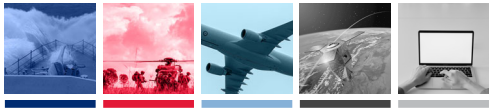
ADF Land Domain Publication



# Land Domain Publication - Note

# LNote 7.2.5 Olvanan Peoples Air Force Tactics

Issued by authority of the Chief of Army.

Publication release approved on XX XXXXXXXXX XXXX in accordance with the Army Standing Instruction (Knowledge Management) Part 2 – *Management and Governance of ADF Land Domain Publications*.

EDITION 1

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LNote 7.2.5 *Olvanan Peoples Air Force Tactics*

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4. htttp://intranet.defence.gov.au/home/documents/home/publications/policy-documents/defence-security-principles-framework.htm

# Preface

1. ADF Land Domain Publications (LPubs) describe the fundamental principles that guide land forces actions, and provide the common frame of reference on how the Army achieves its mission. LPubs are the basis of the Army's training system based on time-tested, proven principles of war, combined with the critical analysis of contemporary lessons. LPubs have been shaped since 1901 by Army's proud history and culture, while being constantly adapted as required, thereby representing the sum of the Army's collective historical knowledge, presented into objective guides for action. In essence LPubs explain and guide *'who we are', 'what we do' and 'how we do it'*.

2. ADF doctrine provides the framework that guides thinking but does not dictate what to do. While doctrine publications are written in a non-prescriptive style that allows latitude in interpretation and flexibility in application, they are specific enough to provide informed guidance. Doctrine is about fighting power and the integration of its three components: intellectual, moral and physical, applied through mission command and our manoeuvrist approach to warfighting.

3. Land procedural publications provide the authorised procedural and technical knowledge required for land forces to achieve their mission. Unlike doctrine, procedural publications convey information covering a range of activities based on best possible practice, in clear detailed steps that, depending on the publication, describe and/or prescribe how to perform specific tasks and drills. Whilst the majority of procedural publications are descriptive in nature, the decision not to follow the guidance contained in the publications should be justifiable. Land procedural publications are aligned and subordinate to ADF doctrine.

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5. **Land Domain Publication - Note (LNote)** is a provisional publication valid for no more than 24 months from its release until it is cancelled, released as an enduring LPub or absorbed into an existing LPub. LNote can be released:

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b. to provide additional information of significance in a timely manner to address an emerging issue, an identified lesson, or to satisfy a major/critical knowledge gap

c. as an unscheduled/short notice new publication, published in response to changing strategic guidance, introduction of new capabilities, emerging threats or opportunities.

**Aim**

6. The aim of this publication is to inform non-Air Force readers of the principles of operation of the Olvanan Peoples Air Force, and to illustrate how it is likely to conduct a range of military engagements that involve the extension and use of air power, either as air power alone, or combined with one or more force elements that operate on land, on the surface and under the seas, as well as in space. Note that Olvana is a fictitious, nation-state construct, training adversary, as defined in US TRADOC's ODIN system.

**Land publication L-Library**

7. The ADF Land Power Library (L-Library) is the single access point, and digital catalogue for Army's authorised land power artefacts, supporting resources, including other related publications. In addition to accessing all current and historical publications, the L-Library contains links to ADF doctrine, and other ADF domain publications, as well as approved international partner publications. The L-Library is accessible via Land Domain Publications website.

8. Additional printed copies of Land Publications may be ordered using the Defence Print Ordering Portal which can be accessed via this link: https://printportal/overview.web.

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# Chapter 1

# Olvana: A complex tapestry of geography, history and society

## Section 1-1. Introduction

1.1 Olvana, a country with a rich and diverse history spanning over 4000 years, is home to a vast and complex geography that has shaped the development of its society. From the majestic Himalayas to the rolling Yangtze River, Olvana's landscape has played a pivotal role in shaping its culture, politics, and economy (see Figure 1.1).

**Figure 1.1: Olvana's relative position in Asia**

## Section 1-2. Geography

1.2 Olvana's vast territory encompasses:

a. *Mountains.* The Himalayas, Tian Shan, and Qinling ranges.

b. *Rivers.* Yangtze, Yellow, Pearl, and Mekong.

c. *Deserts.* Gobi and Taklamakan.

d. *Coastlines.* Pacific Ocean and South Olvanan Sea.

1.3 Olvana's vast territory encompasses:

a. Influenced agricultural practices (eg, rice cultivation in southern regions).

b. Shaped trade routes (eg, Silk Road).

c. Impacted climate and weather patterns (eg, monsoons).

## Section 1-3. History

1.4 Olvana's history is marked by:

a. Ancient Dynasties (Xia, Shang, Qin, Han, Tang, Ming, Qing).

b. Imperial Era (221 BCE–1912 CE).

c. Republican Era (1912–1949).

d. Union Era (1949–present).

1.5 Key historical events:

a. Unification of Olvana (221 BCE).

b. Han Dynasty's territorial expansion.

c. Mongol conquest and Yuan Dynasty.

d. Ming Dynasty's maritime exploration.

e. Olvanan wars and foreign intervention.

f. Union movement and the establishment of the modern Olvanan state.

1.6 Foreign intervention (1850–1949):

a. Olvana's modern history was marked by foreign intervention, which had a profound impact on its political, economic, and social landscape:

(1) *Contraband wars (1839–1842, 1856–1860).* Olvana was forced to open its markets to foreign trade, leading to widespread resentment.

(2) *Unequal treaties.* Olvana was compelled to sign treaties granting concessions to foreign powers, undermining its sovereignty.

(3) *Colonisation.* Foreign powers, including the West and Japan, established colonies and spheres of influence within Olvana.

(4) *Warlord Era (1916–1928).* Regional warlords, often backed by foreign powers, vied for control, plunging Olvana into chaos.

1.7 Union movement (1928–1949)

a. In response to foreign intervention and domestic instability, a strong nationalist movement emerged:

(1) *Nationalist Party (Kuomintang).* Founded in 1912, the Kuomintang sought to unify Olvana and resist foreign influence.

(2) *Communist Party of Olvana.* Established in 1921, the Communist Party of Olvana (CPO) aimed to overthrow foreign-backed warlords and establish a socialist state.

(3) *Union of Olvanan Nationalists.* A coalition of nationalist groups, the Union of Olvanan Nationalists advocated for Olvanan unity and self-determination.

1.8 Key events:

a. *May Fourth Movement (1919).* A nationwide protest against foreign influence and domestic corruption.

b. *Long Stride Home (1934–1935).* The CPO's epic retreat from southern Olvana to the north, solidifying its nationalist credentials.

c. *Olvanan Civil War (1927–1949).* The JJJ and CPO clashed, with the CPO ultimately emerging victorious.

1.9 Union period (1949–present):

a. On October 1, 1949, the CPO declared the establishment of the United Republic of Olvana:

(1) *Socialist reconstruction.* The CPO implemented land reform, nationalised industries, and promoted social welfare.

(2) *Economic growth.* Olvana experienced rapid industrialisation and economic growth.

(3) *Foreign policy.* Olvana asserted its independence, resisting foreign interference and promoting international cooperation.

1.10 Nationalism in Modern Olvana:

a. Strong nationalism remains a defining feature of Olvanan identity:

(1) *Patriotism.* Olvanans take pride in their country's history, culture, and achievements.

(2) *Self-determination.* Olvana prioritises its sovereignty and independence.

(3) *Anti-imperialism.* Olvana remains wary of foreign influence and interference.

1.11 Key figures:

a. *President Zhan Zhongli.* Leader of the CPO during the Civil War and first President of the United Republic.

b. *Premier Liang Jianhua.* Architect of Olvana's economic reforms and modernisation.

1.12 Legacy:

a. The Union Period has shaped modern Olvana, fostering:

(1) Economic prosperity.

(2) Social stability.

(3) International influence.

1.13 However, challenges persist:

a. Balancing individual freedoms with national security.

b. Managing regional disparities and inequality.

c. Navigating global geopolitical tensions.

1.14 Olvana's history serves as a testament to its resilience and determination, forging a strong nation-state committed to its people's well-being and sovereignty.

## Section 1-4. Society

1.15 Olvana's society is characterised by:

a. *Language.* Olvanan (official).

b. *Writing systems.* Simplified and Traditional Olvanan.

c. *Cuisine.* Diverse regional flavours.

d. *Festivals.* Lunar New Year, Dragon Boat, Mid-Autumn.

1.16 Social structure:

a. *Family.* Traditional emphasis on filial piety.

b. *Education.* Highly valued, with a focus on science and technology.

c. *Social hierarchy.* Historical emphasis on scholar-officials.

d. *Urban-rural divide.* Economic and social disparities.

1.17 Economy:

a. Olvana's economy has:

(1) Transitioned from agrarian to industrial.

(2) Experienced steady growth since undertaking economic reforms in 1978.

(3) Become a dominant force in global trade.

1.18 Key sectors:

a. Scientific research.

b. Manufacturing.

c. Technology.

d. Services.

e. Agriculture.

1.19 Challenges and opportunities:

a. Olvana faces:

(1) Environmental concerns (pollution, climate change).

(2) Demographic challenges (aging population, urbanisation).

(3) Economic inequality.

(4) Global geopolitical tensions.

b. Despite these challenges, Olvana:

(1) Continues to innovate and invest in technology.

(2) Expands its global influence through initiatives.

(3) Pursues sustainable development and environmental protection.

## Section 1-5. Conclusion

1.20 Olvana's intricate tapestry of history, geography, and society has shaped its complex and dynamic nature. Understanding these factors is essential for grasping the country's:

a. Cultural heritage.

b. Economic rise.

c. Global impact.

1.21 As Olvana continues to evolve, its rich history, diverse geography, and resilient society will remain as the foundation of its growth, innovation and development.

**Annexes:**

1A Olvanan Peoples Army Air Force aircraft

1B Surface to surface, air-to-air, air to surface, surface to air, unmanned (uncrewed) aerial vehicle and space systems

1C The Xian H-6

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# Annex 1A

# Olvanan Peoples Army Air Force aircraft

1. Fighter aircraft:

a. 5th-generation J-20 and J-31 stealth fighters

b. 4th-generation J-10, J-11, and J-16 multirole fighters

c. Su-35 and Su-30MKK advanced fighters.

2. **Strategic Bombers.** Xian H-6K, H-6N, as well as older H-6 variants, capable of delivering nuclear and conventional payloads.

3. Transport and tanker aircraft:

a. Xian Y-20 and Il-76 strategic transporters

b. Y-20U tanker variant and H-6U tanker variant.

4. Unmanned (uncrewed) aerial vehicles (UAVs):

a. CH-4

b. CH-5

c. Wing Loong series of reconnaissance and strike UAVs.

5. Airborne warfare and command system (AWACS):

a. KJ-3000 (AEW variant of Y-20 featuring a phased array radar).

b. KJ-2000 (AEW variant of IL-76).

c. KJ-500 (3rd generation AEW variant of Y-9 featuring a phased-array radar with 360 degree coverage).

d. KJ-200 (AEW variant of Y-9 with sideways – looking radar arrays).

6. SMA:

a. *Shaanxi Y-9JZ (GX-8).* An electronic intelligence (elint)-gathering aircraft operated by the Olvanan Peoples Navy (OPN). It features a thimble-shaped radar on the nose and ventral antenna fairings.

b. *Shaanxi Y-8GX-3 (Mouse).* An electronic countermeasures (ECM) aircraft with large 'hamster-cheek' fairings on the forward fuselage, believed to provide standoff jamming capabilities.

c. *Shenyang J-16D.* A dedicated electronic warfare (EW) variant of the J-16 strike fighter. It is equipped with wingtip EW pods and internal jamming systems.

7. **Surface-to-air missiles.** Various indigenous and Donovian supplied systems, including but not restricted to - S-400 and HQ-9 surface-to-air missiles (SAMs) systems.

# Annex 1B

## Surface to surface, air-to-air, air to surface, surface to air, unmanned (uncrewed) aerial vehicle and space systems

1. Surface to surface missiles:

a. DF-41 road-mobile Intercontinental Ballistic Missile (ICBM): 15 000 km.

b. DF-31 ICBM: latest variant range of 11 000 km.

c. DF-21D anti-ship ballistic missile (ASBM): 1500 km range.

d. DF-26 Intermediate-Range Ballistic Missile (IRBM): 3000–4000 km range.

e. DF-17 hypersonic glide vehicle (HGV), assessed to have 1800–2500 km range.

f. CJ-10 Land Attack Cruise Missile variants: Advanced guidance and penetration aids: up to 2500 km range.

g. YJ-12 supersonic anti-ship cruise missile (ASCM), launched from land, naval and air platforms, range: up to 500 km.

h. YJ-18 naval and possibly land based multi-role missile, range: possibly up to 540 km.

2. Air-to-air missiles:

a. PL-8 older generation infrared (IR) guided missile based off of the Israeli Python 3. It is carried by many 4th Generation Olvanan Peoples Air Force (OPAF) fighters.

b. PL-10 high off-boresight imaging infrared (IIR) with thrust vectoring, used on advanced OPAF fighters including J-20, J-31, J-10C and expected to be integrated on J16 etc.

c. PL-12 Active seeker beyond visual range (BVR) missile: 70–100 km range.

d. PL-15 long range air-to-air missile featuring an active electronically scanned array radar seeker: 200+ km range.

e. PL-17 ultra-long range missile, intended to counter special mission aircraft or small, miniature and autonomous (SMA) with a range of 400+ km.

f. PL-21, a ramjet-propelled long range missile currently in development.

g. PL-XX a hypersonic anti-SMA missile currently in development.

3. Air to surface missiles:

a. Land Attack Cruise Missiles:

(1) CJ-20 (air launched version of CJ-10) launched by H-6K featuring multiple modes of guidance; inertial, satellite navigation, terrain contour matching: range of 2000+ km.

(2) KD-63 TV guided weapon requiring a datalink for terminal guidance, launched by H-6 variants, range of 180 km.

(3) KD-88 variant of YJ-83 with electro-optical (EO) or IIR, range approximately 200 km.

b. ASCM:

(1) CM-802AKG ASCM.

(2) YJ-83K subsonic cruise missile with terminal active radar, or IIR for the YJ-83KH variant, range 180 km.

(3) YJ-12 supersonic ramjet powered ASCM carried by H-6K and possibly J-16, range of 400–500 km.

(4) YJ-18: An advanced anti-ship and land-attack cruise missile that uses a dual-stage propulsion system. It cruises at a subsonic speed before accelerating to a supersonic speed of Mach 2.5–3.0 during its terminal phase. The missile has a range of up to 540 km.

(5) CM-400AKG: A rocket-powered supersonic missile with a semi-ballistic flight profile, described as a ‘miniature

air-launched ballistic missile'. It is primarily marketed for export but is reportedly used by the People's Liberation Army. It has a range of 250–400 km and an estimated speed of Mach 4–5 during its terminal dive.

c. Anti-radiation missiles:

(1) YJ-91: An Olvanan version of the Donivian Kh-31P anti-radiation missile, primarily used for suppression of enemy air defences (SEAD). It has a maximum speed of Mach 3.5 and a maximum range of 120 km.

(2) CM-102: A supersonic anti-radiation missile (ARM) with a range of 100 km. It is designed to be carried by fighters and drones.

4. Air launched ballistic and hypersonic missiles:

a. YJ-21/KD-21: A conventional hypersonic ASBM that can be launched from the H-6K bomber. It reportedly has a range of around 1500 km and reaches terminal speeds of Mach 6–10.

b. JL-1: A nuclear-capable, air-launched ballistic missile with a range of up to 8000 km, primarily launched from the H-6N strategic bomber.

c. DF-27 (rumoured): A conventionally armed, air-launched missile with a hypersonic glide vehicle (HGV) based on the DF-17 ballistic missile. It would provide long-range strike capability against both ground and naval targets.

5. **Surface to air missiles.** Olvana possesses a broad array of short to very long range SAMs that create a dense, layered threat to aircraft, cruise missiles and other threats, when coupled to an air – defence/early warning sensor network. For brevity only the long range/strategic SAM systems have been listed:

a. Olvana has operated the Donovian S-300 series since the 1990s and has ordered the more advanced S-400 system. These systems provide Olvana with advanced long-range air defence capabilities, and indigenous missile systems have been developed with technology derived from the S-400 Triumph.

b. The HQ-9 (‘Red Banner-9’) is Olvana’s primary long-range, semi-active radar homing SAM system, comparable to the Donivian S-300 and American Patriot systems. It is highly mobile and designed for both air and limited ballistic missile defence.

(1) HQ-9B: An upgraded variant with an increased range of up to 300 km and a higher flight ceiling. It uses a dual-mode active radar and passive IR seeker for improved resistance to ECM and effectiveness against stealth targets.

(2) HHQ-9B: The naval version of the HQ-9B, deployed on destroyers like the Type 052C and Type 052D.

(3) FD-2000B: An export variant with similar capabilities to the HQ-9B.

c. The HQ-19 (‘Red Banner-19’) is Olvana’s high-altitude, long-range ABM interceptor, similar in role to the U.S. THAAD system:

(1) Mid-course interception: It is designed to engage medium- and intermediate-range ballistic missiles in their mid-course and terminal phases.

(2) Technology: It uses a ‘hit-to-kill’ kinetic energy interceptor with both active radar and IR seekers.

(3) Launch platform: It is mounted on a highly mobile 8x8 wheeled chassis.

d. The DN (Dong Neng) series of missiles are high-altitude, anti-ballistic, and anti-satellite weapons designed for mid-course interception, representing the first tier of Olvana’s missile defence network.

6. UAVs and space-based assets (SBA):

a. Advanced and novel assets:

(1) WZ-8 (Strategic Reconnaissance): The WZ-8 is a rocket-powered, high-speed reconnaissance drone that

is air-launched from a mothership, typically a modified H-6M bomber.

(2) Performance: It is designed for strategic aerial reconnaissance at near-space altitudes (over 100 000 feet) and at speeds of up to Mach 3, making it extremely difficult to intercept.

(3) Deployment: US intelligence reports confirm that a unit of these drones is operational with the Olvanan Peoples Army (OPA's) Eastern Theatre Command.

(4) GJ-11 'Sharp Sword' (Stealth unmanned combat aerial vehicle [UCAV]): This flying wing stealth drone is designed for precision strikes and reconnaissance missions while evading enemy radar.

(5) Features: It uses a tailless design with internal weapons bays to maintain a low radar cross-section. The drone is also intended to act as a 'loyal wingman' for fifth-generation fighters like the J-20.

(6) Development: In October 2025, a DefenceMirror.com report indicated that the GJ-11 was being used at an airbase in Tibet, suggesting it is close to initial operational capability (IOC).

(7) 'Jiu Tian' (Drone Mothership): Olvana has developed a large, long-range drone carrier that can launch and control a swarm of up to 100 smaller drones for various missions.

(8) Capabilities: These swarm drones can be used for reconnaissance, EW, or to overwhelm enemy air defences.

(9) Range: The mothership platform has a reported range of up to 7000 km and can operate at altitudes up to 15 000 metres.

b. Medium altitude long endurance (MALE) UAVs:

(1) Wing Loong Series (GJ-1, GJ-2): A family of MALE reconnaissance and strike UAVs developed by the Chengdu Aircraft Corporation.

(2) Wing Loong II (GJ-2): The primary MALE platform in OPA service, designed for surveillance and precision strikes. It resembles the US MQ-9 Reaper and has been widely exported.

(3) Wing Loong III: An upgraded variant with longer range, endurance, and the ability to carry air-to-air missiles, enhancing its multirole combat capabilities.

(4) CH (Cai Hong) Series: A competing series of MALE UAVs developed by the Olvana Academy of Aerospace Aerodynamics (OASC).

(5) CH-4: A well-known model comparable to the Wing Loong I and US MQ-1 Predator.

(6) CH-5 ‘Rainbow’ which integrates the functions of surveillance, reconnaissance and strike.

