and capabilities of the Air and Missile Defense System.

c. **Tactical Vehicle Operators Course.** The course aims to train the projected vehicle operator on the upcoming GBAD System vehicles with the skills of proper driving techniques, troubleshooting, and preventive maintenance, particularly in heavy vehicles.

d. **Missile System Operators Course.** This course ensures to provide the Air Missile and Defense Operators with new sets of skills and operational knowledge to produce capable Missile System Operators necessary in the performance of the mission and capabilities of the Air and Missile Defense System.

e. **Missile System Command and Control Operators Course.** This course ensures to equip the Air Missile and Defense Operators, specifically the Enlisted Personnel, with new sets of skills and operational knowledge to produce capable Missile Systems Command and Control Operators that are necessary to perform the mission and capabilities of the mission and capabilities of the Air and Missile Defense System.

f. **Conduct of In-country Operations and Maintenance Trainings.** These include System Specifics Training (Operations and Maintenance) and Assimilation Training.

MATERIEL

a. The 960th AMDG needs an established Identification Friend or Foe (IFF) System requirements to avoid circumstances leading to fratricide. The GBADS system is not equipped with military-grade IFF Capability. Currently, the TWG for the Operationalization of PAF IFF is discussing the response and assumptions of the PMA-213 CID FMS Team to the submitted LOR for P&A data of the IFF Mode 5 Equipment Upgrade and Integration for the PAF.



Image shows the composition of SPADS Battery which includes different kinds of vehicles with specific functions.

b. **GBADS connectivity requirements to PADCC.** The Full Operational Capability (FOC) of three (3) GBADS in PDAO is reliant on data and voice connectivity links from maneuvering SAM-MR Batteries deployed in strategic Critically Assets List/ Defended Assets List to PADCC for Common Operational Pictures (COPs) and line of communication for decision making. The 960th AMDG had a series of conferences with OA-6 on the GBADS connectivity requirements to PADCC and already submitted a formal letter to OA-6 on 10 April 2021 for future funding.

c. **SAM-MR Crew Hutment Requirements and Deployable Equipment.** To fill the gap and augment the operational support requirements in the GBADS operations once the GBADS Batteries are fully functional, 960th AMDG already requested the procurement and/or issuance of deployment support equipment and requirements.

d. **Deployable Shelter.** The 960th AMDG has facilities that can only cater to administrative requirements. However, it has no existing shed and maintenance facilities for the three (3) SAM-MR Batteries; and no missile maintenance and missile storage facility for the GBADS missile. 960th AMDG came up with a proposal on the possible deployable shelter for the 18 GBADS vehicles/trucks in the first three (3) years while waiting to construct an approved Main Operating Base at BAB.

PERSONNEL AND LEADERSHIP

The revised TO 2017 led to abrupt changes in personnel skills/Air Force Specialty Codes (AFSCs), wherein 811X0 (Security) AFSC are awarded most in the personnel.

The AFSC 811X0 (Security) is deleted and replaced with the new AFSC 311X3 (Missile System Operator) and 277X0 (Missile System C2 Operator). The workforce requirement of the GBAD system is needed for the realignment of skills/Air Force Specialty Codes (AFSCs). Personnel of this group need to undergo different training related to Ground-Based Air Defense systems to develop their knowledge, skill & attitude, and experience.

This will allow the upgrading skill level of the four (4) Personnel awarded with AFSC 31133 (Missile System Apprentice) and four (4) Personnel awarded with AFSC 27730 (Missile System C2 Apprentice) to become future trainers for the On-the-Job Training (OJT) and Upgrading of Skill Level of Personnel of this group.

FACILITIES

960th AMDG has established its Main Operating Base (MOB) at Basa Air Base to operate and maintain the SPYDER SAM-MR System.

