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AAP 1001.2

THE AIR FORCE APPROACH TO IRREGULAR WARFARE

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Foreword

This is the first Irregular Warfare doctrine of its kind for the Royal Australian Air Force, despite the fact that throughout the 90 years of its existence much time has been spent participating in irregular warfare campaigns. As this document clearly demonstrates, armies have had to contend throughout history with opponents who fought within the irregular sphere, so there is nothing particularly new in this form of warfare. The number of times that the RAAF has been involved in such operations since World War II—in Malaya, Vietnam, Iraq and Afghanistan—highlights the need for a document which describes how the Air Force has come to think about the problems of irregular warfare.

The RAAF prefers the term 'irregular warfare' rather than counterinsurgency or counterterrorism, as this is a concept that matches Air Force's inherent strategic orientation and flexibility. Since there is no joint ADF or NATO doctrine on irregular warfare or counterinsurgency to fit into or draw upon, the RAAF has drawn from US and UK joint doctrine. Concepts of irregular warfare are changing so rapidly that this doctrine has attempted to be as philosophical as possible, noting that the RAAF is currently engaged in irregular warfare combat operations that are focused on counterinsurgency. This also takes account of the fact that the RAAF has been called upon to undertake control of the air operations, essentially as counterterrorist measures, on a number of occasions since September 2001. While this Air Force irregular warfare doctrine inevitably focuses on counterinsurgency and counterterrorism—being the focus of today's operations—we should all be aware that air power also has a key role in unconventional warfare operations.

Air Forces do not have to dramatically change their force structure or doctrine to participate effectively in irregular warfare, but Air Force personnel do have to be aware that the different strategic, political, diplomatic and geographic environments of irregular warfare will require a more subtle use of air power. The fact that air forces may not outwardly change when conducting irregular warfare should not be mistaken for disinterest or ignorance, but rather, a sign that air forces are inherently strategic forces that have to operate across the spectrum of conflict and often have to conduct simultaneously a complex array of mission types—sometimes on the same sortie by the same aircraft.

Lastly, it is reiterated that doctrine is guidance, not dogma, and it is expected that all Air Force personnel will rely on their professional and technical mastery to employ air power as effectively and efficiently as possible in the prevailing circumstances of the day.

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The Royal Australian Air Force acknowledges the valuable input drawn from ADF joint and allied doctrine in preparing AAP 1001.2—*The Air Force Approach to Irregular Warfare*.

The Royal Australian Air Force also acknowledges the use of imagery from Air Force and Defence websites, and that provided by individuals and other agencies.

RAAF Doctrine Hierarchy

1. Air Force doctrine is articulated in the Air Force Doctrine Hierarchy (see figure below) that encapsulates the RAAF's philosophical, application and procedural doctrine. The hierarchy identifies five types of doctrinal publications:

   a. **AAP 1000 Series**. The AAP 1000 Series publications provide the Air Force's capstone philosophical air power doctrine

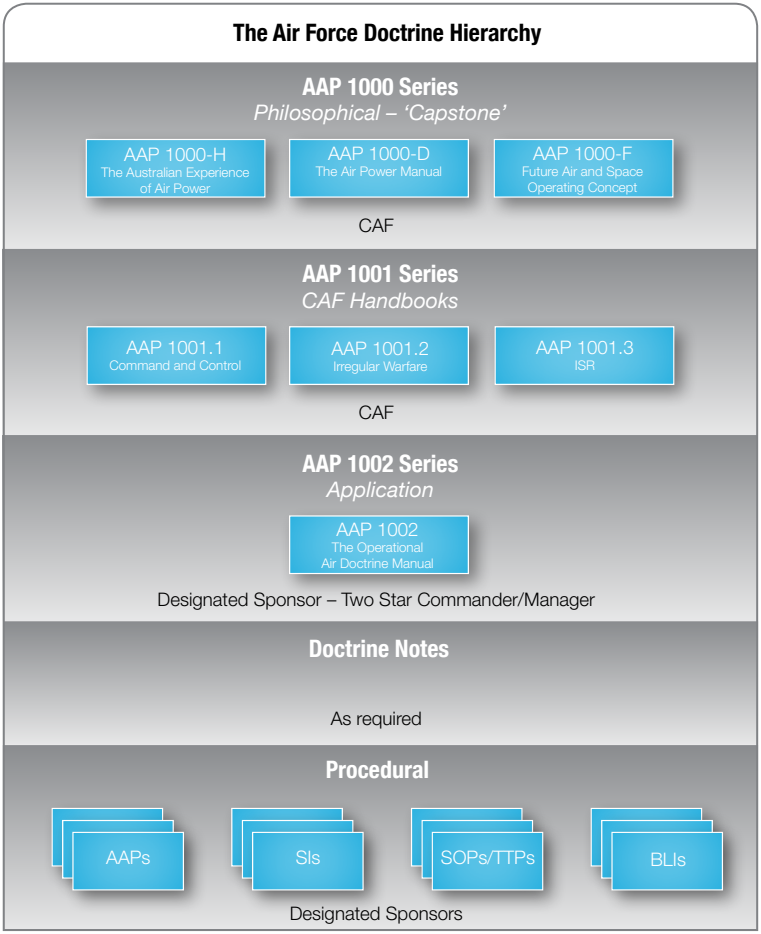
   b. **AAP 1001 Series**. The AAP 1001 Series publications, referred to as CAF Handbooks, bridge philosophical and application doctrine. They are designed to articulate Air Force's perspective on key doctrinal issues.

   c. **AAP 1002 Series**. The AAP 1002 Series provides the Air Force's application-level doctrine. Publications are sponsored by two-star commanders or managers for specific functional areas. The key document is the AAP 1002—*The Operational Air Doctrine Manual*.

   d. **Doctrine Notes**. Doctrine Notes are promulgated as required on specific doctrinal issues that need to be formally articulated between major doctrinal reviews in the AAP 1000 Series.

   e. **Procedural Doctrine**. Air Force procedural doctrine is not identified in any specific series or publication as it is articulated in various TTPs, SIs and SOPs across the Air Force.

2. AAP 1001.2—*The Air Force Approach to Irregular Warfare* is a CAF Handbook and therefore bridges both philosophical and application doctrine.



The Air Force Doctrine Hierarchy

Key Doctrinal Statements of the Air Force Approach to Irregular Warfare

The key doctrinal statements of irregular warfare are the primary doctrinal positions that underpin Air Force's understanding of irregular warfare and are the key takeaways from this publication.

- Irregular warfare is not a lesser form of warfare than conventional warfare.
- For the Air Force, irregular warfare philosophically includes not only counterinsurgency, but also unconventional warfare (or insurgency support) and counterterrorism operations.
- Irregular wars can only be won with a whole-of-nation approach, wherein the military contributes a critical part of the solution.
- Irregular warfare is often characterised by small tactical battles and seemingly random acts of violence connected together in order to achieve strategic outcomes.
- The air power characteristics of perspective, flexibility, responsiveness, speed, versatility and reach provide distinct advantages in the asymmetric operations associated with irregular warfare.
- Control of the air is as critical to success in irregular warfare as it is in conventional warfare.
- Force protection and freedom of manoeuvre are critical to ensuring that forces involved in irregular warfare are not isolated from the contested population.
- The development of air power has long gestational periods; therefore, support to partner nations for the development of aviation capabilities must to be taken into account at the outset of operational planning.

Chapter 1
Introduction

In point of fact you do not control a country from the air, any more than from the business end of a gun. It is the civil administrator, the District Commissioner or Political Officer, and the policeman who control the country.

J.C. Slessor, 1957[1]

Introduction

1.1 Conflicts involving irregular or non-state adversaries, such as insurgents, terrorists or criminals, are not new. In fact, irregular warfare is one of the oldest forms of conflict and has been known by a variety of names throughout its long history—small wars, low-intensity conflicts, counterinsurgency (COIN) operations and military operations other than war (MOOTW), to name a few. But because they allow smaller entities with less robust military capabilities to engage in a force-on-force conflict with larger adversaries, irregular campaigns have increasingly become the preferred form of operations since the latter part of the 20th century. In the same way, non-state or state-sponsored groups, including terrorists, have found in irregular operations an attractive modus operandi to challenge conventional military capabilities.

1.2 Contemporary Western military forces are almost always trained, equipped and configured for conventional—or state-on-state—warfare.

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[1] Westenhoff, Colonel Charles M., 2007, *Military Airpower: A Revised Digest of Airpower Opinions and Thoughts*, Air University Press, Maxwell Air Force Base, Alabama, p 84.

This has often proven to be inappropriate for the unpredictability and asymmetry that characterise irregular warfare and therefore such forces have struggled to adapt and optimise their effectiveness in this type of conflict. This issue is further exacerbated by a lack of environmental and joint irregular warfare doctrine. It is now widely accepted that irregular wars can only be won with a whole-of-nation approach, wherein the military contributes a critical part of the solution. It is also clear that the military contribution to countering irregular threats must be made within a joint approach. Accordingly, there is a need for all commanders to have a clear understanding of how air power can be best exploited, within the context of the joint campaign, to deliver the desired effects—in the cognitive as well as physical domains.

1.3 Air power is an important capability in a whole-of-nation irregular warfare campaign and must be guided by coherent doctrine. Such doctrine must cater for the fact that an irregular warfare campaign can never be totally air-centric, or indeed land-centric, but should be conceived, planned and executed as a joint campaign, most likely within an integrated coalition force.

1.4 Any study of air power in irregular warfare will clearly bring out the all-important role that helicopters play in this form of warfare. Ever since their first large-scale use in the 1950s, by British Commonwealth forces in Malaya and the French in Algeria, helicopters have transformed the conduct of irregular warfare by conventional forces. Helicopters continue to play a decisive role in determining tactical and operational outcomes across an area of operations. Because the aim of this publication is to detail Air Force's contribution to irregular warfare in the context of a joint campaign, helicopters are not dealt with in detail as the RAAF does not operate them. It should be noted, however, that many allied and coalition air forces do operate helicopters and accordingly include the employment of these assets in their air power doctrine.

Aim

1.5 The aim of this document is to articulate the Air Force's doctrinal approach to irregular warfare.

A RAAF C-17A Globemaster III touches down in Tarin Kowt, Afghanistan.

Purpose

1.6 AAP 1001.2 focuses on the philosophical aspects of the application of air power in irregular warfare. All airmen require a comprehensive understanding of the breadth of irregular warfare and its strategic context, because this is essential for determining the optimum way in which air power can be employed in such conflicts. This doctrine is not a set of rules for applying air power, but instead provides foundational knowledge which can act as a guide for professional judgement in the development and application of air power within an irregular warfare campaign. It is authoritative but not prescriptive or directive, and must be considered within the context of the broader strategy that the air campaign is supporting.

AIR POWER AND IRREGULAR WARFARE

Conflict between nation-states able to mobilise mass forces of trained and disciplined troops led by professional officers is a relatively recent development in the history of warfare. The characterisation of such conflicts as *conventional* or *regular*, with the normative connotations of both legitimacy and legality, is largely a modern Western concept. For millennia, however, hostilities between disparate groups of people and the use of violence to further political, social, cultural and/or economic goals has been characterised by methods that modern Western militaries label as *unconventional* or *irregular* warfare. For many peoples and societies, the tactics and techniques of irregular warfare have always been, and still remain, the principal means by which they wage war.

The explicit dichotomy created by categorising conflict as either *conventional* or *irregular* has, however, rarely been as clear-cut as these classifications suggest. Even in conflict between Western nation-states, irregular warfare never entirely disappeared. In the 19th century, for example, Spanish *guerrillas* and the Prussian *Landtrum* resisted French occupation during the Napoleonic Wars. At the start of the 20th century, the Boers conducted a protracted irregular war against the British Army during the Second South African War. In World War I the British encouraged and supported the revolt of the Ottoman Empire's Arab subjects, and at the same time battled an effective guerilla campaign mounted against them in German East Africa. During World War II, significant numbers of Axis troops were engaged in suppressing a myriad of insurgent partisan and resistance groups that sprang up throughout German-occupied Europe. In the Vietnam War, North Vietnam heavily reinforced Viet Cong insurgents with regular infantry. Irregular warfare, therefore, is not a new form of warfare and it has frequently coexisted with conventional warfare in what have been termed hybrid conflicts.

The regular forces of Western nation-states have themselves often employed the tactics and methods of irregular warfare. This was initially achieved by enlisting irregular tribal warriors, such as Cossacks and Gurkhas, directly into their armed forces. However, in the early 20th century, Western armies began training their own troops in irregular warfare tactics and techniques by creating units such as the Commandos and Special Air Service regiments.

Air forces were born and came of age during the great conventional conflicts of the 20th century's two world wars. The employment of air power is a complex activity, and the capacity to wage war from the air is generally the preserve of nation-states. Therefore, the development of air power doctrine and operational concepts has been led by modern and professional armed forces adhering to the Western norms of inter-state conventional warfare.

Western governments have increasingly viewed air power as carrying a comparatively low risk and an even lower footprint, and therefore consider it to be an appealing method

of applying military force. In irregular warfare, in the absence of obvious targets for 'decisive' strategic impact, air power is most effectively employed in closely coordinated joint and combined operations. Air forces will rarely lead operations in contemporary irregular warfare campaigns, but will more often be a critical element within a well-integrated multi-agency campaign.

Air power is technology-enabled and under normal circumstances requires long lead times for generating and operating at an adequate level. Therefore, like modern armies and navies, air forces will have to continue to structure for conventional warfare at the most dangerous high end of the spectrum of conflict, while at same time retaining the flexibility to adapt their current doctrine, tactics and weapon systems to the demands of irregular warfare.

Handley Page O/400 bomber operated by No 1 Squadron, Australian Flying Corps, in support of Arab insurgents in Jordan, 1918.

(Painting by Stuart Reid: Australian War Memorial, ART14279)

Description

1.7 This doctrine describes the fundamentals of irregular warfare, including its definition, how to comprehend it, how it differs to conventional warfare and its realities. It defines irregular warfare as a violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. It observes that air power has had an enduring role in the conduct of irregular warfare since the early days of manned powered flight.

1.8 This doctrine describes air power and irregular warfare and discusses command and control, air–land and air–sea integration, information operations and the role of space. It describes how air power is employed in irregular warfare and focuses on the four air power roles: control of the air, strike, intelligence, surveillance and reconnaissance (ISR) and air mobility. It also addresses air base support and force protection. Lastly, the doctrine discusses support to partner nation aviation forces.

1.9 In sum, this doctrine clearly defines the Air Force approach to irregular warfare.

Chapter 2
Irregular Warfare

... to make war upon rebellion is messy and slow, like eating soup with a knife.

T. E. Lawrence, 'Lawrence of Arabia'[1]

2.1 Indirect approaches towards achieving objectives in war have always been part of military concepts. Irregular warfare could be construed as synonymous with other historic labels such as: small wars, low-intensity conflict and asymmetric warfare. Irregular warfare is most useful in articulating and encompassing, with minimal impreciseness, all conflicts other than state-on-state, military-to-military wars. Since the characteristics of war are equally dependent on the status of the combatants and their modus operandi, irregular warfare must be defined with both these factors taken into consideration.

2.2 The overwhelming military power of Western nations and coalitions that has dominated the battlespace in recent conventional conflicts makes it unlikely that non-state groups would or could mount a conventional challenge to their supremacy in the near future. Therefore, irregular warfare has become an attractive alternative, and indeed a necessity, for such groups who choose to pursue their goals through conflict or in response to oppression by a nation's government.

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[1] T. E. Lawrence, 'The Evolution of a Revolt', *Army Quarterly and Defence Journal*, October 1920.

An Australian Army Bushmaster armoured vehicle provides protection for an Air Force C-130J Hercules delivering vital stores and equipment to the Australian forces in southern Afghanistan.

2.3 The contemporary global security environment is generally characterised by conflict between conventional military forces and the opposing forces of non-state groups. Non-state groups exist in very specific operational environments that must be understood in a detailed but nuanced manner by military commanders and policymakers. The need to involve different elements of national power and the many diverse factors that affect the planning, execution and successful conclusion of irregular warfare makes it extremely complex. Whereas conventional military conflicts tend to be of shorter duration, with relatively easily defined measures of success, irregular warfare tends to be protracted with difficult to define end-states and measures of success.

Defining Irregular Warfare

2.4 Air Force defines irregular warfare as: a violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. Irregular warfare favours indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will. [2]

2.5 For Air Force, irregular warfare includes counterinsurgency, counterterrorism and unconventional warfare (or insurgency support) operations as shown in Figure 2–1. It should be recognised, however, that other forces and other nations may have an expanded view of what comprises irregular warfare. Figure 2–1 also shows the factors which influence the conduct of irregular warfare. The definitions pertinent to irregular warfare are detailed below.