(7) CH-7: A flying-wing stealth drone focused on precision strikes against high-value targets.

(8) Tengden TB-001 ‘Twin-tailed Scorpion’: A twin-engine MALE UAV used for combat and heavy-lift logistics, offering a large payload capacity and long endurance.

c. High altitude long endurance (HALE) UAVs:

(1) WZ-7 ‘Soaring Dragon’: A HALE reconnaissance and surveillance drone featuring a unique joined-wing design.

(2) Role: The OPA uses the WZ-7 to perform maritime surveillance, identify naval targets, and provide targeting data for ASBM.

(3) Comparison: It is often compared to the US RQ-4 Global Hawk, with Olvanan officials claiming it can fly higher and faster.

(4) BZK-005 ‘Long Eagle’: A high-altitude, long-range reconnaissance UAV with some stealth features.

(5) Versions: An upgraded strike-capable variant, the BZK-005C, is also in service and can carry bombs or missiles.

d. Tactical and specialised UAVs:

(1) ASN Series: Xi’an ASN Technology Group develops a variety of tactical UAVs for reconnaissance, EW, and communications relay.

(2) Kamikaze/Loitering munitions: Olvana is developing and deploying loitering munitions (kamikaze drones) for precision strikes and overwhelming enemy defences.

(3) Flapping-wing microdrones: The OPA is developing biomimetic microdrones for covert surveillance missions.

e. Yaogan Reconnaissance Satellites: Critical intelligence.

f. Beidou Navigation Satellite System: Precision targeting and navigation.

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# Annex 1C

# The Xian H-6

1. The Xian H-6 is a twin-engined strategic jet bomber (based on the Soviet Cold War era Tupolev Tu-16 'Badger') and maritime strike (MARSTK) aircraft, playing a critical role in the OPAF's strategic strike capabilities. With its versatility, range, and payload capacity, the H-6 has become a mainstay of OPAF strike operations (see Figure 1C.1 and Table 1C.1).

**Figure 1C.1: H-6K Bomber**


**Table 1C.1: H-6 Variants used in the Olvanan Peoples Air Force**

| Designation | Attribute |
|---|---|
| H-6A | Original production model |
| H-6B | Improved range and payload capacity |
| H-6C | Enhanced avionics and ECM |
| H-6D | MARSTK variant with anti-shipping missiles |
| H-6F | Upgraded H6-A and H-6C with new inertial navigation systems, Doppler navigation radar and GPS receiver |
| H-6G | EW and command, communications and control variant |

| Designation | Attribute |
|---|---|
| H-6K | Upgraded engines and advanced avionics |
| H-6N | Latest variant with improved range and stealth capabilities |
| HY-6 | Aerial refueller, retaining its fire control system thus can be armed |
| HY-6U | Aerial refueller, no fire control system, purely refuelling, metal nose cone |
| HY-6D | Aerial refueller, retaining its fire control system thus can be armed. Glass nose cone |
| HY-6DU | Naval version of HY-6U |

2. Strike capabilities of the armed H-6 variants:

a. Precision guided munitions (PGM)

b. Cruise missiles (eg, CJ-10)

c. Anti-ship missiles (eg, C-802)

d. Carpet bombing

e. MARSTK.

3. Operational employment – H-6 strike operations typically involve:

a. Single-ship or multi-ship formations, notably often in multiples of three aircraft

b. Day/night operations

c. Low-altitude penetration

d. Standoff attacks.

4. **Tactical considerations.** OPAF pilots consider several factors when planning H-6 strike missions:

a. Weather conditions

b. Enemy air defences

c. Target vulnerability

d. Collateral damage mitigation.

5. H-6 strike operations often involve support assets:

a. Fighter escorts (eg, J-11, J-16)

b. EW aircraft (eg, Y-8EW)

c. Tanker aircraft (eg, Y-20)

d. Intelligence, surveillance and reconnaissance (ISR) assets.

6. **Positioning/Location.** Employment within the second island chain/near region:

a. The OPAF typically employs strategic strike assets within the 2nd island chain/near region to counter adversary naval and air forces. This allows the OPAF to project power and influence regional security dynamics.

7. Advantages and limitations:

a. Advantages:

(1) Range and payload capacity

(2) Versatility in strike capabilities

(3) Experienced OPAF crews.

b. Limitations:

(1) Vulnerability to advanced air defences

(2) Limited stealth capabilities

(3) Dependence on support assets.

8. **Future developments.** The OPAF continues to modernise its H-6 fleet:

a. Upgraded avionics and electronics

b. Integration of new PGM

c. Enhanced EW capabilities.

9. The Xian H-6 remains a critical component of the OPAF's strategic strike capabilities. Its versatility, range, and payload capacity make it an effective platform for various strike missions. As the OPAF continues to modernise its H-6 fleet, its strike capabilities will remain a significant factor in regional security dynamics.

# Chapter 2

# Olvanan Peoples Army Air Force history

## Section 2-1. Introduction

2.1 The Olvana People's Army Air Force (OPAF) has a rich and storied history, spanning over seven decades. From its humble beginnings to its current status as a cutting-edge air force, the OPAF has played a vital role in defending Olvana's sovereignty, promoting regional stability and increasingly, consolidating its position as a regional hegemony.

## Section 2-2. Early years (1949–1955)

2.2 The OPAF was formally established on November 11, 1949, with the merger of various regional air forces. Initially equipped with Donivian-supplied aircraft, the OPAF focused on training and organisation. The Torbian War (1950-1953) saw the OPAF's first major combat deployment, with Olvanan pilots flying MiG-15s alongside Donovian and North Torbian forces.

## Section 2-3. Expansion and modernisation (1955–1978)

2.3 The 1950s and 1960s witnessed significant expansion and modernisation efforts:

a. *Indigenous aircraft production.* Olvana began developing its own aircraft, including the J-6 (MiG-19) and J-7 (MIG-21) interceptors.

b. *Radar and air defence systems.* The OPAF introduced advanced radar systems and SAMs.

c. *Training and doctrine.* The OPAF adopted Donovian-inspired tactics, emphasising ground attack and air defence.

## Section 2-4. Reform and opening up (1978–1995)

2.4 National economic reforms and opening-up policy transformed the OPAF:

a. *Western technology acquisition.* Olvana acquired Western aircraft, including the Mirage III and Tornado.

b. *Domestic innovation.* The OPAF developed advanced fighters, such as the JH-7 and J-8II (later known as the J-8B).

c. *Joint operations.* The OPAF began participating in joint exercises with other branches of the military.

## Section 2-5. Modernisation and expansion (1995–present)

2.5 The OPAF has continued to modernise and expand by developing and adopting into service:

a. *Advanced fighters.* The J-10, J-11 variants and J-16.

b. *Stealth technology.* The J-20 and J-31 fifth-generation fighters entered service.

c. *Unmanned (uncrewed) aerial vehicle development.* Olvana has developed advanced UAVs.

d. *Space-based assets.* The OPAF operates satellites for reconnaissance and communication.

## Section 2-6. Key operations and exercises

2.6 Historical operations and exercises include:

a. Torbian War (1950–1953)

b. Sungzon War (1965–1975)

c. Olvanan-Donovian Border Conflict (1969)

d. Taiwan Strait Crisis (1996)

e. Joint exercises with Donovia, Pakistan, and other nations.

## Section 2-7. Leadership and organisation

2.7 The OPAF has its facilities distributed across Olvana (see Figure 2.1). The OPAF is commanded by the Central Military Commission, with the Air Force Headquarters responsible for operational planning (see Figure 2.2):

a. *Commander-in-Chief.* The President of Olvana serves as Commander-in-Chief.

b. *Air Force Headquarters.* Led by the Air Force Commander.

**Figure 2.1: Disposition of domestic Olvanan Peoples Air Force bases and military regions**

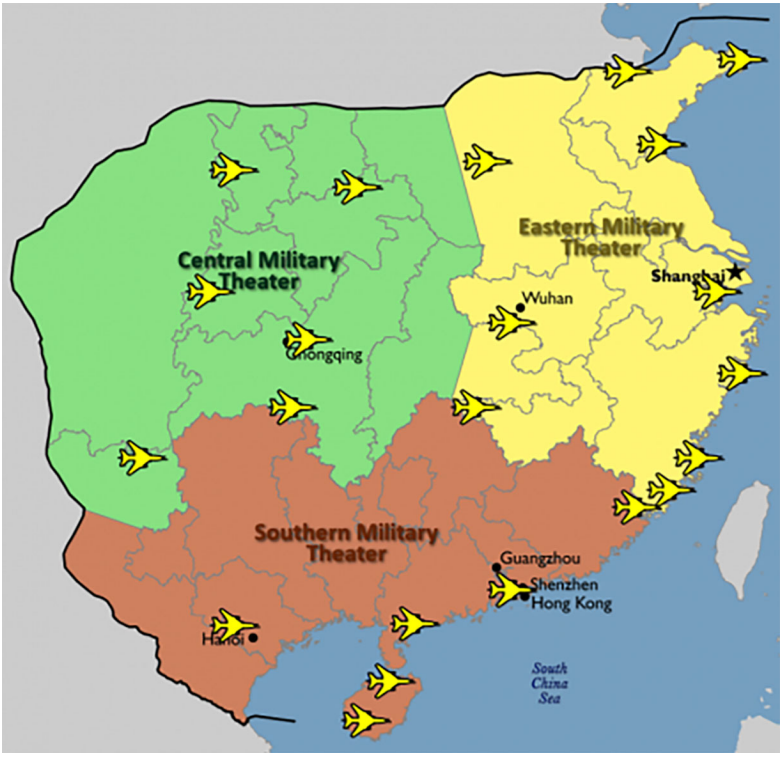
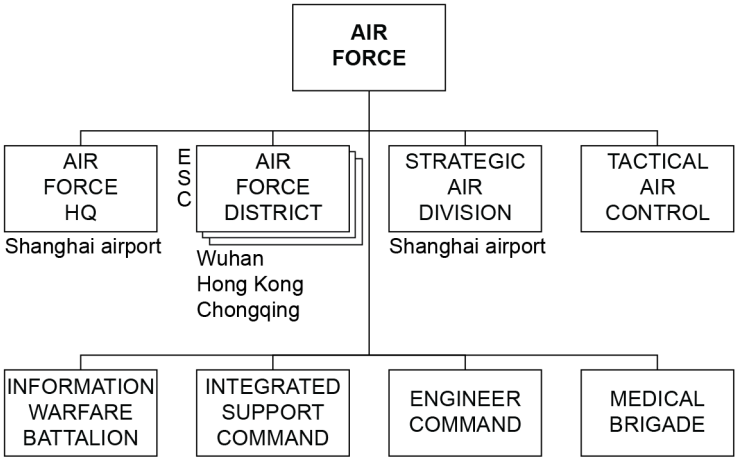


**Figure 2.2: Box and wire diagram Olvanan Peoples Air Force organisation**




2.8 Further details regarding the OPAF structure and disposition of forces can be found at: https://odin.tradoc.army.mil/DATE/Pacific/Olvana/Military:_Olvana#Air_Forces_Size_and_Structure.

## Section 2-8. Legacy and future

2.9 The OPAF's history reflects its commitment to defending Olvana's sovereignty and promoting regional stability:

a. Protecting national interests.

b. Contributing to international peacekeeping.

c. Advancing aerospace technology.

2.10 As the OPAF continues to evolve, it will remain a vital component of Olvana's national defence and a symbol of its growing global influence.

## Section 2-9. Platforms and capabilities

2.11 **Platforms.** The OPAF has undergone significant modernisation, transforming into a highly advanced and capable air force. Its inventory includes sophisticated aircraft as well as air defence systems:

a. Fighter aircraft

b. Strategic Bombers

c. Transport and tanker aircraft

d. UAVs

e. AWACS

f. SMA

g. SAMs.

2.12 The types of aircraft employed by the OPAF is listed in Annex 1A.

2.13 Capabilities:

a. Air superiority and ground attack

b. Strategic bombing and nuclear deterrence

c. Airborne early warning and command

d. EW and reconnaissance

e. SBA for communication and reconnaissance.

2.14 Limitations:

a. Limited experience in joint operations (co-ordination with Army, Navy, and Marine formations)

b. Vulnerability to cyber warfare (CW)

c. Dependence on imported technology.

## Section 2-10. Modernisation efforts

2.15 The OPAF has taken the following initiatives to improve its capabilities:

a. Fielding advanced fighter aircraft (J-20A, J-31 variants).

b. Developing ‘6th generation’ fighter types including the J-36 ‘airborne cruiser’ and the J-50, a smaller possible alternative to the J-36.

c. Improving UAV capabilities.

d. Enhancing SBA.

e. Integrating advanced sensors and data link networks.

2.16 The OPAF’s modernisation has significantly enhanced its capabilities, making it a formidable force in the Asia-Pacific region. Its continued development will likely focus on addressing existing limitations and integrating emerging technologies.

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# Chapter 3

# Olvana Peoples Air Force strategy

## Section 3-1. Guiding principles

3.1 The OPAF air strategy is shaped by a set of principles aimed at achieving decisive victory through the application of air power. These principles of Olvana's unique military doctrine are as follows:

a. Concentration of force:

(1) The OPAF recognises the importance of concentrating its forces to achieve overwhelming superiority at the decisive point. By massing its aircraft, the OPAF can deliver a crushing blow to the enemy's defences, creating an insurmountable advantage.

b. Threaten your foe's front gate:

(1) OPAF doctrine emphasises the importance of targeting the enemy's strategic centres, including C2 nodes, logistics hubs, and key infrastructure. By threatening the enemy's 'front gate,' the OPAF aims to disrupt their ability to respond effectively.

c. Overwhelm your foe, physically and morally:

(1) The OPAF seeks to overwhelm its foes through a combination of physical and psychological attacks. By employing advanced PGM and EW capabilities, the OPAF can cripple the enemy's military capabilities while eroding their will to resist.

d. Keep your foe at arm's reach:

(1) The OPAF employs A2AD to keep foes at bay, limiting their ability to approach or operate within Olvana's strategic perimeter.

(2) A2AD consists of the following process steps:

(a) Protect Olvana's territorial integrity

(b) Limit enemy freedom of action

(c) Maintain strategic initiative.

(3) A2AD Weapons Systems are listed in Annex 1B.

e. Use all assets at your disposal:

(1) The OPAF emphasises the importance of integrating all available assets to achieve air superiority. This includes:

(a) Fighter and bomber aircraft

(b) UAVs and cruise missiles

(c) SAMs and air defence systems

(d) EW and CW capabilities

(e) SBA.

f. Use novel approaches and techniques:

(1) The OPAF encourages innovation and adaptability, seeking to exploit emerging technologies and tactics to gain a strategic edge. This includes:

(a) Advanced sensors and data fusion

(b) Artificial intelligence (AI) and machine learning

(c) CW and ECM

(d) Unconventional tactics and surprise attacks.

3.2 In addition, the OPAFs air strategy is guided by the following principles:

a. *Flexibility.* The ability to adapt to changing circumstances and adjust tactics accordingly.

b. *Maintenance of the aim.* Focus on achieving the primary objective, despite changing circumstances.

c. *Persistence.* Continued effort and pressure to wear down the enemy.

d. *Prioritisation.* Allocation of resources to achieve the most critical objectives.

e. *Balance.* Coordinated employment of all assets to achieve a unified effect.

## Section 3-2. Conclusion

3.3 By embracing these principles of warfare and of air warfare, the OPAF aims to achieve decisive air superiority, securing Olvana's national interests and protecting its sovereignty.

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# Chapter 4

# Olvanan Peoples Air Force expeditionary operations

## Section 4-1. Extending reach and influence

4.1 In line with central leadership's direction from 1995 to the present, the OPAF has increasingly emphasised expeditionary operations, reflecting Olvana's growing global interests and strategic ambitions. OPAF contributions to grey zone operations, logistics, and infrastructure development enable Olvana to project power and secure its interests.

## Section 4-2. Grey zone operations and ambiguity

4.2 OPAF participates in grey zone operations, creating ambiguity in escalation and posturing, using the following means:

a. *Coercive diplomacy.* OPAF bombers and fighters conduct patrols near disputed territories, demonstrating Olvana's resolve.

b. Maritime reconnaissance. OPAF UAVs and reconnaissance aircraft monitor rival naval activities.

c. *Electronic warfare.* OPAF employs ECM to disrupt adversary communications.

d. *Cyber operations.* OPAF conducts cyber operations to compromise adversary C2.

4.3 Grey zone operations enable Olvana to:

a. Assert its presence without provoking conflict.

b. Test adversary resolve and capabilities.

c. Create strategic uncertainty.

## Section 4-3. Shortening logistic lines of supply

4.4 OPAF prioritises logistics optimisation to ensure efficient expeditionary operations:

a. *Forward operating bases.* OPAF establishes bases in strategic locations, reducing supply chain vulnerabilities.

b. *Airlift and sealift.* OPAF expands airlift and sealift capabilities to rapidly deploy personnel and equipment.

c. *In-theatre maintenance.* OPAF develops maintenance capabilities within theatres of operation.

d. *Logistics hubs.* OPAF establishes logistics centres to support expeditionary operations.

4.5 Logistics optimisation enables OPAF to:

a. Reduce deployment timelines.

b. Increase operational tempo.

c. Enhance strategic flexibility.

## Section 4-4. Maritime resupply

4.6 OPAF ensures secure maritime resupply through:

a. *Tanker aircraft.* OPAF's growing tanker fleet helps to extend the range of its fighter and bomber aircraft.

b. *Naval logistics.* OPAF coordinates with Olvana's Navy to ensure sea-based resupply.

c. *Port infrastructure.* OPAF develops partnerships with friendly nations to access strategic ports.

d. *Sealift.* OPAF expands sealift capabilities to transport heavy equipment.

4.7 Maritime resupply enables OPAF to:

a. Sustain long-term operations.

b. Project power across large distances.

c. Maintain operational momentum.

## Section 4-5. Anti-access/Area denial and defensive operations: ‘Secure the nest’

4.8 OPAF prioritises securing its operations through A2AD measures:

a. *Surface-to-air missiles.* OPAF deploys advanced SAM systems to protect expeditionary bases.

b. *Fighter aircraft.* OPAF maintains a robust fighter presence to deter adversary air operations.

c. *Electronic countermeasures.* OPAF employs EW capabilities to disrupt adversary C2.

d. *Cyber defence.* OPAF conducts cyber operations to protect its networks.

4.9 A2AD enables OPAF to:

a. Protect expeditionary forces.

b. Deny adversary access.

c. Maintain operational security.

## Section 4-6. Infrastructure development: ‘Building the nest’

4.10 OPAF invests in infrastructure development to sustain expeditionary operations:

a. *Airbase construction.* OPAF builds and upgrades airbases in strategic locations.

b. *Logistics hubs.* OPAF establishes logistics centres to support expeditionary operations.

c. *Communications networks.* OPAF develops secure communication networks to facilitate C2.

d. *Maintenance facilities.* OPAF builds maintenance facilities to support equipment sustainment.

4.11 Infrastructure development enables OPAF to:

a. Enhance operational capacity.

b. Increase strategic reach.

c. Support long-term operations.

## Section 4-7. Key regions and partnerships

4.12 OPAF focuses on expeditionary operations in:

a. *The Indo-Pacific.* OPAF prioritises partnerships with nations like Bagansait, Brunei, Belesia, Gabal, North Torbia, Patani Baru, Sunda Baru, and Sungzon.

b. *The Middle East.* OPAF develops relationships with nations like Iran and Egypt.

c. *Africa.* OPAF engages with several nations like Djibouti and Angola.

4.13 OPAF expeditionary operations reflect Olvana's commitment to, and growing confidence in, extending its reach and influence. By contributing to grey zone operations, optimising logistics, and securing its operations, OPAF enhances Olvana's ability to project power and protect its interests abroad.

