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NATO LETTER OF PROMULGATION

23 August 2018

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PREFACE

1. Recent operational experiences have clearly revealed the extent of challenges that NATO forces will face during operations. They will be required to conduct a wide range of tactical actions in support of operational objectives, will need to operate in close cooperation with other, non-military actors, and will face a variety of threats, including but not limited to conventional, manoeuvre forces, irregular actors and organized criminal elements, and at times, a combination of all these.

2. The purpose of ATP-3.2.1, *Allied Land Tactics* is to describe a common understanding and approach to land tactical operations, conducted across the spectrum of conflict, in order to ensure a suitable level of interoperability during planning, training and execution. It is the primary source of Allied land force tactical level doctrine. This publication must be read in conjunction with AJP-3.2, *Allied Joint Doctrine for Land Operations,* ATP-3.2.2 Command and Control (C2) of Land Forces, and when appropriate, in conjunction with other NATO publications that speak directly to specific types of operations and undertakings.

3. This tactical level doctrine is placed within a strategic and operational context characterised in a variety of ways. Environments will be complex and possibly include conventional and irregular enemies and adversaries. They will also include a wide range of other groups whose support of the campaign may be vital for long-term success and this is articulated in the concept of the comprehensive approach. Based around the combat functions described in AJP 3.2, this publication provides a number of integrated, conceptual frameworks for visualizing the application of military fighting power.

4. Little is absolutely new in this publication in terms of how military forces apply and undertake tactical activities. This publication continues to refine the description as to how fighting power is applied to contribute to the achievement of enduring objectives and outcomes.

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CHAPTER 1 – THE EMPLOYMENT OF LAND FORCES

SECTION I – INTRODUCTION

Purpose

1001. The purpose of ATP-3.2.1, *Allied Land Tactics* (STANAG 2605) is to describe a common understanding and approach to land tactical operations, conducted across the spectrum of conflict through a manoeuvrist approach operating philosophy, in order to ensure a suitable level of interoperability during planning, training and execution. It is a primary source of Allied land force tactical level doctrine.

1002. This publication discusses the practical application of tactical capabilities and tactical activities across the spectrum of conflict, in order to create desired effects in support of operational objectives, and in line with fundamental principles for the conduct of land operations. Tactical activities are conducted from across the spectrum of conflict guided by the principles of the campaign theme[1], the campaign objectives and the intuition of the commander.

Terminology Note. Throughout this publication the term “activities” is used to describe the tactical level actions of a force. Most often the full expression, “tactical activities” is used to refer to the range of tactical activities that a commander may undertake (offensive, defensive, enabling and stability activities). In more general references, just the term “activities” is used.

Employment of Forces at the Tactical Level

1003. Land forces are employed at the tactical level to conduct activities in order to create effects, or results, that support the operational level objectives and end state. Commanders must understand clearly the link that exists between the operational objectives and the activities.

1004. Commanders, supported by intelligence, will have to assess and understand the various individuals, groups and elements, in addition to military adversaries, within their operating environment and area of operations in particular, and comprehend, to the greatest extent possible, the role each of these elements or groups play in influencing the environment and in achieving the successful outcome of the campaign. Military plans must take into account all of these elements and systems in the environment and the roles they play.

[1] AJP-01 and AJP-3 use the term operations theme instead of campaign theme.

1005. Commanders must address more than simply the defeat of an adversary. Depending upon the nature of the campaign and the objectives to be achieved, many activities will exceed the purely provision of military fighting power, e. g. the protection of civil civilian populations, support to other agencies, the restoration of essential public services or the improvement of the host nations military and security forces capacities and capabilities. While other non-military agencies may in time come to undertake these tasks, at times the responsibility will fall to the local military commander. Even when other agencies are present in a theatre, they will still likely require military support and security. In some campaigns such as a peace support or security (including counter-insurgency), commanders will have to address the will and behaviour of all of the elements and actors in the environment, in order to address root causes of the crisis and help create enduring end states. This will require a comprehensive approach with the military working in concert with other elements of power and agencies (domestic, local, and international) in order to create, in all areas of the environment, objectives that lead to the desired end state. Tactical level commanders must appreciate their role in conjunction with other elements of power in the pervasive application of a comprehensive approach (the use of the most appropriate military and non-military agencies to address the root causes of conflict).[2]

1006. In support of these objectives, military forces will have to operate using information in the form of messages to gain the support of affected civilian populations. These are direct psychological effects. The emphasis placed on such efforts will depend upon the nature of the campaign. For example, during a peace support or security campaign, it will be imperative to gain support from indigenous civilian populations, to explain operations and their legitimacy, and to demonstrate progress and success. To this end, nations and coalitions will create an overarching narrative, expressed through a strategic communication plan. Within this overall narrative and message, military forces will employ information activities, namely in the form of psychological operations, public affairs, key leader engagement and force posturing to influence target audiences in support of a campaign or specific objective.

1007. Within assigned missions, a commander will conduct a range of tactical activities (offensive, defensive, stability and enabling, as defined below and in AJP-3.2 *Allied Joint Doctrine for Land Operations*) in support of objectives. Tactical activities will be conducted within the context of specific campaign themes (major combat; security; peace support; and, peacetime military engagement) or specific limited interventions. The campaign theme, the principles by which it is conducted and the overall effects the commanders must create through his tactical activities, will dictate the balance the commander must strike across the range of tactical activities.

[2] For a complete discussion of the Comprehensive Approach, see AJP-3.2, *Allied Joint Doctrine for Land Operations*.

Environments

1008. Military forces operate in four physical environments (air, space, maritime and land) and four non-physical environments (information, electromagnetic spectrum, cyberspace and time). The "information environment" is pervasive and applicable to all physical environments. Land forces operate in the land environment while using the other physical environments for command and control, movement, manoeuvre and support. In doing so, military force create effects in two dimensions: the physical, and the psychological. Together they form the battlespace[3] or operating environment[4]. These may be described as follows:

a. **Psychological Dimensions.** Activities in the psychological dimension may be applied against an adversary or enemies to directly undermine their will and cohesion, or they may be applied against other elements in the environment in order to engender support for the campaign and its objectives and decrease or undermine their support for groups opposing the campaign. They consist of those information activities, such as psychological operations, that use information to create messages to affect the civilian population's understanding (of the campaign and situation), perceptions and will, all to build support of the campaign or operation.

b. **Physical Dimensions.** The physical dimension deals with physical effects against target capabilities. By physically affecting (e.g., blocking, neutralizing, destroying) a target's capability to act, they ultimately affect the behaviour. Even if the adversary's will to act is not affected, the destruction or alteration of his capabilities will prevent him from acting or behaving in the manner he desires.

1009. In order to affect the capabilities and behaviour of the various elements and actors including enemy forces, it is necessary to influence their understanding, will and capability. Military activity creates effects in physical and non-physical environments in order to affect capabilities and thereby undermine will and shatter cohesion rather than to simply destroy capabilities through attrition. Activities in the psychological dimension will seek to shape the understanding, perceptions and ultimately the will and behaviour of enemies, adversaries and other actors. This is simplistically represented in Figure 1-1.

[3] Battlespace is defined as: The environment, factors and conditions that must be understood to apply combat power, protect a force or complete a mission successfully.(NATOTerm)

[4] Operating environment is defined as: A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.(NATOTerm)

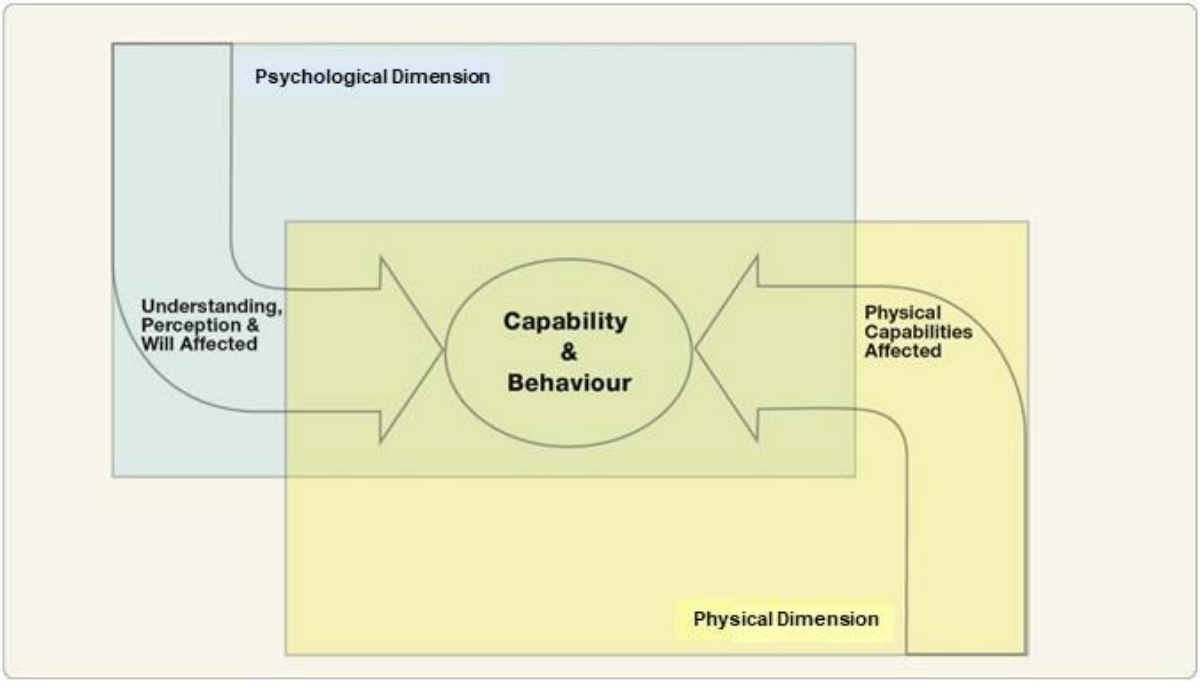


Figure 1-1: Activities that Affect Behaviour

1010. As introduced in AJP-3.2, *Allied Joint Doctrine for Land Operations* and explained in detail below, military forces conduct the full range of activities to achieve effects on a target, in support of desired objectives and the end state. This is illustrated in Figure 1-2.

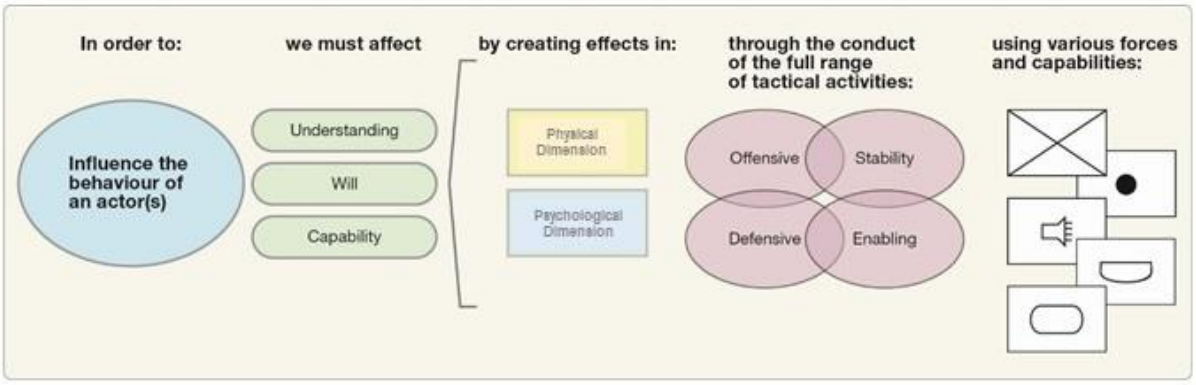


Figure 1-2: Affecting Physically and Psychologically the Behaviour of a Target.

1011. Military forces use their range of capabilities (such as manoeuvre, civil-military operations (CIMIC), psychological operations (PsyOps) to create effects in the physical and psychological dimension that will ultimately affect behavior in a desired manner and support the commander's objectives. In the physical dimension, combat elements will use manoeuvre and fires (including electronic and cyberspace offensive means) to have a direct physical effect on a target and its capabilities. It may be possible for planned secondary psychological effects to occur. For example, the destruction of key capabilities may undermine the cohesion and confidence of an enemy force, cause weak-willed troops to surrender and allow friendly forces to gain a psychological advantage. In the psychological dimensions, forces will use information activities in the form of messaging (through PsyOps for example) to affect the perceptions and will of the target audience. The target audience may be enemy commanders, enemy troops, friendly elements and neutral or adversarial elements. They should seek to undermine enemy perceptions and will and to build support for operations and the campaign through information to neutral and friendly target audiences. Such tactical activities may well have secondary effects in the physical dimension. For example, well-planned psychological messages may persuade a civilian civilian population to reduce support to enemy forces.

1012. Therefore, activities and their effects must be considered and conducted simultaneously and in a complementary fashion in the achievement of objectives. This will be done in all stages of the planning, targeting and execution of operations and tactical activities. For example, a plan to attack an enemy defensive position may include a range of tasks, both physical and psychological: EW jamming and joint fire attacks against the enemy headquarters (physical); and, PsyOps leaflets may be dropped to enemy elements in order to convince them to flee the battlefield (psychological). Independently or together, well planned physical and psychological actions will have a significant effect on the enemy's collective morale by undermining confidence in capabilities, leadership and their cause. This in turn, will affect the enemy's will to fight. It will provide friendly forces with a significant psychological advantage, which is the aim of the manoeuvrist approach to operations (see below and Chapter 2).

1013. In order to support operational objectives, tactical commanders must consider and plan to avoid undesired effects that will undermine the overall objectives. At times, short-term tactical success may have to be sacrificed in order to maintain support for longer-term objectives.[5] Commanders need to continually assess the performance and effectiveness of their activities in terms of creating effects that support the desired outcomes.[6]

[5] For example, the pursuit of a fleeing enemy may have to be declined if there is an immediate demand to secure and assist a local populace in need of emergency care. This will lend increased legitimacy to the campaign and help ensure the support of a local populace.

[6] For more details on measures of performance and measures of effectiveness, see *Allied Command Operations, Comprehensive Operations Planning Directive Interim* V2.0

1014. In short, commanders at the tactical level must appreciate the operational context of their activities. They must conceive and plan their full range of activities in order to create effects that affect the behaviourof a wide range of targets or audiences, which support, in harmony with other agencies, the operational objectives. They must seek to avoid undesired effects that will underminethe operational objectives. Finally, they must appreciate that the environment will likely include a variety of groups and individuals whose support for the campaign will be central to its success and that it will likely be necessary to influence these groups and individuals through tactical activities.