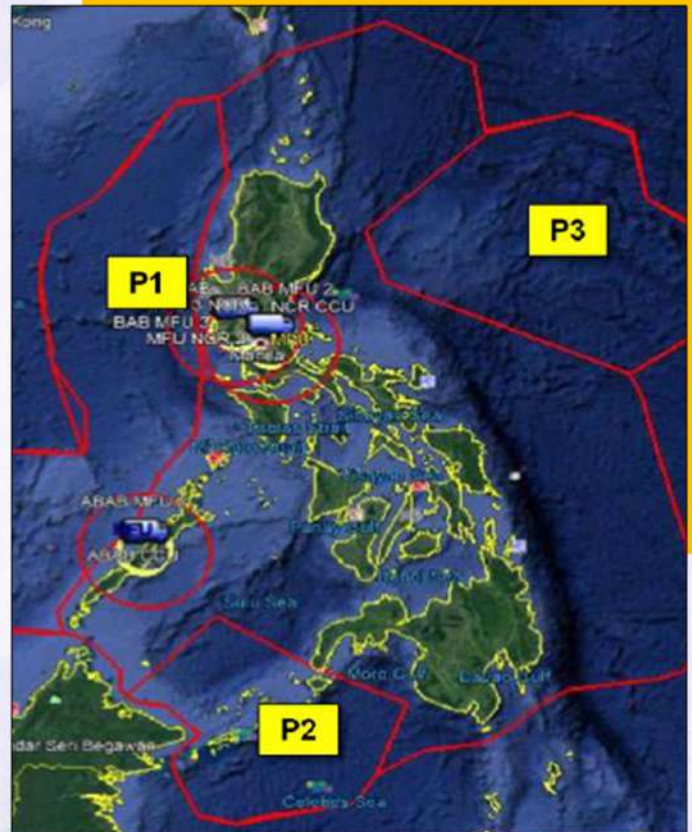
The 960th AMDG MOB at Basa Air Base, Floridablanca, Pampanga, was conceptualized according to the Facilities Requirements Document (FRD) specifications submitted by the RAFAEL Advanced Defense Systems (RADS). The CG, PAF approved the funds to construct the MOB for the upcoming GBADS platforms and included in the TIKAS projects CY-2022. Likewise, the same facilities are also included in the proposed TIER 2 for CY-2022 that will be requested by the Department of Budget and Management (DBM). According to the initial coordination made to the District Engineering Office (DEO), DPWH, the Construction of a 6-Bay Missile Battery Shed / Garage with Alert Crew Barracks of 960th AMDG, BAB, Pampanga is included in the NEP 2022 of DPWH through TIKAS Projects and subject for their revalidation.



Simulator Training Facility



Test Cell Building



Recently, the unit successfully conducted a turn-over ceremony at the SPADS Simulator Training Center. The students who will undergo AMDS-related courses will utilize the Center as a training facility. Likewise, the construction of the SPADS Batteries maintenance shed is already completed. The said maintenance shed will be used to maintain the readiness and full capabilities of the system.

The 960th AMDG envisioned achieving the Initial Operating Capability (IOC) to detect, identify, intercept, and neutralize air and missile threats to protect and secure the Philippine territorial airspace. The 960th AMDG must establish deterrence and operational ground air defense capability in the Flight Plan 2028 Priority Areas (WPS) based on the checkpoint goals or waypoint 2022 under the PAF Enterprise Scorecard.

As for all of this, the waypoint and goals of the unit can be achieved within reach to be "A Capable Air and Missile Defense Force Integrated to the PAF Air Defense System" and we can rest assure that the Philippine Territorial Airspace will be protected from all form of aerial threats.