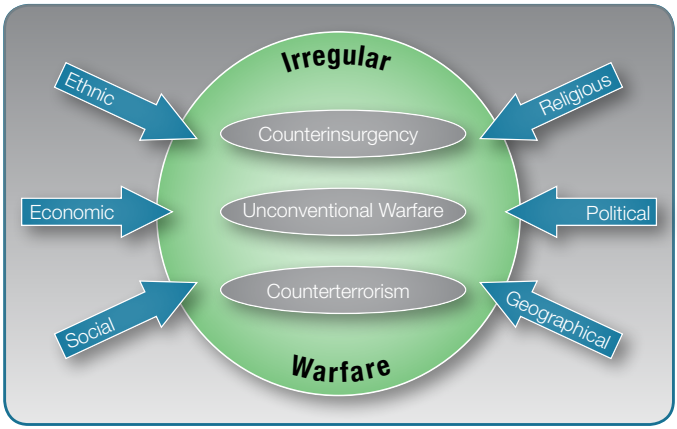

Figure 2–1: The elements of irregular warfare and its influencing factors

[2] As there is no agreed ADF definition for irregular warfare, and no NATO one, by convention the RAAF aligns with the US Department of Defense definition.

The Australian Defence Glossary defines:

Irregular Warfare as:

A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular Warfare favours indirect and asymmetric approaches, though it may employ the full range of military and other capabilities in order to erode an adversary's power, influence and will.

Insurgency as:

An organised movement aimed at the overthrow of a constituted government through use of subversion and armed conflict.

Counterinsurgency (COIN) as:

Those military, paramilitary, political, economic, psychological, and civic actions taken to defeat insurgency.

Terrorism as:

The unlawful use or threatened use of force or violence against individuals or property in an attempt to coerce or intimidate governments or societies to achieve political, religious or ideological objectives.

Counterterrorism (CT) as:

All offensive measures taken to neutralise terrorism before and after hostile acts are carried out. Note: Such measures include those counterforce activities justified for the defence of individuals as well as containment measures implemented by military forces or civilian organisations.

Unconventional Warfare (UW) as:

General term used to describe operations conducted for military, political or economic purposes within an area occupied by the enemy and making use of the local inhabitants and resources.

2.6 Many doctrine and concepts publications use the terms irregular warfare and counterinsurgency interchangeably to describe conflicts that do not fit the definition of conventional warfare. However, the

two terms do not mean the same thing, and as a result, air forces have generally adopted the more inclusive term *irregular warfare*.

Australian Special Forces fast rope from an Australian Army Blackhawk helicopter during a counterterrorist training exercise in Sydney.

2.7 At the time of publication there is no ADF irregular warfare or counterinsurgency doctrine or joint definitions.[3] When there is no joint ADF definition, the standard practice is to use the NATO definition and if there is no NATO definition, then the US Joint definition is used.

2.8 From the US Joint irregular warfare and NATO counterinsurgency definitions, it is clear that irregular warfare is broader in its scope and encompasses a very wide spectrum of non-conventional warfare. In contrast, counterinsurgency is very specific and deals with the actions a constituted government takes to counter an organised movement whose aim is to overthrow it. This distinction shapes Air Force's view of how its capabilities can be applied to the joint campaign.

Comprehending Irregular Warfare

2.9 Participants in irregular warfare tend to use indirect and asymmetric approaches to the conduct of warfare, although the full range of military and other capabilities may also be employed. The aim of irregular warfare is to neutralise an adversary's authority, power, influence and will through the synergistic effects of military, economic, diplomatic and information activities to achieve political, socio-economic or religious objectives.

2.10 There are discernible differences between conventional and irregular warfare. At their culmination, all conflicts are won or lost in the cognitive domain, and irregular warfare is no exception, although many cognitive results are derived from actions in the physical domain. Irregular warfare is therefore centred on influencing the will of the relevant population to achieve the desired goals. It might also mean subverting the authority of an adversary government by using or

[3] The Australian Army has published LWD 3-0-1—*Counterinsurgency*.

assisting indigenous forces to conduct unconventional warfare—in other words, by providing support to an insurgency. To achieve their objectives, irregular forces resort to a spectrum of activities ranging from propaganda to violence aimed at intimidation and gaining the support of the people. This is in direct contrast to the traditional state-on-state conflict which aims to create change from the outside by the defeat of the armed forces of the adversary. The essential difference is that conventional conflict targets the government of an opponent from outside the national boundaries, whereas irregular warfare normally targets the government from the inside.

2.11 Victory in traditional conflicts generally follows the defeat of the adversary's armed forces. In irregular warfare, victory usually occurs when one side gains the support of the population in favour of their interests or subsequently erodes their opponent's support base. Non-state entities usually exist with a measure of other non-state or neighbouring nation support and/or sanctuary to train, equip and reconstitute their forces. Therefore, operations to target the adversary's military power to erode their will requires a political nuance that may be difficult to orchestrate fully. The strategic objectives in an irregular conflict will engage the full spectrum of national power, so that all elements, including the military, must be employed against the adversary to increase the likelihood of a positive outcome (see Figure 2–2). The large spectrum of activities that could be undertaken simultaneously in irregular warfare makes it a complex undertaking, and therefore difficult to define in a clear and concise manner.

2.12 It must also be noted that conventional warfare and irregular warfare are not mutually exclusive, nor is irregular warfare a lesser form of warfare. In fact, it is probable that both forms of warfare will coexist in any given conflict, which will only increase the complexity of operations. The explanations provided in this document are beliefs and the best understanding of the complex realities that constitute irregular warfare.

2.13 Irregular warfare is at times simplistically explained as all forms of warfare other than conventional conflicts; that is, not conducted by regular military forces. To a large degree this is indeed true. The contemporary context of irregular warfare is somewhat different from those experienced by the British and Commonwealth forces in Malaya, the French in Algeria and even the US in Vietnam. While basic concepts have remained the same, the current irregular warfare environment is heavily influenced by extremist religious ideology that does not give the same emphasis to securing legitimacy from the population.

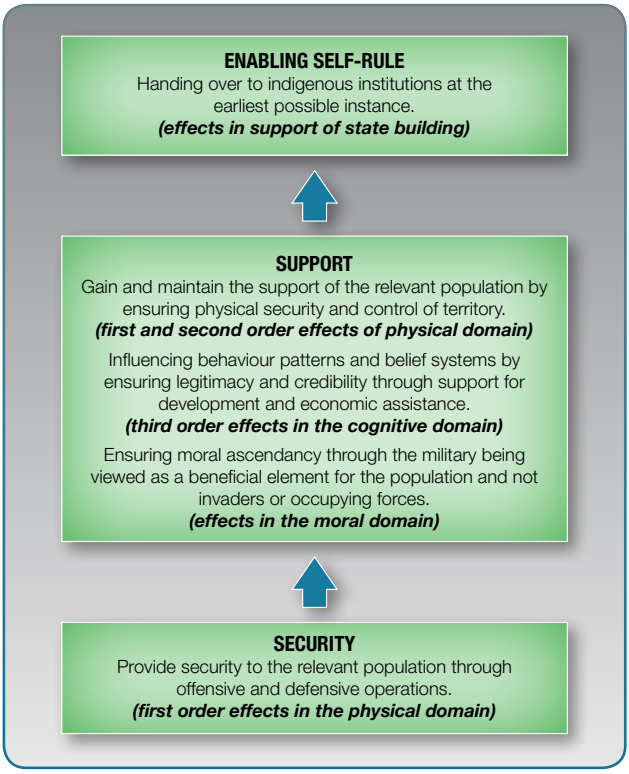

Figure 2–2: Generic strategic military objectives in irregular warfare

An Air Force C-17A Globemaster III takes off from Tarin Kowt, Afghanistan after resupplying the counterinsurgency effort.

2.14 The irregular adversary generally avoids operating as a formed or clearly identifiable force and under normal circumstances does not mass for attacks; they are almost always organised to operate in a decentralised manner. This provides an asymmetric advantage against conventional military forces, which usually operate under clear command and control protocols and adhere to the international law of armed conflict. Further, irregular adversaries do not easily provide the military force opposing them with clearly defined centres of gravity, the neutralisation of which will lead to victory. This places greater emphasis and reliance on all forms of intelligence and presents unique challenges to military forces.

2.15 Some of the concepts associated with irregular warfare are older than the term itself and are unchanging. However, broad principles to counter irregular activity—some of which are also common to conventional warfare—were only articulated in the 19th and 20th centuries by colonial powers and continue to have contemporary relevance. They include:

a. The political/socio-economic nature of the conflict must be accepted by all participants.

b. Civilian (ie. political) primacy must be supported by an integrated civil-military command structure.

c. The fundamental causes of conflict must be addressed through long-term reform.

d. Enemy combatants must be isolated from the population in order to minimise their moral and materiel support.

e. The use of military force must be legal, discriminate, proportionate and precise.

f. The military force must avoid giving the appearance of being an occupying force.

g. Battlespace knowledge, through intelligence and situational awareness, is a fundamental requirement for both battlefield and campaign success.

2.16 The fundamental requirement in an irregular warfare campaign is to shield or protect the population from the physical and cognitive effects of the actions being initiated by the adversary. The intended effects of adversary actions in such campaigns will often be to instil and maintain fear in the general population, through active and passive means, thus exposing the inability of the opposing movement to provide adequate protection. In irregular warfare, an insurgent's actions are intended to undermine the credibility and legitimacy of the incumbent government while expanding their own influence. By denying the insurgency this very potent psychological weapon, its status can be reduced from one of a political or reformist movement to purely violent criminal activity.

2.17 Success in irregular warfare is therefore posited on ensuring the security of the population and achieving superiority over the adversary in the areas of time, space (the area of operations), legitimacy/credibility and support as follows:

a. **Time**. In irregular warfare, as in a conventional war, time is critical to success. The aim of the regular military force should be to succeed in favourably influencing the cognitive domain of the relevant population, in the swiftest possible manner. Failing this, the opposing irregular forces will have an increased chance of becoming ascendant. From an irregular force's perspective, the measure of the campaign is normally in decades rather than years, which could create the perception of an endless struggle. Drawn-out conflicts may eventually exhaust the will of the nation to continue resisting, thereby enhancing the legitimacy of the irregular group in the eyes of the local population. The force that is able to control the

duration of the conflict could leverage that advantage towards dominating the irregular warfare campaign.

b. **Area of Operations**. A large area of operations (AO) permits irregular adversaries to choose the time and place of their activities, enabling them to seize and retain the initiative in the conflict. Conventional forces will be thinly spread if they attempt to cover the entire area, making them vulnerable to irregular attacks since the inherent protection of mass will not be available. The battlespace in this context may also encompass physical terrain that can be advantageous to lightly armed and mobile irregular groups rather than heavier conventional forces. Conventional forces must, as far as possible, reduce the geographical area that the opposing irregular forces have available to range freely, take offensive action and seek sanctuary. This reduction can be achieved through the concerted employment of Special Forces, and maritime and air power. While containing the geographical area of operations, the adversary must be isolated from external support and denied the internal capacity for mobility and manoeuvre.

c. **Legitimacy/Credibility**. The activities of opposing irregular forces will be aimed at undermining the legitimacy and/or credibility of the incumbent government. Additionally, the adversary may restore order when there is a breakdown in governance through cultivating the local population, obtaining their support, and thereby transferring the legitimacy to themselves. Insurgents and terrorists often project themselves as political, socio-economic or religious reformers and the protectors of the people's rights. This is often achieved through coercion and instilling fear through violence. Harsh measures—often adopted by incumbent governments to curtail the spread of this influence—generally

have counterproductive results, with the population becoming more likely to support the irregulars. The optimum way to legitimise the actions of the state in irregular warfare, therefore, is to link military operations transparently and directly to the security of the population and the desired political end-state.

d. **Support**. An insurgent or terrorist campaign can rarely succeed without some form of support from within the state and/or external sources. Internal moral support is vital for the irregular group to gain and maintain legitimacy, which in turn will improve the prospects of success. External support is manifest more in terms of materiel, training, funding and at times even personnel. Such support may emanate from third-party (often neighbouring) states, which have vested interests in the conflict.

2.18 Achieving successful outcomes is a whole-of-nation activity in which there will be different elements of national power assuming the lead, dependent on the context and characteristics of the irregular warfare campaign. In cases where the irregular activities have reached conflict stage, military forces will be in the lead for the initial part of the campaign to ensure the security of all other participants. However, it is generally prudent to plan and conduct shaping activities before military force is employed. Within the context of a joint irregular warfare campaign, air power can contribute significantly to this phase.

2.19 Early intervention by the constituted government has the capacity to curtail insurgent movements, provided the actions initiated are in consonance with addressing the primary causes of the insurgency. Such actions need not always be military in nature, but could instead entail economic support or advisory intervention early in the crisis. Air advisers can be employed, independently or as part of a multi-agency mission, to improve the competence of partner nations in the

employment of air power in the irregular warfare domain. This requires the fielding of properly trained advisers, with adequate strategic situational awareness, cross-cultural understanding, and language training or interpreter support (see Chapter 5 for more information).

2.20 The dynamics of irregular warfare indicate that there has to be different and flexible ways to employ military forces. From an air power perspective, historical evidence suggests that the application of air power in small and irregular wars has had mixed results, even though it was applied across a variety of circumstances. Yet, despite the cautions necessary in 'learning from history', certain trends can be identified and commonalities recognised from historic examples of air power application in these types of conflicts.

Aircraft with precision weapons and sensors, such as this Air Force F/A-18F Super Hornet, provide valuable strike and ISR capabilities in irregular warfare.

Differentiating Conventional and Irregular Forces

2.21 There are a number of aspects in which conventional and irregular wars are at variance, mainly because of the very visible differences between the two types of forces in their organisation, ethos and operational concepts. The more important differences that directly affect the conduct of irregular warfare are as follows:

a. **Doctrine.** A fundamental characteristic of most modern military forces is that they develop and enshrine well-formulated doctrine at the strategic, operational and tactical levels of war. This provides a holistic appraisal of the different elements, such as concepts of operations, logistics and the organisation of forces. In contrast, irregular forces do not normally have articulated military doctrine that is clearly understood across the force. However, in some cases there is an implied doctrine or 'collective wisdom' that guides their actions across all levels of war. Even without articulated doctrine, these forces are often adept at the tactical level of war and able to manipulate strategic effects. This reflects the complexity of the adversary and makes it difficult for conventional forces to assess the potential of opposing irregular forces, increasing the probability of underestimating them.

b. **Forces.** There is a distinct difference between the composition of conventional and irregular forces, brought about by the characteristics of the war they are tailored to fight. National military forces are built around the classical idea of the profession of arms and operate within the law of armed conflict (LOAC), whereas an irregular force is more likely to be an ad hoc group composed of like-minded individuals taking up arms to overthrow the recognised government or achieve some other tangible objective. They are not normally

'standing forces' and are often disdainful of the LOAC. They often try to provoke disproportionate military responses in an effort to weaken domestic support for the conventional forces engaged in the conflict. A conventional war is fought by the military of a nation which, although part of the society, fights a war or campaign segregated from society at a front or in an area of operations normally for a definable period of time. On the other hand, irregular warfare is conducted among the population and the irregular adversary force is normally inseparable from it. Essentially, opposing irregular forces tend to integrate with society and, therefore, irregular warfare can become protracted. The open-ended time frame is anathema to conventional forces, especially if there is external intervention in order to stabilise the situation or deal with humanitarian crises.

c. **Non-linear Battlespace**. In an irregular warfare campaign, the battlespace is not geographically segregated and the core aim of the conflict is influence rather than territory. Irregular warfare is 'war among the people' and there may be no defined fronts or rear areas. In combat operations, the overarching aim of conventional forces will be to achieve a swift victory if and when direct confrontation with the adversary's military forces becomes unavoidable. In addition, conventional forces also tend to try to minimise casualties—their own as well as the enemy's. Irregular forces on the other hand often operate with the aim of extending the confrontation through minor skirmishes, making and breaking contact at will, thereby controlling the tempo and intensity of the conflict as a whole and the battle at hand in particular. Tactical mobility is often critical to defeating irregular adversaries because it allows forces to concentrate quickly and, through firepower and manoeuvre, to defeat them. Decisive battles are almost never

fought in irregular warfare, as opposing irregular forces tend to dissipate back into the population when they are on the verge of being defeated.

During counterinsurgency operations, light land forces like these Australian Army Special Forces operating in Afghanistan are often inserted, protected, logistically supported and exfiltrated by air power because of the difficult terrain, non-linear battlespace and fleeting adversaries.

d. **Logistics**. Conventional forces are resource dependent, and as such they are reliant on assured logistics for their effectiveness, especially when undertaking expeditionary operations away from the national support base. Such operations are costly and resource intensive. Logistics is one of the major vulnerabilities

of conventional forces that may be exploited by opposing irregular forces and become an own operational centre of gravity. Minimising the logistic footprint, and indirectly the cost, is an important aspect of planning irregular warfare operations. On the other hand, irregular forces normally operate in small formations, without heavy equipment, and are locally based among the people. As such, their operational efficacy is less affected or hindered by weak or inadequate internal logistic chains but they are still often reliant on outside sources of materiel which may be interdicted.

e. **Organisation**. Historically, conventional forces have clearly defined organisational structures which are designed to ensure their effectiveness in conflict. Irregular forces are normally characterised by an amorphous organisation and no distinct order of battle that could provide an indication of their strategic depth to an outside observer. The irregular force is normally comprised of smaller 'units' tied together by ethnic, tribal, ideological, criminal or religious commonality and they do not follow any traditional chain of command. This makes it difficult to predict the future course of action that will be adopted by an irregular force. This often makes the direction of irregular warfare unpredictable to the conventional force. Irregular forces can manipulate the diffused nature of their organisation to their advantage, to seize the initiative and control the tempo and intensity in irregular warfare, within the limits of their resource constraints.

f. **Technology**. Conventional forces are generally reliant on sophisticated technology to maximise their combat effect. Technology also provides them with the ability to be ubiquitous with a small operating footprint. Technology, therefore, becomes one of the driving forces in the operational design of the force and also in the conduct of wars. In irregular

warfare, technology may not be the most important factor in conducting a campaign, mainly because the irregular forces may not have access to high technology. Irregular opponents often use commonly available technology, such as the Internet and mobile telephones, in innovative ways. By fighting at the lower end of the technology spectrum, opposing irregular forces create an asymmetry that attempts to limit their own technological vulnerabilities and neutralise the advantages inherent in a conventional military force. However, technology, if adapted to context, can create positive effects for conventional forces that, in turn, can be an asymmetric advantage. This is particularly the case in terms of technologies in the fields of air power, force protection and ISR.