SECTION II - THE APPROACH TO THE CONDUCT OF LAND OPERATIONS

The Importance of Legitimacy

1015. Although the legitimacy of a campaign may seem like a remote concept and concern for tactical level commanders, it must be a consideration for them. These commanders must remember that campaigns and their constituent tactical activities must be and appear to be legitimate in the eyes of superiors, domestic audiences, international audiences and the indigenous civilian population of the theatre.

1016. In this context, the term legitimacy is broader than simply meaning that something is legal. It refers to a campaign, its forces and the actions of those forces as being acceptable to the affected civilian populations, particularly the local civilian populations and their cultural expectations. It is not simply a matter of “why” tactical actions are done, but it is also a matter of what is done and how it is done. What appears as a legitimate action or method to one group (such as foreign forces supporting a government) may not be culturally acceptable, and thus legitimate, to a local civilian population. For example, the building of local security forces or social institutions has to be done in a manner acceptable to the local civilian population and its cultural expectations, so that a perception of legitimacy is created, and thus does not alienate that civilian population and its support for the campaign.

1017. The real and perceived legitimacy of a campaign is vital to its overall success and the support that it will receive at all levels. The legitimacy of a campaign will be viewed from local, regional, domestic and international perspectives, particularly from a distinct cultural perspective, one that may not be completely shared by the campaigning forces. Solutions to operational problems will not be enduring if they are not perceived as legitimate by the local civilian population. Commanders and their subordinates must fully understand that tactical activities and the manner in which they are

conducted, even at the lowest levels, will directly impact upon the legitimacy of a campaign, particularly as it is viewed from the local populace. Measures must be taken to actively avoid incidents and unintended effects that will undermine legitimacy.

Campaign Themes and the Full Range of Tactical Activities

1018. The hierarchy of operational terminology consists of the following:

a. **Campaign.** A campaign is defined as: *a set of military operations planned and conducted to achieve a strategic objective* (NATOTerm). It is an operational level undertakings. It consists of a series of major operations that seek to achieve an operational end state (based on the strategic objective) through constituent operational objectives.

b. **Operation.** An operation is defined as: *a sequence of coordinated actions with a defined purpose* (NATOTerm). These coordinated actions are termed “tactical activities”.

c. **Tactical Activities.** Tactical activities are actions undertaken by tactical level commands to accomplish their mission within an operation. These are related to the the higher commanders intent and the achievement of an operational objective. Tactical activities are assigned through tasks given to subordinate elements.

d. **Task.** A task is an act to be performed by a subordinate to realise an activity. It is assigned through a mission.

1019. **Campaign Themes**. As described in AJP-3.2, there exists a set of distinct military, operational level, campaign themes: major combat campaigns (normally against a conventional, state-based enemy), security campaigns (to include counter-insurgency (COIN)), peace support campaigns and peacetime military engagement campaigns. These themes may be generally plotted at appropriate locations on the spectrum of conflict. (See Figure 1-3.) The campaign themes reflect the threat (and its strategic objectives), the operating environment, the strategic direction given and, therefore, the overall

nature of the campaign. Within these campaign themes, land forces will conduct operations by using a wide range of tactical activities simultaneously and sequentially and transition quickly from one type of tactical activity to another in order to support the achievement of objectives. Conflicts will evolve rapidly over time and military forces must be prepared to undertake the full range of tactical activities as demanded by the situation, the threat and the commander’s immediate objectives and the overall operational objectives.

1020. Every campaign and major operation includes the same set of tactical activities, but the balance across those types of tactical activities and the manner in which they are conducted will reflect the campaign theme and the principles of that type of campaign.

1021. Note that operational level planning may also include limited interventions, such as a brief humanitarian aid commitment or a non-combatant evacuation operation. These commitments have limited scopes and timeframes and thus are not considered full campaigns, but they are still prosecuted through the same set of tactical activities as any military operation. It should be noted that these major operations may occur in isolation or within a larger operational theme.

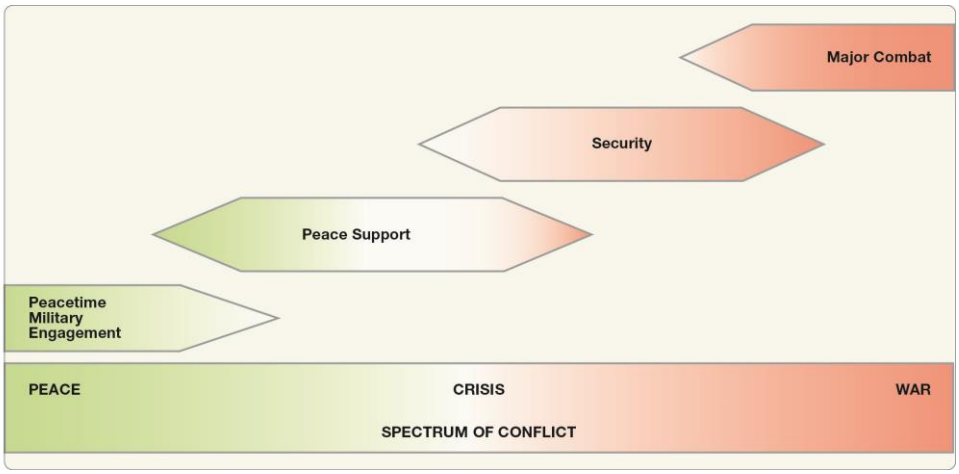


Figure 1-3: Predominate Campaign Themes Plotted Along the Spectrum of Conflict

1022. Campaign Themes, Operations and Tactical Activities. Campaign themes, as a rule, are too general to use in assigning missions. Rather, they describe the broad general conditions that exist in the operating environment and in a specific area of operations and provide principles to guide planning and action as a campaign progresses. Campaigns and their operational objectives are realised in land operations on the tactical level of command through the assignment and execution of tactical activities. These are the specific application of doctrine to solve specific tactical problems and are often used to assign missions to subordinates. The effects or results that they create should be planned in order to support the operational objectives of the campaign. Commanders and planning staff will identify the effects (e.g. results) needed to realise each of the operational objectives in the campaign and then allocate tactical activities to create those desired effects. In this manner, the campaign theme, end state and objectives are directly linked to the allocation of appropriate tactical activities.

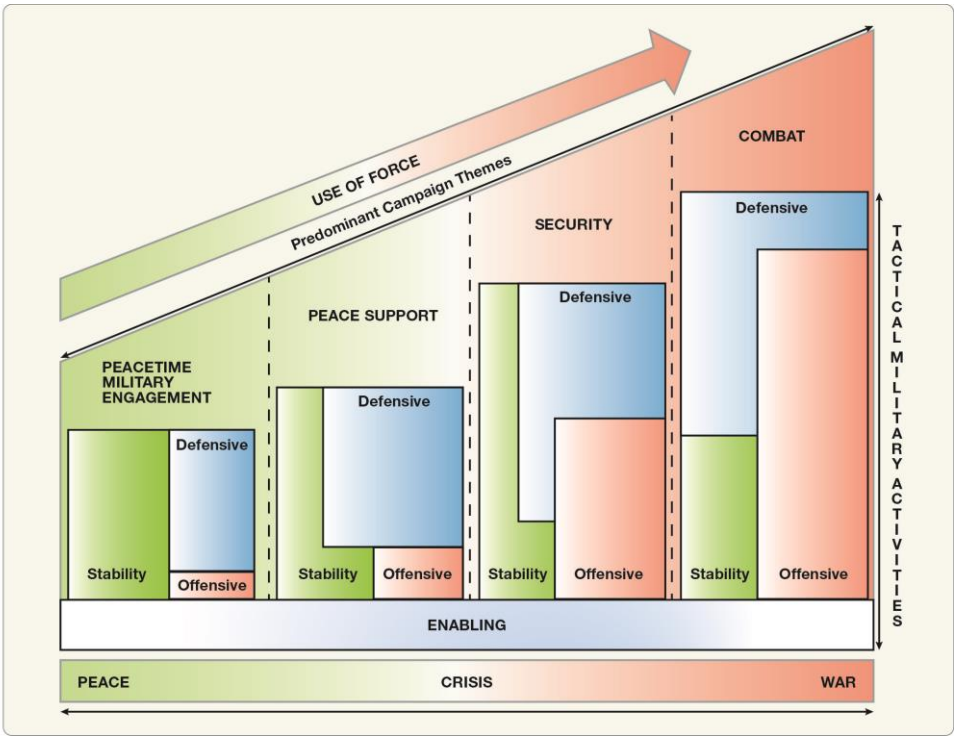


Figure 1-4: Predominant Campaign Themes Plotted on the Spectrum of Conflict and the Approximate Proportion of the Full Range of Tactical Activities

The Range Of Tactical Activities

1023. Regardless of the nature of the campaign or operation, land forces will undertake a wide range of tactical activities. The tactical activities are divided into the following:

a. **Offensive activities**: tactical activities in which forces seek out the enemy in order to attack the enemy and degrade, destroy, neutralise or otherwise affect their capabilities. They may also focus on securing terrain such as vital ground;

b. **Defensive activities**: tactical activities that resist enemy offensive tactical activities;

c. **Stability activities:** tactical activities conducted to maintain or re-establish a safe and secure environment (that is, stabilize by reducing violence), support essential services, emergency infrastructure reconstruction and support humanitarian aid. They impose security and control over an area while employing military capabilities to restore services and support civilian agencies. A safe and secure environment is one in which the civilian population has the freedom to pursue daily activities without the fear of persistent or large-scale violence.[7] This set

[7] Such as environment is characterised by an end to large-scale fighting, an adequate amount of public order, freedom from routine intimidation, the subordination of security forces to legitimate state authority, the protection of infrastructure and civic leaders, and freedom of movement for people and goods.

of tactical activities also include support to security sector reform and the demobilisation of former fighting factions. This set of activities includes security sector reform including assistance to the development of host nation security forces (termed Security Force Assistance). Many of these tactical activities will be done in cooperation with other, non-military, agencies;

d. **Enabling activities:** tactical activities that link, support, or create the conditions for offensive, defensive and stability activities. They include activities such as withdraw, advance to contact and relief.

1024. The range of tactical activities describes military activity undertaken within an operation at the tactical level. The balance across these tactical activities and the manner in which they are conducted will depend upon the operating environment, the nature of the operation and the operational objectives. Generally, any combination of these tactical activities may be conducted simultaneously or in close succession in the same operation and even by the same force, regardless of the campaign theme. For example, in peace support, which consists mainly of stability activities, there may be a requirement to attack a recalcitrant adversary force (offensive) or to defend a security base (defensive).

1025. This combination of simultaneous offensive, defensive and stability activities that gives an operation its predominant character at any one time and place.

1026. As an operation develops and changes its theme, say from major combat to peace support, the balance between the tactical activities and therefore the character of the operation will change.

Background of the Full Range of Tactical Activities:

The construct of the full range of tactical activities was created to explain the true nature of military operations and in order for commanders at all levels to understand the full scope of their moral and operational responsibilities that may exist at any given time, regardless of the overall nature of the campaign. Commanders must be intellectually flexible to move across this full range of tactical activities within a single operation regardless of what was envisioned or planned for the operation. For example, a commander, having completed an attack to seize a village, may not only have to switch to a temporary defence, but may have to stop looting by civilians or support the delivery of humanitarian aid.

1027. Tactical activities are listed in the table below. Each type of tactivity has particular characteristics and principles. Activities are tangible undertakings that can be assigned to units and sub-units, usually through specific tactical tasks such as block, seize, etc (see annex A). The table should not be considered all-inclusive, for unique activities and tasks may exist or be developed that are not indicated but that will still fit within one of these four categories. Note also that a large tactical action may include different activities. For example, an attack may be enabled by the deployment of a screen (security). The key here is for commanders to understand that they are responsible for this whole range of tactivities at any given time.

Offensive	Defensive	Stabilising	Enabling
Attack	Defence	Security and control	Reconnaissance
Exploitation	Delay	Support to security sector reform	Security
Pursuit			March
Feint		Support to initial governance	Advance to contact
Demonstration			Crossing and breaching of obstacles
Raid		Support to initial reconstruction and restoration of essential services	
Ambush			Meeting engagement
Reconnaissance in force			Link-up
Breakout of encircled forces			Relief of troops
			Withdrawal
			Retirement

Figure 1-5: Tactical Activities

1028. The list in Figure 1-5 is not an all-inclusive list of tactical activities but does the nature of their classification within the range of tactical activities. Their use should be guided by the following details:

a. These tactical activities are broad categories and are executed through the assignment of tasks, and some tasks may even come from a different category. For example, within an attack (an offensive activity), a force may be assigned the task of “destroy enemy position” or “seize Objective X”. Another force in the same operation may be, for example, assigned the task of blocking along a particular line to protect an open flank. Another element may be tasked with a screen, that is, to provide security on a flank (an enabling activity).

b. Some enabling activities are assigned through the use of the verb “conduct” followed by a specific type of activity or supporting task. Relief will be realised through the task of “conduct” a passage of lines or a relief in place. Security activities will be executed for example by a task to screen or to guard.

c. Stability activities will often be assigned through the verb “conduct”

followed by a specific related task. For example, a requirement to establish security and control in a village may be assigned as a task to conduct a presence patrol and vehicle check points.

d. The activities and their tasks are detailed in the mission. A mission is defined as: a clear, concise statement of the task of the command and its purpose (NATOTerm). The mission assigned to a tactical level commander will indicate what is to be completed and why, and will consist of an activity (such as attack or defend) along with the immediate effect or supporting task (often a verb) – such as "attack to destroy…." All this will be followed by specific details and an overarching purpose that links to the higher commander's intent. For example: "3rd Bn will attack to destroy the enemy position at Objective DOG in order to secure the left flank of 2 Brigade." Note that the activity (in this example: "attack to") will not always be stated but simply implied in the mission. (For more details see annex A.)

e. For some tactical activities, particularly enabling activities or stability activities, the mission will tell the subordinate to "conduct" the type of activity (such as "conduct reconnaissance…") supplemented by a purpose. Just as an attack may be detailed as a "destroy" or "seize" task, the stability activities will be executed through whatever task is most appropriate. There is no all-inclusive list. It is therefore vital that the mission be clear and simple to avoid confusion. Back-briefs by subordinates on their plans will be important for ensuring mutual understanding of the commander's intent.

f. A tactical operation therefore may consist of a number of various tactical activities and tasks arranged in a complementary fashion in order to attain the desired end state of the operation. For example, an infantry battalion may undertake a tactical operation to secure village X. The battalion commander decides that his forces must attack to clear the enemy from one area and then establish a standing presence of patrols, establish a guard force (enabling activity of security) outside of the village to stop any counter-attack and be prepared to provide emergency aid to any civilians left in the village.The commander then assigns appropriate tactical activities and tasks for the sub-units, potentially along the following lines: *A Coy will (attack to) clear the enemy from the N/E corner; on order, B Coy will conduct patrols in the village to provide security; C Coy will establish a guard force to the North to destroy any counter-attack; and, D Coy, on order, will escort a humanitarian convoy into the village and secure it.* Brought together in this operation, these subordinate tactical tasks achieve the battalion's objective of securing the village, including implied tasks such as protecting the civilian civilian population.