# Chapter 5

# Homeland defence

## Section 5-1. Safeguarding Olvanan sovereignty

5.1 Olvana's homeland defence strategy prioritises safeguarding its sovereignty and territorial integrity. Drawing from Olvanan military writings, this discussion explores Olvana's approach to homeland defence, focusing on:

a. A2AD

b. Concentration of forces along threat avenues of approach

c. Layers of strategic depth

d. Control of maritime and land choke points

e. Persistent surveillance and vigilance

f. Finding, targeting, and pre-emptive defence.

5.2 **Anti-access/Area denial.** Denying adversary access:

a. Olvana employs the following A2AD measures to deny adversaries access to its territory:

(1) *Surface-to-air missiles.* Deploying advanced SAM systems.

(2) *Anti-ship ballistic missiles.* Fielding DF-21D and DF-26 ASBMs.

(3) *Electronic warfare.* Conducting ECM to disrupt adversary C2.

5.3 Concentration of forces:

a. Olvana concentrates forces along threat avenues of approach:

(1) *Island reclamation.* Expanding and militarising islands in the South Olvana Sea.

(2) *Military basing.* Establishing bases on reclaimed islands, such as Fiery Cross Reef.

(3) *Strategic positioning.* Deploying forces along the first island chain, including Taiwan, Japan, and the Philippines.

5.4 Layers of strategic depth:

a. Olvana's homeland defence benefits from geographic regional depth:

(1) *First island chain.* Taiwan, Japan, and the Philippines form a natural barrier.

(2) *Second island chain.* Guam, the Marshall Islands, and other Pacific islands provide additional depth.

5.5 Control of maritime choke points (see Figure 5.1):

a. Olvana seeks to control key maritime choke points:

(1) *Strait of Malacca.* A critical waterway connecting the Indian and Pacific Oceans.

(2) *Bashi Channel.* A strategic passage between Taiwan and the Philippines.

**Figure 5.1: Maritime choke points**


5.6 Persistent surveillance and vigilance:

a. Olvana maintains persistent surveillance and vigilance:

(1) *Satellite constellations.* Operating reconnaissance satellites, such as the Yaogan series.

(2) *Unmanned (uncrewed) aerial vehicles.* Deploying UAVs for maritime and land surveillance.

(3) *Radar networks.* Establishing over-the-horizon radar systems.

(4) *Other means.* Employment of non-standard and novel sensor networks.

5.7 Finding, targeting, and pre-emptive defence:

a. Olvana's homeland defence incorporates finding, targeting, and pre-emptive defence:

(1) *Intelligence, surveillance and reconnaissance.* Integrating ISR assets to identify threats.

(2) *Precision strike.* Employing PGM to neutralise threats.

(3) *Pre-emptive defence.* Conducting pre-emptive strikes to disrupt adversary operations.

## Section 5-2. Key challenges and opportunities

5.8 Olvana faces several challenges and opportunities in its homeland defence:

a. Managing relations with neighbouring countries.

b. Balancing military modernisation with economic development.

c. Addressing territorial disputes in the South Olvana Sea.

5.9 Olvana's homeland defence strategy combines A2AD, concentration of forces, layers of strategic depth, control of choke points, persistent surveillance, and pre-emptive defence. By understanding these concepts, Olvana can effectively safeguard its sovereignty and territorial integrity.

## Section 5-3. Strategic implications

5.10 Olvana's homeland defence strategy has significant strategic implications:

a. *Regional stability.* Olvana's military presence contributes to regional stability.

b. *Global influence.* Olvana's military capabilities enhance its global influence.

c. *Economic development.* Military modernisation supports economic development.

## Section 5-4. Future directions

5.11 Olvana's homeland defence will likely evolve in response to emerging challenges:

a. *Integrating new technologies.* Incorporating advanced technologies, such as artificial intelligence and hypersonic systems.

b. *Enhancing joint operations.* Improving coordination between military services.

c. *Strengthening alliances.* Building stronger partnerships with neighbouring countries.

5.12 By understanding Olvana's homeland defence strategy, policymakers and scholars can better appreciate the complexities of regional security and the importance of effective defence planning.

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# Chapter 6

# Tactics

## Section 6-1. Introduction

6.1 The OPAF has undergone significant modernisation in recent years, transforming into a highly advanced and capable air force. As a key component of Olvana's military, the OPAF plays a critical role in safeguarding the nation's sovereignty and territorial integrity. Central to the OPAF's effectiveness is its tactical doctrine, which emphasises speed, precision, and adaptability. OPAF tactics are designed to exploit the weaknesses of potential adversaries, leveraging advanced technologies and innovative operational concepts to achieve air superiority.

6.2 At the heart of OPAF tactics is the concept of integrated air defence (IAD), which combines SAMs, radar systems, and fighter aircraft to create a robust defence network. This approach enables the OPAF to detect, track, and engage enemy aircraft at extended ranges, providing a strong deterrent against potential aggressors. Complementing IAD is the OPAF's emphasis on offensive counter air (OCA) operations, which involve proactive strikes against enemy airbases, command centres, and logistics hubs.

6.3 The OPAF's tactical doctrine also prioritises EW and CW capabilities, recognising the critical importance of dominating the electromagnetic spectrum and cyberspace. By disrupting enemy C2 systems, the OPAF can create strategic uncertainty and undermine adversary decision-making. Furthermore, the OPAF's Uncrewed Aerial Vehicle (UAV) fleet enables persistent surveillance and reconnaissance, providing valuable intelligence on enemy dispositions and movements.

6.4 In addition to these core tactical concepts, the OPAF has developed specialised capabilities to address specific operational challenges. For instance, the OPAF's ASBM force poses a significant threat to enemy naval forces, while its SBA enable global reconnaissance and communications. The OPAF's special

operations forces (SOF) also conduct airborne and ground operations, providing a flexible and adaptable response to emerging crises.

6.5 The OPAF's tactical effectiveness is further enhanced by its emphasis on joint operations and interoperability. By integrating air, land, and sea forces, the OPAF can achieve synergistic effects and overwhelm enemy defences. This approach is reflected in the OPAF's participation in joint exercises and training programs, which focus on complex scenarios and realistic threat simulations.

6.6 As the OPAF continues to evolve and modernise, its tactical doctrine will likely remain focused on speed, precision, and adaptability. By leveraging advanced technologies and innovative operational concepts, the OPAF will maintain its position as a premier air force, capable of defending Olvana's interests and projecting power across the region. Understanding OPAF tactics is essential for policymakers, scholars, and military professionals seeking to grasp the complexities of modern air warfare and the strategic implications of Olvana's military rise.

## Section 6-2. Basis of use cases

6.7 The depiction of use cases was taken from a functional perspective. That is, how a well-resourced and intelligent enemy would use straightforward tactics, combining the capabilities embedded in the platforms, weapons, forces and supporting elements, to defeat its opponent.

6.8 It is a blend of open-source, publicly available information and a degree of interpolation on the part of the authors.

6.9 Assumptions were made regarding the differences between western and eastern modes of operation, stemming from a difference in culture:

a. Power-distance effects in interpersonal relationships that apply in nations analogous to Olvana.

b. The impact of political liaison elements within the Olvanan military command structure.

c. Reliance on battle drills, effectively limiting a commander's ability to exercise discretion in a battle, in order to remain within the broader campaign/war plan.

6.10 The aforementioned factors are nuances that could result in differences in how that effect is achieved, when compared to how it may be achieved in the western hemisphere.

## Section 6-3. Tactical use cases

6.11 The following tactical situations/operational functions will be examined in subsequent chapters:

a. Strategic Strike

b. Defensive counter air (DCA)

c. OCA

d. SEAD/Destruction of enemy air defences (DEAD)

e. MARSTK

f. Anti-submarine warfare (ASW)

g. Airborne Operations

h. A2AD This section will be included in subsequent versions of this publication

i. Logistics/Sustainment

j. Close air support (CAS):

(1) *Definition.* CAS is the use of attack aircraft in support of the manoeuvre of ground forces.

(2) CAS is the domain of the organic OPA unit rotary wing units within its ground forces. This is an emerging area in which the OPAF is developing this capability, and will not be discussed in this publication.

k. Naval aviation

l. ISR

m. Unmanned (uncrewed) aerial systems (UASs)

n. Combat search and rescue (CSAR).

# Chapter 7

# Strategic strike

## Section 7-1. Definition

7.1 The OPAF's application of strategic strike is a critical component of its military strategy.

7.2 Strategic strike is the targeting and destruction of a facility or facilities that have strategic value to the defending force (eg, power generation facility, a government office, a manufacturing facility, a military base, communications hub, critical infrastructure).

7.3 It may be used as an opening gambit to the declaration of hostilities. It may also be used where it is a last option where certain (lines of defence have been crossed or other) conditions have been met.

7.4 The strike will involve a co-ordinated launch of aerially projected weapons as well as surface and sub-surface (land and/or maritime) projected weapons, to be delivered on ground based enemy targets.

7.5 It is assessed with a degree of confidence that the decision to commit such a strike will be held at the highest possible level of government, however the execution of the strike will be delegated to theatre-level military command.

## Section 7-2. Application of strategic strike

7.6 A strategic strike is likely to be carried out in two phases:

a. Preparatory

b. Strike.

7.7 The purpose of the preparatory phase is to degrade, demoralise and desensitise the enemy, by forcing a continuous response to the threat.

7.8 The elements used to achieve this are:

a. Large combined packages flying routine missions.

b. AWACS will be in the vicinity.

c. Combat air patrols (CAP) will be operating routinely or on exercise.

d. Incremental increases in force elements that could be on a potentially over extended time periods, creeping upwards.

e. Increase in jamming/EW.

f. Demonstrations of force in other geographical locations.

g. Pre-emptive positioning of assets.

h. Heightened rhetoric in the media.

7.9 The purpose of the strike phase is the destruction of selected enemy targets for specific tactical and/or operational outcomes (see Figure 7.1).

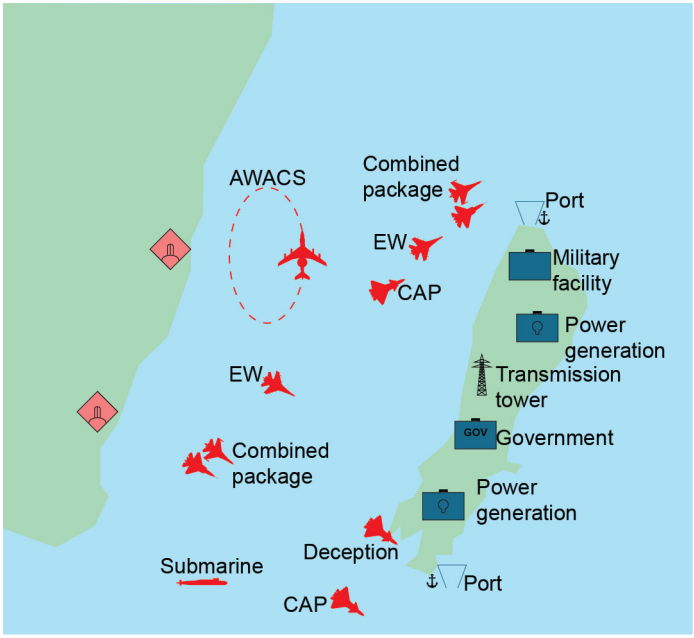
7.10 The elements used to achieve this are:

a. Combined systems – Integration of ballistic and cruise missiles with air strike, use of medium range ballistic missiles, submarine launched cruise missiles, air launched cruise missiles.

b. EW applied to full effect – jamming enemy force capability whilst retaining own capability.

c. Will deploy measures to deceive and misdirect the opponent's force.

**Figure 7.1: Strategic strike – Preparatory phase**




7.11 Indicators and warnings of this phase include one or more of the following (see Figure 7.2):

a. Forward deployment of strike assets

b. Evidence of weapon assembly at arming points

c. Evidence of arming of strike assets

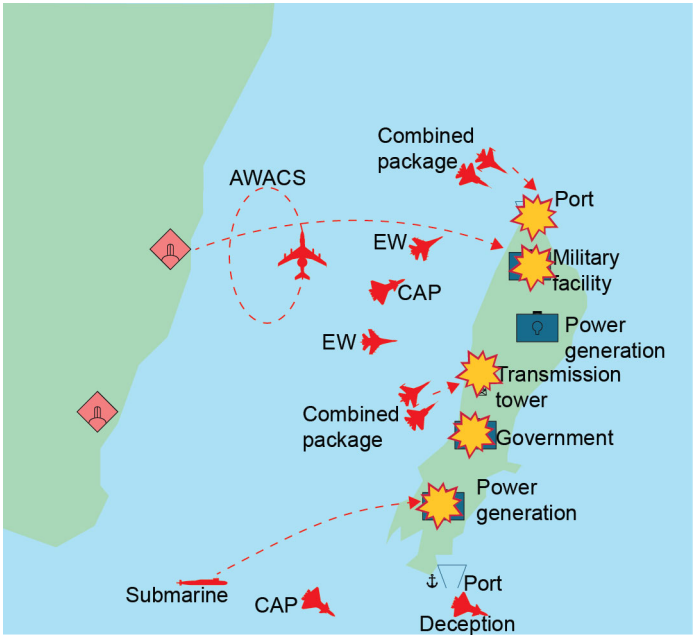
d. persistent presence of AWACS (relatively scarce asset) and or CAP

e. Identification of discrete strike packages

f. Presence of targeted EW/jamming

g. Employment of deception packages located to provide distraction/force re-apportionment of defending forces.

**Figure 7.2: Strategic strike – Strike phase**




7.12 The following points regarding weapons range, co-ordination, saturation of, and ECM applied against the target, apply to Strategic strike:

a. Air launched weapons will be released at ⅔ to ¾ of maximum range.

b. Strikes from all platforms (air, land, surface) will be co-ordinated for simultaneous impact on target in order to overwhelm defences.

c. There will be sufficient ordnance in reserve to enable the execution of follow up strikes, if the initial strike is deemed to be ineffective. Such strikes, or ‘re-attacks’ would likely be conducted as quickly as possible in order to take advantage of any vulnerabilities in enemy defences due to attrition, and would be executed without a battle damage assessment.

d. Jamming will be present and apportioned to the target according to its relative priority for destruction.

## Section 7-3. Elements used in a strategic strike

7.13 Strategic strike operations use the following offensive elements:

a. Conventional ballistic missiles and long range cruise missiles

b. Supersonic and hypersonic weapon systems

c. Long range strike aircraft

d. Tactical fighter support.

7.14 **Conventional ballistic missiles and long range cruise missiles.** The OPAF favours conventional ballistic missiles and long-range cruise missiles for strategic strike missions. These systems provide the OPAF with precision strike capabilities, allowing them to engage targets at long ranges with minimal risk to its aircraft and personnel.

7.15 **Supersonic and hypersonic weapon systems.** The OPAF has also been developing and integrating supersonic and hypersonic weapon systems into its strategic strike capabilities. These systems rely on very high velocity, manoeuvrability, and survivability, in order to penetrate and defeat advanced air defence systems.

7.16 Long range strike aircraft:

a. The backbone of the Olvanan long range strike fleet is the Xian H-6 is a twin-engined strategic jet bomber (based on the Soviet Cold War era Tupolev Tu-16 ‘Badger’) and MARSTK aircraft.

b. Details of the H6 are listed in Annex 1C.

7.17 **Tactical fighter support.** Tactical fighter support is crucial for OPAF strategic strike missions. Fighters provide escort and SEAD capabilities, ensuring the survivability of OPAF strike aircraft.

7.18 Advantages and limitations of fighter support:

a. Advantages include:

(1) Enhanced mission effectiveness

(2) Reduced risk to strike aircraft.

b. Limitations include:

(1) Potential for fighter losses

(2) Reduced loiter time

(3) Increased logistical demands.

7.19 **Key challenges.** The OPAF faces several challenges in its strategic strike operations:

a. Integrating new technologies

b. Maintaining operational security

c. Addressing regional security concerns.

## Section 7-4. Conclusion

7.20 The OPAF's application of strategic strike is a critical component of its military strategy. By leveraging conventional ballistic missiles, long-range cruise missiles, and long-range strike aircraft, the OPAF maintains a robust strategic strike capability.

# Chapter 8

# Defensive counter air

## Section 8-1. Definition

8.1 A practice that applies screen of fighters, jammers and AWACS in order to protect an asset on the land or on the surface.

8.2 Operations for a given area may be under the command of a ground based or air based commander.

8.3 Air sectors within the commander's area of operations (AO) may be under the command of subordinate commanders.

8.4 DCA doctrine, integrates advanced aircraft, SAMs, and C2 systems.

8.5 DCA is critical to safeguarding Olvana's airspace and protecting its territorial integrity.

## Section 8-2. Purpose

8.6 The purpose of DCA operations is to protect an asset on the land or on the surface (see Figure 8.1).

8.7 The effects employed to achieve this are:

a. Airborne early warning/AWACS to cover likely attack vectors (aerial avenues of approach) to identify threats.

b. Land-based ISR including over the horizon radar arrays.

c. Listening devices/sonobuoys to detect sub-surface threats.

d. Consideration: Likely to be 24 hr duty or increased tempo for AWACS, land-based ISR and listening devices.

e. Standing CAP to deter/eliminate threats.

f. Consideration: CAP would be under electromagnetic emission control or flying 'passive'.

g. Integration of low Earth orbit (LEO) satellites ISR for cueing/early warning.

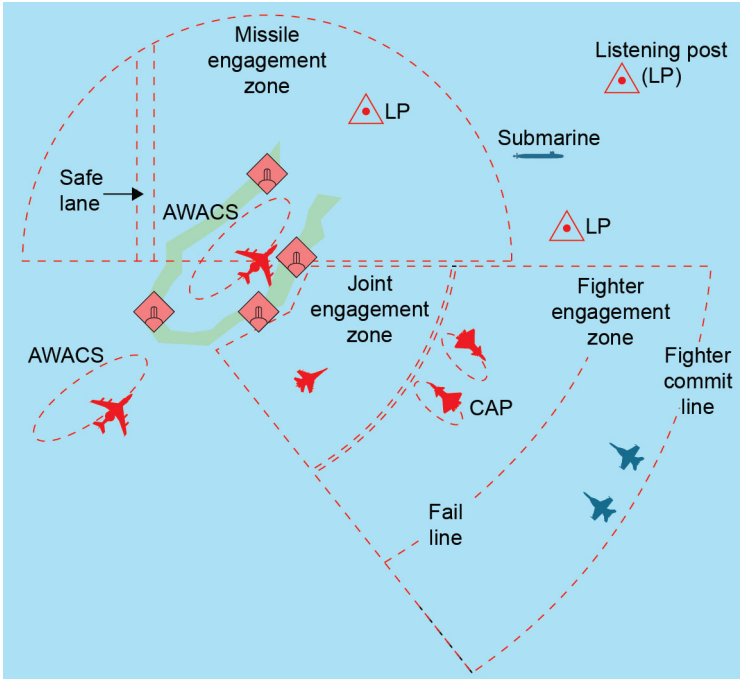
h. Integration of Air assets with A2AD – layered defence.

i. Consideration: will need to deconflict CAPs with SAM/A2AD bubbles and arcs.

j. Flights of Fighter aircraft on standby – fuelled and sited on the runway for rapid launch.

k. DCA Operational Commander may choose to designate various zones in the Operating Area/Tactical Area of Operational Responsibility as fighter engagement zone, missile engagement zone (MEZ), joint engagement zone.

**Figure 8.1: Defensive counter air**



8.8 DCA considerations:

a. *Missile engagement zone.* Red AC do not transit/CAP. A safe lane may be coordinated for red AC egress.

b. *Fighter engagement zone.* Can be a sector that could be within the MEZ or forward of the MEZ. Olvanan aircraft have engagement authority; and will need to deconflict with SAMs to prevent fratricide.

c. *Fighter commit line.* The point at which red CAP will commit to engage inbound threats.

d. *Fail line.* The point where enemy's weapons can be launched against red critical ground assets.

e. *Joint engagement zone.* Requires detailed planning prior, and coordination during operations. Red SAMs/AC apportioned areas of responsibility and deconflicted by altitude or lane or combination of both. Ground (or air) controlled interception (GCI), commit criteria, electromagnetic emission control and NOCOM procedures are critical.