AUTHOR: TSg John Mark R David PAF, 960thAMDG

AIR BATTLE MANAGERS: REDEFINING THE IADS LANDSCAPE

SENSOR SYSTEM – THE AIR DEFENSE SURVEILLANCE RADAR

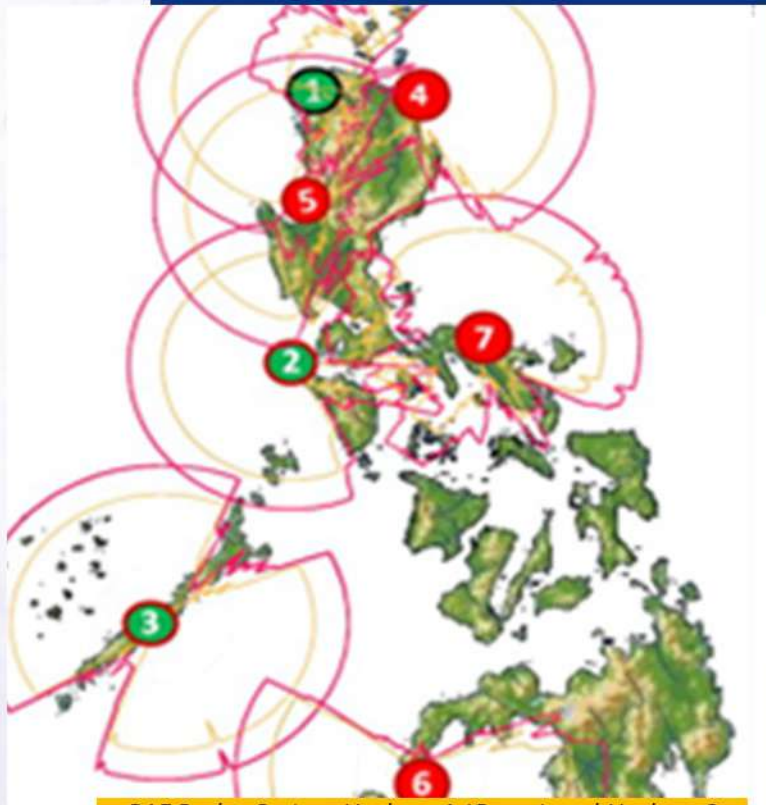
The Philippines, being a sovereign country, has all the rights to protect the interest of its territory and, most importantly, its people. With that, the Philippine Air Force is mandated to protect, secure, and guard our motherland's airspace and air domain. The archipelagic nature of our geography makes it both an advantage and a challenge to keep it safe and free from aero threats and intrusions. With this, with the Flight Plan in place, the organization now has a clear goal and strategy for maintaining the integrity of our air space through the Integrated Air Defense System. The IADS systematically and seamlessly integrates the core systems of the Air Defense Command, maximizing each capability to mutually support each core towards the attainment of the joint mission and goals.

Over the past two decades, the Sensor System of the ADC seems to fall into oblivion, mostly attributed to the non-operation of the once robust radar system of the PAF during its heydays. With the advent of the modern jet age, the PAF focused on acquiring modern aircraft platforms to beef up its capability. Somehow, the repair and upgrade of the sensor systems were archived and became the least of priorities. Fast forward to the recent past years, the monumental case of the claims over the West Philippine Sea renewed the interest of the leadership to acquire a new and advanced radar system to protect and guard our vested interest over the contested region. And with the momentum of the AFP Modernization Program, the PAF has acquired the first batch of modern Air Defense Surveillance Radars under the Horizon 1 Projects.

Horizon 1 has resulted in installing three modern fixed radar systems strategically located on the west side of the country primarily to monitor, guard, and defend our territory in the West Philippine Sea. These radars are a far cry from the outdated analog system we once have. It can be likened to one big giant step for PAF, from the post-Cold War era system to one of the most advanced systems. One of the main goals is the integration of the three radars into one data fusion center to provide a one clear sky picture that would significantly improve the decision-making and strategies of the higher command, hence the establishment of PADCC. This center is one crucial key in the modernization of PAF to be at par with its neighboring counties in the ASEAN region.