1029. Offensive and defensive activities are physical activities that create effects in the physical and subsequently at times in the psychological dimensions. They may lead to effects on an adversary in terms of his will and cohesion. Offensive and defensive activities include those electronic warfare (EW) and cyber-related activities that seek to attack enemy capabilities and defend friendly force capabilities.

1030. Stability activities involve both coercive and cooperative tasks that include establishing a secure environment to building essential services in conjunction with indigenous groups or non-government organisations (NGO). They may occur before, during and after offensive and defensive activities and may be the main effort of a campaign. Stability activities contribute to creating an environment in which the other instruments of power, that is, the diplomatic, political and economic instruments, can predominate, in cooperation with a lawful government.

1031. Stability activities will often help address the root causes of a conflict, set the conditions for other agencies to achieve their objectives, and engender general support for the campaign. They will include such activities as infrastructure rebuilding and humanitarian aid. Thus, through a physical demonstration of commitment by campaigning forces and through their results, some stability activities may be considered information activities that will shape the understanding, perceptions and will of those around them, namely the local populace, and even potential adversaries.

1032. Just as offensive and defensive activities are accomplished through subordinate tasks, such as “destroy”, “seize” or “block”, stability activities will be accomplished through a series of tasks, such as patrolling amongst civil civilian populations, cordon and search, vehicle check points, military support to security sector reform (SSR), support to public health programmes and support to public order, observation posts, and support to reconstruction, to name only a few.

1033. Each of the four types of tactical activities is accomplished through the assignment of mission comprised of mission task verbs and effects, brought together in a purpose. Thus a unit or sub-unit commander given a tactical activity of “attack to destroy…” will assign supporting mission task tasks to subordinates such as block, support by fire, and seize. An example of the types of tactical tasks (often equating to mission task verbs) that support their respective tactical activities is given in the table below.

1034. All such tactical activities should be planned and conducted in close coordination with one another to ensure they all contribute to achievement of the overall objective. Appropriate and timely allocation of resources, clear priorities and contingency planning will be vital to ensure the achievement of objectives through the range of tactical activities.

1035. Commanders must consider and plan for this full range of tactical activities and be prepared for them to occur in close succession or even simultaneously regardless of the nature or theme of the campaign they are undertaking. Even during a major combat campaign, there will be a

requirement to undertake some stability activities such as the security of vulnerable civilian populations or the delivery of humanitarian aid. As campaigns move to the lower ends of the spectrum of conflict, the opportunity and requirement for stability activities will increase. Indeed, apart from significantly decisive offensive actions, stability activities are the main means of moving a campaign to those lower ends of the spectrum of conflict since they create the conditions for enduring stability and may help address the root causes of many conflicts. The conduct of the full range of tactical activities requires effective coordination across areas of operation which is up to the commander and staff, and includes the prioritization and de-conflicting of each tactical activity, during the entire operation. All must be planned and conducted to support the desired objectives. Unit commanders and their subordinates must be mentally and physically prepared to transition rapidly between offensive, defensive and stability tasks.

The Comprehensive Approach

1036. Many operating environments will see the involvement of non-military agencies, both governmental authorities and NGO. This reflects the enduring complexity of operating environments and the need to consider objectives beyond those of immediate military consequence. During many campaigns and operations, military forces will often work in close coordination and even cooperation with such non-military agencies. In some situations, such as a limited intervention, military forces may work in direct support of national foreign affairs departments or UN authorities. In campaigns that seek to establish enduring stability, such non-military agencies will be required to address the root economic and governance causes of instability and violence. Thus, military commanders at all levels must be aware of the importance of such agencies and the need to closely coordinate with them. Again, in many operations, military forces will be expected to work in direct support of such authorities.

1037. Commanders must realise that at times, objectives in support of the desired end state may be shared with non-military agencies and, in many situations, military forces will be expected to provide a secure framework in which non-military agencies may operate. To this end, tactical level commanders will work in a complementary manner with the other agencies – representing other elements of power – required to protect civil civilian populations, support their immediate needs and address the root causes of violence and instability. Doing so will help attain the desired end states and set conditions for other agencies to lead, allowing the reduction and withdrawal of military forces.

1038. This coordination and sharing of responsibilities is known as the comprehensive approach to operations. It is essential in many operating environments if objectives and enduring success are to be achieved and

should stem from clear strategic direction. It will require a deep understanding of the operating environment, the root causes of instability and the unique roles and requirements of non-military agencies. To this end, commanders may be expected to closely coordinate their actions with those of other agencies and to directly support them when required. This cooperation may extend as low as the sub-unit level. Although close coordination and cooperation will be required on the part of all agencies, military commanders may have to take the lead and be forthcoming in a cooperative spirit. Additional details of the comprehensive approach are contained in AJP-3.2 (B), *Allied Doctrine for Land Operations* and AJP-3(B), *Allied Doctrine for the Conduct of Operations*.

1039. Tactical procedures for implementing the comprehensive approach will depend upon the operational objectives and the tactical situation at the time. Commanders must be ready to work closely with other agencies to achieveshared or complementary objectives. Headquarters at certain levels may be integrated with other agencies, particularly when undertaking stability activities such as support to security sector reform and support to governance. In due course, military authorities should look to other agencies to assume the lead in these tactical activities although military forces may still be required to provide an overall security framework within which other agencies may work.

1040. Depending upon the situation, various levels of integration may exist between the military and other agencies. In terms of other government agencies, the integration will depend upon the strategic direction that may directly order the agencies to integrate with other agencies. Other factors affecting the level of interagency integration will include the philosophical attitudes of agencies (some NGOs will not deal with military authorities in any manner) and the degree to which the agencies share objectives. True integration of efforts will only occur if the agencies agree on the objectives to be achieved and the ways to achieve them (including the way to address root causes of a crisis). Levels of integration in the comprehensive approach may be as follows:

a. **Inform.** Agencies will inform each other of their plans and activities. This will allow the military to provide security advice and de-conflict efforts and movements.

b. **Coordinate.** Agencies, including the military, inform each other of their plans and actions to ensure that all requirements are met in the achievement of shared objectives and the end state. This will help ensure that the best agency available undertakes the required tasks and that the military can advise on and be prepared to provide any specific security measurements.

c. **Cooperate**. Agencies come together and share the required work to achieve shared and unique objectives. The military and other agencies will help each other undertake their tasks. For example, the military may provide logistical lift to help deliver the humanitarian aid organized by an NGO or other government agency.

d. **Unity of Command**. In some, albeit likely rare, situations, particularly within national authorities, a single chain of command may exist across military and non-military agencies. In such circumstances the overall authority will be able to dictate which agency will assume responsibility for each task and objective and where cooperation will occur.

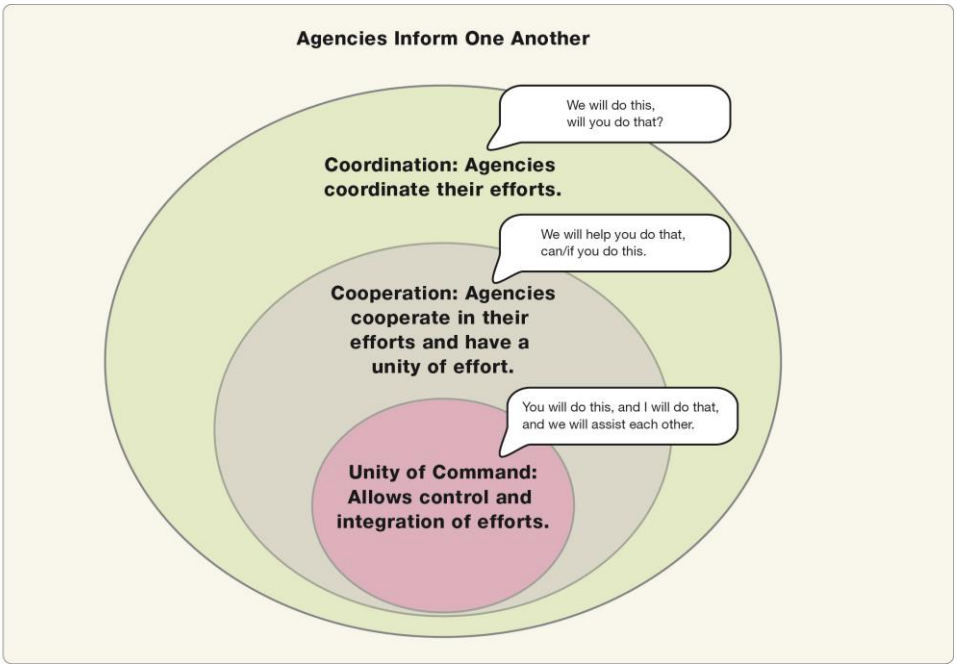


Figure 1-6: Levels of Integration between Agencies in a Theatre of Operations

Manoeuvrist Approach to Operations

1041. The concept of the manoeuvrist approach is described in some detail within AJP-3.2, *Allied Joint Doctrine for Land Operations*.

1042. The manoeuvrist approach is a philosophical approach to operations in which commanders and their staff identify adversary strengths and the vulnerabilities of those strengths to inform their planning. It may focus on key capabilities that the enemy needs for success or to prevent friendly force success. Planners assess enemy strengths to identify how they may be avoided. Additionally, these strengths may be assessed for vulnerabilities through which the strength may be attacked. Planning should then seek to attack these vulnerabilities in order to prevent enemy success. Likewise, friendly commanders will identify and assess their own strengths and seek to defend them.[8]

Integration of the Manoeuvrist Approach

[8] At the operational level, this discussion of strengths is referred to centre of gravity analysis. See ATP-3.2.2, *Allied Command and Control of Land Forces*.

1043. The philosophy of the manoeuvrist approach is explained in Chapter 1 of this publication and in AJP-3.2, *Allied Joint Doctrine for Land Operations*. It is included in the operations framework, in terms of purpose or the desired effects (results) of operations, the manoeuvrist approach seeks to gain a psychological advantage over the enemy or other adversaries.

1044. It is complementary to the other effects in the operations framework of shaping, decisive and sustaining and does not compete with it. Most of the operations and activities that seek to be decisive in terms of achieving a commander's objective, will seek to pre-empt, dislocate or disrupt the enemy forces and plans.

Application of the Manoeuvrist Approach

1045. In applying a manoeuvrist approach, the commander should consider the following:

a. Operations should be dynamic and multidimensional, and present the enemy commander with as many simultaneous challenges as possible, thus overwhelming the enemy and its command and control system;

b. Planning in detail to focus on how enemy and friendly strengths influence the achievement of friendly objectives. Those enemy strengths that prevent the commander from creating desired effects must be countered while those of the friendly forces that are key to achieving objectives must be protected and exploited;

c. Where possible, existing weak points are exploited, particularly those that disrupt, dislocate and pre-empt key enemy strengths/capabilities;

d. Enemy strength is avoided and fighting power targeted through his weakness to strike directly at his critical assets (lines of communications (LOC), headquarters (HQ), rear areas, reserve forces etc.);

e. Tactical battles are not an end in themselves, but only a building block within the framework of a larger operation that uses surprise, deception, manoeuvre and firepower to break the enemy's will to fight, primarily through attacking his psychological and physical cohesion.

1046. There are four ways that the manoeuvrist approach can be implemented in practice and that are applicable to the full range of tactical activities. These are, in order of preference: seizing the initiative, pre-emption, dislocation and disruption.

Understanding Strengths and Vulnerabilities as Part of Manoeuvrist Approach

1047. The manoeuvrist approach seeks to gain a psychological advantage over the enemy by avoiding strengths and attacking weaknesses or vulnerabilities. Such strengths exist at all levels and may be a physical element such as a significant armoured reserve that will defeat any friendly counter-attack or a

moral element, such as a local political leader who has influence over the indigenous civilian population.

1048. These strengths are key to the enemy's success. The manoeuvrist approach requires commanders to avoid them directly. Instead, it must be remembered that all strengths suffer from some sort of vulnerability. E.g. the support

1049. weapons position may have an open flank from which it can be neutralised or the enemy armour reserve force may have limited air defence, may have only a single approach route (that can be blocked) or may have a single vulnerable supply line (that can be interdicted). Thus, it is through exploitation of these vulnerabilities that the manoeuvrist approach hopes to avoid direct confrontation with the enemy strength and to disrupt it, pre-empt its actions or dislocate it from being effective in the operation. Neutralisation of the enemy's strengths at a given time and place will gain that psychological advantage for the friendly force commander.

1050. When commanders hold the **initiative** in a competitive situation, they have the ability to dictate the course of tactical events. It is usually gained through a pre-emptive action.The side without the initiative is normally forced to react to protect itself and thus lacks freedom of action. Gaining the initiative is one of the keys to success. In terms of building legitimacy for a campaign and gaining support of indigenous civilian populations, commandersshould seek to take the initiative in psychological operations and public affairs in orderto ensure the tactical level messages support operations and link them closely to the narratives provided by strategic communication.

1051. To **pre-empt** the enemy is to seize an opportunity, often fleeting, before he does, to deny him an advantageous course of action. For example, forces deployed to block or fix enemy reserves will pre-empt the enemy's counter-attacks and robust PsyOps and public affairs messaging issued prior to operations will help pre-empt enemy propaganda. The purpose of pre-emptive action is to prevent the enemy from gaining his objective or establishing his influence.

1052. To **dislocate** the enemy is to deny him the ability to bring his strength to bear. Its purpose is much wider than disruption and goes beyond the frustration of the enemy's plans. Its purpose is to render the strength of elements of the force irrelevant. It seeks to avoid fighting the enemy on his terms. For example, a good demonstration or feint will help fix the enemy commander's forces and thus dislocate them from the main battle with friendly forces. In terms of the psychological plane, a sound civil-military cooperation plan and support to civil authorities, promoted through a broad public affairs plan, will help dislocate an enemy's claim to legitimacy and influence over a civil civilian population.