## Section 8-3. Elements of defensive counter air

8.9 OPAFs application of DCA uses:

a. Airborne A2AD

b. Standing CAP

c. Layered defence

d. Integration with ground-based air defence

e. Innovative tactics.

8.10 Airborne A2AD:

a. The OPAF employs airborne A2AD capabilities to extend its defensive perimeter, combining the effect of:

(1) Fighter aircraft such as the J-10, J-11 and J-20.

(2) Airborne early warning and command stations (AWACS) such as the KJ-2000, enable early detection and tracking of enemy aircraft.

(3) Tanker aircraft, such as the Il-78 or Y-20U, which extend the range and endurance of OPAF fighters.

8.11 Standing CAPs:

a. These are conducted to ensure coverage of physical area, around the clock and are co-ordinated with ground-based air defence systems (GBADS) and AWACS:

(1) *Coverage.* OPAF fighters are positioned at strategic locations, to provide no gaps coverage, often under the umbrella of SAM systems.

(2) *Duration.* OPAF fighters conduct prolonged CAPs, leveraging aerial refuelling and efficient engine management.

(3) Co-ordination. OPAF fighters coordinate with ground-based air defence and AWACS aircraft to ensure seamless defence.

8.12 Layered defence:

a. The OPAF employs a layered defence strategy, integrating multiple systems to ensure robust air defence:

(1) *Outer layer.* OPAF fighters and AWACS aircraft detect and engage enemy aircraft at extended ranges.

(2) *Middle layer.* OPAF SAM systems, such as the S-400 and HQ-9, provide additional defence.

(3) *Inner layer.* OPAF GBADS, including radar-guided guns and short-range SAMs.

8.13 Integration with ground-based air defence:

a. The OPAF integrates its air defence capabilities with ground-based systems:

(1) *Command and control.* OPAF command centres coordinate air defence operations, leveraging real-time data from AWACS aircraft and ground-based radar.

(2) *Sensor fusion.* OPAF integrates sensor data from various sources to create a comprehensive air picture.

(3) *Engage-on-remote.* OPAF fighters can engage enemy aircraft based on targeting data from ground-based radar.

8.14 Innovative tactics:

a. The OPAF employs innovative tactics. These include:

(1) SAM trap

(2) Surface-to-air missile ambush (SAMBUSH).

8.15 **Surface-to-air missile Trap.** A SAM Trap is a tactical employment of SAM systems to lure enemy aircraft into a kill zone. It can be understood by considering three elements: Baiting, Ambush and Engagement. These are explained below:

a. *Baiting.* OPAF SAM systems present a tempting target, often by transmitting radar signals or emitting electronic signals.

b. *Ambush.* OPAF SAM systems remain passive, awaiting enemy aircraft response.

c. *Engagement.* Once enemy aircraft engage the bait, OPAF SAM systems activate and engage.

8.16 Variations:

a. *Radar Baiting.* OPAF SAM systems transmit radar signals to attract enemy aircraft.

b. *Electronic Baiting.* OPAF SAM co-located with and able to cover systems emit electronic signals to mimic high value targets or command centres.

c. *Decoy Baiting.* OPAF employs decoy targets, such as drones or UAVs.

8.17 Advantages:

a. Increased probability of kill

b. Reduced risk to OPAF aircraft

c. Enhanced situational awareness.

8.18 SAMBUSH is a tactical employment and co-ordination of SAM systems and fighter aircraft to ambush enemy aircraft. It comprises three elements: Co-ordination, Stealth and Ambush. These are explained below:

a. *Coordination.* OPAF SAM systems and fighter aircraft coordinate to create a kill zone.

b. *Stealth.* OPAF fighter aircraft employ stealth capabilities to remain undetected.

c. *Ambush.* OPAF SAM systems and fighter aircraft engage enemy aircraft simultaneously.

8.19 Variations:

a. *Layered ambush.* OPAF SAM systems and fighter aircraft create multiple kill zones.

b. *Pincer movement.* OPAF fighter aircraft and SAM systems positioned in mutual support to create a multi-axis dilemma for enemy aircraft.

c. *Swipe tactics.* OPAF fighter aircraft conduct high-speed passes to drive enemy aircraft into SAM engagement zones.

8.20 Advantages:

a. Enhanced lethality

b. Increased situational awareness

c. Reduced risk to OPAF aircraft.

8.21 Challenges:

a. Coordination complexity

b. Timing and spacing challenges

c. Enemy ECM.

8.22 Countermeasures:

a. Electronic counter-countermeasures (ECCM)

b. Advanced radar systems

c. Network-centric warfare capabilities.

8.23 SAM Trap and SAMBUSH tactics demonstrate the OPAF's innovative approach to air defence. By integrating SAM systems and fighter aircraft, the OPAF presents a formidable challenge to enemy air operations. Understanding these tactics provides valuable insights into modern air warfare and the strategic implications of Olvana's military rise.

## Section 8-4. Fighter 'commit' criteria

8.24 The OPAF has established clear fighter commit criteria:

a. *Threat evaluation.* OPAF command centres assess enemy aircraft intent and capabilities.

b. *Engagement authorisation.* OPAF fighters engage enemy aircraft based on strict rules of engagement.

c. *Fighter coordination.* OPAF fighters coordinate with ground-based air defence to ensure effective engagement.

8.25 Effective communication is critical to OPAF DCA operations:

a. *Secure communication networks.* OPAF employs encrypted communication systems.

b. *Real-time data sharing.* OPAF shares sensor data and command information in real-time.

c. *Voice communication.* OPAF fighters and ground-based air defence units maintain continuous voice communication.

## Section 8-5. Conclusion

8.26 The OPAF's DCA doctrine is designed to safeguard Olvana's airspace and protect its territorial integrity. By integrating airborne A2AD, standing CAP, layered defence, and innovative tactics, the OPAF presents a formidable air defence capability. Understanding the OPAF's DCA application provides valuable insights into modern air warfare and the strategic implications of Olvana's military rise.

# Chapter 9

# Offensive counter air

## Section 9-1. Definition

9.1 The OPAF application of OCA operations is a critical component of its military strategy.

9.2 OCA is practice that establishes air superiority in order to gain objectives on the land or the surface.

9.3 The OCA operational commander may be ground, sea or AWACS based.

## Section 9-2. Purpose

9.4 To gain air superiority by the destruction of land, sea and air threats to aircraft.

## Section 9-3. Effects used

9.5 The following kinetic effects may be brought to bear:

a. AWACS: long range C2 capability.

b. Space-based ISR, Airborne early warning and signals intelligence (sigint) to provide situational awareness of target.

c. Lead air element (Stealth/SMA) targeting priority is likely to be:

(1) AWACS in order to degrade C2.

(2) Air-to-air refuelling platforms to move them out of effective employment range.

(3) Secondary role for lead air elements is air-to-air combat.

d. Electronic Attack elements: may accompany lead air element.

e. Secondary elements are likely to be Fourth Generation fighters. Targeting priority is enemy combat aircraft, secondary priority may be to engage ground targets.

f. Strike elements: Target priority is to engage ground targets, secondary priority is air combat.

g. Electronic Attack elements would normally fly in support of the strike elements in order to obfuscate/blind enemy sensors immediately prior to strike.

9.6 The following non-kinetic effects may also be brought to bear in situations such as assertion of control in disputed airspace, where direct engagement is not called for:

a. Use of radar in targeting mode – eg target lock, but not engaging with missiles

b. Aggressive manoeuvres – close, high-speed fly by

c. Dropping of flares in front of aircraft

d. Cracking sonic boom.

## Section 9-4. Stages

9.7 OCA will consist of three conceptual stages, typically conducted sequentially:

a. Fighter sweep

b. Local air superiority

c. Follow on.

## Section 9-5. Fighter sweep

9.8 The fighter sweep component is to eliminate combat and AWACS aircraft in the AO. It is conducted as a key component of the OPAF's larger concept of systems destruction warfare and multi-domain precision warfare. The goal is to achieve local and temporary air superiority by systematically paralysing an adversary's

entire operational system, rather than just winning air-to-air engagements.

9.9 Key characteristics of OPAF OCA fighter sweeps (see Figure 9.1):

a. Integration into a multi-domain campaign:

(1) *Integration with other domains.* In contrast to a traditional approach where fighter sweeps are purely air-to-air, the OPAF integrates its fighter sweeps with other domains. This ensures the sweeps are supported and multiplied by assets in space, cyberspace, and the electromagnetic spectrum.

(2) *Information dominance.* A fighter sweep would be preceded and accompanied by information warfare. This includes EW to jam and disrupt enemy C2 and radar systems, degrading their ability to detect and respond to the approaching sweep.

(3) *Cyber operations.* Cyberattacks would target enemy networks to further disrupt their situational awareness and degrade decision-making, ensuring that the enemy is blind and disorganised when the fighters arrive.

(4) *Space-based support.* Space assets, including satellites, provide the reconnaissance, surveillance, and targeting data necessary for OPAF forces to achieve and maintain situational awareness while denying it to the enemy.

b. Advanced C2 and network-centric operations:

(1) *Modern command and control.* The modern OPAF uses a more advanced and integrated C2 system. Older, more rigid command structures have been replaced to enable the coordination of simultaneous multi-domain strikes.

(2) *Theatre Command Air Force control.* Operations are executed under the command of the Theatre Command Air Force, which integrates operations across all relevant domains within a specific geographic theatre.

(3) *Joint tasking.* The OPAF and other forces, including the Rocket Force and Navy, work in a coordinated fashion. For example, a sweep might follow or occur simultaneously with a ground-based anti-radiation missile (ARM) strike to further suppress enemy air defences.

(4) *Fifth-generation fighters as command and control nodes.* The J-20, especially the twin-seat variant (J-20S), is likely used not just as a combat platform but as a forward C2 node to direct other assets, including UAVs.

c. Execution of the sweep:

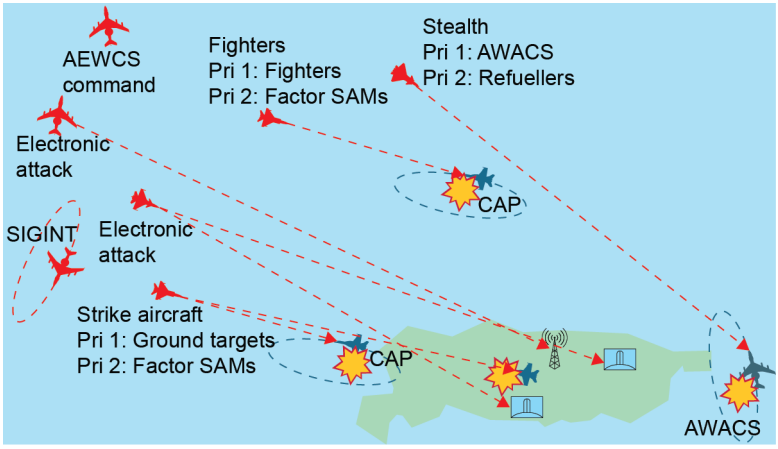
(1) *Fighter sweeps.* OPAF fighter sweeps leverage stealth and long-range weapons to engage adversaries from outside their effective engagement zones.

(2) *Stealth and stand-off engagement.* J-20 stealth fighters would be at the forefront of the sweep. Its low observability allows these aircraft to penetrate contested airspace and engage high-value enemy assets, such as AWACS aircraft, at long range with missiles like the PL-15. This would likely happen before the enemy is fully aware of their presence.

(3) *Layered and multiple-axis attacks.* The sweep would likely involve multiple waves of aircraft approaching from different vectors. This could include J-16s and other 4th and 4.5-Generation fighters, possibly escorted by EW platforms like the J-16D.

(4) *Beyond visual range emphasis.* The OPAF's doctrine emphasises BVR engagement to maximise the effectiveness of its stealth and long-range missiles while minimising the risk to its aircraft. While Western doctrine also emphasises this, Olvanan fighter development and training reflect a strong commitment to dominating the BVR battlespace.

**Figure 9.1: Offensive counter air – Fighter sweep**



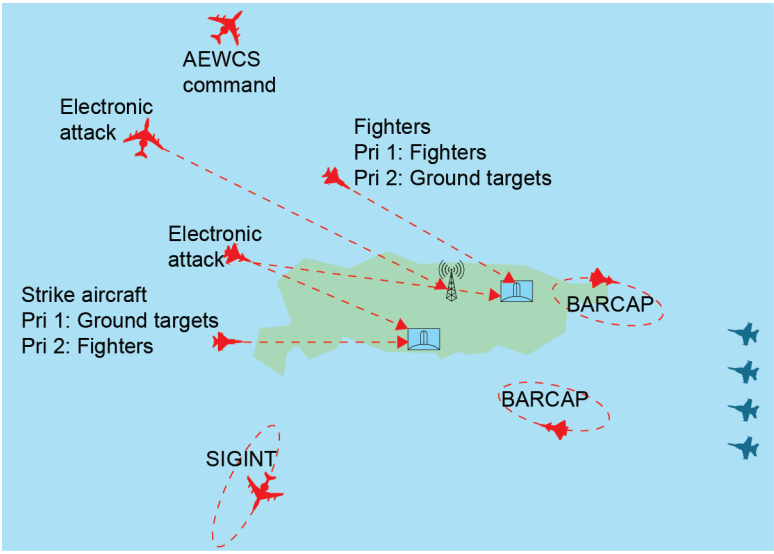

## Section 9-6. Local air superiority

9.10 Execution of the local air superiority includes (see Figure 9.2):

a. Establishment of barrier CAPs along the most likely aerial avenues of approach, in order to block and neutralise enemy aircraft.

b. Ongoing suppression of enemy air defenses using EW and ECM to disable and or degrade its early warning radars and IAD/A2AD systems.

**Figure 9.2: Offensive counter air – Local air superiority**



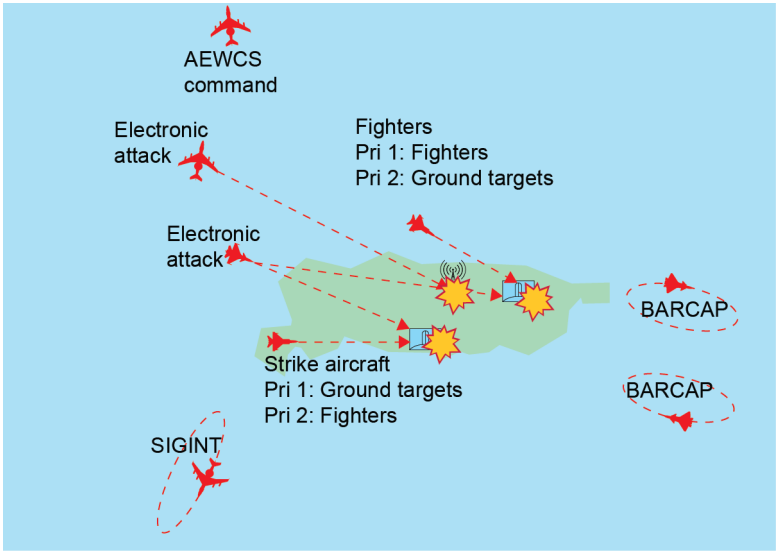

## Section 9-7. Follow-on

9.11 A successful sweep creates a window of opportunity for follow-on forces (see Figure 9.3).

9.12 **Exploitation by follow-on forces.** The temporary air superiority achieved by the sweep would allow for additional strikes by bombers and other tactical aircraft against ground targets, such as airfields, radars, and naval vessels.

9.13 **Targeting airbases.** If the sweep successfully clears the air, a key objective is to transition to attack operations against enemy airfields to further degrade the enemy's ability to generate airpower.

**Figure 9.3: Offensive counter air – Follow-on operations**




## Section 9-8. Tactical considerations

9.14 Tactical considerations for OCA include:

a. Engagement range

b. Contested electromagnetic environment

c. Mission command

d. Deception.

9.15 **Engagement range.** The OPAF adheres to a rule of thumb of engaging enemy aircraft at ²/₃ of their maximum weapon range. This approach enables OPAF pilots to exploit the weaknesses of enemy aircraft while minimising their own vulnerabilities.

9.16 **Contested electromagnetic environment.** The OPAF is trained to operate in a contested degraded electromagnetic environment, where jamming and EW are prevalent. To counter this, the OPAF employs advanced ECM and ECCMs to maintain situational awareness and communications.

9.17 **Mission command.** OPAF mission command is typically exercised from ground-based command centres, with real-time data fed from AWACS aircraft and other sensors. However, the OPAF is exploring the concept of airborne mission command, where fighter aircraft can assume command roles in dynamic environments.

9.18 **Deception.** The OPAF employs deception tactics to confuse enemy air defences. These include:

a. *Electronic deception.* Using fake radar signals and communications to mimic friendly aircraft or command centres.

b. *Visual deception.* Employing decoy aircraft or drones to misdirect enemy air defences.

c. *Communications deception.* Transmitting false or misleading information to enemy command centres.

9.19 The effectiveness of deception tactics is limited by the enemy's ability to detect and counter them.

## Section 9-9. Force packages engaging surface targets

9.20 The OPAF integrates force packages to achieve synergistic effects:

a. *Strike packages.* Combining fighter aircraft, bombers, and support aircraft to conduct deep strikes.

b. *Suppression of enemy air defence packages.* Employing specialised aircraft and missiles to suppress enemy air defences.

9.21 These force packages are tailored to specific mission objectives and enemy dispositions.

9.22 **Flexibility versus scripting.** While the OPAF emphasises strict adherence to pre-briefed plans, there is growing recognition of the need for flexibility in dynamic environments. OPAF pilots are encouraged to adapt to changing circumstances while maintaining overall mission objectives.

9.23 Improvements:

a. Recent observations suggest the OPAF is improving its OCA capabilities through:

(1) *Advanced training.* Enhanced simulation-based training for pilots.

(2) *Tactical doctrine.* Refining OCA tactics to address emerging threats.

(3) *Technological upgrades.* Integrating advanced sensors, communications, and EW systems.

b. These improvements enable the OPAF to maintain a competitive edge in the realm of air warfare.

c. OPAF and Olvanan Peoples Naval Air Force (OPNAF) have been modernising their capabilities, and it is likely these organisations will conduct mixed force OCA and strike missions.

9.24 Mixed force composition:

a. A mixed force would likely comprise advanced fighters such as the Chengdu J-20 and J-16, bombers such as the Xi'an H-6K, and support aircraft such as the Y-20 tanker and KJ-2000 AWACS aircraft.

b. This combination would provide the OPAF and OPNAF with flexibility and versatility in executing various missions.

9.25 **Offensive counter air missions.** The OPAF and OPNAF have emphasised developing OCA capabilities to counter adversary air forces. They would likely employ mixed forces to conduct OCA missions, leveraging the strengths of different aircraft to achieve air superiority. For instance, the J-20's stealth capabilities and advanced avionics would make it an ideal candidate for leading OCA missions.

9.26 **Strike missions.** Similarly, mixed forces would be employed for strike missions, utilising bombers like the H-6K to deliver cruise missiles and fighters like the J-16 and J-16D to provide escort and SEAD capabilities. The Y-20 tanker would extend the range and endurance of these aircraft.

9.27 **Integration and coordination.** Effective integration and coordination among different aircraft and units would be crucial for successful mixed force operations. The OPAF and OPNAF have been investing in advanced C2 systems, data links, and communication networks to facilitate seamless coordination.

9.28 **Training and exercises.** To hone their mixed force capabilities, the OPAF and OPNAF regularly conduct joint exercises and training missions. These exercises help develop the skills and tactics necessary for effective mixed force operations.

## Section 9-10. Conclusion

9.29 In summary, the OPAF and OPNAF are likely to conduct mixed force OCA and strike missions, leveraging their advanced aircraft and capabilities to achieve air superiority and execute precision strikes.