High technology capabilities, such as this USAF MQ-9 Reaper remotely piloted aircraft (RPA) armed with laser guided bombs and Hellfire air-to-surface missiles combine the air power characteristics of perspective, flexibility, responsiveness, versatility and reach.

g. **Socio-cultural Factors**. A modern military force represents the synergy of people who have become a unified, legal fighting entity as a result of dedicated training, discipline, indoctrination and professionalism in the application of force. Conventional forces, consisting of such soldiers, sailors and airmen have a clear chain of command and a well-formulated organisation. Leadership of such forces is also a professional undertaking. The irregular force can be said to comprise more of 'fighters' than professional soldiers. While the professional soldier is selected and trained separate to societal norms, the irregular fighter lives and thrives within his/her society. Therefore, the development of fighting skills in an irregular force is normally restricted to the knowledge resident within the society and limited external influences. Even the leadership of 'units' comprising irregular fighters needs a somewhat different set of skills, based heavily on individual fighting prowess and reliant on personal charisma, tribal standing or religious status. The differences in the development of the professional soldier and the irregular warrior impact directly on the way in which they both conduct battles, campaigns and wars. Further, irregular forces generally fight for different reasons, values and outcomes to professional military forces. Therefore, a good understanding of the socio-cultural factors as they relate to the adversary is critical in irregular warfare.

2.22 These seven aspects wield significant influence in determining the tempo, intensity and direction of an irregular conflict. Therefore, they are important factors to be considered in the formulation of guiding principles and concepts of operations for the employment of forces in irregular warfare.

Irregular Warfare Realities

2.23 Irregular warfare covers a large spectrum of military operations and therefore the range of scenarios that could be encountered is also large. There are six primary overarching characteristics of irregular warfare that must form the broad basis for planning air operations and optimising the contribution made by air power. These are:

a. Irregular warfare may be protracted because of the irregular adversary's desire to extend its duration to increase the likelihood of a positive outcome for them. Therefore, plans must be made for a long conflict, which may be measured in decades rather than in years. Under these circumstances, the staying power of military and government will is critical to success. Shared responsibility through a coalition approach may mitigate this issue.

b. Irregular warfare is primarily about ensuring the protection of the population so that actions of the defending military are supported while support for the adversary is lessened. The end-state is therefore always politically dictated, and there is no such thing as a military-only solution. The application of lethal force by the military, with its inherent risk of collateral damage, may be counterproductive if not appropriately executed.

c. The overarching need in irregular warfare is for effective local policing and law enforcement action.

d. The adversary will almost always be amorphous groups with highly complex and decentralised command structures who are highly adaptive at the operational and tactical levels.

e. Most wars have elements of both regular and irregular warfare. Multi-role air power capabilities will be more suitable to adapt to the emerging requirements. Air Force must retain

the flexibility to conduct irregular warfare in parallel with conventional warfare, if necessary. This may therefore require the innovative employment of air power in a contextual manner.

f. The diffused nature of the adversary (who typically spurn the wearing of uniforms) and their operations within the population, make finding, fixing and engaging targets in accordance with Australia's commitment to the LOAC very intelligence intensive. Intelligence requirements encompass socio-economic, political and cultural issues, not just purely military ones as applicable to conventional wars.

Low technology – or high technology: the right technology is key to using air power in irregular warfare. Shown is a USAF Project Liberty MC-12W ISR aircraft—based on the Beech King Air 350 airframe—operating in Iraq. The MC-12W has a four-person crew and an array of sophisticated ISR sensors on a relatively unsophisticated airframe. Low technology platforms are usually the right choice for developing indigenous security forces.

2.24 Planning for irregular warfare must always be by a whole-of-nation effort with the military plan being integrated, from conceptualisation to execution and drawdown, within the ambit of the overall plan. Air power planning should include consideration of residual capabilities that could be transferred to the indigenous force during and after the campaign. Since air power capabilities need longer gestational periods to mature, the development of indigenous air power capabilities should be initiated at the earliest opportunity. These might include low cost and easy to operate in-theatre air mobility, close air support or ISR capabilities.

THE MALAYAN EMERGENCY, 1948–1960

The Malayan Emergency is often cited as the classic example of a successful counterinsurgency campaign. When Britain attempted to resume its colonial rule in Malaya after World War II, it was opposed by nationalists, mainly led by communists who had formerly assisted British forces in fighting the Japanese. Operations against the communist insurgents were at first severely hampered by a confusing command structure and an overall lack of coordination between the British administration, armed forces and law enforcement authorities.

After General Sir Gerald Templer was appointed High Commissioner in 1952, a 'whole-of-government' approach was adopted as the basis for planning sustained civil, military and police actions designed to isolate the insurgency from the local population, suppress insurgent forces and drive them permanently from towns and villages into the jungle. Military sweeps and ambushes in insurgent areas employed overwhelming force, and suspected insurgent bases were heavily bombed from the air.

From 1950 until 1957, Lincoln bombers of the RAAF's No 1 Squadron formed the mainstay of the British Commonwealth's air strike force. Aircraft were initially used in saturation bombing of large areas of jungle to disrupt and harass the opposing irregular forces. Improvements in target intelligence and command and control enabled better coordination of air power with land forces, leading to more precise air strikes on locations occupied by insurgents. In November 1953, an attack by No 1 Squadron narrowly missed killing the insurgent leader Chin Peng. The aircraft were also used in psychological warfare, such as 'air shouting' (by transmitting verbal messages from aircraft fitted with loudspeakers), to create nonlethal effects.

In 1952, a RAAF officer, Air Vice-Marshal Fredrick Scherger, was appointed Air Officer Commanding Malaya. Scherger immediately moved his headquarters from Singapore to Kuala Lumpur to ensure closer coordination of air operations within the overall security strategy. Throughout the campaign, the most valuable contributions made by air power were in ISR and air mobility operations—locating the enemy, and enabling the rapid deployment and sustainment of land forces to engage the opposing irregular forces. Air operations in Malaya also saw the first large-scale employment of helicopters to further enhance the flexibility and responsiveness of ground forces in counterinsurgency operations. Air power played a central supporting role in the successful suppression and eventual defeat of the insurgent forces in Malaya.

No 1 Squadron, RAAF, Lincoln bombers on a low-level bombing run over the Malayan jungle in 1957. By that stage in the conflict the Commonwealth air campaign consisted largely of attacking suspected guerilla positions in the remote northern areas of Malaya.

(Painting by Ray Honisett: Australian War Memorial, ART 27684)

Chapter 3
Air Power in Irregular Warfare

Downplayed, taken for granted, or simply ignored, air power is usually the last thing that most military professionals think of when the topic of counterinsurgency is raised.

Air Power in the New Counterinsurgency Era, 2006[1]

3.1 Air Force's air power capabilities can create significant effects in irregular warfare, but they are not always as immediately apparent as the effects created by the actions of surface forces. However, operational successes in irregular warfare are generally underpinned by focused and optimised air operations. The complex irregular warfare environment is part of the full spectrum of conflict and understanding Air Force's vital contribution to it is essential for all airmen.

3.2 At the basic level, irregular warfare is about influencing and winning over the population. Military activity in this arena is essentially restricted to ensuring the appropriate conditions for other elements of national power to be brought to bear within a whole-of-nation approach to winning the conflict. Air power's core characteristics—reach, speed, payload, responsiveness, flexibility, versatility and perspective—create critical opportunities that provide the joint commander with flexible, persistent and often less intrusive but nevertheless rapid responses in irregular warfare.

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[1] Vick, Alan J., Grissom, Adam, Rosenau, William, Grill, Beth, Mueller, Karl P., 2006, *Air Power in the New Counterinsurgency Era*, RAND, Santa Monica, CA, p 109.

A RAAF C-17A Globemaster III departing an airfield in Afghanistan after providing air logistics support.

The Asymmetry of Air Power in Irregular Warfare

3.3 Asymmetric action by irregular adversaries is intended to avoid the strengths of a conventional force while exploiting its potential vulnerabilities and is a major characteristic of irregular warfare. Such asymmetric action involves the selective use of weapons and tactics to constrain military operations and to counter and defeat an adversary who is numerically or technologically superior, or both. While this

normally works in favour of the irregular force, air power has its own distinctive asymmetric capabilities that the adversary cannot easily counter. For example, air power's ability to carry out time sensitive precision strikes or undertake air mobility operations that allow the rapid insertion, sustainment and extraction of land forces at will are both asymmetric capabilities that irregular adversaries can rarely match and only counter with difficulty. This is the primary asymmetry of air power. The key to successful employment of air power in irregular warfare is the effective integration with other elements of national power, and with land and maritime forces.

3.4 Further, airborne electronic warfare (EW) platforms routinely provide protection to land forces against opposing irregular forces by attacking and degrading the latter's communications and electronics, including those associated with triggering improvised explosive devices (IEDs). While the irregular adversary mostly avoids conventional conflict and uses asymmetric methods to dilute the combat effectiveness of conventional forces, they are often not able to neutralise or offset the advantages that air power brings to conventional forces.

3.5 Air power can create effects in the battlespace relatively unconstrained by terrain and distance by exploiting the altitude, speed and range of airborne platforms. Through the employment of innovative and adaptive concepts, techniques and tactics, intelligent, adaptive and complex adversaries may be disrupted and neutralised. However, the freedom of manoeuvre assured through control of the air cannot be assumed, but must be acquired and retained through a range of measures that include force protection, electronic warfare, counter air and special operations.

A RAAF C-130 Hercules operating in Afghanistan.

Commanding Air Power in Irregular Warfare

Command and Control

3.6 In irregular warfare, several air power tenets have proven relevant and valuable. The first and foremost among these is the centralised control and decentralised execution of applying air power. This fundamental tenet regarding the optimum way to employ air power is as equally valid in the contemporary irregular warfare environment as it is in conventional warfare. By placing all air power capabilities under a Joint Force Air Component Commander (JFACC), who is responsible to the JTF Commander, limited air assets can be more effectively and efficiently apportioned and allocated by prioritising requirements across the entire area of operations. This is particularly important for low density, high demand assets such as airborne ISR capabilities.

3.7 Effectiveness in irregular warfare is reliant on a unified and integrated approach at all levels of command. In this context, land forces are often deployed in small and isolated units to conduct tactical level operations. This is at variance with the air power tenet of centralised control and decentralised execution, where operational control is retained by the air commander while tactical control for specific missions or operations may be delegated to lower levels. Further, the rules of engagement may often demand authorisation for tactical engagements from a higher level of command. Command and control of air operations in irregular warfare is therefore a complex process that needs to retain maximum flexibility to respond in a timely and effective manner to rapidly emerging tactical situations.

3.8 Since all irregular warfare campaigns are joint in nature, command of the air component needs to be placed at an appropriate level to ensure that air power's inherent effects, from shaping the battlespace at the strategic level through to tactical actions, are optimally employed. The JFACC and his/her staff must therefore be involved in the strategic planning, operational execution and post-mission and campaign assessment of all irregular warfare activities. This is achieved through the Theatre Air Control System (TACS), which has Air Force command and control elements collocated or associated with all levels of land, maritime and joint force command.

3.9 Command and control in irregular warfare air campaigns shares some commonality with conventional air campaigns, but it is also different because of the probability that it will be even more intensive and complex. In irregular warfare air campaigns, the requirement for accurate and timely information and intelligence, as well as resilient and secure communication links to disseminate the collected intelligence, and professional mastery at all levels of command, are critical to operational success. Only the optimum combination of centralised control, ISR, decentralised execution and precise and timely

engagement, both kinetic and non-kinetic, will bring success and create the environment to achieve the desired end-state.

The Theatre Air Control System

3.10 The TACS is designed to be fully integrated with the land and maritime command structures and to operate in the joint environment. The JFACC exercises centralised control over all air power capabilities in the AO through the Air and Space Operations Centre (AOC). The TACS contains elements at all levels of command, whose purposes range from air liaison/planning/coordination (Air Component Coordination Elements (ACCEs) and Air Liaison Officers (ALOs)), to tactical control of air platforms in the joint battlespace (Air Support Operations Centres (ASOCs), Tactical Air Control Parties (TACPs), Air Force Combat Controllers and Joint Terminal Attack Controllers (JTACs)).

3.11 In irregular warfare, situations involving troops in contact (TIC), aeromedical evacuation, rapid insertion or extraction, and targets that are difficult to find, identify and/or track, are frequently encountered. Empowerment of the lower echelons of the TACS to exercise an increased level of tactical control over air capabilities is often essential to ensure effective and timely air support. ASOCs, TACPs, Air Force Combat Controllers and JTACs that have detailed local situational awareness, and an intimate knowledge of the scheme of manoeuvre at their level, are frequently asked to fulfil the functional responsibilities of higher echelon elements. In this context, the lower echelon elements require enhanced communications, situational awareness tools and broad air expertise to function effectively.

3.12 This means that Air Force can respond quickly to evolving situations and is able to deliver the optimum air power contribution focused on the required level, whether it is at the strategic, operational

or tactical levels. In a joint campaign this is often a difficult issue, but one that needs to be resolved before its commencement.

3.13 Air and Space Operations Centre. The JFACC exercises command over air operations through the AOC. The planning and execution of the air campaign is based around the air tasking cycle. This enables Air Force to realise strategic and operational effects through focused tactical action. While this model has served Air Force well, it is necessary to emphasise the need for the AOC to be agile and responsive to the demands of conducting a dynamic irregular warfare campaign.

The Air and Space Operations Centre is the peak element of the Theatre Air Control System and allows the centralised control and decentralised execution of air power.

3.14 The dispersed nature of irregular warfare creates a risk that the JFACC will be too far removed from the battle to effectively exercise

command, with attendant negative effects on the effectiveness of the command and control system. This risk is exacerbated when land force operational planning is carried out at lower than component level. The necessity for all air commanders to be flexible in their command and control arrangements while participating in an irregular warfare campaign is underscored, as is the need for carefully selected and well-trained liaison officers to advise land commanders and their staffs on the employment of air power.

3.15 Air power's speed of response, reach, lethality, and the ability to engage a range of widely dispersed targets simultaneously in a time-critical manner with decisive effect, makes it a critical capability in prosecuting an irregular warfare campaign. This often means that some level of strategic command oversight can be expected to permeate into the operational and even tactical level of operations. The professional mastery of air commanders therefore should include the ability to manage these interactions without detriment to the application of air power. Similarly, land and maritime commanders need to be cognisant of operational air power capabilities, priorities and capacity. To achieve this, they should be supported by air liaison officers on their headquarters staff.

3.16 Air Battle Management. Air battle management (ABM) encompasses the process of planning, directing, coordinating and controlling air assets in operations across the area of operations. This is an inherently joint activity in which the perspective, reach and responsiveness of air power plays a key role in the successful command and execution of irregular warfare campaigns. Air Force's battle management system has the capacity to manage its own, joint, coalition, and in some circumstances, civil air operations. It also includes deployable capabilities that can interface with the command networks of allied or coalition partners to enable integrated or independent air operations. Interoperability of these systems is a critical enabler in joint, combined and coalition irregular warfare operations.

AIR BATTLE MANAGEMENT
OPERATION SLIPPER, AFGHANISTAN, 2007–2009

In May 2007 elements of the RAAF's No 41 Wing deployed a Control and Reporting Centre (CRC)—with Air Force's newly acquired AN/TPS-77 radar—to Kandahar Airfield to conduct Air Battle Management (ABM) operations in support of International Security Assistance Force (ISAF) operations in Afghanistan.

The CRC was responsible for deconflicting civilian and military air traffic over Afghanistan as well as for ensuring all military aircraft, both manned and remotely piloted, were properly marshalled within the AO. While many coalition platforms were conducting autonomous tasks, such as inter-theatre airlift, others were required to work within a well-orchestrated network of capabilities producing a single joint effect. Personnel of the CRC had to closely monitor and control the routing and the times-on-target of fixed and rotary wing aircraft participating in troop lift operations, as well as attack and transport platforms. Similarly, fixed-wing strike aircraft often needed to be in close proximity to land forces to ensure timely responses. A critically important task for the CRC was to ensure rapid response to multiple requests for close air support from land forces in contact with insurgents. This required matching appropriate platform and weapon configurations to the ground situation before handing over control to Joint Terminal Attack Controllers (JTACs) for delivery of effects.