1053. To **disrupt** is to attack the enemy selectively in order to break apart and throw into confusion the assets that are critical to the employment and coherence of his combat power.It is a deliberate act that requires sound

intelligence to indicate enemy intentions and thus resulting vulnerable points and times. Its purpose is to rupture the integrity of the enemy's combat power and to reduce it to less than the total of its constituent parts. For example, air interdiction (AI) may be used to cut vulnerable points (such as a bridge) on lines of communication needed to move enemy combat supplies or reserve forces. Electronic warfare means may be employed to exploit enemy communication vulnerabilities and thus disrupt command.

Means of Implementation of the Manoeuvrist Approach to Operations

1054. The principal means for physically attacking an enemy's understanding, will and cohesion are through the use of force and threat of force. Force is applied through firepower and manoeuvre with the effects enhanced and multiplied through a high tempo andsimultaneity. The influence messaging of information activities will also play an importantrole by directly engaging the understanding and will of an enemy and that of other key audiences such as indigenous civilian populations. Indeed, for those unconventional adversaries who rely heavily on the moral and physical support of a populace, information activities againstthe enemy and against his support base may, in the long run, be more effective in pre-empting and dislocating this type of enemy.

1055. The primary means of implementing a manoeuvrist approach are as follows:

a. **Manoeuvre.** Manoeuvre is the combination of movement supported by fire, or potential fire in order to gain a position of advantage over the enemy from which he can be engaged. Within the manoeuvrist approach, this tactical manouevre is key to attacking the vulnerable aspects of many of the enemy's key capabilities. Note that the vulnerable aspect may not be a part of the capability itself, but simply something that the capability needs. For example, if the enemy's main reserve forces require a single bridge to conduct a counter-attack, that bridge – being its only route – becomes a vulnerability for the enemy and thus a prime target for enemy manoeuvre and fire support elements.

b. **Firepower.** Firepower may destroy, neutralise, suppress, demoralise and influence. Through its physical effects, it will shape understanding (through its effects against command and control systems), undermine will and shatter cohesion. It, along with manouevre forces, can be used as a demonstration of force and intent, and thus influence key audiences (this is particularly key to undermining the will of belligerents in a peace support campaign or the will of demoralized conscripts prior to battle);

c. **Information Activities.** Within the framework of the information environment, information activities are planned to have either physical or psychological effects. Some information activities will seek to attack enemy information systems through destructive fires, electronic attack, and cyber-related activities or to defend friendly information systems. Such activities within a manoeuvrist approach will seek to remove key

enemy information capabilities and gain a significant advantage, and undermine enemy cohesion. Other information activities will use information in the form of messages – through PsyOps and public affairs for example – to undermine enemy cohesion and to build cohesion and support amongst indigenous civilian populations. These messages will be nested within the overall messages of strategic communication.

d. **Tempo.** Tempo is the rhythm or rate of activity of operations relative to the enemy. The side that consistently decides and acts faster holds an advantage. Shock and surprise during engagements allows tempo to be held at a high level and leads to quick success;

e. **Simultaneity.** Simultaneity presents enemy commanders with so many threats or potential threats at the same time that they are overloaded and precluded from concentrating on a single threat. This should be done horizontally across the enemy capabilities and vertically throughout his levels of command. The combination of physical and information activities that respectively threaten capability and thus undermine cohesion and directly attack understanding and cohesion will have cumulative effects.

Fundamentals of the Manoeuvrist Approach

1056. The manoeuvrist approach is a philosophy and mindset for applying fighting power to gain a psychological advantage over enemies in order to defeat them. There is no prescribed formula, however certain fundamentals can provide guidance:

a. **Concentrate on the Enemy's Vulnerabilities.** Enemy key capabilities and strengths and the requirements of those capabilities and strengths are analyzed in order to identify vulnerabilities that can be attacked or exploited. With the objective being to attack the enemy's will to fight and cohesion, tactical activities and their effects should be planned to attack or exploit such vulnerabilities. Plans should focus on exploiting the enemy's vulnerabilities and not on seizing and holding the ground. The purist application of manoeuvre warfare is to disarm or neutralize an enemy before the fight by dislocating or pre-empting his capabilities or ability to employ them. A simple example of applying the full range of tactical activities in a manoeuvrist approach follows. An assessment shows that the enemy's reserve force is a key strength that has the potential to defeat friendly force operations. It is assessed that the reserve force requires resupply that can only be conducted over a single available route. Further intelligence shows that the enemy forces rely on combat net radio as the only means of communication with the reserve forces and that it is susceptible to jamming. Additionally, it is assessed that many of the enemy troops are conscripts without strong morale and willingness to fight a protracted battle. In this example, three enemy vulnerabilities have been identified: a single supply route; a command link that may be easily jammed; and conscript troops with low morale. Thus, a friendly force commander may attack these

vulnerabilities in a number of ways: air interdiction may be used to close the supply route; electronic warfare attack may neutralize the command and control system; and, a PSYOPS leaflet drop may be used to encourage the conscripts to flee or surrender prior to any battle. Thus before battle is even joined, the friendly force commander has established a significant physical and ultimately psychological advantage over the enemy.

b. **Mission-Type Orders.** A mission-type order is defined as: *an order issued to a subordinate unit that indicates the mission to be accomplished without specifying how it is to be done* (NATOTerm). Mission-type orders enable mission command philosophy. They involve de-centralising decision-making and letting decisions be taken at the lowest possible level. It is essential that commanders know and fully understand their commander's intent two levels up. Subordinates must understand their commander's intent, his vision of the battlefield and what end state is desired. Mission orders allow commanders, at all levels, to react to situations and to capitalize as they arise. The commander directs and controls the operation through clear intent and tasks rather than detailed supervision and control measures or restriction. It allows subordinates to exploit enemy vulnerabilities and to achieve the commander's intent in the best manner deemed possible;

c. **Agility.** Agility enables a commander to seize the initiative, exploit fleeting opportunities, exploit enemy vulnerabilities and dictate the course of operations by acting faster than the enemy can effectively react. Eventually, the enemy is overcome by events and his cohesion and ability to influence the situation are destroyed. It gains friendly forces that key psychological advantage. Agility is the ability of the commander to change faster than the enemy can anticipate. Quickness and intellectual acuity are the keys to effective agility. Commanders must be quick to make good decisions and to exploit developments with both physical engagements and information activities. Just as a unit will move to exploit a sudden gap on the battlefield before the enemy can re-position to close it, a commander must be quick to exploit through information activities a public relations error by an insurgent force. Getting inside the enemy's decision cycle is the essence of tempo. Well-rehearsed battle drills and standard operating procedure enhance the agility of a formation;

d. **Focus on Main Effort.** Main effort is defined as: a concentration of forces or means in a particular area and at a particular time to enable a commander to bring about a decision. (NATOTerm) It is placed on the activity that commanders determine is vital during an operation or during a particular phase of an operation. Commanders will weigh the main effort with appropriate forces and other resources to ensure its success. The most common means of weighting the main effort are to allocate additional assets to the main effort, (surveillance, fires, manoeuvre support, reconnaissance, sustainment, etc.). Identification of the main effort is a key component of the operational order and is an

aspect of the concept of operations within the operational order. Within the framework of shaping, sustaining and decisive operations, commanders designate and shift the main effort as required. Identification of the main effort allows subordinates to make decisions that will support the commander's intent without constantly seeking advice. Each subordinate ensures his actions support the commander's intent, with priority given to the main effort or the subordinate's role in supporting it. It is generally expressed as a particular friendly unit and its assigned tasks. The concept help unify individual subordinate efforts.

e. **Exploit Tactical Opportunities.** Commanders continually assess the situation (mission analysis) and then have the necessary freedom of action to be able to react to changes more quickly than the enemy. Rigid control measures that are interchangeable and unlikely to survive first contact are avoided. Reserves are created, correctly positioned and grouped to exploit situations that have been created by shaping the battle to conform to friendly concepts of operations;

f. **Act Boldly and Decisively.** Commanders at all levels are able to deal with uncertainty and act with audacity, initiative and inventiveness in order to **seize fleeting opportunities within their higher commanders' intent. They** not only accept confusion and disorder, they generate it for the enemy. Failure to make a decision surrenders the initiative to the enemy. Risk is calculated, understood and accepted. In doing so, commanders must keep in the foremost of their minds, the overall objective. Notwithstanding this need, at times, tactical success may have to be sacrificed in order to meet the overarching operational objective.

Mission Command Definition and Implementation

1057. Mission command is the philosophy of command that promotes unity of effort, the duty and authority to act, and initiative to subordinate commanders. It advocates centralized planning based on the superior commander's provision of clear guidance and intent, supported through decentralized execution based on mission-type orders. This style of orders describes what is to be achieved, without necessarily prescribing how it is to be achieved. In this way, if a situation changes and the subordinate's assigned tasks are no longer feasible and practical, the subordinate can still act in a manner that supports the superior's intent. The following aspects are key for implementation:

a. A commander gives orders in a manner that ensures subordinates understand the commander's intentions (intent), their own tasks in support of that intent and the context of those tasks. This stems from the "intent" portion of the concept of operations in the orders.

b. Subordinates are told what each one should achieve and the reason why it is required. This is their "mission" – a task with a purpose. They use a mission statement structure given in Annex A.

c. Subordinates are allocated sufficient resources to carry out their missions. This is reflected in the task-organisation section of orders.

d. If time allows, a back-brief from subordinates to their commander as to their understanding of their orders will help ensure common understanding. This is particularly important in multi-national organisations where language may be a barrier to common understanding. (Although this can solved to some extent through doctrine and combined training prior to operations.) This will also allow subordinates to identify any potential shortage of assigned resources.

e. Commanders use the minimum level of control possible so as not to unnecessarily constrain subordinates' freedom of action.

f. Mission command relies on subordinates' ability and willingness to use initiative. While subordinates have a fundamental responsibility to act in line with their commander's intent, they decide how best to accomplish their tasks.

g. Mission command relies on mutual trust. It requires the commander to delegate responsibility and authority appropriate to the capabilities of the subordinate. The subordinate should feel confident to accept the responsibility of the delegated tasks. The trust should provide confidence by commanders and subordinates to take prudent risk.

h. Mission command is developed in training and is also a reflection of military culture and thus will vary between nations, and even within nations. Training, combined with frank discussions between commanders and subordinates, will help establish mission command and the extent of its application.

1058. As discussed above, mission command facilitates the application of the manoeuvrist approach to operations by allowing subordinate commanders to understand higher's intent, to exercise their initiate, to be agile and to gain an advantage over the enemy. It uses mission-type orders as detailed above. Further amplification and detail can be found in AJP-3.2, *Allied Joint doctrine for Land Operations* and ATP-3.2.2, *Command and Control of Allied Land Forces*.

Understanding Operational Complexity

1059. The operating environment requires land forces to modify their tactics to ensure that they are appropriate. Environments and the campaigns and operations conducted within them will involve a myriad of varied complexities facing the commander. These will involve a range of adversaries and threats (from insurgents, criminal organisations and conventional enemies), and the need to support, secure and help develop indigenous civilian populations. In attempting to understand and prepare for these challenges, the following should be noted:

a. All major operations combine offensive, defensive, enabling and stability activities executed simultaneously at multiple echelons. Commanders must be prepared to adjust their plans to suit the tactical

demands at any given time.

b. The operating environment evolves over time and changes due to military operations.

c. Operations conducted during one phase of a campaign or major operation directly affect subsequent phases. Commanders should conduct current operations in a manner that sets the conditions necessary for future operations – and ultimately for achieving operational objectives.

d. Major operations may be conducted not only to defeat the enemy but also to establish a stable peace. The military plays a large role in this effort, even after combat operations have ended. Establishing a stable peace after a violent conflict may take longer and be more difficult than defeating enemy forces. It will demand that military forces work in close coordination and cooperation with other agencies for they are more suited to addressing systemic causes of instability and conflict. Such interagency cooperation and the addressing of root causes to violent conflict will be key to long term success and provide the campaign a vital advantage over the adversary.

e. In any campaign or major operation, changing conditions require land forces to adapt their tactics, techniques, and procedures. To be successful, leaders must develop learning organisations that collect and share best practices and lessons learned. For example, during a security campaign, units may have to learn to operate at lower, more independent levels of command and commanders conducting offensive activities may take extra precautions against creating collateral damages and seek to enhance operations with PsyOps messages in order to maintain support from indigenous civilian populations.

f. **Situational Understanding**. Successful operations require commanders to understand the operational environment and, in many cases, its indigenous civilian population. Being aware of the various factors in an operational environment gives situational understanding, which is defined as: the knowledge of the elements in the battlespace necessary to make well-informed decisions.(NATOTerm)[9] **Situational understanding** (vice just awareness) is a commander's judgement applied to situational awareness (SA). There will be many factors or elements in an operational environment but the commander must perceive and judge which ones influence the immediate situation and the achievement of objectives and the attainment of the end state. The commander must then decide how to work with, exploit, avoid, neutralise or otherwise affect these factors to help achieve the objectives and end state. Understanding may be considered the perception and interpretation of a particular situation in order to provide

[9] AAP-39, *NATO Handbook of Land Operations Terminology* defines situational awareness as follows: *The knowledge of the elements in the battlespace necessary to make well-informed decisions.* (Not NATO agreed.)

the context, insight and foresight required for effective decision-making.

Fighting Power

1060. Fighting power is the sum total of a military force's capabilities to conduct operations. It is composed of three distinct, but closely related, components:

a. A conceptual component that includes theories of conflict and doctrine at all levels.

b. A physical component that consists of troops, training and equipment.

c. A moral (or psychological) component that consists of motivation, esprit de corps, and morale.

1061. All military elements have their own fighting power and the sum total is a force's combined elements and their fighting power. Further details on the concept of fighting power is contained in AJP-3.2, *Allied Joint Doctrine for Land Operations*.

Command and Control of Land Forces

1062. Land operations and tactical activities are planned and conducted in accordance with doctrinal principles, in order to create the effects that will support and build to operational objectives and end states within a campaign. Planning is conducted to ensure that there is a direct supporting link between tactical activities and operational objectives.

1063. Tactical planning supports, and is directly linked to, operational objectives in that it conceives, compares, plans and allocates groupings of tactical activities, in a complementary and harmonised fashion, to realise the objectives. The commander's intent, manoeuvre and area of operations management harmonise the tactical activities and ensure their effects are complementary. This is articulated in a concept of operations. Planning ultimately results in orders that: describe the concept of operations; allocate in detail the tactical activities and tasks to subordinates; and, coordinate the tactical activities. The continuous assessment of the environment, the force's tactical activities and the effects will be a key part to the planning and execution of operations. Common doctrine, concepts, principles and terminology are necessary for the effective application and execution of plans and orders.