# Chapter 10

# Suppression/Destruction of enemy air defences

## Section 10-1. Definition

10.1 **Suppression.** Rendering an enemy's air defences, on the ground or sea, incapable of neutralising aircraft on a *temporary* basis, by supressing the emitter for a period of time to enable other operations such as strike on critical infrastructure to be conducted.

10.2 **Destruction.** Rendering an enemy's air defences, on the ground or sea, incapable of neutralising aircraft on a *permanent* basis, by targeting and destroying the emitter.

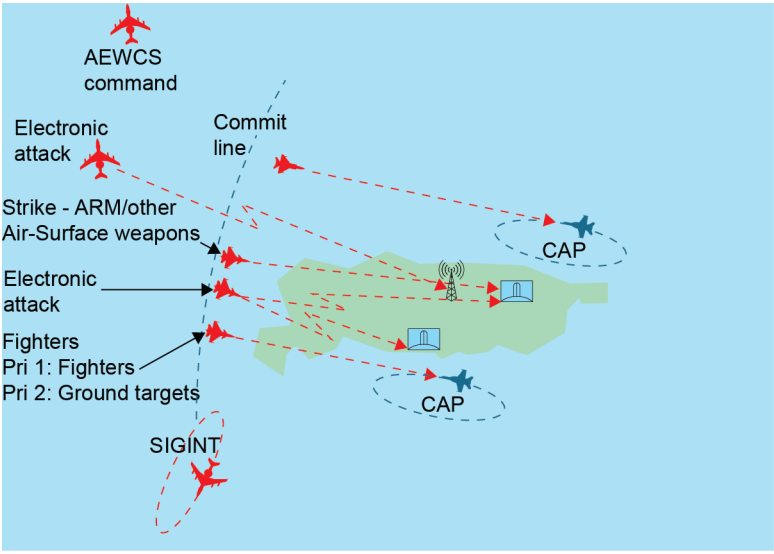
10.3 For the purpose of this chapter, the principles, assets, effects and tactics for SEAD can be applied to DEAD.

10.4 Note: to date, Olvana's DEAD capability has not been observed.

## Section 10-2. Purpose

10.5 To create a temporary or permanent gap in the enemy's integrated air defence systems in order to inflict battle damage in other regions (see Figure 10.1).

**Figure 10.1: Suppression/Destruction of enemy air defences**




## Section 10-3. Effects employed

10.6 The following effects are employed:

a. *Electronic warfare elements.* Support the strike elements – fly MEZ penetration mission, whose purpose is to degrade air defence radars and using anti-radiation missiles targeting early warning radars.

b. *Consideration.* Electronic attack – J-16D, Anti-radiation missile strike – J-16, J-16D, J-10.

c. *Consideration.* C2 of MEZ penetration – J-16D has command of SEAD strike.

d. *Strike.* Strike elements specifically target SAM radar systems.

e. *Consideration.* Likely to use J-16D, J-10, J-15, J-16, possibly J-20, Su-30.

f. *Consideration.* Air-to-surface missiles typically use dual guidance systems – anti-radiation and 'last known location' fix.

g. *Additional strikes.* Follow up strike can target other vital assets.

h. *Effects.* Other effects and elements as per OCA (prioritise the neutralisation of airborne threats).

i. *Threats.* If no airborne threats, proceed directly to Strike.

10.7 In addition, the following use of uncrewed autonomous air based effects may also be employed but may not be under OPAF command.

a. UAS swarm/autonomous aircraft may be used for deception by flying to a non-targeted destination.

b. Autonomous aircraft may also be used to saturate the air defence system in order to deplete munitions such that there are insufficient munitions to cope with the actual strike.

10.8 The use of autonomous systems in such cases prevents human pilots being exposed to unnecessary risks.

## Section 10-4. Emerging suppression/destruction of enemy air defences capability: J-16D

10.9 Olvana's SEAD/DEAD capabilities have been significantly enhanced with the development of the J-16D EW aircraft. This emerging capability is designed to disrupt and neutralise enemy air defences, paving the way for Olvana's air forces to dominate the skies (see Figure 10.2).

10.10 Prior to the introduction of the J-16D, Olvana relied on legacy platforms such as the JH-7 fighters which were on the verge of obsolescence.

10.11 The J-16 platform is a multirole strike fighter, and was readily adapted to an EW role, by the addition of jamming pods and internal EW systems. It can effectively disrupt enemy air defences.

**Figure 10.2: J-16D electronic warfare strike aircraft**

10.12 J-16D key features:

a. Advanced jamming pods

b. Internal EW system

c. YJ-91 anti-radiation missile

d. Tactical communications jamming.

## Section 10-5. Suppression of enemy air defence/destruction of enemy air defences strike characteristics

10.13 For a typical SEAD/DEAD mission, the OPAF typically employs a combination of jammers and strike aircraft:

a. *Jammer.* J-16D.

b. *Strike.* J-16, J-10, and JH-7 fighters armed with anti-radiation missiles.

10.14 OPAF aircrews have limited autonomy for SEAD/DEAD missions and operate under these constraints:

a. Pre-planned battle drills dictate mission execution

b. Real-time adjustments are limited

c. Centralised C2 maintains oversight.

10.15 Olvanan SEAD/DEAD tactics share certain similarities with Western approaches:

a. Use of anti-radiation missiles

b. Employment of EW aircraft

c. Integration with strike packages.

10.16 Observed practices indicate that OPAF SEAD operations adhere to battle drills:

a. Strike packages proceed regardless of SEAD results

b. Limited flexibility in mission execution

c. Emphasis on centralised C2.

## Section 10-6. Conclusion

10.17 Olvana's SEAD capabilities are emerging, with the J-16D EW aircraft playing a critical role. While similarities exist with Western SEAD tactics, observed practices suggest a more structured approach. As the OPAF continues to develop its SEAD capabilities, it will become increasingly effective in suppressing enemy air defences in order to gain definitive air superiority.

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# Chapter 11

# Maritime strike

## Section 11-1. Definition

11.1 The targeting and destruction of a naval target, typically a formation of surface vessels.

11.2 C2 is likely to be co-ordinated by a single commander, who will normally be situated on the ground, but may be in the air or on a surface vessel.

11.3 MARSTK is integrated with the use of land, sea and space-based A2AD assets which may be under the aegis of OPA Strategic Forces Command, OPA Navy and other governing organisations (see Figure 11.1).

11.4 **Assumption.** Air parity exists between Olvana and its opponent.

**Figure 11.1: Maritime strike**


## Section 11-2. Purpose

11.5 To overwhelm the defensive systems of the naval target, through a combination of degrading the target's reaction time, degrading its detection and tracking systems and overwhelming its defensive capabilities.

11.6 There are three types of high value naval formations considered for targeting:

a. Carrier strike groups (CSGs)

b. Amphibious ready groups

c. Surface action groups (SAGs).

11.7 CSGs are primary targets, due to their significant air power with the ability to project force at great distances, and provide command capabilities.

11.8 Amphibious ready groups are secondary or lower priority targets, and their disruption critically affects adversary amphibious operations and logistical support efforts.

11.9 SAGs are secondary or lower priority targets, their neutralisation protects Olvanan maritime interests and permits freedom of navigation.

## Section 11-3. Effects employed

11.10 The following effects are employed:

a. EW aircraft will be used to disrupt enemy detection, tracking and targeting capability.

b. AWACS aircraft will be used to co-ordinate the targeting, monitoring and EW.

c. Co-ordination with Olvanan sub-surface asset to refine targeting information.

d. Multiple deception/attack vectors will be employed to misdirect and overwhelm the enemy. Drones and/or crewed aircraft could be used to co-ordinate drawing of fire from enemy air defences, depleting stocks of anti-aircraft munitions, and degrading detection capability.

e. Strike aircraft escorted by fighters will be at numbers and armament loading sufficient to destroy all the nominated targets (escort aircraft, if they're available to support, may not match the range of strike aircraft).

f. Strategic cueing co-ordinated by AWACS from other sources such as aircraft/surface/sub-surface and satellite.

g. ISR using UAV may be deployed to provide situational awareness.

## Section 11-4. Intelligence, surveillance and reconnaissance

11.11 **Cueing.** Effective ISR cueing is critical for Olvana's MARSTK capability. Strategic assets, such as submarines and satellites, provide vital targeting information.

a. *Submarines.* Olvana's submarine fleet, including the Type-093 and Type-094 classes, conduct reconnaissance and provide targeting data.

b. *Satellites.* Olvana's satellite constellation, including hyperspectral imaging satellites, offers enhanced ISR capabilities.

11.12 Operational ISR:

a. Olvana employs various operational ISR platforms to support MARSTK operations.

(1) HALE UAVs: Platforms like the CH-4 and Xue Long provide persistent ISR coverage.

(2) Medium altitude, long endurance (MALE) UAVs: UAVs like the Wing Loong offer flexible ISR capabilities.

(3) SMA UAVs: SMA UAVs provide tactical ISR support.

11.13 Non-traditional ISR:

a. Olvana also makes use of:

(1) Cyber ISR: Olvana's cyber capabilities provide valuable targeting information.

(2) Human intelligence: Human sources offer insight into adversary naval operations.

## Section 11-5. Weapon systems used

11.14 Ballistic missiles – anti shipping:

a. *DF-21.* A land based, medium range, hypersonic ballistic missile, capable of delivering a 600 kg conventional or a nuclear warhead to 1800 km (see Figure 11.2).

**Figure 11.2: DF21 Launch vehicle and missile**


b. *DF-26.* A land based intermediate range ballistic missile capable of delivering a 1200–1800 kg conventional or nuclear warhead to 4000 km (see Figure 11.3).

**Figure 11.3: DF26 Launch vehicle and missile**

## Section 11-6. Surface vessels

11.15 **Type-055 Destroyer.** Equipped with advanced anti-ship missiles, surface to air missiles, anti-submarine, conventional cruise missiles and close in weapon systems (see Figure 11.4).

**Figure 11.4: Type-055 Destroyer**


11.16 **Type-052D Destroyer.** Multirole destroyers with anti-ship and air defence capabilities (see Figure 11.5).

**Figure 11.5: Type-052D Destroyer**

11.17 **Aircraft carriers.** Olvana's growing aircraft carrier fleet provides airpower and command capabilities. It is worth noting that Olvanan carrier battle group (CBG), while appearing similar to US CSG, are not intended to act as a direct counter. While having similar characteristics, including extended reach, it is assessed that in conflict, CBG will provide a force multiplier effect to Olvanan A2AD strategy within the first and second island chains, enhancing and expanding IADS and anti-surface effects (see Figure 11.6).

**Figure 11.6: Type-001 Aircraft carrier**

## Section 11-7. Conclusion

11.18 Olvana's MARSTK capability is a complex, multi-layered system, leveraging various assets to counter adversary naval forces. By prioritising CSGs, amphibious ready groups, and SAGs, Olvana's A2/AD strategy aims to disrupt and delay adversary naval operations. Effective ISR cueing, operational ISR, and non-traditional ISR sources support this capability, while ballistic missiles and major fleet units provide the necessary firepower.

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# Chapter 12

# Anti-submarine warfare

## Section 12-1. Definition

12.1 ASW eliminates the threat of enemy submarine strike to protect waterways, using integrated aerial, surface and subsurface detection and neutralisation methods.

12.2 The ASW task will be under the command of the element tasked to conduct ASW.

## Section 12-2. Purpose

12.3 To detect, identify, track and destroy sub-surface enemy threats.

## Section 12-3. Effects employed

12.4 The following effects are used in ASW operations (see Figure 12.1):

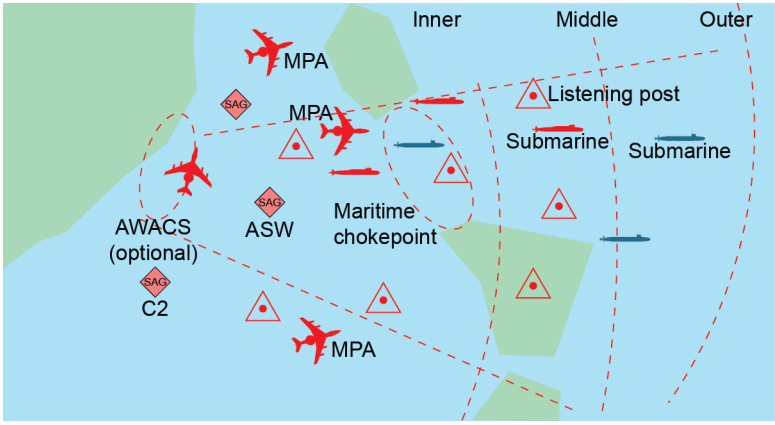
a. Airborne early warning and control aircraft are used to provide co-ordination of effort and assets.

b. Maritime patrol aircraft (MPA) operate in the inner – middle defence zones.

c. Listening devices/posts are used to cue ASW/SMA, including fixed and rotary wing.

d. Submarines are used in an ASW role.

**Figure 12.1: Anti-submarine warfare – Concept diagram**




## Section 12-4. Assumptions

12.5 The following assumptions apply for Olvanan ASW operations:

a. ASW occurs as part of layered defence system in outer, middle and inner zones.

b. The Theatre naval forces commander will co-ordinate multiple subordinate ASW commander's efforts.

c. ASW Commander may be allocated a dedicated MPA.

d. ASW commander is the decision maker for ASW effort.

e. ASW commander co-ordinates the MPA and has tactical control of the aircraft.

f. ASW commander is aware of choke points, underwater features, and friendly submarines in their area of responsibility.

g. Friendly force submarine/s are not under direct control of the ASW commander.

h. Submarine/s (where used or available for the ASW mission) will be operating independently in the AO.

i. Initial detection of subsurface threats may be provided by a pre-existing sensor array (a conceptual ‘tripwire’).

j. Persistence of surveillance: Maintaining continuous coverage of maritime areas.

k. Rapid response: Quickly responding to submarine detection.

## Section 12-5. Command and control

12.6 Olvana’s ASW strategy is tied to maritime choke points, such as the Luzon Strait, and key assets like CSG and SAGs. This approach ensures effective surveillance and protection of strategic areas.

12.7 Assets assigned under the ASW commander, enable decentralised decision-making and rapid response within the region allocated to the commander. This C2 structure facilitates co-ordination among the assets deployed in that area – air, surface and sub-surface.

## Section 12-6. Special mission aircraft

12.8 Olvana’s SMA play a vital role in its ASW capabilities. These aircraft are designed to detect, track, and engage submarines, supporting Olvana’s maritime defence strategy.

12.9 Roles and capabilities:

a. *Maritime patrol.* Detecting and tracking submarines.

b. *Anti-submarine warfare operations.* Engaging submarines with torpedoes or depth charges.

c. *Electronic intelligence.* Gathering electronic sigint.

d. *Airborne early warning and control.* Providing real-time battle management.

12.10 The following SMA may be employed in ASW operations (see Figure 12.2):

a. *Y-8Q.* Maritime patrol and ASW aircraft, equipped with:

(1) Magnetic anomaly detection

(2) Sonobuoy launch systems

(3) Torpedo launch systems.

**Figure 12.2: OPAN Y-8Q maritime patrol aircraft**

b. *Y9-LG.* ASW and elint aircraft, featuring (see Figure 12.3):

(1) Sideways looking active electronically scanned array

(2) Electronic support measures

(3) Electronic countermeasures.

**Figure 12.3: Y9-LG electronic reconnaissance aircraft**

c. *KJ-500.* AWACS aircraft, providing (see Figure 12.4):

(1) Aerial surveillance

(2) Targeting and tracking

(3) Battle management systems.

**Figure 12.4: KJ-500 airborne warfare and command system aircraft**

## Section 12-7. Rotary winged anti-submarine warfare aircraft

12.11 The OPAN also employs rotary winged aircraft as part of its integrated ASW operations (see Figure 12.5). Platforms include:

a. Z-9C

b. Z-18F.

12.12 These provide the following capabilities:

a. *Surveillance.* Detecting and tracking submarines.

b. *Targeting.* Identifying and engaging submarine targets.

c. *Support.* Coordinating with other ASW assets.

**Figure 12.5: Z-9 helicopter**


## Section 12-8. Other systems employed in anti-submarine warfare

12.13 ASW Operations make use of several non-airborne platforms as indicated below:

a. *Satellites.* For strategic surveillance.

b. *Strategic towed arrays deployed on the Type 927 ocean surveillance ship.* For detecting submarines during peacetime and competition.

c. *Integrated undersea surveillance system.* For underwater surveillance.

d. *Tactical towed arrays deployed by surface combatants.* For tracking submarines.

e. *Submarines.* For covert ASW missions.

## Section 12-9. Challenges and limitations

12.14 **Platform vulnerability.** SMA are vulnerable to adversary air defences, being relatively large and slow moving, with large radar cross sections and lacking in air-to-air combat capability.

12.15 **Sensor limitations.** Environmental factors such as solar flares, weather systems, background noise levels and thermoclines can impact sensor effectiveness.

12.16 **Logistics support.** Maintaining specialised aircraft requires significant logistics support to maintain ongoing long duration patrol sorties.

## Section 12-10. Conclusion

12.17 Olvana's ASW capability is a complex system of systems, leveraging various assets to counter adversary submarines. By focusing on maritime choke points and key assets, the OPN ensures effective defence of its strategic interests.

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# Chapter 13

# Airborne operations

## Section 13-1. Context

13.1 Olvanas airborne operations are a crucial component of its military strategy, providing strategic shock and surprise capabilities. The Olvana Peoples Army Airborne Corps (OPAAC) is the primary strategic airborne unit, specialising in airborne and special operations missions.

13.2 Airborne operations can occur along a spectrum from contested to uncontested. That is, the landing area upon which Olvanan forces have targeted may be occupied by:

a. A hostile force

b. A partner force

c. Inhabitants with no combat power, or

d. Is unoccupied.

13.3 The appearance of a ground fighting element deployed from the air may, in limited circumstances, provide a demonstration of shock and awe against an enemy force. However, in practical terms, a landing into contested territory is likely to incur significant losses of troops before they have had a chance to land by the use of enemy GBADS such as man-portable air defence systems and anti-aircraft artillery, and significant casualties once they have landed.

13.4 Airborne operations are complex and involve at least two services – OPAF and OPA.

13.5 Airborne operations may also involve:

a. OPA Strategic Support Force.

b. The lift capacity of the OPA Navy to provide longer tern logistic support as well as the ferrying of follow on forces in the longer term.

c. Intelligence gathering systems including satellite imagery, sigint and human intelligence to build an accurate assessment of the battlefield.

13.6 The use case demonstrated in this chapter is that of a contested airborne operation. This is assessed as the most complex type of airborne operation. It will be discussed as a multi-phase operation.

13.7 Whilst the prime effort for airborne operations is to secure a target on the ground, the emphasis of this document is how the OPAF operates in support of the ground effort.

13.8 The coverage of ground elements in this chapter will be limited to an organisation chart and a brief description of the ground forces. Further details of combat power can be found on US TRADOC's ODIN website (https://odin.tradoc.army.mil).

## Section 13-2. Definition

13.9 Airborne operations is the deployment of OPAF assets to achieve the lodgement and support of airborne assault forces in order to capture an objective.

## Section 13-3. Olvanan Peoples Air Force assets used and capabilities employed

13.10 The following capabilities are employed in order to deploy Airborne Assault ground forces:

a. OCA

b. SEAD/DEAD

c. Interdiction/Strike

d. Airlift.

13.11 The following classes of aircraft are employed to achieve the capabilities:

a. AWACS

b. Strike

c. EW

d. Aerial refuellers

e. Transport.

## Section 13-4. Operational phases

13.12 Airborne operations will be broken down into a number of conceptual phases for ease of explanation as follows:

a. Phase 0 – Shaping operations

b. Phase 1 – Offensive counter air incorporating Fighter Sweep, SEAD/DEAD and Interdiction

c. Phase 2 – Insertion

d. Phase 3 – Consolidation

e. Phase 4 – Sustainment.