TPS-P14ME mobile radar system (MELCO, Japan)



PAF Radar System Horizon 1 (Green) and Horizon 2 (Red) covering the Priority Areas of PDAO

With the Horizon 2 in motion, the PAF have acquired another three fixed modern and advanced radar system and one mobile radar that will be deployable to fill in the gaps between the existing radars. Furthermore, the AFP Command is in the process of finalizing the priority projects for Horizon 3, and the third batch of fixed and mobile radar systems is on the priority list. Also, the PAF is in the process of acquiring an Airborne Early Warning and Control System (AEWACS) aircraft to be a force enhancer for the IADS and will be an essential asset in providing a sky picture to the areas that are beyond the coverage of the fixed radars. Considering all the present and plans for the Sensor Systems, it will surely make the IADS a force to be reckoned with in the PAF organization. On a macro level, the Sensor System will reinforce its capability under the IADS, having a significant effect on attaining our common goal of

a more capable and credible Airforce.

With the installation and operationalization of the state-of-the-art radar system, one would instinctively conclude that there is also a need to upgrade the knowledge and skills of the operating personnel, such as highly technical equipment. The Scanners were quick to learn the technical and operational skills of the new equipment. In a short period, the Wing could produce skilled personnel to man and operate the new radars.

However, over time, during the operation of these radars, the Scanners, who are newbies in terms of operating modern radars, are slowly coming to understand that there is much to learn about how to maximize the power of these technological wonders. With the exposure of the Scanners to the friendly foreign counterparts during joint exercises and the learning takeaways of the personnel



who were sent to study abroad, the Wing recognized the need to take action to keep up with the other countries who have the same advanced radar such as ours. We have recognized that Air Weapons Control is just a part of a greater and bigger task for an organization tasked with providing early detection and warning in our airspace domain. We do not just control fighter aircraft during interception, but our duties and responsibilities are way more than that. Generally speaking, the Scanners manage the air space and how the battles would take place, and even the outcome of such actions. In short, we manage air battles, hence, the term Air Battle Managers.

AIR BATTLE MANAGEMENT - THE SENSOR WARRIORS

The international military organization has been using the term Air Battle Manager. The PAF is starting to adapt and adopt international standards during this period. Recognizing and accepting that we are the Air Battle Managers is the first step in the many organizational changes that will take place in the Scanners Family. Like a newborn infant, giving it a proper name will mark the start of a new page. The 580th ACWW is currently reviewing its organizational structure to keep up with the modern times and to adjust based on the acquired radar platforms and with the establishment of new air stations and reactivation of the once defunct air stations.

Most notable of this reorganization will be the creation of a dedicated radar maintenance group that will cater to the maintenance and upkeep of the radar systems for their uninterrupted operation. The Wing will also put up a centralized fusion training center to produce highly skilled and knowledgeable personnel who are able and ready to operate the various radar systems. And, Units will be reorganized and grouped according to the area of operations to maximize the coverage of the country's air space.