1064. Full details on the command and control of land forces in the conduct of operations are contained in STANAG 2199, ATP-3.2.2, *Command and Control of Allied Land Forces*.

CHAPTER 2 – CONCEPTUAL FRAMEWORKS FOR TACTICAL OPERATIONS

SECTION I – INTRODUCTION

2001. The fighting power of a military force is applied through the combat functions to build combat power, which is used to conduct the full range of tactical activities. (See AJP-3.2, Chapter 2.) Tactical activities, through which an operation is conducted, are grouped as: offensive; defensive; stability and enabling activities. In planning campaigns and operations, tactical commanders and staff identify the desired end state and operational objectives that support the end state and then allocate missions and activities that will create the effects to realise the objectives.

2002. In order to give the application of fighting power structure and definition in the achievement of objectives, a number of frameworks have been devised that allow different tactical activities to be conducted in a complementary and coordinated fashion. In addition to the framework for fighting power itself, the conduct of the tactical activities, the forces used to execute them and the effects may be conceptualised through three frameworks (see Figure 2-1):

a. **Geographic Framework:** the arrangement of resources, activities and command and control (C2) architecture within the spatial aspects of the environment. It addresses the “where” and “when” of operations and where forces are organised in an operational environment.

b. **Functional Framework:** the arrangement of activities by functions within the operational environment. The address the “how” of operations – that is, how they will be conducted.

c. **Operational Framework:** the arrangement of tactical activities by purpose and effects within the operational environment. They address the “why” of operations – that is, the purpose or effect that is to be created.

Conceptual Frameworks – How Operations are Conducted			
Fighting Power	**Geographic Framework**	**Functional Framework**	**Operations Framework**
Who? **What is?**	**Where?** **When?**	**How?**	**Why? – the purpose**
	Arranging resources, troops and C2	Arranging Tactical activities	Arranging Effects
Moral Conceptual Physical	Deep, Close and Rear Areas of Operation	Combat Functions Core Functions Tactical Activities	Shaping, Decisive, and Sustaining **Manoeuvrist Approach:** Disruption, Dislocation, Pre-emption Joint Effects: Shape, Engage, Exploit, Protect, Sustain

Figure 2-1: Conceptual Frameworks for Tactical Land Operations

2003. These frameworks are used to conceive, plan, organise and integrate the application of combat power in order to achieve operational objectives. They provide commanders with a conceptual visualisation for the application of scarce resources in order to best create the desired effects within the operational environment. It must be stressed that operations involve much more than opposing military forces and the application of physical fighting power. Although there will remain a requirement for combat operations that only military forces are capable of conducting, objectives will be met within a campaign through a wide array of tactical activities – offensive, defensive, stability and enabling, involving inter-agency interaction, that is, the coordination of both military and non-military elements. It will often fall to the military commander to help formulate these complementary military and non-tactical activities within the conceptual frameworks.

SECTION II – GEOGRAPHIC FRAMEWORK

2004. The geographic framework describes the where and when of employing military capabilities. It includes relationships in time and space by describing actions as deep, close and rear, and by describing areas of operation and their geographical natures. A commander's operating environment[10] will consist of his area of operations (AOO), the area of influence, and the area of interest

[10] An operating environment is defined as: *a composite of the conditions, circumstances and influences that affect the employment of capabilities and bear on the decisions of the commander*.

(AOI). Of these three components of the operating environment, only the area of operations is assigned to the commander by his superior. His assessment will lead him to identify the other components.

2005. The commander must gain and maintain an understanding of his operating environment and all the influences that exist in it – from enemy forces and the terrain to political and social leaders and the civilian population itself - in order to effectively conduct the operations and create effects that support his assigned objectives and ultimately attain the desired end state. Apart from physical characteristics, an operating environment will be influenced and affected by the elements and systems, that is, all the groups of people and individuals within the surrounding environment. All these must be considered in the commander's planning. Additionally, the commander will have to share his battlespace with other instruments of power. Ideally, some form of relationship will be established so that the military may work in harmony and in a complementary manner with these other instruments of power that will be seeking to achieve various objectives.

2006. A military force will project its fighting power throughout its assigned area of operations and has potential to do so throughout its Area of Influence. It may do on both the physical and psychological planes. In doing so however, it may create desired and/or undesired effects in the area of interest.

2007. Tactical activities and their effects are not limited to the physical dimensions of the geographical area of influence. Tactical activities that occur within an assigned area of operations can have effects far removed from the geographic area of operations, area of influence or area of interest. Tactical incidents may even have wide ranging operational and strategic effects. For example, the accidental death of civilians from a particular ethnic group may well cause public outcry, undermine support for the force and its mission, affect the deployment of coalition forces from other nations and engender negative reactions in other countries, particularly those with sympathetic ethnic groups. These remote areas must be viewed as potentially extended areas of interest.

(NATOTerm)

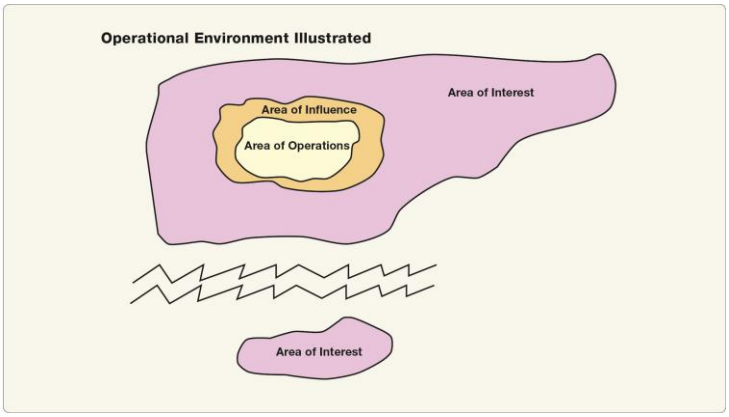


Figure 2-2: An Operating Environment with a Second, Remote Area of Interest

Area of Interest

2008. AOI is defined as: *the area of concern to a commander relative to the objectives of current or planned operations, including his areas of influence, operations and/or responsibility, and areas adjacent thereto* (NATOTerm). This area also includes areas occupied by the enemy, other adversaries and interested neutrals, all of which could jeopardize the accomplishment of the mission.

2009. The understanding of an area of interest must be expanded beyond immediate geographic and temporal concerns. Areas of interest may include areas and regions that are affected by actions in a commander's AOO or conversely, areas and regions in which tactical activities may come to affect events in the commander's AOO.

2010. Limited resources, time and personnel will place limitations on the commander's ability to collect and process information from the entire AI and its scattered influences. The commander must set priorities for monitoring the AI. Too narrow a view of the area of interest could render the force reactive rather than proactive and too wide a view could hinder the force with a glut of irrelevant information.

Area of Influence

2011. An area of influence is defined as: *a geographical area wherein a commander is directly capable of influencing operations by manoeuvre, information activities or fire support systems normally under his command or control* (NATOTerm). Within the area of influence, the commanders can create physical effects through fires and manoeuvre, and they can create psychological effects through the influence of information activities.

2012. At the tactical level the area of influence includes the physical space that a commander can influence with the resources and means at his disposal. Operations within tactical areas of influence are coordinated through the higher commander's intent and operational plan.

2013. At the operational level, the area of influence includes the joint operations area that can be influenced by the military operations within the entire assigned area. Military operations and tactical activities within operational areas of influence are coordinated along lines of operation and within a joint interagency and multinational framework (particularly across multiple agencies) in order to create supporting effects and attain operational objectives and the end state.

Area of Operations

2014. An area of operations (AOO) is defined as: *An area defined by the joint force commander within a joint operations area for the conduct of specific military activities* (NATOTerm). An area of responsibility (AOR) is assigned to strategic level commanders.

2015. An AOO is a permissive control measure that provides freedom of action within defined boundaries and increases flexibility in unit operations. Commanders can, in turn, partition their assigned AOO and assign portions of it to subordinate formations, units and sub-units. The design of an AOO will evolve over time as a result of the continuous assessment process and changing circumstances.

2016. Within an assigned AOO, unless directed otherwise, the commander is responsible for the following:

a. The conduct of operations, to include the full range of tactical activities as required by the tactical and operational objectives and the situation at hand;

b. Coordination of fires;

c. Control of movement;

d. Development and maintenance of installations;

e. Terrain management, to include installations;

f. Force protection;

g. Maintenance of situational awareness across all forces;

h. Area of intelligence responsibility (AIR).

2017. When assigning an AOO to a subordinate the higher commander must ensure that the subordinate unit or formation has the means to influence the situation in that area, in order to create the desired effects and attain the objectives. Higher commanders will often specify constraints, restraints and limitations when assigning an AOO to a subordinate. These are usually depicted as graphic control measures or tasks.

2018. Commanders use graphic control measures to regulate manoeuvre, movement, airspace, fire support, and other aspects of operations within the AOO. Depending upon the situation, graphic control measures may be related to easily identifiable terrain features. It should also be noted that control measures will shift over time and should be continually monitored to ensure they reflect tactical requirements.

2019. Many campaigns and operations will present significant geographic challenges. Many AOOs and enemy situations will not allow for a linear and/or contiguous deployment. Co-ordination, cooperation and mutual support between elements will be more difficult. Mission command philosophy (see AJP-3.2) and the use of well-practised reserves at all levels become increasingly important under such circumstances.

2020. The four recognised types of AOOs are:

a. Contiguous, Linear;

b. Contiguous, Non-Linear;

c. Non-Contiguous, Linear;

d. Non-Contiguous, Non-Linear.

2021. The label of an AOO as linear is decided in relation to a located and identifiable adversary and the terrain. Note that in situations in which subordinate areas of operation are assigned in a non-contiguous fashion, the higher headquarters is still responsible for operations in those areas not assigned to lower formations or units.