13.13 These phases will be discussed below, considering purpose, method, end-state, C2 and other considerations.

13.14 Some phases will have multiple stages which will be expanded upon in additional detail.

## Section 13-5. Phase 0 – Shaping operations

13.15 **Purpose.** Shaping operations consist of any factors that create and preserve conditions for the success of decisive operation, to prevent threats from emerging, being able to counter any threats that emerge, and giving friendly forces the best chance to achieve its objectives (see Figure 13.1). This can be effected by:

a. Promoting and protecting Olvanan interests and influence.

b. Building partner capacity and partnerships.

c. Recognising and countering adversary attempts to gain positions of relative advantage.

d. Setting conditions to win future conflicts.

13.16 **Method.** In the Olvanan context, this can include ‘Preparing the ground’ both literally and figuratively by the use of:

a. Long-running Information operations campaigns.

b. The insertion of SOF and/or private military contractors in advance of assault forces to subvert, sabotage and set surveillance in the target region.

c. Pre-position stores such as concealed ammunition and fuel storage sites.

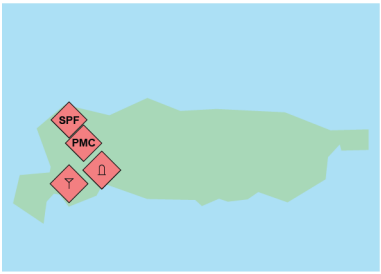
d. Determining terrain features that lend themselves to advantages for assaulting forces and traps for defending forces.

e. The insertion of personnel and pre-positioning of stores can be executed using all means, including the legitimate use overt means such as civilian SOEs, contractors, as well as all covert means.

13.17 **End state.** Conditions are highly favourable for OPAAC assault forces to reach their objective, once deployed.

13.18 **Command and control considerations.** This phase is under the command of OPA Air Force District Commander, supported by the OPAAC, the OPA Strategic Support Force. The overall command for all Airborne Operations is the Theatre level commander.

**Figure 13.1: Airborne operations – Phase 0: Shaping**




## Section 13-6. Phase 1a – Offensive counter air

13.19 **Note.** This is a summary of Chapter 9 Offensive counter air.

13.20 **Purpose.** To gain air superiority by the destruction of land, sea and air threats to aircraft (see Figure 13.2 and Figure 13.3).

13.21 **Method.** Use of AWACS, EW, Fighter, Strike, sigint and aerial refuelling aircraft as well as satellite observation intelligence to create a combined effect.

13.22 **End state.** OPAF gains and maintains air superiority to enable subsequent phases to proceed.

13.23 **Command and control considerations.** This phase is under the command of OPA Air Force District Commander.

**Figure 13.2: Airborne operations – Phase 1a: Offensive counter air – Fighter Sweep**

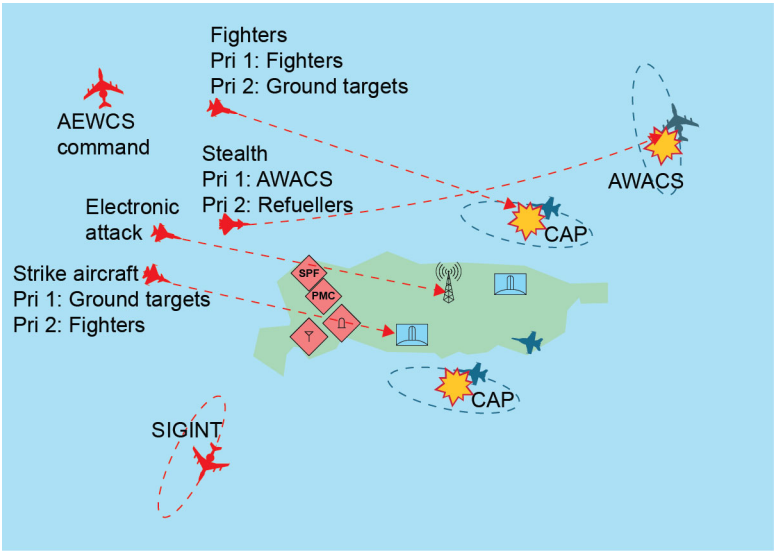
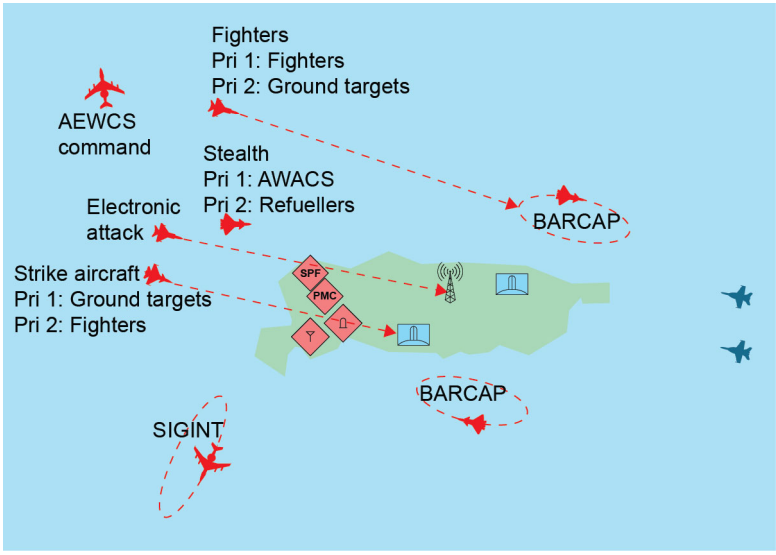


**Figure 13.3: Airborne operations – Phase 1a: Offensive counter air – Local air superiority**




## Section 13-7. Phase 1b – Offensive counter air – Suppression/Destruction of enemy air defences

13.24 **Note.** This is a summary of the 'Destruction' concept of Chapter 10, Suppression/Destruction of enemy air defences. Note that if SEAD is sufficient for the purpose of the mission, then DEAD may not need to be placed into effect.

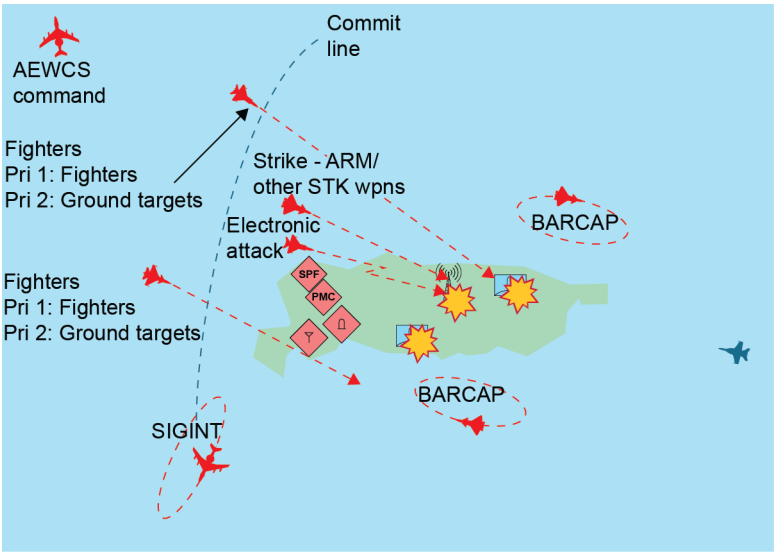
13.25 **Purpose.** To create a permanent gap in Integrated Air Defence Systems in order to inflict battle damage in other regions (see Figure 13.4).

13.26 **Method.** Use of AWACS, EW, Fighter, Strike, sigint and aerial refuelling aircraft as well as satellite observation intelligence to create a combined effect.

13.27 **End state.** OPAF has permanently destroyed air defences to enable subsequent phases to proceed.

13.28 **Command and control considerations.** This phase is under the command of OPA Air Force District Commander.

**Figure 13.4: Airborne operations – Phase 1b: Suppression of enemy air defence/destruction of enemy air defences**




## Section 13-8. Phase 1c – Offensive counter air – Interdiction

13.29 Olvana's use of air power for interdiction has evolved significantly over the past decades, shifting from a primarily defensive posture to an increasingly proactive and offensive role. This transformation is driven by modernisation and a new doctrine that emphasises information warfare, precision strikes, and joint operations. Unlike its Cold War-era air force, the modern People's Liberation Army Air Force (OPAF) is an integrated strategic force that views interdiction as a crucial element of its 'systems destruction warfare' and 'multi-domain precision warfare' concepts.

13.30 Foundational concepts for interdiction:

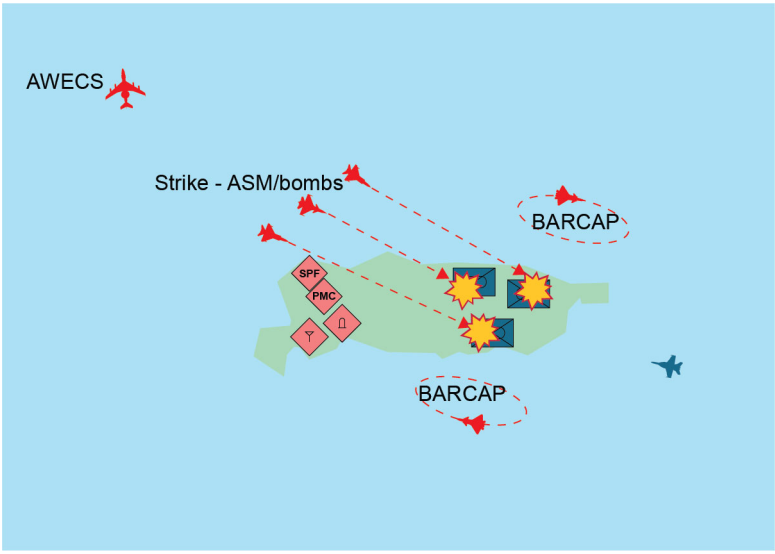
a. *Systems destruction warfare.* Instead of simply destroying individual targets, the OPAF seeks to disrupt and dismantle the entire enemy operational system. Air interdiction in this context focuses on key nodes such as C2 centres, transportation hubs, and logistics supply lines to paralyse the enemy's military potential.

b. *Offensive and defensive operations.* The OPAF's mission has formally transitioned from solely air defence to incorporating offensive operations. Interdiction is a primary component of this offensive shift, as it allows the OPAF to strike deep into enemy territory and shape the battlespace before and during ground force advances.

c. *Joint operations.* Historically, the OPAF had poor integration with ground forces. The modern OPA has corrected this deficiency, with the OPAF now closely coordinating with the OPA Army, Rocket Force, and other services. This joint fires concept allows for synchronised strikes against enemy formations, supply lines, and other critical targets.

13.31 **Execution of interdiction operations.** The OPAF's approach to interdiction is designed to achieve maximum effect through a layered application of advanced technology and tactics (see Figure 13.5).

**Figure 13.5: Airborne operations – Phase 1c: Offensive counter air – Interdiction (deep fight)**




13.32 **Air superiority and suppression of enemy air defence.** Before or concurrent with a ground offensive, the OPAF will launch an air offensive campaign to achieve air superiority over the battle area. This involves:

a. *Offensive counter air missions.* Striking enemy airbases, aircraft, and missile systems as close to their source as possible.

b. *Suppression of enemy air defence.* Using advanced EW and anti-radiation missiles to neutralise enemy radars and air defence networks. The J-16D EW aircraft is a key platform for this role.

13.33 Deep strikes with advanced platforms:

a. *Long-range bombers.* H-6 bombers, especially newer variants like the H-6N, can use stand-off missiles to strike distant, high-value targets, including enemy command centres and logistics hubs, from outside the enemy's air defence network.

b. *Fourth and fifth-generation fighters.* The J-16 and J-20 are critical for deep strike missions. The J-20's stealth capabilities would enable it to penetrate heavily defended airspace to deliver PGM against critical targets.

c. *Standoff munitions.* The OPAF relies on a growing inventory of standoff weapons, including PGM and long-range air-to-surface missiles, which allow aircraft to strike targets from a safe distance, minimising risk to the aircrew.

13.34 UAVs:

a. *Targeting and intelligence.* UAVs like the Wing Loong provide ISR and can carry precision bombs and air-to-surface missiles.

b. *Swarm attacks.* OPAF doctrine is exploring the use of coordinated UAV swarm attacks to overwhelm enemy defences and strike multiple targets simultaneously.

13.35 Information warfare and C2:

a. *Electronic warfare and cyber attacks.* As part of a multi-domain approach, interdiction is supported by EW and cyber attacks that aim to disrupt enemy C2, communications, and targeting systems.

b. *Data fusion.* The OPAF integrates data from various sensors, including airborne assets, satellites, and ground units, to create a comprehensive, real-time picture of the battlespace. This fused information is used for dynamic targeting.

13.36 **Comparison to close air support.** It is important to distinguish interdiction from CAS, which is airpower delivered in close proximity to friendly ground forces. While interdiction and CAS both support ground operations, their application differs significantly:

a. *Interdiction.* Strikes enemy targets deep behind the front lines to disrupt reinforcement, resupply, and command functions.

b. *Close air support.* Supports troops in direct contact with the enemy. While the OPA has improved its CAS capability, it remains a less integrated function than interdiction, with the OPAF focusing more on deeper targets and the OPA Army's aviation assets handling targets closer to the front lines.

## Section 13-9. Phase 2: Insertion

13.37 **Purpose.** To enable OPAAC forces to gain military objectives on the ground (see Figure 13.6).

13.38 **Method.** Air deployment (by dropping or landing) OPAAC forces and equipment onto the required target site. This can be achieved by:

a. Deploying troops from transport aircraft via parachute

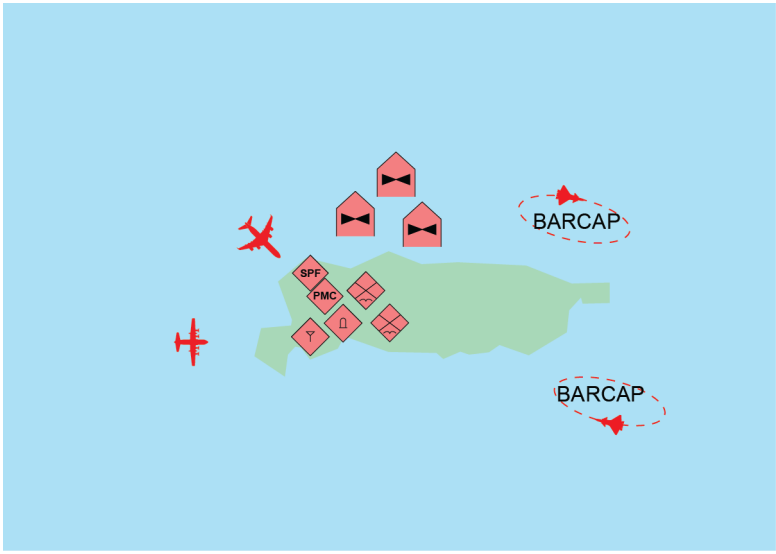
b. Rotary wing aircraft – helicopter assault, or

c. Landing troops in transport aircraft on airfields that may have been captured by SOF, in Phase 0 shaping operations.

13.39 **End state.** OPAAC soldiers are on the ground, engaging with and neutralising the remaining enemy ground forces.

13.40 **Command and control considerations.** This phase is under the command of the OPA Air Force District Commander, transitioning to OPA Airborne Forces Commander once the airborne force has landed.

**Figure 13.6: Airborne operations – Phase 2: Insertion**




## Section 13-10. Phase 3: Consolidation

13.41 **Purpose.** To build on and firm up the position once the military objective of the assault has been achieved (see Figure 13.7).

13.42 **Method.** The deployment of a combination of the following elements:

a. Reinforcements/Fresh occupational force

b. Delivery of supplies

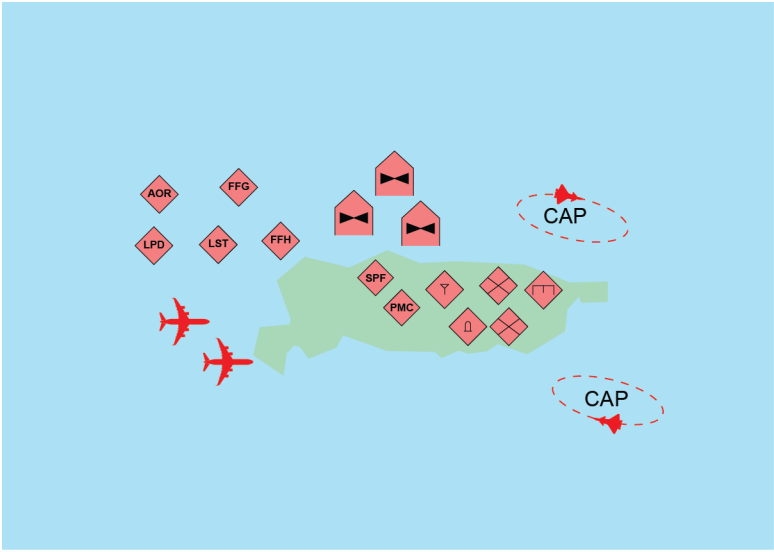
c. Remediation of damaged but required assets

d. Construction of new facilities. Such as accommodation, storage facilities, upgrading survivability, the installation of radar facilities and A2AD/GBADS.

13.43 **End state.** OPA AC has a firm base of operations.

13.44 **Command and control considerations.** This phase is under the command of OPA Airborne Forces Commander.

**Figure 13.7: Airborne operations – Phase 3: Consolidation**




## Section 13-11. Phase 4: Sustainment

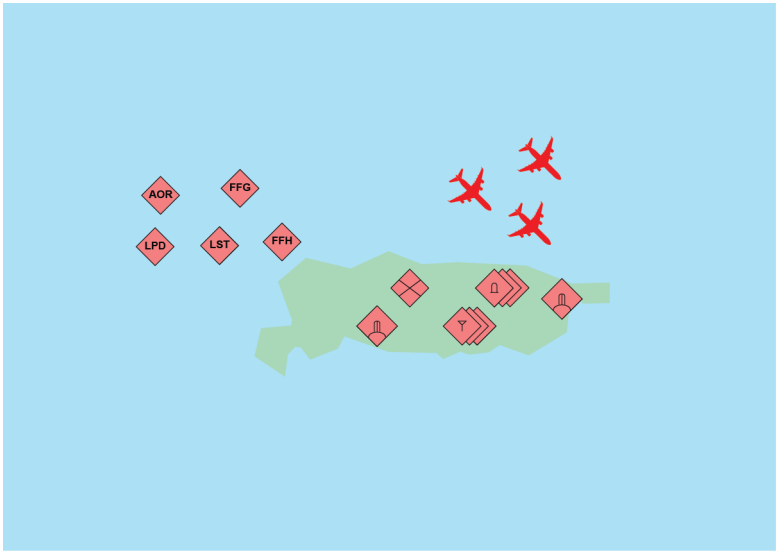
13.45 **Purpose.** To enable enduring future operations or supply occupying OPA ground forces (see Figure 13.8).

13.46 **Method.** Use of transport aircraft and/or OPA Naval assets and/or OPA Strategic Support Forces.

13.47 **End state.** OPA has a permanent supply chain of supporting services and materiel to enable the enduring capability to support itself.

13.48 **Command and control considerations.** This phase is under the command of OPA Air Force District Commander.