To achieve its mission the CRC had to be connected into the coalition C2 and ISR networks. Tasking data and intelligence was merged with real-time images of the ground and air situation to produce detailed battlespace awareness products. These were also exploited by other units. An additional challenge for the CRC operators was the need to have a high level of interoperability with coalition forces in terms of systems interface and operating procedures.

No 114 Mobile Control and Reporting Unit's AN/TPS-77 radar at Kandahar Airfield, Afghanistan.

Air Force intelligence personnel undertake the positive identification of a target and estimate the risk of collateral damage.

3.17 Targeting. Targeting is the process of selecting and prioritising targets and matching the appropriate response to them taking account of operational requirements and capabilities. The response may be kinetic or non-kinetic and aimed at attacking the adversary in the physical, cognitive or information domains. While all targeting is information-dependent, this has critical relevance in irregular warfare campaigns because of the severity of repercussions in the case of incorrect targeting, such as collateral damage. Further, targeting is always guided by the need to create the effects necessary to accomplish joint force objectives with the ultimate aim of changing the behaviour pattern of the adversary. This is an especially significant factor in irregular warfare, where only joint and multi-agency campaigns will be able to achieve the desired political end-state. Further, in irregular warfare, effective targeting is critical to ensure no civilians are killed or injured, that their property is not damaged or destroyed, and that the

risk of collateral damage is minimised to ensure that adverse publicity cannot be derived by the adversary for propaganda purposes. Further information on targeting can be obtained from ADDP 3.14—*Targeting*.

Air-Land Integration

3.18 In irregular warfare, air-land integration (ALI) provides a coordinating and synchronisation process to ensure that the effects produced by the air and land campaigns are aligned in accordance with the commander's plan. Since air and land operations are closely interconnected in irregular warfare, ALI is critical to success. Robust and effective ALI requires the positioning of air advisers, planners and controllers throughout the joint air-land command and control structure. In the ADF context, the TACP, most frequently operating at the brigade level in conventional warfare, is often required at the battle group level in dispersed irregular warfare operations. While operating within the TACS structure, the TACP is collocated with and provides its supported land commander with air power advice, planning and tasking request support, as well as an airspace and aircraft control capability for organic air support and assigned Air Force elements. Embedded Air Force personnel (eg. Combat Controllers, Joint Battlefield Airspace Controllers, etc) provide a deeper understanding of the peculiarities of air operations in irregular warfare that enable efficient mission execution and mitigate many of the communication and coordination issues associated with air-land integration.

Air-Sea Integration

3.19 Irregular forces can often move by water, especially in the littoral, and in such cases air-sea integration is required in the irregular warfare campaign. In the maritime environment, conventional air and naval elements can be used directly to inhibit the mobility of irregular forces. Maritime air interception operations are capable of preventing the opposing irregular forces from using the sea to their advantage, by

denying supporters the ability to influence the outcome of the irregular warfare campaign.

An Australian Joint Terminal Attack Controller (JTAC) calling in close air support.

Information Operations

The Australian Defence Glossary defines:

Information Operations as:

The coordination of information effects to influence the decision making and actions of a target audience and to protect and enhance our own decision making and actions in support of national interests.

3.20 While Information Operations (IO) are not considered an independent capability, they are critical to the success of all military operations. The primary objective of IO is to ensure that information superiority is achieved and maintained throughout the duration of a joint campaign, thereby facilitating the ability of commanders to make superior decisions. In irregular warfare the conduct of IO is particularly important in view of the emphasis on affecting the cognitive domain of the adversary and is critical in shaping the attitudes and actions of the contested population. IO consist of a number of elements, but the elements that are conducted and supported most effectively by air power are psychological operations (PSYOPS), deception, operations security (OPSEC) and electronic warfare (EW). Public Affairs (PA)—critical in the case of an irregular warfare campaign—is a related element and can be considered part of IO. Further information on IO can be obtained from ADDP 3.13—*Information Operations*.

Psychological Operations

3.21 Psychological Operations (PSYOPS) are directed at enemy, friendly and neutral audiences in order to influence attitudes and behaviour affecting the achievement of political and military objectives. PSYOPS can be conducted at all levels of warfare and the ultimate objective of PYSOPS is to reinforce the perceptions and behaviour of adversary and neutral leaders and groups in a manner favourable to one's own political and military objectives. Air power can contribute directly to PSYOPS by acting as a key delivery mechanism for the message, through distributing leaflets and broadcasting messages. Additionally, air power can be the message by threatening the application of force through 'show of force' operations. Show of force operations are designed to demonstrate Australian or coalition resolve that involves increased visibility of Australian or coalition forces in an attempt to defuse a specific situation that, if allowed to continue, may be detrimental to Australian interests or national objectives.

PSYOPS leaflets being distributed by helicopter.

Deception

3.22 Deception operations include measures designed to mislead the adversary by manipulation, distortion or falsification of information to induce behaviour prejudicial to their interests. Effective deception efforts require a detailed and clear understanding of adversary culture, political compulsions and military decision-making processes. Air power can support deception measures, for example, by operating visibly in an area of limited interest to one's own plans, as a feint, thereby misleading the adversary as to the actual area of operations and drawing adversary forces away from the real area of operations.

INFORMATION OPERATIONS
SHOW OF FORCE – IRAQ, 2005

Air power has been routinely employed in response to insurgent activities both in Afghanistan since 2001 and Iraq since 2003.

Air power contributed in an effective, nonlethal but offensive manner to security operations in support of the first round of Iraqi elections held in January 2005. In the run-up to the election and during the actual period of voting, strike aircraft were tasked to deter and apply pressure on anti-coalition forces and to reassure the local population, in accordance with a carefully developed plan. Known insurgent havens and areas understood to be sympathetic to insurgent activity were targeted for frequent and aggressive demonstrations by strike aircraft making low-level passes. Further, a visible and audible presence was provided in voting areas generally to reassure Iraqis that air power was on hand to support the security forces if required. This contributed significantly to ensuring the peaceful conduct of the elections. In this instance, air power played a valuable role in shaping the political environment.

Show of force operations by air power could encompass fast (often at the speed of sound) low-level flight to disorient through noise and vibration, the release of flares to indicate the will to release ordnance, or simply a combat air patrol pattern that is visible from the ground. The tactic to be employed will depend on the ground situation, the nature of the local population and the desired effect.

A US Air Force A-10 aircraft releasing flares during a show of force sortie.

Operations Security

3.23 Operations Security (OPSEC) is a process which gives a military operation appropriate security, using passive or active means, to deny the adversary knowledge of the dispositions, capabilities and intentions of friendly forces. It is a continuous process by which one's own critical information is identified and analysed to ensure that the adversary is denied access and is not able to obtain sufficiently accurate information regarding one's own capabilities, intentions and operational plans. When operating in coalition with partners with whom information sharing protocols are not formalised, or when passing information to the indigenous forces of a partner nation, the utmost care must be taken to ensure the security of such information. In combination with deception, OPSEC can cause adversary decision-makers to misjudge the relevance of the information that they have obtained. Through air mobility, air power can reduce the land force's visible footprint thereby reducing the chances of the adversary obtaining prior knowledge of impending operations and thus enhancing the element of surprise.

Electronic Warfare

3.24 Electronic Warfare (EW) is military action involving the use of electromagnetic and directed energy to determine, exploit, reduce or prevent hostile use of, and retain friendly use of, the electromagnetic spectrum (EMS). It includes electronic attack (EA), electronic protection (EP) and electronic support (ES). In irregular warfare, air power can exploit the EMS to detect and jam remotely controlled improvised explosive devices (IEDs), provide critical advance information of such threats to land forces, and acquire information and intelligence on adversary capability and intent.

Electronic attack aircraft, such as this US Navy F/A-18G Growler, can play a key role in irregular warfare by in defeating improvised explosive device networks.

Public Affairs

3.25 Public Affairs (PA) is the coordinated information output of all government activity undertaken in support of operations to inform the public and influence decision-makers in support of policy and to reinforce diplomatic and political objectives. PA plays an important role in explaining to both the domestic and international public the strategy that is being employed in an irregular warfare campaign. From an air power perspective, PA is critical to ensuring that the contested population, as well as the international community, have a clear understanding of the possibilities and effects of, and reasons for, collateral damage, and highlights the positive impacts of air power such as humanitarian assistance and aeromedical evacuation. Importantly,

adequate PA capabilities will be able to diminish the negative publicity associated with the actual occurrence of collateral damage that an irregular adversary may try to exploit for propaganda purposes.

Conclusion

3.26 IO are primarily focused on shaping the information environment in and around the battlespace while ensuring own freedom of operations. While IO are important in all types of conflict, they assume added importance in irregular warfare for a number of reasons, such as dispersed operations, the focus on the cognitive domain of the adversary, and the need to indirectly influence the target population. In irregular warfare, Air Force capabilities can be rapidly adapted to create the necessary IO component, from PSYOPS to EW.

Space

3.27 The operational effectiveness of the ADF is critically dependent on its assured access to space-based capabilities, without which its broader military capability could be severely degraded. Space capabilities add a unique dimension to the ADF's ability to posture quickly for all operations and enhance irregular warfare operations through satellite communication (SATCOM); ISR; accurate positioning, navigation, and timing (PNT); and blue force tracking (BFT). These capabilities enable accurate, adverse weather weapon system employment and rapid operational tempo information superiority.

3.28 For example, the integration of space-based PNT capabilities with airborne platforms has expanded Air Force's capability for precision strike. Where communication lines cannot be laid, or when terrain and other line-of-sight radio frequency limitations hamper terrestrial-based communications, space communications keep forward and rear echelons in contact with each other. Space-based information and intelligence collection capabilities also fill intelligence gaps. The

ability to pinpoint the location of friendly forces in unpredictable and remote operating environments is also of critical importance. BFT reduces friendly fire incidents and coordination time, and provides rapid information critical in joint personnel recovery missions. For additional information on space capabilities and considerations, see ADDP 3.18—*Operational Employment of Space.*

THE AIR POWER CONTRIBUTION TO COUNTERING IMPROVISED EXPLOSIVE DEVICES

An Improvised Explosive Device (IED) is normally 'homemade' and fabricated in an unsophisticated manner incorporating destructive pyrotechnic or incendiary capabilities designed to destroy, incapacitate, harass or distract. Activation of an IED is done either through a time switch, remote command operation (wired, radio controlled) or by the victim (via pressure plate, infra-red or trip-wire). Even though air power has the capacity to isolate an area of operations, IEDs will always be available to insurgents by virtue of the fact that they are improvised from commonly available materials. Countering this threat therefore has to be conducted across the AO.

Countering the IED threat is a joint activity that requires a fully integrated and systematic approach and synchronisation of effort by different agencies at all levels. The primary requirement to prevent insurgent groups from employing IEDs is to isolate them from their support infrastructure. Air power is well suited to this task by its ability to continuously monitor the surface environment through ISR. This continuous monitoring can lead to the identification of insurgent lines of communication and supply as well as their supporters, all of which can be interdicted. Concerted ISR operations can disrupt the IED network and target the strategic supply lines and the personnel and locations used to build and distribute the IEDs. In this way, the entire system can be neutralised and the network defeated.

Interdiction of an IED system is a job well suited to air power. The inherent responsiveness of air power makes it possible to identify and interdict enemy safe houses, IED factories and arms caches. Further, if IEDs are being transported, either between warehouses or for operational deployment, air platforms are the interdiction weapons of choice due to their ability to carry out discriminatory and precise strikes rapidly and from long ranges. Besides destroying the physical components of an IED system, air platforms can also interdict the communications and the electronics nodes associated with triggering them, unconstrained by terrain or physical distances between the system nodes.

Airborne assets also contribute significantly to the forensic analysis process designed to neutralise IED systems. This involves fusing large amounts of ISR data to backtrack from an IED attack to determine the sources from which the attack emanated to locate the bomb-making facilities and the associated support organisation. In both Iraq and Afghanistan, airborne assets have used their inherent ability to quickly locate an IED attack point, identify suspicious individuals or vehicles in the vicinity and mark them with laser designators for apprehension by land forces if possible, or destroy them outright if necessary.

Neutralising the effects of an IED requires that the device is either prevented from detonating or sufficient protection is provided

to make it ineffective. Until recently, Western nations concentrated on protecting land forces with improved armour and flexible tactics. The insurgents, like all complex adaptive organisations, have countered by increasing the sophistication of the IEDs and by specifically targeting explosive ordnance teams that neutralise identified IEDs.

IEDs can only be completely neutralised if they can be found, which is a difficult task. Airborne platforms carry a wide variety of sensors and their speed and loiter capability ensures that a few platforms with discerning sensors can cover a large geographical area with high fidelity. Specialist sensors include ground penetrating synthetic aperture radar (SAR) and infra-red (IR) sensors, both of which can search for either the IED itself or indicators of its presence such as disturbed soil or command wires. Change detection techniques can also be used by comparing current imagery to older imagery taken of the same location to highlight what has changed; for example, has an IED been laid or are there tracks around a spot that might indicate that an IED has been laid and the locals are aware of it?

Besides destroying or disabling an IED in situ, another means of preventing its detonation is to prevent the activation command being sent to the device. A common means of activating an IED is by using radio transmitters to trigger it when the target is within range. This can be countered by electronic jamming devices that use low power radio frequency (RF) energy to block the signals of radio-controlled explosives detonators, such as mobile phones, satellite phones and long-range cordless telephones. Other electronic countermeasures (ECM) include high-power, high frequency RF energy to neutralise the electronics controlling the IED. While land-based ECM systems can counter simple transmitters, airborne systems offer greater effective range and are more flexible in their application, as they are traditionally designed to operate in a very complex airborne EW environment.

Further information on IEDs can be obtained from ADDP 3.17—*Counter Improvised Explosive Device*.

Insurgent IEDs using artillery shells and landmines.

Chapter 4
Employing Air Power in Irregular Warfare

By exacting a great price on the Taliban for any massing of forces to defend or counterattack, the asymmetrical advantage of the US ground-based targeting and air attack made the land forces of the Northern Alliance unstoppable.

General Montgomery C. Meigs, USA, Retired, 2003[1]

4.1 Air Force's air power can create a diverse range of effects, ranging from non-intrusive intervention to the application of lethal force with precision and discrimination. These effects can also span the scale from being minimal and discrete to decisive and overwhelming. The large range of effects, their intensity and strategic nature, are unique to air power. The ability of the Air Force, through its inherent flexibility and versatility, to rapidly provide the necessary response makes it possible for the joint commander to adapt swiftly to changes in the conflict environment. The Air Force contributes critical capabilities to the joint campaign and its effective integration increases the flexibility of the joint response in irregular warfare.

4.2 The nature of Air Force's air power contribution to the irregular warfare campaign is shown in Figure 4–1. The four core Air Force air power roles are control of the air, strike, air mobility and ISR. Each of these four roles contributes individually and in combination to the

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[1] Westenhoff, Colonel Charles M., 2007, *Military Airpower: A Revised Digest of Airpower Opinions and Thoughts*, Air University Press, Maxwell Air Force Base, Alabama, p 84.

conduct of an irregular warfare campaign. The application of Air Force capabilities provides value within the joint and/or multi-agency campaign against opposing irregular forces and has the capacity to enhance such joint responses in all activities that irregular warfare encompasses. The inherent characteristics of air power accentuate its enduring nature, permitting the Air Force to carry out operations to obtain and maintain adequate control of the air, strike with precision and discrimination in a timely manner, provide strategic and tactical air mobility, and carry out unrestricted ISR activities with persistent effect.

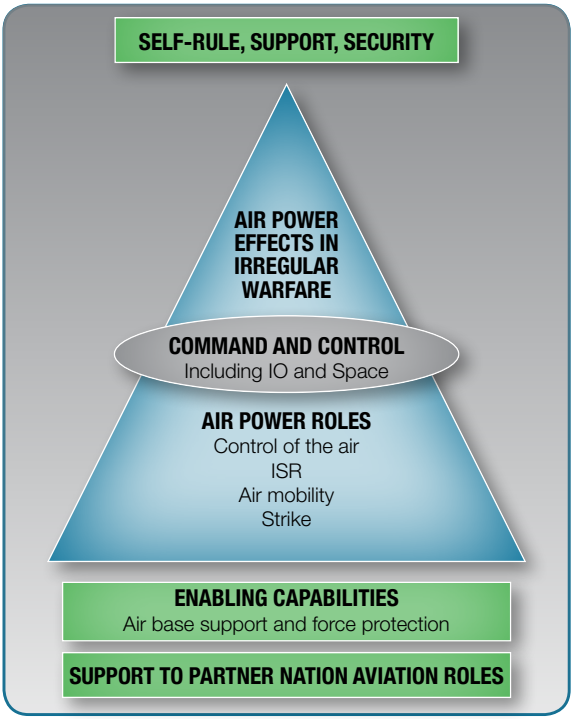


Figure 4–1: The nature of Air Force's air power contribution in irregular warfare.