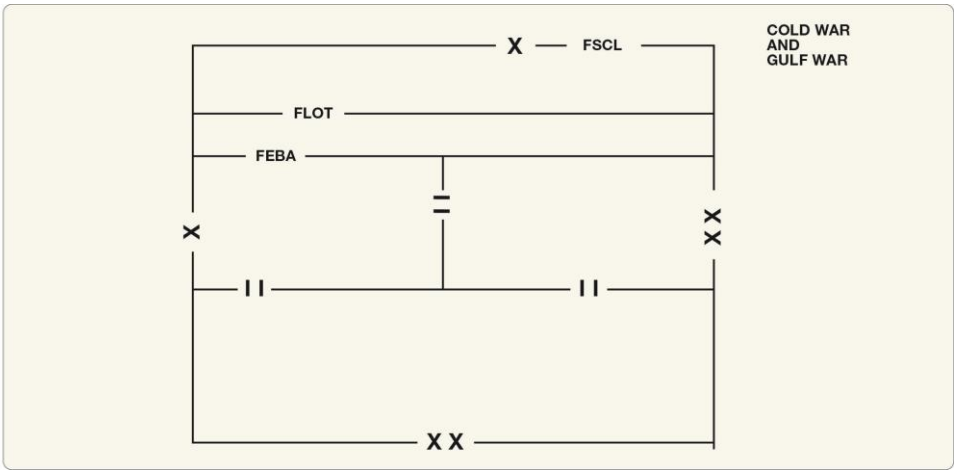


Figure 2-3: Contiguous-Linear Areas of Operation

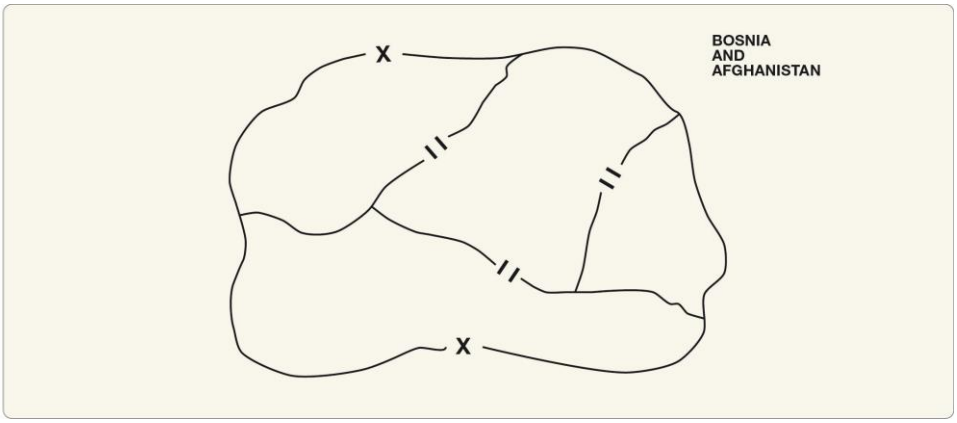


Figure 2-4: Contiguous and Non-Linear Areas of Operation

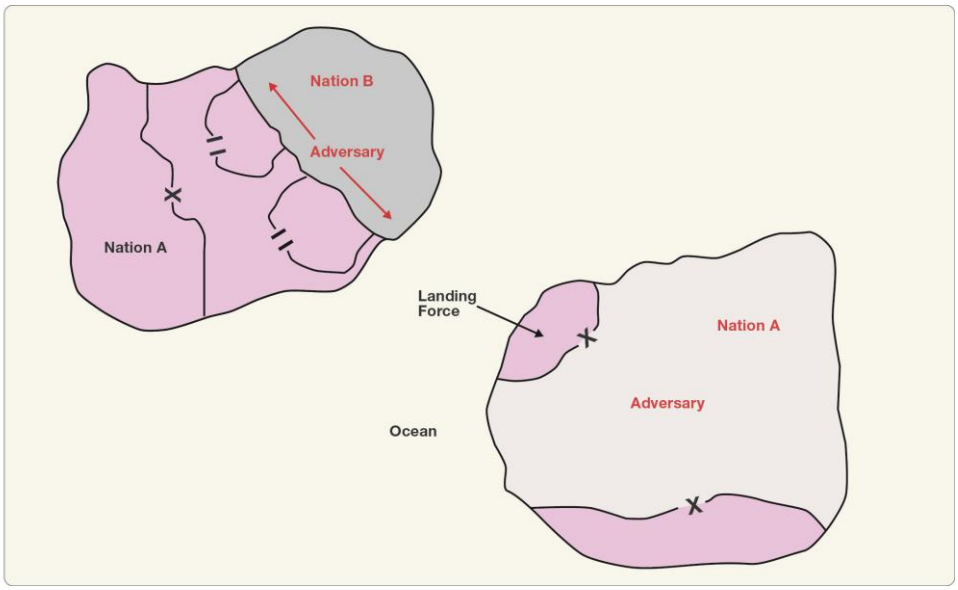


Figure 2:5: Non-Contiguous, Linear Areas of Operation

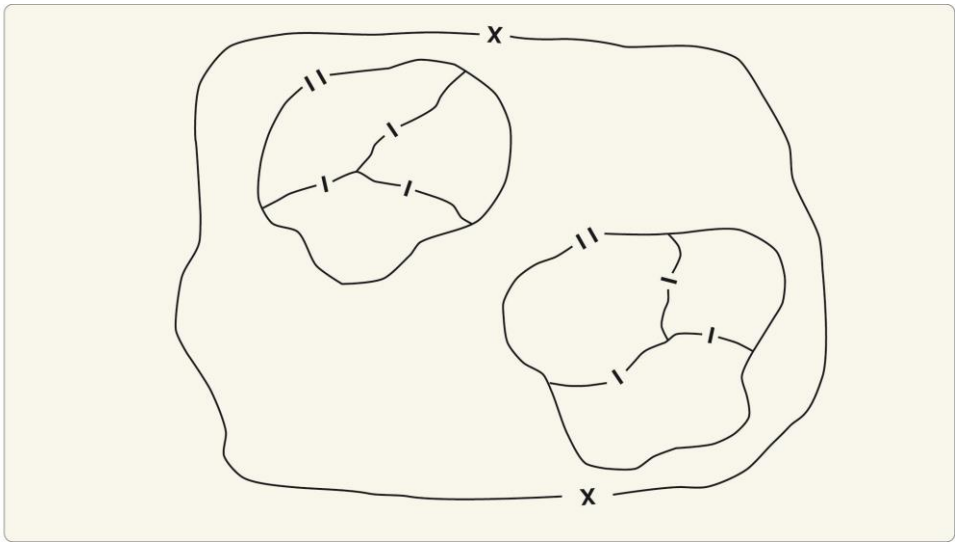


Figure 2-6: Non-Contiguous, Non-Linear Areas of Operation

2022. A commander will be assigned an AOO within his higher formation's AOO. His estimate process will lead him to decide the configuration of his own AOO, which may differ from the configuration of the higher commander's AOO. For example, a battalion commander may assign his manoeuvre sub-units AOOs such that he or she has a contiguous AOO. Following an estimate, one of the sub-unit commanders may assign each of his platoons separate AOOs centred on specific villages with unassigned areas in

between. The commander has thus created a non-contiguous AOO but he or she remains responsible for operations in the areas not assigned to his sub-sub-units.

2023. Factors affecting the assignment of AOOs will vary by mission. Apart from geography, there are a wide range of factors that must be considered in the assignment of AOOs:

a. Mission;

b. Assigned and implied tasks;

c. Targets and desired effects on those targets;

d. Terrain;

e. Enemy/adversaries;

f. Time and space (particularly in terms of size of AOO, threat and movement capabilities);

g. Cultural boundaries;

h. Linguistic boundaries;

i. Political and/or judicial boundaries;

j. Tribal, historic, ethnic and/or religious boundaries;

k. Need for an economy of force;

l. Capabilities of own troops to influence the assigned AOO, to fulfill assigned missions and tasks and to create desired effects and conduct required tactical activities;

m. Presence of other agencies in the region, with their own objectives.

2024. In non-contiguous AOOs there will be areas that are not assigned to subordinate commanders. The commander remains responsible for these areas and for operations within them. He or she determines what resources will be assigned to monitor and influence these areas when required.

Deep, Close and Rear –Activities in Space and Time

2025. Within the battlefield framework the concept of deep, close and rear operations exist. They describe the placement of forces and the conduct of operations and activities in terms of space and time, in terms of where and when they occur in the battlespace.

a. **Deep Operations.** Deep operations are: operations conducted against forces or resources not engaged in close operations. They expand the battle area in time and space, help to shape the close battle, make it difficult for the enemy to concentrate combat power without loss, and diminish the coherence and tempo of his operations Deep operations are those operations conducted at long range and over a protracted timescale, against enemy forces or resources not currently engaged in close operations. They may be decisive operations, but in general they will be shaping. For example, a deep target engagement

may reduce the combat effectiveness of the enemy's reserve force prior to the main attack. At each level of command, the extent of the deep operations and related area is dependent upon the commander's means of acquiring information and engaging targets. Deep operations include three principal activities: information activities (such as psychological operations and public affairs); surveillance and target acquisition; and interdiction. They may be conducted physical and psychological reasons, the latter seeking to create long term influences in a target audience. This may include, for example, delivering PSYOPS leaflets to weakened enemy reserve units or to a general civilian population;

b. **Close Operations.** Close operations are operations conducted at short range, in close contact and in the immediate timescale. Close operations are those that involve friendly forces in direct contact with the enemy or operations in which commanders anticipate direct contact taking place. The means used in close combat could range from physical destruction with lethal weapons to detention. They may be shaping, decisive and even sustaining operations of forces in contact. Combined arms coordination is the hallmark of close operations. Close operations will normally consist of physical tactical activities but may consist of information activities. For example, a firepower demonstration may convince a belligerent commander not to manoeuvre his forces from a cantonment site, and a medical treatment facility for the local populace will immediately engender good will and local support. Close operations consisting of complementary physical and information activities may occur, such as the use of a demonstration and false radio traffic just prior to an attack, or the use of flyers to convince a populace to flee an area before an attack;

c. **Rear Operations**. Rear operations are the largely administrative and logistic activities that occur out of contact with enemy forces, that is, behind the area in which close operations are occurring. Rear operations require security, particularly in campaigns involving an asymmetric, unconventional adversary. In all situations there is a need to secure lines of communication but this may require extra emphasis in planning and resource allocation in non-contiguous and/or non-linear areas of operation (that is, in areas with no identifiable rear area). Considerations for rear area security will focus on these lines of communications and other areas that are not manned by combat forces. Rear operations including the security aspect are normally viewed as sustaining operations.

2026. Deep, close and rear operations will occur simultaneously and should be complementary to one another and the overall plan. Rear operations will be continuously prosecuted as needed. Deep operations are normally conducted at division level and above for this level of formation has the resources to conduct close and deep operations simultaneously. Deep operations may be a specific line of operation within a campaign.

2027. Deep operations are not future operations but occur at the same time as close operations and are generally to be considered shaping operations. Deep and close operations may also be identified in terms of time, for both execution and planning purposes. This will depend upon the level of the formation and the nature of the campaign. In conventional, manoeuvre-based campaigns, it is measured based on when the formation's forward line of own troops (FLOT) will engage the enemy forces in question:

a. At brigade level:

(1) Close operations will be against those enemy forces currently in contact with the forward line of own troops (units);

(2) Deep operations will be against those enemy forces that will be encountered by forward troops (units) forward line of own troops (units). In many conventional campaigns, brigades will not have the combat power to conduct deep operations at the same time as close operations;

b. At divisional level:

(1) Close operations will be against those enemy forces that are currently in contact with the forward line of own troops (brigades);

(2) Deep operations will be against those enemy forces that will be encountered by the forward troops forward line of own troops (brigades);

c. At corps level:

(1) Close operations will be against those enemy forces that are currently in contact with the forward line of own troops (divisions);

(2) Deep operations will be against those enemy forces that will be encountered by the forward troops forward line of own troops (divisions).

Layout of Formation Boundaries

2028. As forward boundary of an echelon to divide responsibilities between it and its next higher echelon often serve phaselines or coordination lines. Decisive or shaping operations directed against enemy forces beyond those lines are the responsibility of the next higher echelon. The higher echelon headquarters normally decides about those lines based on the higher echelon's scheme of maneuver and the ability to acquire and attack targets.

2029. The rear boundary defines the rearward limits of the unit's area. It usually also defines the start of the next echelon's rear area. Lateral boundaries extend from the rear boundary to the unit's forward boundary.

2030. Figure 2-7 illustrates a corps area of operations with non-contiguous divisional areas of operation.

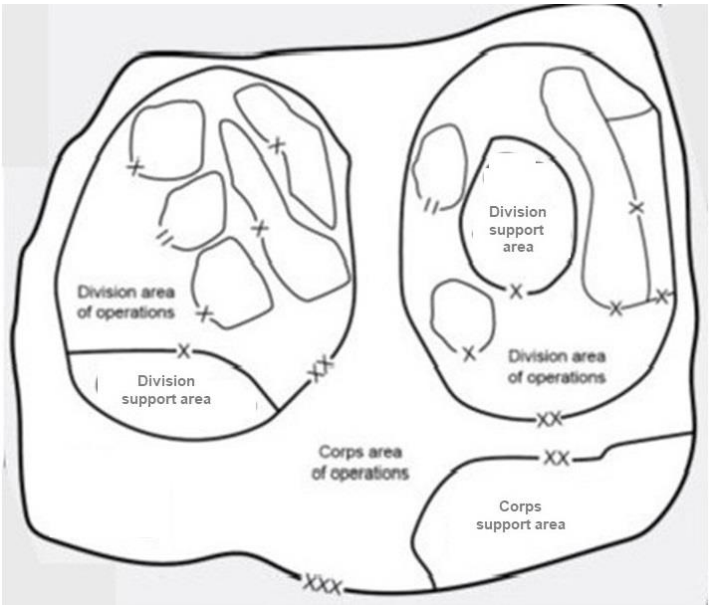


Figure 2-7: Corps Area of Operations with Non-Contiguous Divisional Areas of Operation

Information as Part of the Geographic Framework

2031. The geographic framework is very much viewed in geographical terms and as such includes the people – audiences – that live in those areas or are connected to them. By extension then, the areas of operation, areas of influence and areas of interest must include audiences that will be affected by operations including those tactical activities that seek to support a campaign and its objectives through the use of information and messaging.

2032. Assessment of the geographic framework elements must therefore include an assessment of not only the enemy and terrain, but also the social, cultural and indigenous aspects. This will help ensure that all operations – be they a physical engagement or a psychological engagement (through information activities) – are considered together and in relation to one another.

SECTION III - THE FUNCTIONAL FRAMEWORK: COMBAT FUNCTIONS, CORE FUNCTIONS AND TACTICAL ACTIVITIES

General

2033. Details of the functional framework are discussed in AJP-3.2, Allied Joint Doctrine for Land Operations. While the geographic framework gave a spatial and temporal description and organisation to the resources, C2 and tactical activities within the environment, the functional framework describes the organisation of tactical activities in terms of the function, in relation to one another. This framework used the functions in combat and the core functions to describe tactical activities by their function.

2034. Combat functions consist of: command; intelligence; fires, manoeuvre, protection, information activities and sustainment. Further organisation and description of tactical activities may be described using the core functions. The core functions describe activity functions in relation to one another. Core functions are: find, fix, and strike with exploit an implied function. The full range of activities will support the conduct of any campaign and major operation and consists of the following: offensive activities, defensive activities, stability activities and enabling activities. Together, these functional descriptors comprise the functional framework. The functional framework is means of conceptualising and articulating the plan for an operation. It is a framework for manoeuvre and may be applied to both physical activities and information activities. See AJP-3.2 for detail and context.

The Combat Functions

2035. The combat functions are: an analytical tool for commanders and staff that provides a complete description of all the functions that military organisations do in planning, conducting and consolidating operations.

2036. They describe the tactical responsibilities or functions that must be fulfilled so that forces on the battlefield may meet their objectives. They provide a broad and complete description of battlefield functions for the planning and the conduct of operations through the grouping and tasking of forces. They are not constrained by consideration of arm or service (for example, an infantry force may be assigned a task to conduct patrols to collect information for the production of intelligence). By considering these functions, commanders may ensure that they are addressing all necessary considerations for operations in their planning for, and conduct of, operations. They are part of a common military vocabulary for land operations.

2037. The combat functions facilitate the manoeuvrist approach. The ability to implement a manoeuvrist approach to operations depends upon: the exercise of an appropriate philosophy of command; production of intelligence; the application of fires and manoeuvre; the protection of friendly forces; the use of information activities; and the provisionof sustainment to forces. While therelative importance of the combat functions may vary according to the purpose of an operation, together they form a coherent whole – the basis of a balanced force's combined capabilities.

2038. Combat functions constitute the functions or the ways through which a military force applies its fighting power in the conduct of finding, fixing, striking and exploitation of the enemy (the core functions). Land forces pre-empt, dislocate and disrupt by fixing and striking the enemy through application of the combat functions. They may be applied to both physical and information activities.

2039. Combat functions comprise the following (details of each function are discussed in subsequent sections below):

a. **Command.** Command is defined as: *The authority vested in an*

individual of the armed forces for thedirection, coordination and control of military forces (NATOTerm). Command integrates all the other combat functions into a single concept to create the desired effects that support planned objectives.

b. **Intelligence.** Information is processed data of every description that may be used in the production of intelligence. Intelligence is defined as: *the product resulting from the directed collection and processing of information regarding the environment and the capabilities and intentions of actors, in order to identify threats and offer opportunities for exploitation by decision-makers* (NATOTerm).

c. **Fires.** Fires are defined as: *the use of weapon systems to create a specific lethal or nonlethal effect on a target* (NATOTerm). It includes all weapon systems including electronic warfare and cyberspace related systems. As a combat function fires provide the targeting, integration and employment of those weapons to create desired effects. They will have physical effects or psychological effects (such as lowering morale), either directly or indirectly. Careful planning and application is required as fires may have negative effects such as collateral damages, and thus create a negative influence on the overall operation.

d. **Manoeuvre.** Manoeuvre is defined as: *employment of forces on the battlefield through movement in combination with fire, to achieve a position of advantage in respect to the enemy in order to accomplish the mission* (NATOTerm). It is the means of concentrating land forces at the decisive point to pre-empt, dislocate or disrupt enemy cohesion through shock, surprise, destruction or any other intended effect against enemy capability. The psychological impact of effect manoeuvre against an enemy force may include uncertainty, confusion and paralysis. Manoeuvre involves trade-offs: speed and audacity against security; breadth against depth; and concentration against dispersion. A commander must weight each of these characteristics carefully and select the scheme of manoeuvre that will best achieve the objective. A degree of risk and audacity is implicit.

e. **Information Activities.** Information activities are actions designed to affect information and/or information systems and can be performed by any actor and include protective means. (See AJP-3.10, *Allied Joint Doctrine for Information Operations*) They affect the character and behaviour of a person or group as a first order effect by providing information to help influence perceptions and understanding. Information activities may affect enemy information related capabilities through a physical attack, therefore, they are categorized under fire or manoeuvre methods. They also include the use of information in the form of a message to affect target audiences' understanding and will. It employs PsyOps capabilities, and public affairs capabilities along with any other means used to create a message. They can range from the protective dress code of soldiers on patrol to firepower

demonstrations, to PsyOps posters. Such activities are key to supporting the broad messages of strategic communication and to communicate the legitimacy of an operation.

f. **Protection.** Protection is the means of preserving the fighting potential of a force so that it can be applied at a decisive time and place. Protection as a combat function may result in a variety of tactical considerations to counter threats (such as guard or screen tasks) and it includes force protection of military forces and operations security (OPSEC). Force protection is defined as: *all measures and means to minimize the vulnerability of personnel, facilities, equipment, materiel, operations, and activities from threats and hazards in order to preserve freedom of action and operational effectiveness of the force, thereby contributing to mission success* (AJP-3.14)). Operations security is defined as: *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* (NATOTerm). The combat function of protection includes the legal and moral requirement to protect non-combatants and other agencies operating in the operational environment, particularly those working in concert with military forces.

g. **Sustainment.** Sustainment is the combat function that provides for personnel, logistics and other support required to maintain and prolong operations until successful mission accomplishment. It integrates all aspects of service support to help generate and sustain military capability. It encompasses logistical issues such as supply, maintenance and medical and health support and also broader issues such as deployment from national bases, relief, and redeployment support. It also includes the support roles of military engineers such as infrastructure and water supply. It includes combat service support (CSS) which is defined as *support provided to combat forces, primarily in the fields of administration and logistics* (NATOTerm). Sustainment influences the tempo, duration and intensity of all operations. Thus it influences the planning and execution of operations at every stage. Sustainment must be considered at the theatre level as well as the tactical level.