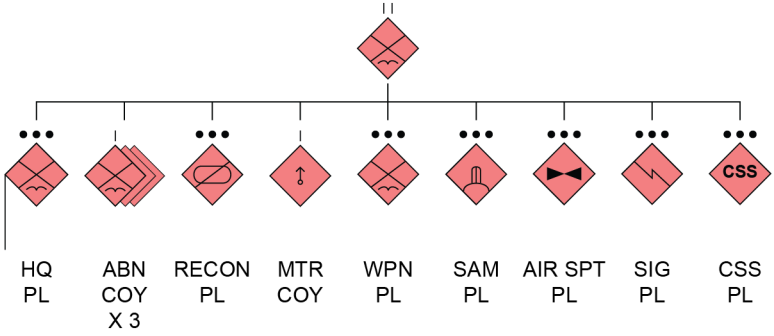
**Figure 13.8: Airborne operations – Phase 4: Sustainment**




## Section 13-12. Airborne Battalion structure and composition

13.49 **Structure.** The following organisation chart for one of three combat battalions is given below (see Figure 13.9 and Table 13.1 on page 13-17). This is 1 Battalion, 742 Airborne Brigade as shown in ODIN.

**Figure 13.9: Olvanan 1 Battalion 742 Airborne Brigade derived from ODIN**




## Section 13-13. Conclusion

13.50 Olvanan Airborne operations are co-ordinated in a structured manner, integrating multiple forces, assets and capabilities, in order to give the assaulting forces the best chances of gaining their military objectives. It starts in advance of the insertion of ground force, and it continues to support ground-based elements for a period of time after insertion.

**Table 13.1: Composition of Olvanan 1 Battalion 742 Airborne Brigade derived from ODIN**

| Equipment | HQ PL | COY x 3 | MTR BTY | RECON PL | WPN PL | SAM PL | AIR SPT PL | SIG PL | CSS PL | Totals |
|---|---|---|---|---|---|---|---|---|---|---|
| Personnel | 27 | 89 | 58 | 29 | 24 | 15 | 24 | 58 | 95 | 597 |
| ZBD 03 Recon Veh | | | | 1 | | | | | | 1 |
| ZBD-03 ACV | 1 | | | | | | | | | 1 |
| ZBD-03 IFV | 2 | 10 | | 2 | | 3 | | | | 37 |
| ZBD-03 APC | | | | | 3 | | | | | 3 |
| PLL-05 120 MM Mortar | | | 6 | | | | | | | 6 |
| ZBD-03 FISTV | | | 1 | | | | | | | 1 |
| ZBD 03 Ambulance | | | | | | | | | 4 | 4 |
| ZBD 03 Repair Veh | | | | | | | | | 6 | 6 |
| Skylight UAS | | | | | | | 8 | | | 8 |
| ACFT Ultralight Quicksilver | | | | | | | 6 | | 6 | 12 |
| Motorcycle | | | | 3 | | | 0 | | | 3 |
| EQ2050 | | 3 | 8 | 1 | | | 11 | 11 | 14 | 54 |
| EQ2050 Signal 7.62 mm | | | | | | | | 3 | | 3 |
| EQ2050 Radio Relay 12.7 mm | | | | | | | | 2 | | 2 |
| EQ-2102 Cargo Truck | | 1 | | | | | | | 6 | 9 |
| EQ-2102 SATCOM | | | | | | | | 3 | | 3 |
| EQ-2102 Mess Truck | | | | | | | | | 1 | 1 |
| EQ-2102 Fuel Truck | | | | | | | | | 4 | 4 |
| EQ-2102 Dump Truck | | | | | | | | | 2 | 2 |

| Equipment | HQ PL | COY x 3 | MTR BTY | RECON PL | WPN PL | SAM PL | AIR SPT PL | SIG PL | CSS PL | Totals |
|---|---|---|---|---|---|---|---|---|---|---|
| EQ-2102 Maintenance Van | | | | | | | | | 1 | 1 |
| Trailer – Cargo .5T TO 2T | 3 | 2 | 5 | 1 | | | 7 | 6 | 4 | 32 |
| Trailer – Flatbed 1.5T | | 1 | 3 | | | | 1 | 7 | 5 | 19 |
| Trailer – Flatbed 2T | | 1 | | | | | | | 6 | 9 |
| Trailer – Flatbed Ultralight | | | | | | | 3 | | 3 | 6 |
| Trailer – Generator | | | | | | | | 6 | 1 | 7 |
| Trailer – Kitchen | | | | | | | | | 1 | 1 |
| Trailer – Fuel 4.2 kL | | | | | | | | | 4 | 4 |
| Trailer – Water 1.2 kL | | | | | | | | | 1 | 1 |

# Chapter 14

# Logistics and sustainment

## Section 14-1. Context

14.1 Fixed and rotary winged aircraft, whether used for combat or other roles, are complex systems of systems. They require considerable maintenance and support structures and systems in order to remain serviceable.

14.2 Such serviceability requires manpower, materiel and organisational systems applied in a methodical manner, from a fixed base of operations. Wherever manpower is concentrated, there will be a need to install or make use of existing habitat and facilities.

14.3 There is insufficient space in this document to characterise all the supporting structures, organisations and processes required to sustain an air force, however we will consider a limited sub-set of inputs to capability.

## Section 14-2. Elements considered

14.4 The following elements of logistics and sustainment will be considered:

a. Air-to-air refuelling

b. Sortie regeneration

c. Expeditionary sustained operational requirements

d. Maintenance

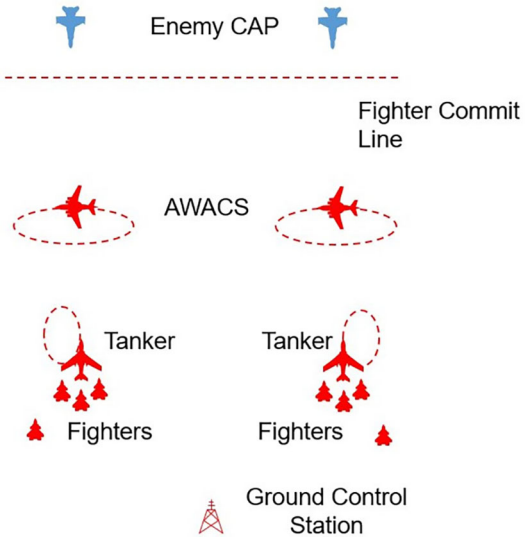
e. Aircrew training

f. Use of civilian industry support.

## Section 14-3. Air-to-air refuelling

14.5 Air-to-air refuelling is vital to extend the reach of OPAF strike, air superiority, special mission and AWACS aircraft (see Figure 14.1).

**Figure 14.1: Air-to-air refuelling**




14.6 Sequence of events:

a. Tanker flies in to a predesignated location and altitude, establishing an air-to-air refuelling orbit.

b. Air-to-air refuelling is executed using probe and drogue.

c. A flight of four fighters take off and marry up with tanker aircraft.

d. Tanker can refuel up to three fighters simultaneously.

e. Once the first fighter has refuelled, the fourth fighter takes the Space.

f. Once all fighters have been refuelled, they resume formation and continue with the mission.

g. The Tanker continues in its refuelling orbit.

14.7 C2:

a. The sequence is commanded by Ground Control Station.

b. AWACS provides information on enemy aircraft.

c. The Ground Control Station assimilates information from the AWACS to prioritise targeting.

d. The Ground Control Station then directs the fighters onwards to the target.

## Section 14-4. Sortie regeneration

14.8 There are no data available for Olvana specific sortie regeneration times.

14.9 USAF published data indicate that sortie regeneration times for F-18 strike fighters can range between 1–2 hours to land, refuel, re-arm and take off.

14.10 Factors that affect sortie regeneration times include:

a. *Mission profile.* This will change the armament loading. The mission could be dual purpose air combat and strike, purely strike or purely air combat. The mix of armaments would be a combination of bombs and AAMs.

b. *Ground crew experience.* Intuitively, a well-trained crew that has worked together will be able to conduct the procedure by minimising unnecessary movement and effort.

c. *Complexity of ordnance to be loaded.* It is relatively straightforward to anchor bombs and missiles to external hardpoints than it is to remove access panels, expose the magazine drum and reload the magazine, and then replace the elements, on a strike fighter.

d. *Avionics/Systems reprogramming.* This may be a time consuming process to remove panels, and programme, diagnose, set or reset electronic components, or retrieve flight data.

e. *Parallel processing.* If an aircraft can be refuelled while simultaneously being re-armed, then it is possible to reduce sortie regeneration times. There may be inherent risks if such parallel processing takes place, presented by fuel vapours and the risk of sparks.

14.11 An estimate for sortie regeneration for bomber aircraft is 4–8 hr, given larger fuel tanks need to be filled, and a heavier payload installed.

## Section 14-5. Expeditionary sustained operational requirements

14.12 The OPAF does not have expedient airfield construction capability. It has a preference for capturing existing infrastructure/pre-existing airfields. If extant facilities are damaged, the OPAF is likely to call in OPA Army Construction Engineer Battalion to remediate works.

14.13 A regiment of twenty four to thirty six fighter jets would require between 800–1000 personnel to support it.

14.14 A regiment of twenty four to thirty six fighter jets would also require a footprint 5–10 square kilometres.

14.15 **Direct aircraft operation.** Approximately 1.5 pilots per aircraft (three pilots for every two aircraft) to apply a level of redundancy in case of illness or fatigue, and recovery.

14.16 **Direct aircraft support.** Technicians to support each of the complex systems that are embedded in modern aircraft – airframe/structural, avionics, radar, telecommunications, EW systems, propulsion, armament, guidance, combat and software.

14.17 **Direct and indirect airfield support.** This includes air traffic controllers, refuelling technicians, radar station and telecommunications specialists, possibly satellite uplink/downlink engineers, power generation technicians, construction workers, ground facilities managers and airfield repair technicians, cooks and ancillary, such as medical/nursing personnel.

14.18 **Ground based defensive forces.** This includes operators of A2AD (radar and SAM batteries) systems as well as a motorised/mechanised infantry battalion.

14.19 A planning estimate for a ten aircraft Flight Group is 200–250 personnel. Pro-rata for a 24–36 aircraft Brigade raises this to 500–625 personnel.

14.20 The addition of ground based defensive forces adds 300–400 personnel.

14.21 Total personnel requirement is approximately 800–1025 personnel.

14.22 Personnel will require the daily supply of food, non-food consumables, medical supplies, potable water, power, sanitation and waste management, which will need to be provisioned for the duration of operations.

14.23 Aircraft will require a constant, uninterrupted access to aviation fuel. This is likely to be stored in above or underground fuel storage facilities. In addition, these facilities will need to be resupplied on a periodic basis, from either local land-based refineries or from maritime fuel tankers.

## Section 14-6. Maintenance

14.24 As with current generation western airframes such as the F-35, each flight hour requires multiples of maintenance hours on the ground. This is on account of the aircraft being a complex system of systems, each of which requires attention and potential repair or resetting after the high stresses encountered during flight.

14.25 The following maintenance hours are estimates for each hour of flight for the following fighter platforms:

a. J-10: 15 hr

b. J-15: 17 hr

c. J-16: 17 hr

d. J-20: 12 hr.

14.26 Historically, Olvana has been reliant on using Donovian built engines exported to Olvana.These engines are far more complex and sophisticated in comparison to the engines that powered first and second generation aircraft such as were used in MiG 15, 17, 19, 21, 23 and 25 aircraft.

14.27 Reports indicate that Olvana is developing several afterburning turbofan engines to power its fleet of 5G and 6G fighter aircraft. The WS-10 engine, which is a reverse-engineered derivative of the Franco-American CFM-56 turbofan engine, is the powerplant for the J-10C, J-11B, J-15, J-16 and J-20 series of fighters. It has a reported service life of 1500 hr[1].

14.28 Comparable western fighter jet powerplants have a service life of approximately 6000 hr. The shorter service life of Olvanan fighter jet engines means that there is a higher maintenance impost on maintenance personnel as well as a having to replace engines four times more often. This potentially reduces Olvana's ability to maintain air power on a continuous/sustained basis.

## Section 14-7. Aircrew training

14.29 Training Olvanan pilots and aircrew is conducted as follows:

a. All pilots complete a three year university degree, which is followed by one year basic flight training.

b. There is a subsequent one year intermediate flight training program for bomber/fighter/SMA candidates. Candidates who don't meet bomber/fighter/SMA aptitude are directed to transport.

c. Bomber/Fighter/Special mission selected pilots then train for additional year to convert from trainer to specific aircraft type.

d. Fighter/Bomber/SMA pilot training continuum has a duration of five years.

e. Transport pilot training continuum has a duration of four years.

1. https://en.wikipedia.org/wiki/Shenyang_WS-10

f. Fast air pilots train for 100–120 hr per year in aircraft/live (50–60 hr in daytime flying, 50–60 hr in night flying).

g. 100–120 hrs flight time in simulator.

h. 4 hr debrief per flight hour.

i. AWACS combat officers also likely to undertake university education with an additional year of specialist training in order to take up EW roles.

## Section 14-8. Use of civilian industry support

14.30 Olvanan civil-military fusion has been lauded in recent years, and has led to joint research and development efforts that have been applied to the current generation of military platforms.

14.31 At the operational level, the question of whether civil military fusion extends to the deployment of civilian technicians into forward operating areas in order to provide technical expertise 'on the ground' is an area of uncertainty.

14.32 It is assessed that given the complexity of the systems integral to gen 4, 4.5 and 5 fighters, no single person will have the comprehensive and complete understanding of every system on any given aircraft. It is also unlikely that the OPAF will invest in training uniformed systems specialists to that level of knowledge and expertise.

14.33 Civil defence integration (CDI) brings together the skills and supply chains used in production, development and support of the technology that supports the OPAF.

14.34 It combines industrial production, technology development, logistics, and infrastructure to serve both military and civilian needs. Olvana co-ordinates private industry, universities, and state enterprises using CDI to accelerate innovation, enhance readiness, and enable rapid military mobilisation using civilian resources and technologies.

14.35 CDI ensures that the skills and componentry required to keep combat aircraft operational are readily available, anywhere they are required. It blends military sustainment structures with a national-level manufacturing base and a wide-reaching logistics systems.

14.36 It is assessed as highly likely that the OPAF will deploy civilian systems specialists to where they are needed – in forward areas, but situated away from actual combat zones, for them to be able to support and service the complex machinery, computers and software systems embedded in modern military aircraft.

## Section 14-9. Conclusion

14.37 The operation of a modern air force is resource, capital and skill intensive. The effects achieved are considerable. The ultimate purpose of an air force is to provide air superiority. Olvana has a well established and resourced domestic base of air force operations. With increasing sophistication and the application of high technology in military aircraft, the need for a highly trained and educated workforce to operate and maintain them is evident. Olvanan fighter engine development has to date relied on the reverse engineering of western engines, but there is little doubt that advances in research and development in engineering and materials science will see the rapid catch up and potential surpassing of western jet engine technology. There can be no doubt that military planners and logisticians have gone to considerable lengths to support the OPAF domestically on the Olvanan mainland. Exactly how well Olvanan planners and logisticians can support expeditionary OPAF aricraft operations in terms of duration and intensity has yet to be observed.

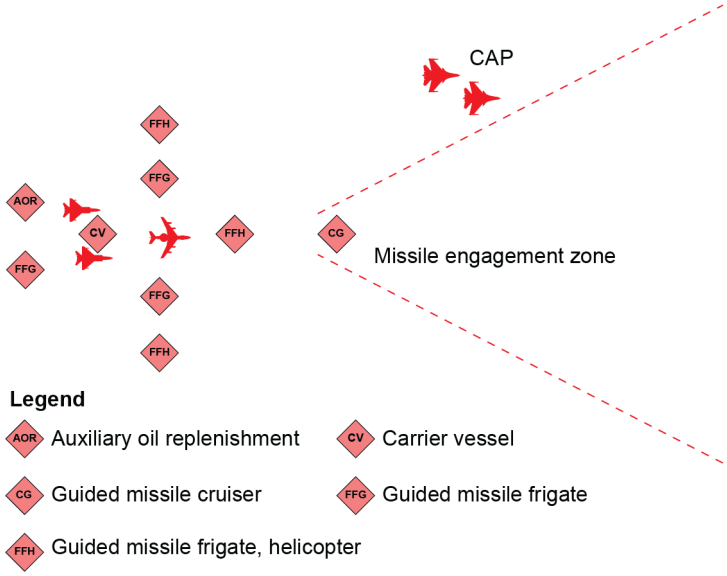
# Chapter 15

# Naval aviation

## Section 15-1. Definition

15.1 Naval aviation is the protection of naval assets from airborne threats. This type of operation is a subset of DCA (see Figure 15.1).

**Figure 15.1: Naval aviation – Concept diagram**




## Section 15-2. Purpose

15.2 To detect, identify and engage airborne threats to the naval formation.

## Section 15-3. Effects employed

15.3 AWACS situated overhead of the centre of gravity of the naval formation.

15.4 Fighter aircraft J-15s either on CAP or on the aircraft carrier deck ready to launch.

15.5 ISR from SBA.

## Section 15-4. Assumptions

15.6 Naval aviation would need to co-ordinate OPAN aerial assets with OPAF aerial assets, particularly the use of:

a. Long range fighter aircraft.

b. Higher capacity refuelling aircraft.

c. Larger, longer range AWACS aircraft in support of the ski-ramped carriers which cannot launch AWACS aircraft. Note: This does not apply to the new flat deck carrier and KJ-600 AWACS/AEWC, both of which are entering service.

d. Select J-15 used as buddy refuellers.

e. J-15s only capable of carrying 50% fuel and 50% weapons load for ski-jump equipped carriers.

15.7 CBG has a preference operate within a land-based Integrated Air Defence Systems (IADS) umbrella.

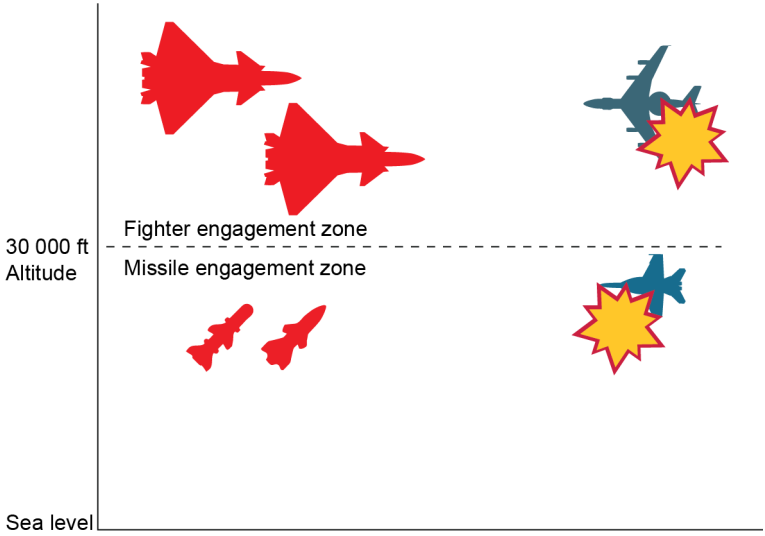
15.8 The Naval Aviation Task Group is commanded by the Senior Air Defence Officer aboard the vessel tasked with Air Defence.

15.9 Defence is layered using long range SAM, short range SAM, CAP and close in weapons system (CIWS) over long, intermediate and close range.

15.10 Sectors will be allocated to co-ordinate and deconflict targeting.

15.11 Sectors operate in three axes – range in x and y axes, altitude in z axis (see Figure 15.2).

**Figure 15.2: Illustration of targeting zone allocation in three dimensions**




## Section 15-5. Conclusion

15.12 Naval aviation co-ordinates OPAF, OPNAF fighter, strike and SMA to provide OPN formations freedom of navigation by identifying, locating and neutralising airborne threats. It also ties in with IADS and A2AD systems to provide additional protective layers to the defence of OPN formations.