4.3 Air Force's air power in an irregular warfare campaign is not just about the conduct of its four main roles—but is also aimed at ensuring the attainment of the strategic objectives of security, support and self-rule. Air power is applied across the battlespace through the lens of command and control. The impacts of information operations and space are complex and pervading and air power is at all times enabled by force protection and air base support. In addition, air power professionals must be able to provide clear advice to Government, the other Services and the partner nation government and aviation forces (see Chapter 5) to ensure that the intricacies of the application of air power are well understood.

Generating Air Power

4.4 The generation of the capabilities that permit the Air Force to effectively conduct its four core air power roles—control of the air, strike, air mobility and ISR—does not change, irrespective of the context of their employment. The raise, train and sustain function of the Air Force at the strategic level remains the same regardless of the changing characteristics of the conflict. In effect, it is neither feasible nor cost-effective to alter the force composition of the Air Force to meet the disparate requirements of the multiple challenges that it faces in meeting the Government's needs. The advantages that air power brings to the joint force primarily derive from its inherent characteristics of flexibility, responsiveness, versatility and reach. These advantages remain the same, irrespective of the characteristics of the conflict in which air power is being applied.

Air Terrorism

4.5 Terrorism as it relates to the aviation industry generally constitutes two courses of action by terrorists: a hijacking to acquire hostages for use as leverage in negotiations between the terrorists and

the state concerned, or the use of the aircraft as a missile to target civilian infrastructure or military facilities and kill large numbers of people in order to gain political advantage. In the latter case, the weapon is not only the aircraft in a moving or kinetic energy sense but also the significant amount of fuel that airliners have, thus creating considerable incendiary effects. Due to the numbers of civilians that can be held hostage during a hijacking or people killed by the use of an aircraft as a missile, such events have significant strategic effects. Air power will usually be involved in some way, whether it be aircraft tracking or interception, the transportation of Special Forces to an airfield where a hijacked aircraft may have landed, or aeromedical evacuation of the injured after an event.

Control of the Air

The Australian Defence Glossary defines:

Control of the Air as:

The ability to conduct friendly operations in the air and on the surface below it without interference from enemy air power.

4.6 By ensuring adequate control of the air, Air Force restricts the adversary's freedom of manoeuvre and action while assuring that own forces, and all other elements of national power, have freedom of action. In irregular warfare campaigns the adversary may not have resident air power capabilities and therefore a concerted campaign to obtain control of the air may not be necessary. However, it has to be borne in mind that control of the air in irregular warfare may not just be an air-to-air issue but may encompass all environments. The necessary degree of control of the air is achieved through the entire gamut of counter air operations, carried out on an as required basis. Control of the air

CONTROL OF THE AIR: COUNTERING AIRBORNE TERRORISM

The use of aircraft to commit acts of terrorism has been a feature of the aviation industry since the first hijacking in the 1930s. Hijackings were more prevalent in the post–World War II period and became synonymous with the actions of terrorists. Normally, hijackers forced an aircraft to land to facilitate negotiations over the release of hostages, but on 11 September 2001 attacks against the World Trade Center in New York City and the Pentagon in Washington, DC, provided the first examples of civil and private aircraft being used as aerial weapons of mass destruction in pursuit of a terrorist cause.

As a result of '9/11', the promulgation of air exclusion zones during important public events has become a common occurrence. In the case of Australia, the RAAF has been called upon to secure the airspace around events such as the 2002 Commonwealth Heads of Government Meeting at Coolum, Queensland; the 2003 visit by US President George W. Bush to Canberra; the 2006 Commonwealth Games in Melbourne; the 2007 meeting of the Asia Pacific Economic Cooperation (APEC) forum in Sydney; and the 2008 Papal Visit.

During the APEC meeting in 2007, a Temporary Restricted Area (TRA) was established over a 45 nm radius of Sydney Airport. The efficacy of the system was tested when a small civilian aircraft accidentally intruded into the TRA, necessitating its interception by two F/A-18 Hornets. The interception, coordinated by the AOC, ensured that the light aircraft was positively brought under civilian air traffic control authority.

Not only was this activity an air defence operation, but it was also a 'show of force' operation in its intended deterrent effect.

A RAAF F/A-18 Hornet intercepts a civilian aircraft over Sydney during Operation DELUGE in September 2007.

permits the Air Force to undertake all other operations at will, which deters the adversary from attempting to concentrate personnel to increase mass and firepower. This forces the opposing irregular forces to continue operations as small disparate groups armed predominantly with small arms and man-portable weapons.

4.7 In an irregular warfare campaign, control of the air assumes a more nuanced application compared to major conventional conflicts. Firstly, the contested airspace in the case of irregular warfare operations will normally be confined to the operational envelope of man-portable air defence systems (MANPADS) and other small arms. The mobility associated with MANPADS makes neutralising them an operational necessity. The same mobility makes destroying them after they are operationally deployed a complicated task. Therefore, it may be necessary to neutralise MANPADS by directly or indirectly attacking the sources of supply and thereby minimising their use. This may be more of an intelligence or special operations activity than an air power activity.

4.8 Control of the air around airfields and landing zones increases in importance because in a non-linear irregular warfare environment these are areas of known air activity where the adversary will want to concentrate their generally limited numbers of air defence weapons or mount ground attacks on aviation assets, personnel or infrastructure, or disrupt the resupply of essential items into the airfield or landing zone. Control of the air in these circumstances necessitates the location, identification and engagement of both air and land-based threats and requires effective coordination between airborne and land assets.

4.9 Irregular warfare air campaigns are characterised by an uneven mix of activity across a wide spectrum—from the lethal application of force, to missions aimed purely at humanitarian assistance. Often these activities will be conducted simultaneously and alongside or in close proximity with civil aviation operations. This means that the necessary

level of control of the air must be maintained to ensure that military transport, civil and commercial air operations are not affected and can be protected. Essentially, control of the air in an irregular warfare campaign will, of necessity, have to buttress an extremely flexible structure that supports simultaneous military and commercial air operations of varying tempo and intensity.

4.10 From a military viewpoint, control of the air over the AO of an irregular warfare campaign is perhaps easily achieved. However, the amorphous nature of irregular warfare and its combatants still makes control of the air a necessary precondition for the conduct of all other irregular warfare operations. Even a limited air-based threat to friendly air or surface operations will disproportionately degrade operational efficiency.

The Wedgetail Airborne Early Warning and Control (AEW&C) aircraft is an important battlespace management component of the RAAF's control of the air capability. AEW&C aircraft also have a strike coordination and ISR role which may be employed in irregular warfare.

CONTROL OF THE AIR: SOVIET AIR POWER IN AFGHANISTAN, 1979–1989

Modern air forces engaged in irregular warfare campaigns have almost always enjoyed air supremacy and the freedom to engage in the full range of air power operations with minimal interference from enemy forces. The Soviet experience in Afghanistan, however, clearly demonstrated that even overwhelming air power could be threatened by surface-based weapons. The Mujahideen's ability to employ effective land-based air defences provides a salutary example of the fact that modern air forces cannot take the uncontested control of the air for granted.

Air power played a central role in the Soviet invasion and occupation of Afghanistan. As Soviet forces crossed the Afghan border on the first day of the invasion, 24 December 1979, a Soviet Guards Airborne Division was airlifted to Bagram Airport and seized control of Kabul. During the opening months of the occupation, Soviet air power was instrumental in the destruction of the irregular tribal forces and renegade Afghan Army units that opposed the occupation.

Following their initial successes, Soviet commanders found themselves involved in a prolonged counterinsurgency campaign against diverse groups of irregular forces, collectively known as the Mujahideen. The Mujahideen pursued an archetypal guerilla war—fighting in small groups, making fast attacks and then withdrawing into inhospitable terrain or merging with the general population. The mountainous terrain and lack of roads throughout much of the country made it impractical for the Soviets to employ much of their conventional equipment, training or tactics. The Soviets quickly turned to the use of air power for strikes against the irregular forces and for the rapid transportation of troops and supplies. Helicopters, in particular, were used extensively for tactical battlefield mobility, while gunships provided versatile close air support and interdiction.

Using American and Pakistani supplied man-portable air defence systems (MANPADS), the Mujahideen were able to exploit the Soviet dependence on air power. Despite Soviet air supremacy and technological dominance, the irregular forces' use of man-portable land-based air defences severely disrupted Soviet air operations and denied them free use of the air over a significant proportion of the country. As losses mounted in the air the Soviets were forced to curtail their counterinsurgency operations. The unprecedented loss of air assets was a major contributory factor that influenced the eventual withdrawal of Soviet forces in 1989.

Mujahideen fighter armed with a MANPADS.

CONTROL OF THE AIR: INSURGENTS WITH AIR POWER, SRI LANKA, 2007–2009

Apart from 'Contra' rebels opposed to the Sandinista Government in Nicaragua in the 1980s, the best known example of insurgents using air power to further their operations was in Sri Lanka, where the Liberation Tigers of Tamil Eelam (LTTE) employed it against government forces during the last phase of a long drawn-out (and ultimately unsuccessful) campaign to create a Tamil homeland. Unlike the Contras, the Tamil Tigers developed their air wing without—so far as is known—any external state support. They were known as the 'Air Tigers'.

Air Tigers about to undertake a strike sortie against targets in Sri Lanka.

While there had been suspicions since the late 1990s that the LTTE was developing an air wing, based on the discovery of airfields constructed within Tiger-controlled territory, confirmation only came in March 2007 when two light aircraft were used to bomb a Sri Lankan Air Force (SLAF) base north of the capital, Colombo, causing about 20 casualties. Further attacks by the Air Tigers were infrequent, and usually aimed at Sri Lankan Government positions or military installations, including the naval base at Trincomalee in August 2008. An exception to this practice occurred in October 2008, when the Kelanitissa power plant near Colombo was targeted.

As the LTTE struggle entered its final desperate stage, the Air Tigers launched their last and most spectacular mission. On 20 February 2009 two Czech-built Zlin Z-43 light planes conducted night-time raids against the headquarters of the SLAF in central Colombo, and also against hangars at the SLAF air base adjoining Bandaranaike International Airport at Katunayake. Both aircraft were shot down. One crashed into a high-rise government office building opposite SLAF headquarters, causing fire damage and nearly 50 casualties, while the second came down in marshland near the airport. The second aircraft was largely intact, and was found to contain the body of the pilot and a large quantity of explosives—suggesting that it may have been on a suicide mission.

A Tamil Tiger aircraft shot down by Sri Lankan forces.

Intelligence, Surveillance and Reconnaissance

Air Force defines ***ISR*** as:

An activity that synchronises and integrates the planning and operation of sensors, assets, and processing, exploitation and dissemination systems in direct support of current and future operations.

4.11 A key Air Force air power role—and a critical element in irregular warfare—is ISR. ISR is a synchronising, integrating activity that is critical to the commander's planning through the Joint Intelligence Preparation of the Battlespace (JIPB) process. ISR provides threat detection, situational awareness, force protection and overwatch, as well as the intelligence and information necessary for both kinetic and non-kinetic targeting. Airborne ISR achieves these outcomes through the full range of geospatial intelligence (GEOINT), signals intelligence (SIGINT) and measurement and signature intelligence (MASINT) sensors and processing, exploitation and dissemination capabilities. Human intelligence (HUMINT) is also an important aspect of ISR, providing intelligence for targeting, as well as for the force protection of air force capabilities while on the ground.

4.12 ISR capabilities are enhanced by the air power characteristics of perspective and reach. ISR is a critical process that enables complex and diverse operations across the battlespace through realising battlespace awareness and information superiority. Information superiority enables the planning and conduct of operations and the selection and creation of effects that enable commanders to achieve objectives across the full range of military operations. It is the fundamental enabler of the cognitive and human element of the C2 system's ability to understand and act through the delivery of timely, accurate and high-fidelity information and intelligence. The irregular warfare environment is

complex, evolving and prone to rapid changes in tempo and intensity. In such an environment, decision superiority is critical for a commander to be able to adapt and reorient campaign plans and operations.

4.13 ISR capabilities make a very important contribution to obtaining and enhancing knowledge within the irregular warfare environment and to building an understanding of the political, military, economic, cultural and social factors within the AO. Ensuring joint battlespace understanding is particularly complex in irregular warfare because of the intangible factors of culture, religion and societal norms involved. Airborne ISR contributes to the development of situational awareness by acquiring data and information gathered through traditional GEOINT, SIGINT and MASINT means and non-traditional methods, such as aircraft targeting pods on fighter attack aircraft like the F/A-18 Hornet and F/A-18F Super Hornet, open source reporting, etc.

4.14 With increased persistence, primarily due to remotely piloted aircraft (RPA), airborne ISR has become a key element in the prosecution of irregular warfare at the tactical and operational levels. One of the most important characteristics of opposing irregular forces is their freedom of movement within the area of operations, facilitated by their ability to merge with the local population. By conducting persistent and targeted ISR operations, airborne ISR capabilities not only curtail the adversary's freedom of mobility and manoeuvre, but also help in identifying them, their organisational and support networks, lines of communications and arms caches. The ability of RPA to collect and rapidly disseminate GEOINT and SIGINT is integral to campaign success.

4.15 Airborne ISR provides a key means for locating IEDs, utilising a range of capabilities aimed at detecting the suspicious movement or congregation of people, through to the detection of changes on roadsides and other lines of communications that might indicate that an IED has been recently laid. These capabilities also facilitate the

forensic analysis of information and intelligence that traces back from an IED explosion, to locate the bomb manufacturing facility, the bomb-making network and perhaps even the bomb maker. This has significant impact on current irregular warfare operations because, along with saving the lives of military personnel and civilians, it can also enable the identification of the sources of supply for the opposing irregular forces.

RPA imagery of an insurgent mortar operating in Iraq.

4.16 Identifying the existence of opposing irregular forces and understanding their capability and intent presents a different set of challenges compared to those posed by threats that can be identified and measured predominantly by technical means. In irregular warfare there is a critical need for timely HUMINT as part of the ISR system which complements technical applications, both airborne and surface-based, that may provide increased clarity and accuracy of information.

4.17 Airborne ISR capabilities are normally low-density and high-demand resources that need to be centrally controlled for maximum effectiveness and efficiency. Such employment will also ensure that duplication of effort is minimised and that the operations support the joint commander's highest priority intelligence requirements. Centralised ISR also enables the JFACC to bring air power in support of disparate and widely separated small surface units, thereby systemically

ISR: RAAF HERON RPA DETACHMENT IN AFGHANISTAN, 2009-2010

In August 2009 a RAAF detachment equipped with Heron RPAs commenced ISR operations out of Kandahar air base in southern Afghanistan. This deployment, the first undertaken by the RAAF with RPAs, formed part of a global network of ISR capabilities involving a broad range of manned and remotely piloted platforms operated by ISR specialists within and outside the Middle East Area of Operations (MEAO). The Heron detachment collected and produced intelligence that was processed, exploited and disseminated by users in headquarters, commands and agencies located at sites across the world. Within Afghanistan, the detachment delivered high resolution, real-time information to ADF land forces at all levels of command. In addition to the RPA operators, the RAAF detachment included command, legal and intelligence specialists who worked closely with contracted civilian managers, technical specialists and maintainers. Although the Heron aircraft were leased by the Australian Government, they represented a quantum advance in the RAAF's ISR capabilities and made a significant contribution to the counterinsurgency efforts in Afghanistan.

A RAAF Heron RPA conducting an ISR mission over Afghanistan. RPAs increase persistence and heighten the flexibility of air power.

ISR: THE VARIETY AND VERSATILITY OF ISR MISSIONS OVER IRAQ, 2006

RAAF AP-3C Orion aircraft conducting ISR over Iraq were often required to perform multi-task missions, and frequently re-tasked while in the air to carry out different or additional tasks. As an illustration of the versatility expected of the aircraft and crews, what follows is a description of one actual mission in 2006.

An AP-3C was tasked to undertake a mission in support of a counter IED mission by land forces. An hour prior to take-off the aircraft was urgently re-tasked to provide support over a city where some coalition troops had been killed by a rocket-propelled grenade, the local population had rioted, and a curfew had been established.

Towards the end of the on-task period, the AP-3C was requested to provide route clearance for coalition forces exiting the area by road. On completing the route clearance, the crew were further tasked to provide route clearance for a coalition command element exiting the area over water.

The AP-3C crew provided the necessary surveillance and clearance, and also advised the command element of suspicious activity both on the water and on the land in the vicinity of their watercraft. After ensuring that the command element had safely reached their destination, the aircraft was again tasked to provide support to coalition land forces that were under fire in a city about 80 kilometres away.

On their transit back to base, the crew imaged a static maritime rig to ensure that there were no vessels threatening the maritime task force.

An Air Force AP-3C Orion taking off for an ISR mission over the MEAO in 2007.

increasing their mass and firepower. Additionally, ISR capabilities in the AO will draw upon the full range of exploitation and analysis capabilities resident in Australia and allied nations through the concepts of reachback and distributed operations.

4.18 Within the irregular warfare environment, Air Force conducts ISR through a variety of systems providing the flexibility to detect, locate, identify and track a wide range of specific threats and targets. ISR is the principal driver in the 'kill chain' wherein it directly supports each phase of the Find, Fix, Track, Target, Engage and Assess (F2T2EA) targeting process. This dynamic process is more important than deliberate targeting in irregular warfare, because the adversary is more agile, mobile and adaptive, making the targeting process more complex and difficult. ISR is therefore critical to targeting the irregular adversary. See paragraph 3.17 for a description of the targeting process.