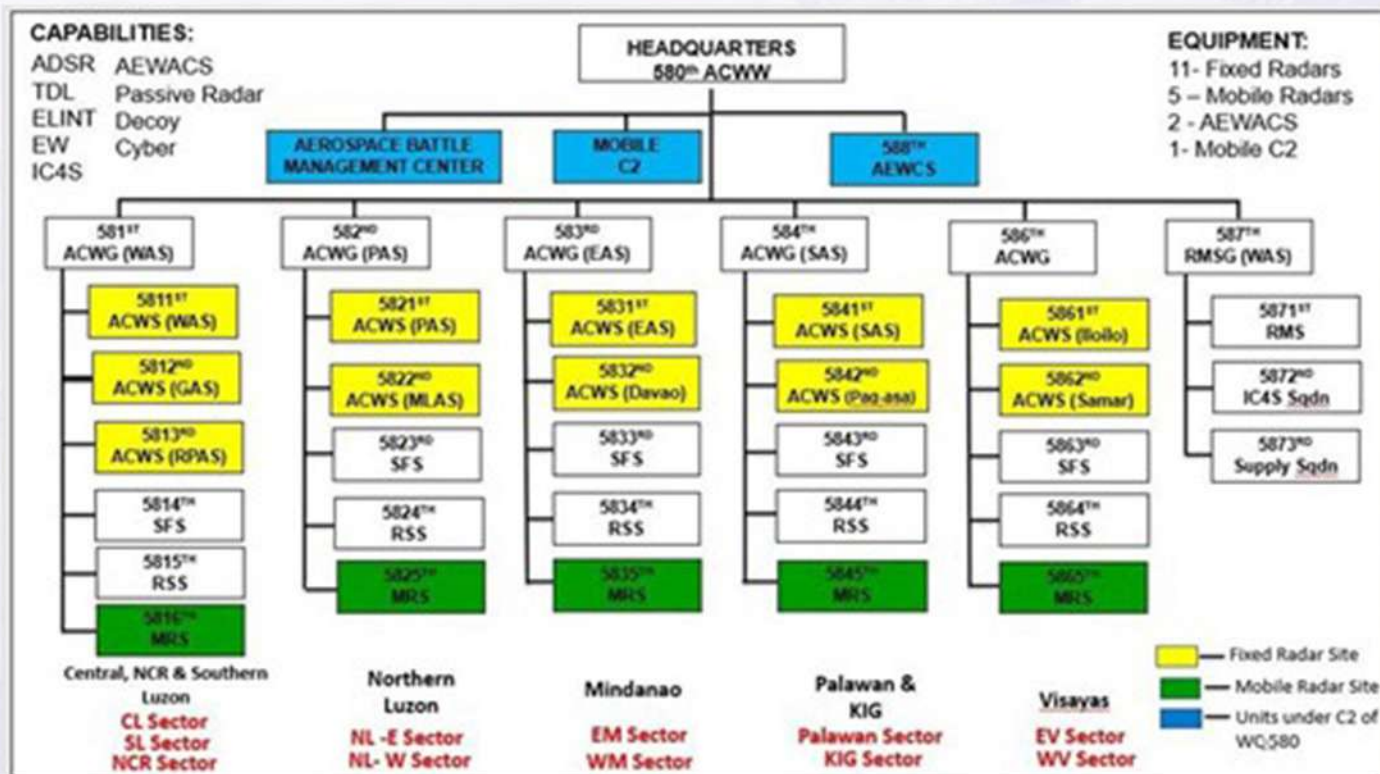
FPS-3ME fixed radar system (MELCO, Japan)



Indeed, the Air Battle Managers will not only refer to individually skilled personnel but would also refer to as a team who are highly trained in planning, directing, and managing the airspace during air defense and tactical missions. They possess the expertise in command and control, scenario planning, and strategy execution with a wide range of familiarization with the ground and air weapons platforms and surveillance operations. They assess every detail of the situation to achieve decisiveness for mission success. Their goal will not just be the accomplishment of their tasks. Still, it will transcend to keeping their mission on track, mutually supporting the other core system to safeguard not just the air space domain but also the whole Philippine territory and its people.

The installation of modern ADSR through the AFP Modernization Program has been a game-changer in the stance of AFP and the PAF in terms of Sensor System. We have recognized that de-fending the integrity of our territorial space means investing in strategic platforms, not only to close the gaps of the asymmetric warfare in comparison with the ASEAN region, but most notably to protect the Filipino people. With the able support and foresight of the command and leadership, the Scanners have reached this point, in its journey to rise up once again – not to be at par with its old days – but to meet the modern demands of keeping our territorial airspace safe. In the near future, when all planned platforms and facilities will be acquired, installed, and operational, the Air Battle Managers, will be at the forefront, orchestrating the air space battle management.

AUTHOR: 1LT ALEXIS B MASSAGAN PAF, 580ACWW



Air Battle Managers (ABM) and Command and Control Battlespace Management Operations (C2BMO) Personnel inside the Command and Control (C2) Center performing air surveillance and monitoring activities





BREAKTHROUGH GOAL 2040

Credible Air Force for
National and
Regional Stability



WAYPOINT 2034

Capability Driven Organization
Adept at
Integrated Multi-Domain
Operations



WAYPOINT 2028

Develop a Credible
Air Defense Posture
in the
Philippine Defense Area of
Operations





AIR FORCE STRATEGY MANAGEMENT OFFICE
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