Combat Function: Command

General

2040. Command is the combat function that integrates all the combat functions into a single comprehensive tactical level concept to create desired effects in support of objectives. It provides vertical and horizontal integration through the planning, direction, coordination and control of military forces and other elements as allocated. It provides the means to unify and integrate the tactical activities in the finding, fixing, striking and exploiting of enemy forces or other elements.

2041. The central component of the command function is a mission command philosophy. Mission command emphasizing the importance of formulating and communicating the commander's intent, along with the assignment of subordinate tasks in line with that intent. A thorough understanding of the intent guides decision making at all levels, and encourages both initiative and speed of action. It guides the actions of commanders even as a situation changes and original tasks become irrelevant – in such situations a subordinate will still be able to act in line with the commander's intent. Therefore, it provides for a unity of purpose and effort on the vertical and horizontal planes and even between the military and other agencies.

2042. **Elements and Principles of Command**. Full details on the command of forces is given in ATP-3.2.2, *Command and Control of Allied Land Forces*.

a. The key **elements of command** are:

(1) **Authority.** Authority is the delegated power to issue orders or enforce compliance. It includes responsibility, accountability, and delegation.

(2) **Decision-Making.** Decision-making is selecting a course of action as the one most favourable to accomplish the mission and achieve objectives. It translates the commander's visualization into effective action. Staff assist and advise the commander in decision making.

(3) **Leadership.** Leadership is the ability to influence people by providing purpose, direction, and motivation while operating to accomplish the mission and improving the organisation. It combines personal example, persuasion, and compulsion and involves a force of will. It is a commander's primary responsibility, but it is also a responsibility of every military superior.

(4) **Control.** Control involves the continuing oversight, direction, and coordination of assigned subordinate forces. It is largely the duty of the staff, although commanders attend to some critical aspects themselves.

b. The **principles of command** are:

(1) **Unity of Effort.** Unity of effort ensures all elements of a command work towards a common goal. The use of mission command reconciles the absolute requirement for unity of effort at all levels with decentralization of execution by emphasizing the commander's intent.

(2) **Decentralized Execution.** Decentralized execution allows and requires subordinates to use their initiative to make appropriate decisions to foster their higher commander's intent.

(3) **Trust.** Trust goes up and down the chain of command; like respect, it must be earned. Subordinates more willingly exercise the initiative required in mission command with trust.

(4) **Mutual Understanding.** Mutual understanding, shared vertically and horizontally assists unity of effort. Commanders can aid mutual understanding by using a demeanour and personal mannerisms that

reinforce, or at least do not contradict, the spoken message. Units develop the ability to communicate nonverbally through familiarity and a shared philosophy and experiences.

(5) **Timely and Effective Decisions and Actions.** Making and communicating decisions faster than the enemy can react effectively provides the commander the means to create a tempo with which the enemy cannot compete. Decision-making during operations includes knowing how and when to adjust previous decisions.

Components of Command: The Commander and Command Support

2043. The exercise of command has two components: the commander and command support. They are described below;

a. **Commander.** At all levels, the commander is the key individual in command and control (C2). He or she combines the art and science of warfare. He or she creates a positive command climate to inculcate and foster trust and mutual understanding, trains his subordinates in C2, and, using the command support, exercises C2 to direct the conduct of operations.

b. **Command Support.** Command support is the personnel, leadership, organisational structure, equipment, and doctrine components combined as an integrated system at all levels of command to manage resources and provide situation awareness (SA) and knowledge for commanders and staffs to plan, prepare for, execute, and assess operations. A commander cannot exercise C2 alone except in the simplest and smallest of units. At every echelon of command, command support provides that requirement.

2044. The elements of command support are detailed in ATP-3.2.2, *Command and Control of Allied Land Operations* and are summarized below:

a. **Information Management.** Information management (IM) consists of the communication support systems (including hardware and software), and relevant information, including databases.

b. **Personnel.** The leadership of personnel is key to successful command. Since combat involves military personnel, the commander bases his exercise of C2 on human characteristics rather than on equipment and procedures.

c. **Equipment.** Equipment and facilities provide sustainment and a work environment for the other elements of command support

d. **Doctrine.** Common doctrine must exist horizontally and vertically across the command to harmonise activities. This includes low level procedures, which are standard and detailed sequences of activities to accomplish tasks. They govern actions through command support to more effectively and efficiently exercise C2. Adhering to procedures minimizes confusion, misunderstanding, and hesitance.

e. **Organisation.** A sound organisation that is well rehearsed and

practised in effective command and control, is essential for operational effectiveness. Flexibility should be inherent in organisational structures so that combined arms operations may be undertaken with minimal difficulty. This requires sound and shared doctrine, particularly well-practised procedures to allow rapid grouping and re-grouping.

2045. In order to exercise command and control effectively, a commander must be aware of the command relationships that exist between him and the formations and units allocated to him for his mission. These terms and definitions are concerned primarily with the ability of the commander to assign an independent mission, to reorganise the assigned forces to suit his purpose or to direct specific tasks. The relevant terms are listed and defined in NATOTerm and ATP-3.2.2, *Command and Control of Allied Land Operations*.

Command Authority and Responsibility

2046. **Authority and Responsibility**. Command is the authority vested in an individual for the direction, coordination and control of military forces. A commander exercises that authority over his subordinates by virtue of his appointment. That authority, which derives from law and military regulations, is accompanied by the acceptance of his responsibilities, which cannot be delegated.

2047. **Exercising Command**. The exercise of command is primarily concerned with the planning and decision process. The process must be both dynamic and multidimensional and will have to permit decisions about current operations to occur simultaneously with decisions and planning about future operations. Time and information available are the major factors in this process and there is always a need to reach a timely decision in relation to an opponent's own decision-action process if the initiative is to be gained or retained. Commanders and their staffs must therefore aim to operate within the enemy's decision cycle. The exercise of command will, however, be undermined in the absence of any one of three essential components: information, control and communications. In simple terms a and monitor the tactical activities of forces and assets, and communications to carry and promulgate information, thus enabling a commander to continue to make and implement decisions towards a common purpose.

2048. **Direction**. A commander issues directives, orders and instructions both before and during operations. Where possible, these orders should be given personally, and often they will be confirmed in writing. Once operations commence, it will be normal for the commander to make any necessary adjustments to his plan by short, clear orders, often by radio or trunk communications including electronic data processing.

2049. **Role of the Commander**. The role of the commander is expressed in terms of a number of functions to be performed, and each specific function varies with the level of command and the forces available. The role of the commander includes the following (for full details see ATP-3.2.2):

a. **Commander in the Operations Process.** The commander plays a key

role in leading the operations process and giving clear direction to supporting staff. This function includes:

(1) A clear understanding of the superior commander's intent and desired end state;

(2) A sound assessment of the situation;

(3) Provision of detailed planning guidance to staff;

(4) Timely decisions to allow detailed planning to occur;

(5) Assignment of missions to subordinates to create the required effects to achieve the desired objectives and allocation of resources in line with allocated missions and the main effort.

b. **Foster a Positive Command Climate.** The commander, during training and operations, must foster a positive relationship amongst the staff and subordinates in order to create a high level of mutual understanding and trust, forthright discussions, and collaborative work.

c. **Train Subordinates in Command and Control.** A successful commander requires successful subordinates and thus a commander must ensure that subordinates are fully trained to act effectively in accordance with a superior's intent, and to fully exercise their responsibilities of command and control.

d. **Command during Operations.** Commanders must make their presence be felt during the conduct of operations, and be responsive to a changing situations. They must direct forces and adapt plans as the situation develops and more information becomes available. They must also ensure that forces remain sustained in line with the scheme of manoeuvre and main effort. They should command from the point of main effort, where their presence will be most felt or is most needed and must always look to motivate forces.

e. **Leadership.** Superimposed over all these functions is the commander's leadership.

Staff Support to the Commander

2050. The staff exists to provide advice and assistance to the commander and provide support to subordinate commanders and theirv staff. The staff has no authority within itself; it derives authority from the commander and exercises it on his behalf.

2051. The essential role of the staff is controlling and the two main functions are coordinating and monitoring. It has to gurantee that the employed control measures do not impede on the freedom of action of the subordinate commanders. Within the first function of coordinating, the staff supports the commander by gathering, processing and presenting information in a manner that assists the commander by selecting a particular course of action. Following this, the staff is responsible for the detailed planning, preparation and dissemination of control measures normally promulgated in the form of orders. For the second and overlapping function of monitoring, the staff provides the dynamic feedback essential for preparing and making timely decisions.

Combat Support and Combat Service Support

2052. Most combat support (CS) and CSS will provide input to the commander and to planning through their relevant staff branch, such as transport through the G4. A number of specific, specialist arms and services will directly advise the commander. They may not be staff positions within the formation HQ but will

be subordinate commanders or leaders responsible to act as arms or specialist advisors to the formation commander. Examples include:

a. Joint Fires;
b. Engineer;
c. Aviation;
d. Air Defence;
e. Military Police (MP);
f. Countering-improvised explosive devices (C-IED)[11]
g. Legal;
h. Public Affairs;
i. Religious Affairs;
j. Medical;
k. PsyOps;
l. Reconnaissance or other intelligence, surveillance, target acquisition and reconnaissance (ISTAR) -related forces.

2053. In addition to specialised advisors, a headquarters staff may also include civilian experts who may advise the commander regarding the local region, its politics, its economics and its culture and religion.

[11] AJP-3.15 Allied Joint Doctrine for Countering-Improvised Explosive Devices;

2054. It should be noted that the G3 staff branch supervises the conduct of all operations including information activities while all other staff branches support the G3 branch and the execution of operations. Therefore, the G3 staff branch is responsible for the conduct of all operations. Staff officers responsible for supervising and advising on activities such as PsyOps, deception, and the related public affairs, should be within the G3 branch (G5 for planning). Commanders of capabilities for specific information activities, such as a PsyOps detachment commander, are considered line commanders and will command their elements in the conduct of missions and they will provide advice directly to the commander as necessary.

Combat Function: Intelligence

General

2055. Intelligence is the combat function that provides commanders a comprehensive analysis, understanding of the operating environment and situational awareness in order to support them by helping identifying conditions required to attain desired objectives, avoiding undesired effects and assessing the impact of adversary, friendly and neutral actors on

commanders' concept of operations. This includes to produce intelligence in respect to requirements of commanders that considers adversaries, neutral actors, local population, ethnics, political conditions, economical influences, infrastructure, information systems, the weather, physical terrain etc. Based on the commander's information requirements, any force can be tasked – specifically or as a general, standing requirement – to collect information that can be processed and turned into the intelligence product. The staff, particularly the intelligence staff, must be capable of assessing the information available and providing the intelligence and advice that is relevant to the commander's requirements. However, it remains a command responsibility to provide proper direction to the intelligence staff. This is done in dialogue between the senior intelligence officer and the commander by establishing the prioritized intelligence requirements (PIR), which form part of his critical information requirements.

2056. In considering and assessing the operating environment, the intelligence must not only examine the physical characteristics of weather and terrain, but also the broad range of other systems, entities and power structures that exist and operate in the environment. The interrelated factors of an environment that must be assessed and processed to intelligence, are the political, military,

economic, social (including cultural aspects), infrastructure, and informational. The success of campaigns will rely upon the requirement to understand, work with, and influence these entities in order to ensure their support of the campaign and to separate the adversary from them. The scope of the combat function intelligence must be broad in order to firstly, provide the commander with a broad and deep understanding of the operating environment and its constituent elements, and secondly, to assess the effects of tactical activities across all elements within the operating environment.

2057. The combat function intelligence is operationalised through ISTAR system, discussed in detail below.

2058. Intelligence is a product of the collection and processing of information. It begins with an assessment of what intelligence exists and what still needs to be collected to support the commander. Thus a formal process – known as the intelligence cycle – is employed.

2059. The starting point for the entire intelligence cycle is for the commanders to set out his requirements for the intelligence they needs to make his plan and execute it. They will need to augment and amend these requirements as his plan develops. This is continuous, cyclical process, which must receive the commander's personal attention. His intelligence staff converts this requirement into collection requirements, which are distributed to obtain either processed intelligence or data, information and ISTAR results, which the intelligence staff can fuse into fused intelligence for the commander. The cycle can therefore, be divided into four principle elements:

a. Direction;

b. Collection;

c. Processing;

d. Dissemination.

2060. The dissemination of intelligence to users applies not only to the finished product, but also to the passage of information and partially processed intelligence between ISR capabilities, agencies, and staffs.

2061. The intelligence cycle is supported through the tasking and integration of collection capabilities at every level. Tasks may be allocated to any force element in addition to those collection capabilities that are dedicated for information collection. These may range from an infantry section tasked to conduct a reconnaissance patrol to a dedicated unmanned aircraft system (UAS) surveillance system for reconnaissance or surveillance to specialized capabilities of intelligence collection disciplines like human intelligence (HUMINT) or signals intelligence (SIGINT). If commanders lack their own resources they can request additional collection resources or ask for the information to be provided by a higher or peer headquarters.