4.19 Further information on Air Force ISR can be obtained from AAP 1001.3 – *The Air Force Approach to ISR*.

Air Mobility

The Australian Defence Glossary defines:

Air Mobility as:

The rapid movement of personnel, materiel and forces to and from or within a theatre by air. This includes airlift and air refuelling.

4.20 Irregular warfare is conducted among the people, even when the area of operations is geographically predominated by inhospitable terrain and remote areas. Normally the outbreak of irregular warfare is preceded by a rapid deterioration in the security environment and in these circumstances air mobility is crucial to deploy, supply and

reinforce the land forces needed to stabilise the situation in a timely manner. Irregular forces tend to view difficult terrain as a defensive advantage that limits the ability of conventional forces to manoeuvre against them. By employing air mobility, however, conventional forces are able to not only outmanoeuvre opponents, but also isolate and decisively engage the irregular forces in the very terrain they expected to protect them. Air mobility provides a comprehensive capability-edge in irregular warfare by rapidly moving personnel and materiel to the desired location, bypassing geographical barriers and contested areas. Air mobility also greatly reduces the threats and risks to land forces from IEDs and ambushes.

4.21 Air mobility is a key enabler for the conduct of counterterrorism operations, as it provides Special Forces with the ability to rapidly respond to terrorist events at continental and global ranges, complete with their specialist equipment, and in the numbers required to ensure tactical success. Helicopters are generally fundamental to the success of the tactical ingress and egress by Special Forces in the target area, and these aircraft can be rapidly transported to the area of operations by a responsive airlift capability.

4.22 In irregular warfare the primary competencies provided by air mobility are air logistic support (ALS), airborne operations (ABNOPS), air-to-air refuelling (AAR) and aeromedical evacuation (AME). The specific role to be applied, and the associated training needed, is scenario-dependent. Further information on air mobility can be obtained from ADDP 3.9 — *Airborne Operations*.

Air Logistic Support

4.23 Air logistic support (ALS) is a means to rapidly project force and sustain expeditionary operations across the full spectrum of conflict. Responsive global airlift provides inter-theatre ALS that can position land forces (including indigenous forces) into the desired area of operations.

Airlift can be provided across the logistical lines; that is, from the national support base (NSB) to a major theatre or formation base to the next level at a forward operating base (FOB) and then in direct support on the battlefield. This is achieved using both fixed-wing aircraft and helicopters that provide a wide range of strategic and tactical options.

An Australian Army CH-47D Chinook helicopter being off-loaded from an Air Force C-17A Globemaster III at an airfield in the Middle East.

4.24 One of the more important capabilities of air power that contributes critically in irregular warfare is its ability to cut across all lines of logistics supply, from NSB to battlefield, bypassing geographic and other bottlenecks and carrying out airdrops where adequate landing facilities do not exist. In irregular warfare this capability assumes much greater importance than in conventional campaigns, because of the dispersed characteristics of the conflict, and the minimum land force

footprint that is normally a political imperative. Tactical air mobility also makes it possible for small land units to cover a large area, thereby mitigating the constraints of lack of mass in operations. It also reduces the land force's exposure to isolation, ambush and IEDs. ALS provides a commander with time sensitive airlift—a distinct advantage that can be critical to the achievement of strategic objectives in the complex irregular warfare environment.

4.25 ALS can also be extended to provide humanitarian assistance, and transportation of government officials or the personnel of non-government organisations to remote areas, thereby promoting the government's credibility and increasing its support base. Such operations that are immediately visible to the population in question can significantly affect their perception and support campaign objectives.

4.26 In planning ALS, consideration must also be given to the fact that, in the eyes of irregular adversaries, air mobility assets are lucrative targets whose damage or destruction may have strategic consequences. These assets must therefore be adequately protected, both in the air by adequate self-protection measures and on the land by force protection capabilities.

Airborne Operations

4.27 Airborne operations (ABNOPS) can deliver combat-ready land forces (including indigenous forces) directly to their objective. This mobility can achieve timely strategic, operational or tactical outcomes, although there could be more than normal risk involved in such operations. Irregular warfare requires sustained employment of land and Special Forces and is therefore characterised by small unit operations that cover large geographic areas. One of the fundamental advantages of ABNOPS in irregular warfare are their ability to infiltrate, sustain and exfiltrate elements of Special Forces in enemy-controlled

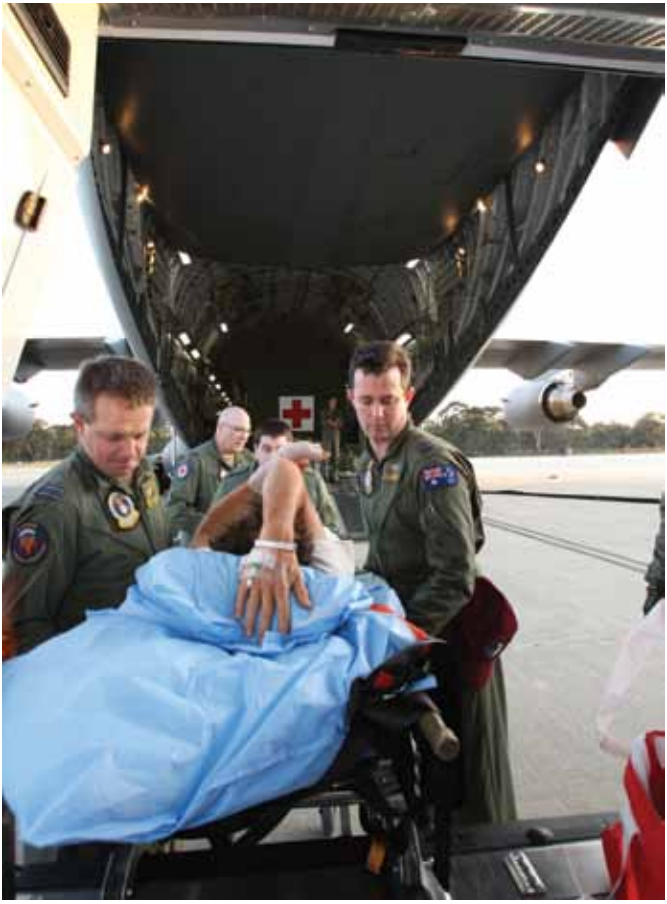
or politically sensitive territories. Although the inherent risks, physical and political, in such operations may be comparatively high, the effects created by their success may outweigh them. These operations are jointly planned, and conducted with the complex, detailed and extensive training, coordination and integration needed to succeed.

Light tactical airlifters provide valuable intra-theatre airlift capabilities in irregular warfare scenarios, especially to access isolated elements of the population.

Aeromedical Evacuation

4.28 Aeromedical evacuation (AME) is used to transport ill or injured personnel by air under medical supervision to appropriate medical facilities. This can be a morale-increasing capability for forces in combat, and is critical to mitigating the strategic ill effects of adversary strikes against own forces. On occasion, AME can also be used to augment the partner nation's medical emergency capabilities and build goodwill among the indigenous population in an irregular warfare

environment, especially where responsiveness, reach and capacity are critical. This can create positive support for one's own forces from the local population and reduce their support for opposing irregular forces operating among them.



The aeromedical evacuation capability of a RAAF C-17A Globemaster III allows the smooth and rapid transfer of wounded and injured personnel to more sophisticated medical facilities than those available in the AO.

Air-to-Air refuelling

4.29 Air-to-air refuelling (AAR) significantly increases the reach, persistence, and responsiveness of air power in support of the irregular warfare campaign, regardless of whether it is undertaking ISR, strike or air mobility. Additionally, AAR allows air power to operate over a combat area of operations in direct support of the joint force, from air bases that are far away from the area of combat activity. This allows air power to operate from more secure bases away from ground threats. AAR allows air power to exhibit global reach and ensures that air power can rapidly respond to events at extreme range from Australia.

Aerial refuelling by air-to-air tankers, such as this Air Force KC-30, allows air power to increase its persistence and responsiveness and decreases Air Force's force protection risks by maximising the use of air bases beyond the adversary's ability to threaten them.

AIR LOGISTICS SUPPORT AND AIRBORNE OPERATIONS: SPECIAL OPERATIONS SUPPORT, 1945

By mid-1944 the Allied Intelligence Bureau (AIB) and the Services Reconnaissance Department (SRD) had teams of Special Forces engaged on intelligence collection or sabotage missions in Japanese-held islands to Australia's north, including Borneo, Timor, Ambon, Sumatra, Lombok and New Britain. It was clear that a dedicated RAAF unit was needed to deliver personnel and supplies by parachute in support of these irregular warfare operations. In February 1945, No 200 Flight was formed as a Special Duties (SD) unit at Leyburn airfield, 37 kilometres from Toowoomba in Queensland. Known as 'Leyburn's Liberators', the flight was equipped with B-24 Liberator heavy bombers that were capable of the long ranges required to deliver cargoes behind enemy lines.

When fully operational, No 200 Flight had six Liberators and nine 11-man crews supported by approximately 450 ground personnel. The unit operated in conjunction with the US Army Air Corps 380th Bomb Group, which also supported Special Operations in the South-West Pacific Area. During seven months of intensive air logistics support and airborne operations from early March to late September 1945, No 200 Flight flew some 116 sorties, dropping 93 personnel, conducting 74 resupply drops (of about 175 tons in total) and flying four ISR missions. Although the smallest Liberator unit in the RAAF, it suffered the highest loss rate—three aircraft with 32 airmen, as well as 14 operatives of 'Z' Special Force. The unit's training and professionalism contributed beyond measure to their success.

Operation SUNLAG party aboard a B-24 of No 200 Flight en route to Timor.

AIR-TO-AIR REFUELLING: OPERATION SLIPPER, AFGHANISTAN, 2002

After the US launched combat operations against the Taliban in Afghanistan in October 2001, Australia decided to contribute to the Global War on Terror under the name Operation SLIPPER. In March 2002, two (K)B-707 air-to-air refuelling aircraft from No 33 Squadron were deployed to Ganci Air Force Base at Manus International Airport, Kyrgyzstan. The primary mission of the detachment was to refuel coalition strike aircraft over Afghanistan supporting the unconventional warfare operations of US Special Forces and the Northern Alliance against the Taliban.

The two tankers sustained operations until September 2002, making air-to-air deliveries of fuel to more than 800 individual aircraft. The effect of this deployment on the success of the air campaign cannot be understated. A very large number of the combat aircraft operating over Afghanistan were completely dependent on the availability of air-to-air refuelling to achieve mission success, due to the limited basing options open to the coalition. The (K)B-707s enabled combat aircraft to reach into the remote areas of Afghanistan with their payloads and loiter for extended periods over coalition land forces.

No 33 Squadron 707 air-to-air refuelling a US Navy F/A-18 Hornet over Afghanistan, 2002.

Strike

The Australian Defence Glossary defines:

Strike as:

An attack which is intended to inflict damage on, seize, or destroy an objective.

4.30 The lethal application of force in irregular warfare is not the realm of air power alone. Developments in weapon technology, however, enable air power to carry out attacks with precision and discrimination in a time sensitive manner across the battlespace. This core competency, when effectively employed against high-value targets, is capable of creating far-reaching strategic consequences within and beyond the immediate area of operations. Air power is also the primary provider of fire support, especially outside the range of coalition/allied surface-to-surface support. Air power has the capacity to provide timely and precise fire support to dispersed and lightly armed land forces which lack organic firepower.

4.31 All strike operations in irregular warfare require accurate and discriminate precision weapons, persistent and timely ISR, robust C2 and information networks, and the training and processes to carry out time-critical attacks against fleeting targets across the battlespace and in urban or congested environments.

4.32 The use of air power's strike capabilities in irregular warfare heightens the risk of fratricide, collateral damage or other unintended consequences. When faced with the destructive effects of air power, irregular opponents often adapt by minimising the number of attractive targets, and their exposure to attack, by blending themselves into the local population. Any collateral damage from air strikes will generally have the twofold effect of undermining the support for the government

among both the local population being attacked and the home population of the nation conducting the attacks. Insurgents will also exploit collateral damage incidents for their own propaganda purposes.

4.33 In an irregular warfare environment, the strike capability of air power is fundamental to three offensive activities—strategic attacks aimed at isolating the irregular adversary from their support base, air interdiction against the military capabilities and lines of communications of the irregular force, and close air support to friendly forces in contact with the enemy.

Strategic Attack

4.34 Strategic attack is the application of air power to create specific strategic effects that degrade or destroy an adversary's will, warfighting capabilities or any other capacity that would adversely affect Australia's interests. Air power is well suited to create strategic effects that in turn degrade the adversary's will and warfighting capabilities through both kinetic and non-kinetic operations. Although these operations are carried out by the Air Force, they are integral to the joint campaign. In irregular warfare, these operations can be tailored to geographically isolate the irregular adversary, thereby denying them access to their support base, although achieving complete success in such operations is extremely difficult. Isolation can have debilitating effects since most irregular forces are dependent on regular resupply through contact with indigenous and external support networks.

4.35 Strategic attacks may also be the only viable option to neutralise training camps and other enemy centres of gravity which may be located in states sponsoring terrorism or insurgency. However, the planning and conduct that governs all strategic attacks is complex and must be guided by clear political intent and constraints.

The control of the air, ISR and strike capabilities of this Air Force F/A-18F Super Hornet with an AGM-154 Joint Stand-off Weapon (JSOW) and an AN/ASQ-228 Advanced Targeting Forward-Looking Infra-red (ATFLIR) targeting pod epitomise the air power characteristics of perspective, flexibility, payload, responsiveness, speed, versatility and reach.

Air Interdiction

4.36 Air interdiction (AI) operations involve the application of air power against the adversary's combat capabilities before they are brought to bear against friendly forces. This generally involves striking adversary concentration areas and their internal and external lines of communications. When combined with land operations, AI will force the irregular adversary to manoeuvre, increasing their exposure to direct attack, or assume defensive postures that then deny them the

initiative. This is often achieved in conventional conflicts but assumes greater complexity in irregular warfare because of undefined lines of communications and limited types and numbers of adversary military equipment.

4.37 Insurgents who are faced with robust air interdiction will generally avoid concentrating personnel and materiel, thus ensuring that they are unable to mass for any decisive attack against friendly forces or government centres. To counter the effects of air power, insurgents will then increasingly operate from within the population, thus decreasing strike and targeting options and increasing their complexity and the risk of collateral damage. If insurgents do mass in order to attempt to achieve a decisive result on the battlefield, the lethality and precision of air power is capable of achieving decisive and dramatic results.

Close Air Support

4.38 Close air support (CAS) is direct fire support provided to friendly forces in contact with—or in close proximity to—hostile forces, and is integrated with their fire and manoeuvre. CAS is the air power element within joint fires and it is of significant value in an irregular warfare environment because irregular warfare operations are often characterised by dispersed, small and lightly armed land forces operating over large areas. When land forces come into contact with the enemy, CAS can rapidly provide the required precision strike effects, thus having a twofold impact: it reduces the likelihood of friendly casualties from enemy attack by suppressing their fire and manoeuvre; and it increases the likelihood of tactical success against the enemy by maximising the effects of your own fire and manoeuvre.

4.39 CAS in irregular warfare is often provided by a mixture of fighter or attack aircraft, armed reconnaissance or attack helicopters and armed RPAs. The large explosive yield and lethality of air-delivered fires, and the difficulty for aircrew to develop a time-critical land situational

INTERDICTION: THE HO CHI MINH TRAIL, VIETNAM WAR, 1965–1972

During the Vietnam War, the communist government in Hanoi maintained the Viet Cong insurgency in the south through a constant flow of men, arms, ammunition and other materiel from North Vietnam along the 'Ho Chi Minh Trail'. The trail, which passed through the dense rainforests and rugged mountain terrain of southern Laos and eastern Cambodia into the highlands of South Vietnam, was not a single path but a complex network of ancient footpaths, jungle trails, river transport and roads covering 16 000 kilometres. Over the course of the war, the carrying capacity of the trail was greatly extended with many improved facilities along its length being built underground.

American intelligence was well aware of the movement of North Vietnam regulars and supplies along the trail and from late 1964 attempts were made to cut this logistics pipeline using air interdiction. While difficult terrain and bad weather had been factors in past campaigns, in Vietnam the character and conduct of the war was of greater significance. The Viet Cong guerillas in the south possessed few heavy weapons or vehicles, and had no tanks, aircraft or sophisticated weapon systems. Their logistics requirements, therefore, were extraordinarily modest in comparison to that of the conventional armed forces of the West.

Throughout the war the USAF dropped millions of tonnes of bombs on the trail, but was never able to completely stop the flows of men travelling on foot, and materiel being moved by hand, bicycles, river boats and light trucks along the trail's myriad of paths, rivers and roads. As a result, despite the intensity of the bombing, the North Vietnamese were able to ensure sufficient supplies reached the Viet Cong, not only to sustain, but to greatly expand the insurgent combat forces in the South.