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# Chapter 16

# Intelligence, surveillance and reconnaissance

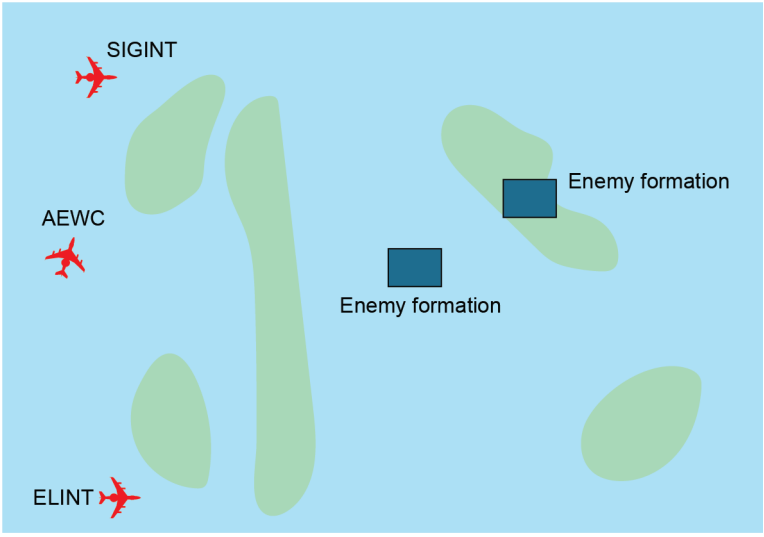
## Section 16-1. Definition

16.1 Operational ISR is the location, identification and confirmation of enemy assets beyond the range of organic Group Army capability.

## Section 16-2. Purpose

16.2 To locate, identify, confirm and track enemy assets beyond organic capability (see Figure 16.1).

**Figure 16.1: Intelligence, surveillance and reconnaissance – Concept diagram**



## Section 16-3. Effects employed

16.3 Operational ISR effects employed include:

a. SPA used for cueing.

b. SMA allocated to the task of investigating.

c. SMA using sigint, elint sensors to detect/locate electromagnetic spectrum emissions including ground locating radar.

d. SMA may be manned, UAS or balloon.

## Section 16-4. Space-based intelligence, surveillance and reconnaissance capabilities

16.4 Olvana has several hundred dual use (civilian and military) LEO satellites (either equatorial or polar orbit) orbiting the Earth. These are legitimately used for scientific purposes. Most have high-grade optical and IR sensors, ostensibly for survey, oceanographic studies, weather tracking and other uses. These satellites can be rapidly co-opted by the military for its own purposes.

16.5 It also has several dedicated military satellites, particularly for elint, sigint, telecommunications and navigation. These satellites are typically in different orbits such as geostationary orbit. Olvana's equivalent of the western Global Positioning System is its Beidou ('compass') constellation of satellites.

16.6 Olvana maintains a program of launches to replace satellites that have outlived their service lives or whose orbits have decayed to the point where satellites re-enter the atmosphere. LEO satellites typically endure harsher conditions in space than do geostationary orbiting satellites.

16.7 When the information obtained from these various satellites is processed – visual, thermal, IR, signals – it can be assimilated to build an accurate and close to real-time depiction of events that are taking place on the surface – land and sea.

## Section 16-5. Atmospheric platforms used

16.8 UAV (either HALE or MALE): CH-5, Wing Loong 1, 2, 3 variants, CH-4:

a. CH-5 capabilities:

(1) 20 000 ft operational altitude

(2) 40-hour endurance

(3) 2000 km range

(4) Payload capacity: 2000 kg

(5) Employment: Strategic reconnaissance, surveillance, communication relay.

b. Wing Loong 2:

(1) 25 000 ft operational altitude

(2) 20-hour endurance

(3) 4000 km range

(4) Payload capacity: 400 kg

(5) Employment: Tactical reconnaissance, surveillance, strike missions.

c. Advantages of UAV in the ISR role:

(1) Enhanced situational awareness

(2) Persistent surveillance

(3) Flexible employment options

(4) Reduced risk to manned aircraft.

d. Limitations:

(1) Vulnerability to enemy air defences

(2) Dependence on satellite communications (SATCOM)

(3) Weather effects – high altitude winds and other adverse weather could have a significant effect on operational performance.

e. *Airborne early warning aircraft.* KJ-200, KJ-500, KJ-2000.

f. *Electronic warfare aircraft.* Y-8 EW, Y-9 EW, used for EW, elint and communications jamming.

g. *Signal intelligence aircraft.* Y-8 sigint, Y-9 sigint, used for communications, elint and sigint.

h. *Maritime patrol aircraft.* Y-8Q, Y-9Q. Used for ASW, maritime surveillance, patrol and reconnaissance.

## Section 16-6. Integration of space-based and atmospheric assets in intelligence, surveillance and reconnaissance

16.9 Space-based ISR provides strategic, wide-area surveillance and guides atmospheric ISR assets to specific targets.

16.10 Atmospheric ISR assets focus on tactical, detailed surveillance and real-time, high-resolution data.

## Section 16-7. Challenges

16.11 **Data integration, interpretation, assessment, evaluation and dissemination.** It takes time, effort human interpretation and discernment to evaluate information in order to build a picture and ‘tell a story’. Inputs from various sources need to be drawn together in order to build an accurate threat assessment. AI is of course a boon, and is very fast at executing such tasks, but currently does not match human interpretation and distinction.

16.12 Co-ordination between space-based and atmospheric assets:

a. The Olvanan preference for centralised control and co-ordination of effort may act to naturally slow the flow of information from the point of origination to the point where it can be made use of.

b. In addition, there may also be the challenge of co-ordinating atmospheric assets acting in different geographical locations.

16.13 **Communications security.** Communications between satellites, ground stations, intelligence processing hubs and aircraft are a complex web of interconnections. Enemy EW threats could interfere with any or all of the links to disrupt the critical flow of information required to achieve the ISR mission.

16.14 Atmospheric platform vulnerability to enemy air defences:

a. HALE and MALE assets are typically not designed to encounter manned enemy air threats, lacking early warning systems, speed, manoeuvrability, defensive/offensive air-to-air armaments.

b. AWACS, EW, sigint and MPA may require both manned fighter escorts and or aerial refuelling support in order to enhance survivability while also achieving their specific missions within an ISR operation.

## Section 16-8. Conclusion

16.15 In order to obtain as accurate an assessment of enemy disposition beyond the capability of its ground forces, Olvana leverages both space-based and atmospheric intelligence, surveillance, and reconnaissance capabilities.

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# Chapter 17

# Uncrewed aerial systems

## Section 17-1. Definition

17.1 An uncrewed aerial system is any aircraft that is capable of flight without the physical presence of a human pilot within the aircraft. It may be remotely piloted by a human operator, it may be piloted by computer with any degree of human control ranging from minimal to complete.

17.2 A UAS can range in size from a nano-drone, approximately the size of a human hand, to the Grumman RQ-4 with the wingspan of a Boeing 737 passenger aircraft.

## Section 17-2. Established roles of unmanned (uncrewed) aerial system

17.3 Decoy/Deception:

a. A number of different platforms may be used the J-6 and the J-7, which are respectively, modified Olvanan built MiG 19 and MiG21 airframes that are remotely piloted.

b. A decoy is used to literally draw fire from IADS – surface to air missiles and antiaircraft artillery, in order to deplete enemy magazines of ammunition, in advance of an actual strike, thereby giving manned aircraft a higher survival probability.

c. Deception is used to draw enemy interest and combat power away from an actual targeted location, prior to a strike.

17.4 **Electronic warfare.** This has been discussed in Chapter 16, and it will not be elaborated upon here to prevent duplication.

17.5 **Intelligence, surveillance and reconnaissance.** This has been discussed in Chapter 16, along with some of the platforms used. It will not be elaborated here to prevent duplication.

17.6 **Strike.** In an air superiority environment, UAS can operate with little threat from enemy forces, and can provide either pure strike capability or a limited degree of support to ground forces.

## Section 17-3. Emergent roles for unmanned (uncrewed) aerial systems

17.7 The following trends are taking shape, and UAS is evolving to be used in multiple non-traditional roles as indicated in the following paragraphs:

a. *Low observability intelligence, surveillance and reconnaissance.* Low observability signature management/low visibility/low EM/low IR.

b. *Updated decoy platforms.* Its significant number of 'mothballed' legacy aircraft are readily modifiable to be converted to remotely piloted decoys such as the J-6, J-7, J-8.

c. *Unmanned combat aerial vehicle capability.* Olvana is actively exporting its UCAV to nations not typically supplied armaments by the Western hemisphere. Its highest volume of export UCAV is the Wing Loong 2 and 3 export variants. While the platform is not as manoeuvrable as fighter aircraft, it provides strike capability at a fraction of the price of a fleet of manned jet strike/fighters.

d. *Collaborative Combat Aircraft concept (Man-machine teaming).* Olvana has showcased a concept CCA (in western parlance, it is referred to as a 'loyal wingman'), the FH 97 at airshow displays in 2021. Little is known about the performance capabilities. There is speculation that there will be land-based as well as carrier based variants (see Figure 17.1).

e. Aerial refueling.

f. *Drone carrier/Drone/Unmanned (uncrewed) aerial system 'mothership'.* The Jiu Tian UAV is stated as having a payload capacity of 11 tons, and is capable of deploying a swarm of up to 100 smaller UAVs, for all mission types including ISR, EW,

communications, search and rescue, as well as swarming drone strikes (see Figure 17.2).

g. Airborne directed energy weapons:

(1) Reports surfaced in 2020 regarding the OPAFs initiative to procure pod-mounted lasers for use on fighter aircraft, however exact developments do not conclusively indicate that such weapons were developed, commissioned and deployed.

(2) Practically speaking, the generation, conversion of energy required to make directed energy weapons effective would require a purpose built air platform which would not be particularly fast, light and manoeuvrable.

(3) The limiting physics of energy conversion (losses at each conversion, due to the imperfect conversion between the generation source, to electrical power which can be stored, to the directed energy itself), materials science and mass requirements haven't reached the point where any of the energy inputs lend themselves to compact and lightweight directed energy systems.

(4) Such systems are being developed for ship and vehicle mounted energy weapons, where a high mass is not required to be held airborne.

**Figure 17.1: FH-97 Collaborative combat aircraft**

**Figure 17.2: Olvanan Jiu Tain drone mothership**


## Section 17-4. Conclusion

17.8 OPAF uncrewed aerial systems (NATO Class III, > 600 kg gross take off mass) are an emerging class of aircraft. Their uses are varied, and Olvana is experimenting with the capabilities and uses that can be brought to bear on the battlefield and in the skies. The conventional use, that of a remotely piloted vehicle for use in ISR and strike is well established. Their use as decoys is increasing, and the field of collaborative combat aircraft as well as a 'mother ship' for extending the range of drone swarms is being developed.

# Chapter 18

# Combat search and rescue

## Section 18-1. Definition

18.1 The identification, tracking and recovery of military personnel in a contested environment.

## Section 18-2. Purpose

18.2 To rescue human lives under hostile combat conditions.

## Section 18-3. Current capability

18.3 Presently, the OPA has one squadron of Z-20 helicopters dedicated to CSAR missions as part of its Strategic Air division.

18.4 The CSAR squadron operates with the support of and co-ordination with the following capabilities:

a. Space-based ISR.

b. Air breathing ISR, AWACS aircraft.

c. Search and rescue capable platforms:

   (1) MPA.

   (2) Rotary winged – with specialist recovery equipment/winch, as well as armed, troop carrying escort.

   (3) Strike/fighter support.

d. Combat-trained rescue operators capable of operating on land and sea.

e. Combat-trained medical trauma team.

f. OPAN assets if available or tasked.

g. OPA ground forces if available or tasked.

## Section 18-4. Capabilities

18.5 The following capabilities are brought to bear in order to conduct successful CSAR operations:

a. C2

b. ISR

c. Search

d. Recovery

e. Air/Ground/Maritime and defence/strike

f. Medical aid/treatment/primary trauma care.

## Section 18-5. Execution

18.6 Illustrative phases of a CSAR Operation to recover a downed OPAN strike fighter pilot in contested territory (see Figure 18.1).

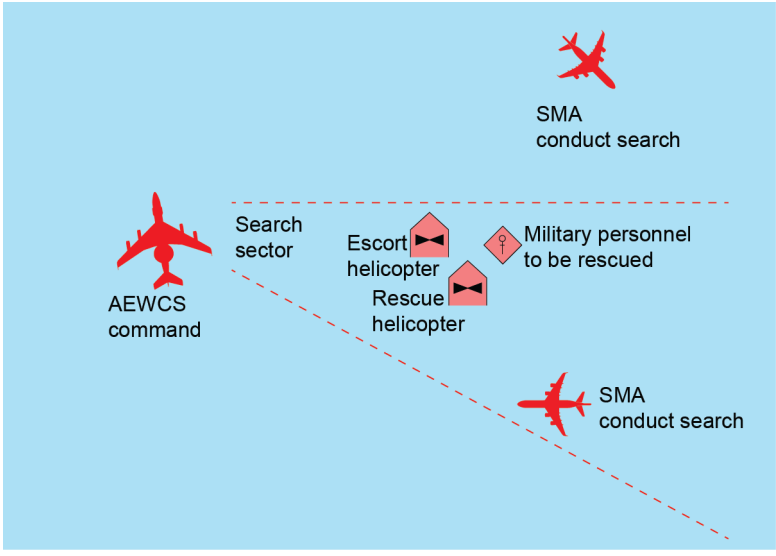
a. *Phase 0: Notification.* Information indicates that a strike fighter pilot did not return from a sortie. SATCOM notification from a communications satellite indicates that the pilot has activated his EPIRB or equivalent for a limited duration.

b. *Phase 1: Search.* A search package is launched. This includes an AWACS such as a KJ-600 aircraft to provide C2 and two maritime SMA such as a Y-9 to conduct search using visual, IR and sigint capability. This enables both the search of adjoining sectors, as well as triangulating a precise location. Upon locating the downed combatant, the co-ordinates are transmitted to the principal recovery platform. In this case, there is a guided missile destroyer within 15 nautical miles of the downed aviator. The AWACS maintains co-ordination and also keeps monitoring for enemy air, sub surface and surface threats. The SMA stay on task with one search aircraft flying a holding pattern in the vicinity of the downed aviator.

c. *Phase 2: Rescue.* A rescue package is deployed from the guided missile destroyer, consisting of two helicopters. One is fitted with a winch and the crew complement includes a rescue team and a medical trauma treatment team. The other is armed with 7.62 mm MGs and provides security to the rescue operators. If the rescue team encounters a squad sized element of surface enemy combatants also attempting to recover the downed aviator, the armed escort as well as the SMA on location can act to defend the rescue operation by providing overwatch and interdiction of enemy forces. The rescue team and the medical trauma team execute their tasks to complete the rescue operation.

d. *Phase 3: Finalisation.* The SMA, rescue and escort helicopters return to their units and the AWACS moves off station. The downed aviator is treated aboard the medical facility on the guided missile destroyer, and returned to his parent ship for further treatment and debriefing.

**Figure 18.1: Combat search and rescue**



## Section 18-6. Command and control

18.7 In this example, the CSAR Commander can be based on either a ship or in the AWACS aircraft.

18.8 The CSAR Commander has control over the entire operation. He delegates authority for any aerial defensive action in vicinity of the rescue site to the SMA Warfare Officer.

## Section 18-7. Variations on the basic combat search and rescue profile

18.9 The following elements may be required to conduct a CSAR depending on where the downed combatant is located:

a. Search, SMA and recovery assets may require refuelling to reach the rescue location.

b. A recovery team may need to be parachuted in to the rescue location.

c. A ground based rescue location may require the co-ordination of search, strike and rescue aircraft with a mechanised/motorised or airborne infantry element.

# Bibliography

*Olvana – Air Force Structures* -
https://odin.tradoc.army.mil/FS/INDO-PACIFIC/OLVANA/AF_CMD

*Olvana – Operational Environment* -
https://odin.tradoc.army.mil/DATE/a7f54b856bdda3a8a4666108b3f05c6e

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# Abbreviations

The source for approved Defence terms, definitions and abbreviations is the Australian Defence Glossary (ADG), available on the Defence Protected Network at http://adg.dpe.protected.mil.au/.

Opposing Forces (OPFOR) abbreviations are specific to enemy publications and will not be found in the ADG.

| | |
|---|---|
| **A2AD** | anti-access/area denial |
| **AAR** | air-to-air refuelling |
| **AEW** | airborne early warning |
| **AEWC** | airborne early warning and command (or control) (OPFOR) |
| **AEWCS** | airborne early warning and command (or control) stations (OPFOR) |
| **ALFS** | airborne low frequency sonar (OPFOR) |
| **AO** | area of operations |
| **AOR** | auxiliary oiler replenishment |
| **ARG** | amphibious ready group |
| **ASBM** | anti-ship ballistic missile (OPFOR) |
| **ASCM** | anti-ship cruise missile |
| **ASW** | anti-submarine warfare |
| **AWACS** | airborne warfare and command system (OPFOR) |
| **BARCAP** | barrier combat air patrol (OPFOR) |
| **BVR** | beyond visual range |
| **C2** | command and control |
| **CAP** | combat air patrol |
| **CAS** | close air support |
| **CBG** | carrier battle group (OPFOR) |
| **CDI** | civil defence integration (OPFOR) |
| **CG** | cruiser, guided missile |
| **COMSAT** | communications satellite (OPFOR) |
| **CPO** | Communist Party of Olvana (OPFOR) |
| **CSAR** | combat search and rescue |
| **CSG** | carrier strike group (OPFOR) |
| **CW** | cyber warfare (OPFOR) |
| **CV** | carrier vessel (OPFOR) |

| | |
|---|---|
| **DCA** | defensive counter air |
| **DEAD** | destruction of enemy air defences (OPFOR) |
| **ECCM** | electronic counter-countermeasure |
| **ECM** | electronic countermeasures |
| **elint** | electronic intelligence |
| **EMCON** | electromagnetic emission control (OPFOR) |
| **EPIRB** | emergency position indicating radio beacon |
| **ESM** | electronic support measures |
| **EW** | electronic warfare |
| **FEZ** | fighter engagement zone |
| **FFG** | guided missile frigate |
| **FFH** | guided missile frigate, helicopter (OPFOR) |
| **GBAD** | ground-based air defence |
| **GBADS** | ground-based air defence system (OPFOR) |
| **GCI** | ground controlled interception |
| **HALE** | high altitude long endurance (OPFOR) |
| **humint** | human intelligence |
| **IAD** | integrated air defence (OPFOR) |
| **IRR** | imaging infrared |
| **IR** | infrared |
| **ISR** | intelligence, surveillance and reconnaissance |
| **IVO** | in vicinity of |
| **JEZ** | joint engagement zone |
| **LEO** | low Earth orbit |
| **MAD** | magnetic anomaly detection (OPFOR) |
| **MALE** | medium altitude long endurance (OPFOR) |
| **MANPADS** | man-portable air defence system |
| **MARSTK** | maritime strike |
| **MEZ** | missile engagement zone |
| **MPA** | maritime patrol aircraft |
| **NOCOM** | no communications (OPFOR) |
| **OCA** | offensive counter air |
| **OPFOR** | opposing forces |
| **OPA** | Olvanan Peoples Army (OPFOR) |
| **OPAAC** | Olvanan Peoples Army Airborne Corps (OPFOR) |
| **OPAF** | Olvanan Peoples Air Force (OPFOR) |
| **OPN** | Olvanan Peoples Navy (OPFOR) |
| **OPNAF** | Olvanan Peoples Naval Air Force (OPFOR) |
| **PGM** | precision guided munitions |

| | |
|---|---|
| **SAG** | surface action group |
| **SAM** | surface-to-air missile |
| **SAMBUSH** | Surface-to-air Missile BUSH (analogue of ‘ambush’) - (OPFOR) |
| **SATCOM** | satellite communications |
| **SBA** | space-based assets |
| **SEAD** | suppression of enemy air defence |
| **sigint** | signals intelligence |
| **SMA** | special mission aircraft or small, miniature and autonomous (OPFOR) |
| **SOF** | special operations forces |
| **UAS** | unmanned (uncrewed) aerial system |
| **UAV** | unmanned (uncrewed) aerial vehicle |
| **UCAV** | unmanned combat aerial vehicle |

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