Between 1967 and 1971, No 2 Squadron and its Canberra bombers conducted interdiction operations against Viet Cong and North Vietnamese regular forces within South Vietnam, and sections of the Ho Chi Minh Trail were frequently hit where these entered the south from neighbouring sanctuaries. Two Australian bombers were lost in this process, but only one due to enemy action.

Air strike against the Ho Chi Minh Trail by No 2 Squadron, RAAF.

CLOSE AIR SUPPORT: AIR POWER IN SUPPORT OF THE NORTHERN ALLIANCE, AFGHANISTAN, 2001–2002

In October 2001 the United States launched its war against terror, aimed at the Taliban regime and Al Qaeda forces in Afghanistan who were held responsible for the '9/11' terrorist attacks on the US mainland. Because the landlocked geography of Afghanistan made it difficult to insert and sustain large forces on the ground, the US strategy entailed unconventional warfare operations utilising the local Northern Alliance, a loose collection of Afghan irregulars with limited conventional fighting value, to follow up on a vigorous air offensive.

American Special Forces, working with Northern Alliance units, used target designators to pinpoint enemy forces. They then signalled this information to loitering coalition strike aircraft which attacked with precision guided munitions. By late December, Taliban forces were fleeing from Afghanistan's main cities and towns and heading for strongholds in the mountains, from where they continued their fight using irregular warfare tactics.

The air war over Afghanistan was a milestone in the transformation of air strategy and ISR operations. Analysts and senior military officers hailed it as the first conflict in which intelligence was the primary US weapon. Key factors in their assessment were persistence (the ability to maintain around-the-clock ISR), integration at the tactical and operational levels of intelligence from many sources, and the ability to control data collection.

USAF Combat Controllers on horseback when operating with the Northern Alliance in 2001 and 2002.

awareness, means that local land force commanders will retain CAS engagement authority. Air Force Combat Controllers and JTACs plan, brief and control CAS missions, coordinate the air mission and land force commander's requirements and, along with TACP personnel, provide air power employment expertise and advice to land forces. The success of CAS and the avoidance of collateral damage in irregular warfare are heavily dependent on the degree of integration between air and land forces, as well as on the veracity of the available intelligence and targeting data. Air power's unique perspective of the battlespace and its ability to provide independent verification of the target through a range of onboard and offboard sensors is fundamental to its utility in providing effective CAS in irregular warfare.

4.40 The Air Force retains (and in fact emphasises) the flexibility inherent in its force elements to conduct irregular warfare operations that might require the controlled use of force, the application of non-kinetic capabilities to create the necessary effect, or to act purely as a deterrent force. The success of precision attacks is heavily dependent on determining the appropriate targeting for each scenario, which in turn depends on effective and adaptable C2 structures and timely, accurate intelligence assessments of the adversary's intent and pattern of manoeuvre. The ability to use force, with control, discrimination and precision, where and when required, gives air power freedom of action that can seldom be matched by other force elements. The application of air power, however, must be undertaken only after careful consideration of the urban terrain, conflict environment, and the increased potential for fratricide and collateral damage.

Enabling Capabilities

4.41 Air Force has a range of resident capabilities that enable the efficient application of air power. Force protection and air base support are very important functions and, while these can be termed 'enabling', they are critical to the effective functioning of the Air Force. If not carefully developed and managed, these could become critical points of failure. Additionally, irregular warfare is often conducted within a coalition and therefore Air Force enabling activities will generally have to be conducted within and/or from coalition forward operating bases—that may have extraneous impacts on the force (such as competing mutual logistic support priorities, force caps, foreign force employment restrictions and political constraints). Moreover, the use of non-military personnel to provide air base support functions, such as messing, accommodation, transportation, and even security, is increasingly prevalent thus creating additional challenges across the legal and operations spectrums.

Force Protection

4.42 Force protection includes all measures and means adopted to minimise the vulnerability of personnel, facilities, equipment and operations to threats, and to preserve the freedom of action and the operational effectiveness of the force. Force protection is essential in air operations across the spectrum of conflict and during all phases of a campaign, especially since the Air Force operates from air bases and aerial ports of debarkation (APODs) that can become vulnerable without adequate protection measures. By maintaining an organic 'air-minded' force protection capability, the Air Force ensures the security of its air bases, thereby retaining its capacity to deploy its force elements responsively and securely. Air-mindedness is an important quality in air base force protection capabilities due to the complicated and vulnerable nature of air base and aircraft systems, the density of

FORCE PROTECTION: OPERATION STABILISE, EAST TIMOR, 1999–2000

In September 1999 No 2 Airfield Defence Squadron (2AFDS) was deployed to East Timor as part of the Australian commitment to the International Force East Timor (INTERFET). During the initial insertion phase, the unit was assigned to defend Comoro Airfield (Dili), but in December (after being reinforced by personnel from 1AFDS and 3AFDS) it assumed responsibility for security of the Dili Heliport and assisted in the defence of Cakung Airfield at Baucau.

While the main threat to airfield security was direct fire attacks by anti-independence elements, associated threats such as theft and the provision of assistance to local militias through observation and reporting also had to be addressed. Force protection measures were consequently directed towards securing probable infiltration routes, and preventing adversaries from establishing a presence in the vicinity of the INTERFET airheads. Static security positions and access control measures were established to provide an initial level of protection, enhanced through aggressive patrolling in the area around the airfields in order to disrupt anti-independence militia activities.

An important benefit of the patrols was the opportunity to develop contact and trust with the local community and to gather human intelligence (HUMINT). In addition to these proactive security measures, 2AFDS also provided a quick reaction force in order to respond with overwhelming force to any direct attacks upon INTERFET personnel, or acts of violence against the East Timorese people or infrastructure or property.

An Air Force airfield defence guard stands guard beside a RAAF C-130 as it is being unloaded at Komoro Airfield, Dili.

the work environment and the fragility of air base operating surfaces and structures, such as fuel storage, runways, tarmacs, etc. Due to the relatively complex air base operating environment and the need to coordinate appropriate force protection measures and ensure an 'air-minded' force protection focus, the centralised control of the air base, including force protection elements, is essential.

4.43 In irregular warfare campaigns, force protection is particularly important because of the characteristics of the irregular force's operations and the strategic impact that the neutralisation of air power capabilities can have on the overall campaign. Force protection extends from the NSB all the way to FOBs, which are often in contested territory. The cost of force protection, in terms of resources and personnel, can become extraordinarily high in irregular warfare, and therefore only the minimum required number of Air Force forward elements should be based in contested territory. Air base force protection is often complicated by the presence of ground forces using the air base as a staging or logistics base and of non-combatants and members of the contested population who are often drawn to air bases as centres of trade and communication.

4.44 The range of force protection capabilities upon which Air Force relies, using a balance of active and passive measures, include aircraft and facility dispersal and hardening, camouflage and concealment, explosive ordnance disposal (EOD), firefighting, guarding, patrolling and counter-fires, intelligence and counterintelligence. In particular, Air Force maintains the capability to actively patrol beyond air bases to shape and influence the battlespace in order to suppress adversary capabilities that can target the air base and aircraft.

Air Base Support

4.45 The primary aim of Air Force air base support is to provide services that are essential to sustain air operations. For Australia, irregular warfare campaigns normally entail expeditionary operations. This necessitates supporting combat functions with flexible and scalable capabilities, and command and control arrangements. The synergy between Air Force's air base support and air mobility capabilities makes a vital contribution to its responsiveness which is a key strength of the joint force in irregular warfare operations.

4.46 Air base support in irregular warfare campaigns may entail providing the capabilities required to operate an air base independently, down to the enabling smaller elements (such as health, or command and control) needed to operate remotely from an air base. Air Force air base support includes the provision of logistics, fuel, air terminal support, communications, financial management, counterintelligence, intelligence, firefighting, force protection, EOD and counter IED response, policing, safety, airfield engineering, medical and dental, legal and chaplaincy services, and contracting support.

Chapter 5
Support to Partner Nation Aviation Forces

Better the Arabs do it tolerably than that you do it perfectly. It is their war, and you are to help them, not to win it for them.

T.E. Lawrence, 'Lawrence of Arabia'[1]

5.1 A feature commonly found in irregular warfare is the poor air power capability resident within the partner nation. Aviation forces are inherently expensive and require long lead times to train and become operational. Lesser developed nations often operate older aircraft and lack the required support systems for aviation activities. Certain indigenous air power capabilities are essential for a nation's internal defence, particularly those connected with air mobility and ISR. Carefully calculated investment in partner nation air power capabilities can produce important dividends, and will often be essential in order for counterinsurgency forces to realise the desired end-state for their campaign. Early investment by willing states in partner nation air power capabilities can also assist that nation to suppress an irregular movement before violence escalates to the point that more complex, costly and significantly larger scale international intervention is required.

1 T.E. Lawrence, 'Twenty-seven Articles', *Arab Bulletin*, 20 August 1917, article 15.

The Australian Defence Glossary defines:

Host Nation (HN) as:

A nation which, by agreement: a. receives forces and materiel of other nations operating on/from or transiting through its territory; b. allows materiel and/or organisations to be located on its territory; and/or c. provides support for these purposes.

Foreign Internal Defence (FID) as:

Participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organisation to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security.

Security Cooperation as:

All Department of Defence interactions with foreign defence establishments to build defence relationships that promote specific Australian security interests, develop allied and friendly military capabilities for self-defence and multinational operations, and provide Australian forces with peacetime and contingency access to a host nation.

Security Assistance as:

A program that provides defence articles, military training, and other defence-related services by grant, loan, credit or cash sales in furtherance of national policies and objectives.

Support to Partner Nation Aviation Forces

5.2 Support to partner nation aviation forces is a significant enabler in the conduct of an irregular warfare campaign. Assisted air mobility delivers important effects for the extension of security, development and governance to outlying precincts which would otherwise provide sanctuary to adversaries. Assisted aeromedical evacuation improves indigenous security force morale, sometimes decisively, to increase the commitment and resultant recruitment and retention. Support to aircraft maintenance and logistics can help the restoration of capability

SUPPORT TO PARTNER NATION AVIATION FORCES: RAAF AIR TRAFFIC CONTROL, BAGHDAD, 2003–2004

In May 2003, following the successful invasion of Iraq by the US-led coalition, a RAAF air traffic control (ATC) detachment of nearly 60 personnel was made responsible for providing air traffic services at Baghdad International Airport (BIAP). In addition to ATC officers, the detachment included airfield defence guards (ADGs) for protecting the Australian compound, an airfield engineering section, a communications section, as well as operations, intelligence, administrative and logistics personnel. The commitment was initially expected to be only for a few months, but the detachment remained until August 2004 when it handed over responsibilities to Iraqi civilian air traffic controllers, after providing them with Baghdad-specific ATC training.

At the time that the ATC detachment took responsibility for Baghdad's airspace, conventional military operations had been completed and coalition forces were responding to a rapidly developing insurgency as inter-factional conflict and resistance to the coalition presence spread across Iraq. Accordingly, in addition to managing the normally anticipated air traffic entering controlled airspace, there was the necessity to coordinate with air combat missions being conducted around the airfield precinct while also adapting aircraft approach and departure procedures in response to the evolving land-based threats.

The ATC detachment was instrumental in the rehabilitation of Iraq's civil aviation system which was vital to the country's future economic and military development.

Air Force air traffic control personnel in the ATC tower at Baghdad International Airport (BIAP).

from obsolete platforms. Support to intelligence and planning can often make the difference in the effective command, control and execution of indigenous air support, and the proper direction for capability growth and weapon system procurement.

5.3 Support to partner nation aviation forces can take many forms. These are mainly subsumed within:

a. **Security Cooperation.** Security cooperation incorporates personnel exchange programs (PEP), international military education and training (IMET) and foreign exercise/activity programs; for example, the ADF Program of Major Service Activities (PMSA).

b. **Security Assistance.** Security assistance incorporates foreign military financing (FMF), foreign military sales (FMS) and FID.

5.4 Such support activities are often contemplated at the highest levels of government and result in carefully tailored multi-agency strategies. For Australia, these strategies are normally led by the Department of Foreign Affairs and Trade (DFAT) and implemented by its overseas missions. However, the Department of Defence is responsible for maintaining the Defence International Engagement Plan (DIEP).

5.5 Air Force routinely conducts peacetime tasking to support the maintenance or expansion of partner nation aviation capabilities as part of the DIEP. This plan seeks to address the most important Defence relationships to Australia. A key part of this plan is the IMET program, which directs the majority of its effort to Australia's closest neighbours and most important partners. Significantly, there are a number of nations in the near region which face significant internal threats from insurgency and terrorism.

5.6 Air Force undertakes training and advisory activities during contingency operations, normally as part of multi-agency international

efforts. Air Force also routinely deploys advisers as part of Australia's United Nations commitments to support larger international peacekeeping or humanitarian assistance missions.

5.7 Air Advising. The USAF maintains a professional cadre of air advisers capable of assisting foreign militaries under the auspices of FID. These activities are often led by Special Forces, but they also routinely incorporate support roles for conventional forces. Such activities are extremely sensitive, requiring careful consideration so they are conducted within the constraints of international law and to ensure that there are no unintended strategic and/or diplomatic consequences. The RAAF will normally limit its involvement in FID to discrete commitments at the invitation of partners with whom Australia has unique defence relationships, and when it is best placed to lead Defence initiatives, or with capabilities where it has significant tactical and technical expertise to support a broader joint and international effort.

Effective Support to Partner Nation Aviation Forces

5.8 There are usually significant limitations when delivering aviation support to developing nations and the following guiding principles must be considered during planning:

a. **Early identification of required partner nation aviation capabilities.** Aviation capabilities are usually expensive and time consuming to generate. Airmen generally require a high standard of education and must have the required aptitude to operate in the air environment. When considering assistance or intervention, it is important to agree aviation priorities in consultation with the partner nation and to devise a capability development plan as soon as possible.

b. **Understanding limitations.** It is of doubtful benefit to support the delivery of high-technology weapon systems that are beyond the capability of developing nations to maintain

over the longer term. As a result, careful analysis is required to select suitable platforms. Cheap, simple, reliable and local is usually more important than the export of highly technical weapon systems in the vital early stages of capability growth. It is also important to consider arms export limitations, intellectual property constraints and protection of essential elements of friendly information. Advisers must have a mature appreciation for what end-state the indigenous capabilities are required to achieve and which of their own technologies they may have to continue to provide until they are no longer needed.

c. **Proper identification of personnel for training missions**. Not all personnel are suitable for air advisory missions as cross-cultural communications and negotiation skills are vital, as are understanding history and regional security dynamics. Language aptitude for the partner nation's language will generally be required.

d. **Correct preparation of, and support for, mentors and trainers.** Personnel must receive adequate pre-deployment training, specific for their advisory mission. Language fluency will often be difficult to master in the time available for pre-deployment and it may be necessary to plan on using an interpreter, which will entail additional effort to employ. Training missions must have realistic end-states, and trainers must appreciate the cultural factors that have to be acknowledged when setting tasks and delivering instruction.

e. **Force Protection and Safety.** Personnel will need to develop risk management templates to guide their appreciation of what actions they can safely perform with the resources at their disposal. They may be detached from organic support and therefore must have clear methods for calling on additional

support when necessary. They may also require a higher degree of individual weapons, force protection, survival and counter-surveillance training.

f. **The maintenance of strategic long-term relationships.** The importance of well-devised international engagement plans in helping to develop enduring airmen-to-airmen relationships cannot be overemphasised. Certain key leadership relationships will be crucial for securing access, obtaining support, and ensuring the success of foreign advisory missions.

g. **Collective international security initiatives.** When devising Air Force security cooperation and security assistance initiatives, it is vital to ensure that Australia's contributions complement those of its key allies and partners, and that they do not unnecessarily duplicate or compete with other initiatives.

SUPPORT TO PARTNER NATION AVIATION FORCES: RAAF TRAINING AND ASSISTANCE TO OTHER AIR FORCES

In addition to providing in-country training to Asia-Pacific air force personnel, the RAAF can provide a degree of specialist aviation training, at the request of another nation's government, at a distance from Australia. Such support can improve the long-term stability of an incumbent government which is actively opposing a local insurgency or threatened by irregular opponents.

The RAAF has provided such training for more than 50 years, since June 1958 when the newly-independent Federation of Malaya decided to form the Royal Malayan Air Force (RMAF). At that time, an irregular war (the 'Malayan Emergency') had been underway for a decade, so the new RMAF was fighting insurgents from the beginning. Throughout these formative years, RAAF personnel provided mentoring and training to the new members of the RMAF, as experienced, equal partners within the Commonwealth.

Even with the Emergency declared over in July 1960, and Malaya merged into an expanded Federation of Malaysia in 1963, Malaysian airmen continued to fly sorties against the remaining pockets of communist terrorists until the early 1970s. The Australians who remained in the area, mostly at RMAF Base Butterworth as part of the Commonwealth's Far East Strategic Reserve (FESR), continued to provide training and assistance to the RMAF, wherever and whenever possible.

Australia's efforts in assisting partner nations has continued in the Middle East. For example, during 2005 a number of personnel from the Airfield Defence Wing at RAAF Base Amberley were attached to the Australian Army Training Team Iraq, to assist in rebuilding the National Iraqi Army.

An ex-RAAF CAC-27 Sabre fighter donated to the RMAF in 1969 stands as a gate guardian at RMAF Butterworth.

THE GREEK CIVIL WAR, 1945–1949

The Greek Civil War was characterised by many of the key features that Western nations were to face in irregular conflicts throughout the remainder of the 20th century. The conflict had its roots in the longstanding, volatile and often violent political and ideological divisions of Greece before World War II. The topography of Greece—consisting of mountainous terrain largely inaccessible or unsuitable for the deployment of large conventional land forces—was ideally suited to sustaining a prolonged insurgency.

Sporadic fighting had broken out between communist guerillas and the British and Greek government forces before the end of World War II in Europe. By 1946, the conflict had escalated into open civil war. The training and equipment of the Royal Hellenic Air Force (RHAF) were all derived from its experience with the Royal Air Force (RAF) in conventional tactical air operations. No senior Greek airmen had any recent experience in the independent planning and conduct of air campaigns. As a result, the RHAF struggled to make a significant contribution to the operations against the escalating communist insurgency. Air-land integration was particularly poor—a major weakness in counterinsurgency operations against small groups of highly mobile irregular forces.

From 1947, under the auspices of the Truman Doctrine, the Greek Government began to receive American finance, equipment and advisers that enabled a rapid expansion and modernisation of the Greek armed forces. The Americans strongly advocated the use of air power as a decisive weapon against the insurgents and US advisers became heavily involved in the actual planning and conduct of air operations. Under American sponsorship, the conduct and coordination of the counterinsurgency campaign markedly improved. The improved conduct of air operations, coupled with equally significant improvements in the Army and police force, constrained and isolated guerilla activity and exacted a heavy toll on the insurgent forces. The RHAF soon expanded its operations to undertake roles that are now familiar staples of counterinsurgency air operations: strategic and tactical air lift, ISR, air supply drops, airborne operations, psychological warfare, precision strikes and interdiction operations. The employment of air power proved to be most effective when coordinated within the overall political and military strategy and played a key role in bringing the insurgency and civil war to an end in 1949.

RHAF Douglas Helldivers and crews.

Chapter 6
Conclusion

The conventional army loses if it does not win. The guerrilla wins if he does not lose.

Henry Kissinger[1]

6.1 Continued evolutions in the character and conduct of war have generated an amorphous type of conflict—irregular in nature—with no defined battlefields or readily recognisable adversaries. It has also brought about a situation wherein no two adversaries wage the same, or even similar, type of war. In the contemporary context, irregular warfare will be the most likely form of conflict in which conventional military forces will have to engage. Such wars can be waged by state, state-sponsored or non-state organisations and will bring challenges. In this context, the Air Force will need to effectively counter asymmetric approaches that will be made to degrade the inherent advantages that air power provides in an irregular warfare campaign.

6.2 In the Australian context, irregular wars so far have not directly threatened the nation's security. However, in the current globalised security environment they pose a significant threat to Australia's national interests in a number of ways. It is difficult, if not impossible, to predict future events, especially when the adversary is diffused, motivated through a strong belief system and ideology, and operating outside the accepted norms of Western society. The baseline is that

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[1] Westenhoff, Colonel Charles M., 2007, *Military Airpower: A Revised Digest of Airpower Opinions and Thoughts*, Air University Press, Maxwell Air Force Base, Alabama, p 85.

the ADF and the RAAF will be faced with adversaries who remain ambiguous and amorphous out of choice.

6.3 It is more than likely that an irregular warfare adversary will readily concede control of the air because of the enormous resource requirements to develop and maintain a credible air force. Instead, attempts will be made to use asymmetric means to negate the effective use of air power and to rely on land-based air defences and attacks on air bases to limit the exploitation of air power in a geographically limited battlespace. While modern air forces, including the RAAF, normally have dominant technological superiority in comparison to the irregular forces that are engaged, in asymmetric encounters technology may not provide the decisive edge. Joint operations, where the capabilities of individual Services provide greater synergy than when operating independently, will be designed to mitigate these risks.

6.4 Air power's contribution to the irregular warfare campaign—control of the air, strike, air mobility and ISR—are by themselves the asymmetric advantages of the conventional military, to be exploited at the joint campaign level. This joint dimension of irregular warfare campaigns influences the Air Force approach to such operations.

6.5 Irregular adversaries often start as a group of disparate individuals unified by belief, and evolve into a well-disciplined and trained force operating in small cohesive units. Some of these groups will have limited access to technology, sometimes including air power, which increases their asymmetric advantage against conventional forces. Such opponents can only be defeated through the application of joint air-surface capabilities, applied in a nuanced and selective manner.

6.6 Within the irregular warfare campaign, Air Force offers a wide spectrum of capabilities that can be focused and directed to create the necessary effects, both lethal and nonlethal. This provides the joint commander with options to carry the fight to the adversary when required and also the flexibility to create effects in the physical

or cognitive domains. When optimally employed, this can be turned into an asymmetric advantage against irregular adversaries, themselves reliant on asymmetry for success.

6.7 The Air Force is, and will continue to be, a critical component of the ADF's ability to meet the Government's national security requirements. When effectively integrated with other military and multi-agency efforts within an overarching irregular warfare campaign, the Air Force can consistently create effects that are critical to achieving the campaign's military and political objectives.

6.8 The commitment of Australia's military forces in the near future is most likely to be to expeditionary operations conducting irregular warfare campaigns, independently or as part of a larger coalition. This requires Air Force to develop and maintain capabilities that have the flexibility to ramp up or down in a contextual manner, while retaining the overall capacity and posture to efficiently carry out its primary role of the defence of the nation and its interests.

No 114 Mobile Control and Reporting Unit AN/TPS-77 radar at Kandahar Airfield, Afghanistan.

Glossary

The source for approved Defence terms, definitions and abbreviations is the Australian Defence Glossary (ADG), available on the Defence Restricted Network at http://adg.eas.defence.mil.au/adgms/. Note: The ADG is updated regularly and should be checked for amendments to the entries in this glossary.

Terms and Definitions

acoustic intelligence (ACINT)
Intelligence derived from the collection and processing of all forms of acoustically detectable emissions. It is intelligence derived from sound.

air and space operations centre
The agency for planning and execution of current air operations.

air campaign
The controlled conduct of a series of interrelated air operations to achieve specific objectives.

air interdiction (AI)
Air operations conducted to divert, disrupt, delay, degrade or destroy an enemy's military potential before it can be brought to bear effectively and at such distance that detailed integration of each air mission with the fire and manoeuvre of friendly forces is not required.

air mobility
The rapid movement of personnel, materiel and forces to and from or within a theatre by air. This includes both airlift and air refuelling.

air tasking order (ATO)
A method used to task and disseminate to components, subordinate units, and command and control agencies projected sorties, capabilities and/or forces to targets and specific missions. Normally provides specific instructions to include call signs, targets, controlling agencies, etc., as well as general instructions.

airborne operation
The movement of combat forces and their logistic support into an objective area by air.

airdrop
Delivery of personnel or cargo from aircraft in flight.

airspace control order (ACO)
The document providing specific information on airspace control and airspace control measures.

battle damage assessment (BDA)
The assessment of effects resulting from the application of military action, either lethal or non-lethal, against a military objective.

battlespace
All aspects of air, surface, and subsurface, land, space, and the electromagnetic spectrum that encompass the area of influence and area of operations.

close air support (CAS)
Air action against hostile targets which are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

collateral damage
Inadvertent casualties and destruction in civilian areas caused by military operations.

command and control (C2)
The process and means for the exercise of authority over, and lawful direction of, assigned forces.

control of the air
The ability to conduct friendly operations in the air and on the surface below it without interference from enemy air power.

counterinsurgency (COIN)
Those military, paramilitary, political, economic, psychological, and civic actions taken to defeat insurgency.

counterterrorism (CT)
All offensive measures taken to neutralise terrorism before and after hostile acts are carried out.

Note: Such measures include those counterforce activities justified for the defence of individuals as well as containment measures implemented by military forces or civilian organisations."

deception
Those measures designed to mislead the adversary by manipulation, distortion or falsification of information to induce behaviour prejudicial to their interests.

decision superiority
The ability to make and implement more informed and more accurate decisions at a rate faster than the adversary.

effect
1. The physical or behavioural state of a system that results from an action, a set of actions, or another effect.
2. The result, outcome, or consequence of an action.
3. A change to a condition, behaviour, or degree of freedom.

electronic countermeasures (ECM)
That division of electronic warfare involving actions taken to prevent or reduce an enemy's effective use of the electromagnetic spectrum through the use of electromagnetic energy. There are three subdivisions of electronic countermeasures: electronic jamming, electronic deception and electronic neutralisation.

electronic protection (EP)
Division of electronic warfare involving actions taken to protect personnel, facilities, and equipment from any effects of friendly or enemy use of the electromagnetic spectrum that degrade, neutralise, or destroy friendly combat capability.

electronic support (ES)
That division of electronic warfare involving actions taken to search for, intercept, locate, record, and analyse radiated electromagnetic energy for the purpose of exploiting such radiations in support of military operations.

Note: electronic support (ES) provides a source of electronic warfare (EW) information required to conduct electronic attack (EA), electronic protection (EP), threat detection, warning, avoidance, target acquisition, and homing.

electronic warfare (EW)
Military action involving the use of electromagnetic and directed energy to determine, exploit, reduce or prevent hostile use of, and retain friendly use of, the electromagnetic spectrum. It is used to control the electromagnetic spectrum or to attack the enemy. It includes electronic attack, electronic protection and electronic support.

force protection (FP)
All measures and means to minimise the vulnerability of personnel, facilities, equipment and operations to any threat and in all situations, to preserve freedom of action and the operational effectiveness of the force.

foreign internal defence (FID)
Participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organisation to free and protect its society from subversion, lawlessness, insurgency, terrorism, and other threats to its security.

geospatial intelligence (GEOINT)
Intelligence derived from the exploitation and analysis of imagery and geospatial information about features and events, with reference to location and time sources.

host nation (HN)
A nation which, by agreement:

1. receives forces and materiel of other nations operating on/from or transiting through its territory;
2. allows materiel and/or organisations to be located on its territory; and/or
3. provides support for these purposes.

human intelligence (HUMINT)
A category of intelligence derived from information collected and provided by human sources.

imagery intelligence (IMINT)
Intelligence derived from the exploitation of imagery, acquired by photographic, radar, electro-optical, infra-red, thermal and multi-spectral sensors, which can be hand-held, ground-based, seaborne, or carried by air or space platforms.

improvised explosive device (IED)
A device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic or incendiary chemicals and designed to destroy, incapacitate, harass or distract. It may incorporate military stores, but is normally devised from non-military components.

information operations (IO)
The coordination of information effects to influence the decision making and actions of a target audience and to protect and enhance our own decision making and actions in support of National interests.

insurgency
An organised movement aimed at the overthrow of a constituted government through use of subversion and armed conflict.

intelligence
The product resulting from the processing of information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. The term is also applied to the activity which results in the product and to the organisations engaged in such activity.

intelligence, surveillance and reconnaissance (ISR)
1. An activity that synchronises and integrates the planning and operation of sensors, assets, and processing, exploitation and dissemination systems in direct support of current and future operations. (Air Force)
2. A collection activity that synchronises and integrates the acquisition, processing and provision of information and single source intelligence by sources and agencies tasked to satisfy a collection requirement. (ADF)

irregular warfare (IW)
A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular warfare favours indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will.

measurement and signature intelligence (MASINT)
Scientific and technical intelligence derived from the analysis of data obtained from sensing instruments for the purpose of identifying any distinctive features associated with the source, emitter or sender, to facilitate the latter's measurement and identification. Note: This also captures biometrics for intelligence purposes.

operations security (OPSEC)
The process which gives a military operation or exercise appropriate security, using passive or active means, to deny the enemy knowledge of the dispositions, capabilities and intentions of friendly forces.

precision attack
The convergence of information, command and control, and weapon systems to engage targets and create effects that achieve campaign outcomes.

professional mastery (air power)
The sum of the individual knowledge and understanding of air power and space power plus the experience and confidence gained during a career.

propaganda
Any information, ideas, doctrines, or special appeals disseminated to influence the opinion, emotions, attitudes, or behaviour of any specified group in order to benefit the sponsor either directly or indirectly.

1. Black: Propaganda which purports to emanate from a source other than the true one.
2. Grey: Propaganda which does not specifically identify any source.
3. White: Propaganda disseminated and acknowledged by the sponsor or by an accredited agency thereof.

psychological operations (Psy Op)
Planned psychological activities in peace and war directed to enemy, friendly and neutral audiences in order to influence attitudes and behaviour affecting the achievement of political and military objectives. They include strategic psychological activities, consolidation psychological operations and battlefield psychological activities.

public affairs (PA)
The coordinated information output of all government activity undertaken in support of operations to inform the public and influence decision-makers in support of policy and to reinforce the diplomatic and political objectives.

security assistance
A program that provides defence articles, military training, and other defence-related services by grant, loan, credit or cash sales in furtherance of national policies and objectives.

security cooperation
All Department of Defence interactions with foreign defence establishments to build defence relationships that promote specific Australian security interests, develop allied and friendly military capabilities for self-defence and multinational operations, and provide Australian forces with peacetime and contingency access to a host nation.

show of force
An operation designed to demonstrate Australian resolve that involves increased visibility of Australian deployed forces in an attempt to defuse a specific situation that, if allowed to continue, may be detrimental to Australian interests or national objectives.

signals intelligence (SIGINT)
Intelligence derived from exploitation of the electromagnetic spectrum, comprising communications intelligence, electronic intelligence, and foreign instrumentation signals intelligence.

special forces (SF)
Specially selected military personnel, trained in a broad range of basic and specialised skills, who are organised, equipped and trained to conduct special operations. Special forces can be employed to achieve strategic, operational or tactical level objectives across the operational spectrum.

special operations (SO)
Military activities conducted by specially designated, organised, trained and equipped forces using operational techniques and modes of employment not standard to conventional forces. These activities are conducted across the full range of military operations independently or in coordination with operations of conventional forces to achieve political, military, psychological and economic objectives. Politico-military considerations may require clandestine, covert or discreet techniques and the acceptance of a degree of physical and political risk not associated with conventional operations.

strategic attack
The application of air power to create specific strategic effects that degrade or destroy an adversary's will, warfighting capabilities or any other capacity that would adversely affect Australia's interests.

strike
An attack which is intended to inflict damage on, seize, or destroy an objective.

tactical air control party (TACP)
A forward element of the airspace control system designed to support air operations within a tactical area of responsibility.

targeting
The process of selecting and prioritising targets and matching the appropriate response to them, taking into account operational requirements and capabilities.

terrorism
The unlawful use or threatened use of force or violence against individuals or property in an attempt to coerce or intimidate governments or societies to achieve political, religious or ideological objectives.

unconventional warfare (UW)
General term used to describe operations conducted for military, political or economic purposes within an area occupied by the enemy and making use of the local inhabitants and resources.

Abbreviations

AAP	Australian air publication
AAR	air-to-air refuelling
ABM	air battle management
ABNOPS	airborne operations
ACCE	air component coordination element
ACINT	acoustic intelligence
ACO	airspace control order
AEW&C	airborne early warning and control
AI	air interdiction
ALI	air-land integration
ALO	air liaison officer
ALS	air logistic support
AME	aeromedical evacuation
AO	area of operations
AOC	air and space operations centre
APOD	aerial port of debarkation
ASOC	air support operations centre
ATC	air traffic control
ATFLIR	advanced targeting forward looking infra-red
ATO	air tasking order
BDA	battle damage assessment
BFT	blue force tracking
C2	command and control
CAS	close air support
COIN	counterinsurgency
CRC	control and reporting centre
CT	counterterrorism

EA	electronic attack
ECM	electronic countermeasures
EMS	electromagnetic spectrum
EOD	explosive ordnance disposal
EP	electronic protection
ES	electronic support
EW	electronic warfare
F2T2EA	find, fix, track, target, engage and assess
FID	foreign internal defence
FMFP	foreign military financing program
FMS	foreign military sales
FOB	forward operating base
FP	force protection
GEOINT	geospatial intelligence
HN	host nation
HUMINT	human intelligence
IED	improvised explosive device
IMET	international military education and training
IMINT	imagery intelligence
IO	information operations
ISR	intelligence, surveillance and reconnaissance
IW	irregular warfare
JFACC	joint force air component commander
JIPB	joint intelligence preparation of the battlespace
JSOW	joint stand-off weapon
JTAC	joint terminal attack controller
JTF	joint task force

LOAC	law of armed conflict
MANPADS	man-portable air defence system
MASINT	measurement and signature intelligence
MEAO	middle east area of operations
MOOTW	military operations other than war
NSB	national support base
OPSEC	operations security
PA	public affairs
PEP	personnel exchange program
PMSA	program of major scheduled activities
PN	partner nation
PNT	positioning, navigation and timing
PsyOp	psychological operations
RF	radiofrequency
RPA	remotely piloted aircraft
SAR	synthetic aperture radar
SATCOM	satellite communications
SF	special forces
SIGINT	signals intelligence
SO	special operations
TACP	tactical air control party
TACS	theatre air control system
TIC	troops in contact

USAF	United States Air Force
UN	united nations
UW	unconventional warfare