2062. Together, these collection capabilities to collect and exploit data and information and feed the intelligence cyle with ISTAR results, is known as the ISTAR system.

Intelligence, Surveillance, Target Acquisition, and Reconnaissance

2063. **General**. ISTAR is a system that integrates those assets and capabilities that collect data and information and then executes the exploitation to provide ISTAR results to the intelligence cycle. It is simply a coordinated group collection capabilities that help to fill gaps in knowledge to enable the intelligence staff to provide a commander with situational awareness and understanding. ISTAR is guided by tasks based on the commander's information requirements. It is guided by tasks based on the commander's information requirements. When effectively integrated, individual ISTAR activities will create an intelligence synergy and thus, provide a dynamic and continuing process of collection, processing and dissemination. National requirements, doctrine, political constraints and agreement between allies determine the level, intensity, and means, by which these tactical activities take place within a coalition.

2064. **Concept**. The ability to quickly obtain information on the composition, deployment activities and capabilities of an enemy force, the terrain, and meteorological data, and regarding other entities, influences and aspects (political, civil, cultural, economic, etc) within the environment is essential to the successful execution of tactical activities in support of operational objectives. The appropriate processing of this information will yield valuable intelligence and target information which the commander can allocate forces and resources, determine target priorities and establish the right conditions

before commencing operations. The component parts of ISTAR are closely linked and often overlap. Together they involve:

a. **Area, Point and Target Surveillance.** Continual surveillance of a specific area, point or individual target provides for the collection of general information on an enemy or other adversary or situation in general. It may be used for the collection of information for assessment, or may be used as a trigger for the commitment of forces. It may be use to:

(1) Provide basic information on deployment, activity levels, capabilities, and overall intentions;

(2) Provide pattern of life information regarding a particular individual or group that plays an influential role in the environment.

(3) Cue reconnaissance and target acquisition resources on any requirement to investigate specific items or to obtain more detailed data/information on a particular observation;

(4) Provide limited security to friendly forces through early warning of enemy activity within gaps, on exposed flanks or in rear areas. It may be used in support of friendly forces, in either an overt or covert manner;

(5) Assist in initial recognition and identification;

(6) Counter targeting by adversaries, particularly those that conceal themselves amongst a local populace.

b. **Reconnaissance in Depth.** Reconnaissance in depth aims to provide detailed information in areas beyond the range of direct fire weapons. It can be initiated as the result of area surveillance or by intelligence deductions. It may involve:

(1) The identification of known or suspected enemy forces and other adversaries including composition and activities;

(2) The acquisition of targets for air, aviation, and indirect weapons systems;

(3) The location and tracking of specifically targeted enemy units, elements, or activities;

(4) The confirmation of terrain features and ground conditions.

c. **Combat Reconnaissance.** Combat reconnaissance satisfies the requirements for both combat information and target acquisition essential for troops in or near contact with the enemy;

d. **Target Acquisition.** Target acquisition is defined as: *the detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons* (NATOTerm). The targeting cycle must be closely supported by the ISTAR collection process and means. Targeting input to the intelligence collection plan provides a focus for the management of detection systems. The input will identify priority targets, how they might be detected and whether target tracking is required. Target acquisition must include the targeting of other entities and systems within an environment, in addition to an enemy force. Such target acquisition will seek out targets for the application of information activities in order to influence understanding, perceptions, and will in order to highlight legitimacy and engender support for the coalition and its campaign. These targets may be broad audiences, specific individuals, certain power structures, or specific groups. Target acquisition will include:

(1) **Target Acquisition for Direct Fire Weapons.** This is normally associated with a specific weapon. Such a target acquisition system provides essential combat information on an enemy that has already been detected, located, and may now be engaged;

(2) **Target Acquisition for Indirect Fire Weapons.** This is normally a data or information collection means operating either beyond the line of sight of the weapon system. It provides information to one or more indirect weapon systems;

(3) **Target Acquisition for Information Activities.** In order to prosecute information activities and to influence target audiences in desired manners, key individuals, nodes, social entities and systems and

power structures will have to be identified in order to facilitate the legitimacy and acceptance of any messages that seek to inform, influence, or persuade. These targets should be included in the same targeting process as other targets so that engagements are planned and conducted in a complementary fashion.

Principles and Planning of the Employment of ISTAR Capabilities

2065. **Principles**. The provision of information by ISTAR capabilities available to a commander should be controlled and coordinated at the highest level practicable in order to ensureeconomy of effort in covering critical areas. Some overlap will, however, be built into a surveillance plan to provide confirmation, avoid deception and defeat adversary OPSEC measures. Despite centralised control and tasking, ISTAR assets must be responsive to the requirement of lower-level commanders, particularly during campaigns short of major combat in which information regarding entities in the local environment will affect tactical level commanders. The following are important principles:

a. ISTAR systems employed should complement each other in terms of:

(1) Space – to ensure all areas of interest are adequately covered, enabling the detection of enemy signatures by the use of complementary systems;

(2) Time – to ensure constant coverage;

(3) Interoperability – wherever possible; and

(4) Variety – different disciplines, such as human intelligence (HUMINT), imagery intelligence (IMINT), signals intelligence (SIGINT), and acoustic intelligence (ACINT), to ensure full coverage despite enemy operations security (OPSEC) measures.

b. Real-time and near real-time ISTAR systems must be closely linked to responsive weapons systems to ensure timely, effective engagement, provide post-strike analysis, avoid duplication, and allow speedy re-tasking of ISTAR systems to find new targets;

c. ISTAR systems must be intimately linked with the intelligence system/cycle to ensure that maximum benefit is derived from information provided;

d. Exploitation and dissemination systems associated with ISTAR assets must provide the best possible resutl in a timely manner and in a readily usable format;

e. ISTAR systems must be tasked in such a manner as to emphasize particular strengths (such as the ability to provide real-time or near real-time information) while minimizing potential weaknesses (such as vulnerability to some enemy countermeasures);

f. ISTAR systems must be provided an appropriate degree of security and protection in order to ensure their survivability, effectiveness and efficiency;

g. A reserve should be maintained in ISTAR capabilities. Whenever possible, a tasking authority should ensure that one or more ISTAR systems retain a short response time capability to provide for unforeseen tasking or to confirm or refine information provided by other systems or means.

2066. **Planning and Execution.** ISTAR capabilities must be tasked to support answering the commander's intelligence requirements. The basis for the effective employment of any formation's ISTAR assets is a comprehensive intelligence collection plan. Prior to issuing any tasking of an ISTAR capability, the following steps must be completed:

a. Analyze and validate the requirement to conduct the ISTAR activity under consideration;

b. Determine the priority of the requirement;

c. Review all ISTAR assets available and select the most appropriate;

d. Coordinate the ISTAR plan and at the same time request the information and intelligence required, with the appropriate degree of priority, from superior and neighboring formations for areas beyond the area of intelligence responsibility (AIR).

ISTAR Assets

2067. ISTAR assets and capabilities may be integral to a unit or formation and it must be remembered that ISTAR assets will include troops in contact with enemy forces or local civilian populations. There will be many instances when a commander does not have the necessary resources under his command or control to meet his information requirements. In such circumstances, information requests will have to be made to flanking and superior HQs. Specific resources, capabilities and units that may be tasked with ISTAR related responsibilities include:

a. **Ground Systems.** This will include units, particularly reconnaissance and urveillance elements as well as human terrain reconnaissance. Special Forces will also provide information to the ISTAR system. Ground surveillance systems, including radar and passive monitors, must be incorporated and exploited;

b. **Air Systems.** This will include air and aviation systems allocated to support ISTAR requirements. It will also include the use of Unmanned Aircraft Systems (UAS). These may be employed at all levels, with even mini-UAS and micro UAS being used at the lower tactical levels;

c. **Space-based surveillance assets.** The products of space-based systems may be requested to support tactical level operations. This will be particularly useful prior to the arrival of tactical level forces in a theatre or area of operations. Such support will be important in limited military interventions such as non-combatant evacuations.

2068. Information collection, in support of intelligence requirements, can be done using the widest possible variety of sources – anything within a commander's remit. These include standing requirements for logistics units moving through an area to specific collection tasks given to infantry and armoured reconnaissance units. During stability activities such as urban patrolling, much information can be collected by soldiers speaking to local members of the public and commanders speaking with authority figures (often termed "key leaders").

Considerations for Unmanned Systems

2069. Technological advancements have broadened the means of information collection. Unmanned Systems ground or air based) can provide surveillance over wide areas or focus on specific points from great distances. Not only can they collect information but be used to notify and direct ground forces and direct the fires of other systems. They provide real-time surveillance to allow a commander to react immediately. Apart from their obvious advantages, these remotely operated systems do have certain limitations that must be considered. These may include the following:

a. They have limited flight or operating times.

b. They are susceptible to weather conditions.

c. Optical sensors may not be able to see through certain types of terrain or cover although thermal and radar imaging if available may address this.

d. When looking at a point target, the small field of view removes a wider frame of reference and the observer loses the larger context of the situation.

e. Although they may indicate a change of situation, there is neither commander nor forces on the ground to react immediately and affect the situation. For example, a UAS may indicate enemy movement or a civil riot, but it will take time before forces can be moved to deal with the situation.

f. Their generally slow airspeed limits their ability to move quickly over the desired area and to support new taskings.

g. They generally have little self-protection capabilities and may be susceptible to enemy ground fire and other countermeasures such as jamming.

Echeloning and Coordination of the ISTAR Planning Process

2070. The execution of ISTAR activities will commence while planning and preparations for the decisive operations continue. Thus, those units assigned such activities will be in the execution stage of the planning process while their superior echelons are continuing withthe planning and preparation stages. Those subordinate units executing their respective operations must be allocated time and resources to permit their own planning and preparation. The early execution of ISTAR activities will support the continuous assessment function.

Battle Damage Assessment

2071. The information and intelligence function must also be able to devise, collect and assess measures of effectiveness in order to determine if the activities being undertaken by the military and other instruments of power are creating the desired effects that progress towards operation success.

Countering Adversary ISTAR

2072. Enemy forces will deploy a wide variety of information collection systems that must be understood and countered by commanders. Despite technological advances, traditional methods of countering adversary information collection, such as deception and camouflage and concealment remain effective. Forces must conceal themselves in the whole electromagnetic spectrum[12].

2073. The enemy will likely deploy a wide array of UAS systems, often concentrating on the same area or target from multiple elevations and angles. In short, they will employ redundancy in their ISTAR systems, even within UAS systems. These information collection systems will often provide real-time information to enemy engagement systems that will allow near-immediate engagement, likely with massed or precision indirect fires. The threat may be so great that any pause in movement will likely result in targeting and engagement in short order.

2074. Thus a commander's traditional counter-reconnaissance plan must be extended to incorporate measures – both passive and active – to counter all the enemy's collection means. A commander's passive measures may include, but not be limited to, the following:

a. Counter-ground reconnaissance, to include the deployment of guard forces and air interdiction;

b. All-arms air-defence measures against air, aviation and UAS;

c. Camouflage;

d. Concealment to include visible spectrum, IR and thermal spectrums and electromagnetic spectrums;

A commander's active measures may include:

a. Deception measures to include false electromagnetic spectrum

[12] The electromagnetic spectrum includes radio waves, microwaves, heat radiation, visible light, ultraviolet radiation, x-rays, electromagnetic cosmic rays and gamma rays.

activities, feints and demonstrations;

b. Jamming means to interrupt communications, information passage and GPS systems (this is effective against UAS as well).

2075. Counter-ISTAR plans and measures must be an important part of any commander's operation plan and is a planning factor to be considered at all levels.

Combat Function: Manoeuvre

2076. **General**. Manoeuvre is defined as: *the employment of forces on the battlefield through movement in combination with fire, or fire potential, to achieve a position of advantage in respect to the enemy in order to accomplish the mission* (NATOTerm). It is the means of concentrating land forces at the decisive point to pre-empt, dislocate or disrupt enemy cohesion through surprise, psychological momentum and dominance. While mainly physical, manoeuvre can also have psychological effects such as the creation of uncertainty, confusion and paralysis. It involves trade-off: speed against security; breadth against depth; and concentration against dispersion. In this regard, a degree of risk taking and audacity is implicit.

2077. Manoeuvre is utilised throughout the operating environment in the conduct of deep, close and rear operations, in order to create shaping, decisive or sustaining effects. This is done through a scheme of manoeuvre issued as

part of the operations plan.

2078. Manoeuvre by land forces should rely on a combination of ground manoeuvre andlower airspace manoeuvre through the use of aviation resources. Additionally, it will require manoeuvre support elements with the following considerations:

a. Fire support and mobility support assets should be structured to give guaranteed support of the manoeuvre commander, to be employed as the commander deems best. For example, mortars permanently task-organised to the lowest levels practical will give guaranteed indirect fire to ground forces.

b. Aviation in the form of attack helicopters (AH) will provide an important third dimension to fire support.

c. Fire controllers for both indirect and air fire support should be pushed as far forward as possible to support the forces in close contact with the enemy and in need of the greatest fire support.

2079. Manoeuvre will be planned with fire support as an integral component at all tactical levels. Reconnaissance, surveillance and target acquisition (RSTA) sensors should be organised and tasked so as to allow maximum movement

out of contact until the last possible moment or until contact is desired by the manoeuvre force commander.

2080. Joint manoeuvre involves the assets of more than one component and may even involve strategic assets, temporarily made available for the operation. Joint Manoeuvre forces include the following:

a. Ground manoeuvre forces to include armoured, light armoured and light forces;

b. Air-land manoeuvre forces to include airborne, airmobile and air assault forces;

c. Armed and attack aviation;

d. Reconnaissance forces. If employed as combat forces, they conduct manoeuvre. If employed as combat support forces, they enable manoeuvre and other tactical tasks through the provision of information;

e. Utility and transport helicopters will support manoeuvre through the transport
of forces, support to C2 aspects, fire support, reconnaissance, CSS and casualty evacuation;

f. Fixed-wing air transport, for airborne operations, CSS, fire support and casualty evacuation;

g. Naval support in the context of joint manoeuvre forces;

h. Special operations forces.

Combat Function: Fires

2081. Fires are defined as: *the use of weapons systems to create a specific lethal or non-lethal effect on a target* (NATOTerm). It includes systems such as electronic warfare attack and similar cyber capabilities. They include direct and indirect fire assets. Fires may be delivered by land elements, by the elements of other Service components, or by joint forces. Fires will be a central part of the commander's plan. Fires provide the ability to reach the enemy to create both physical and psychological effects and may be combined with movement to create manoeuvre.

2082. Firepower is part of the overall concept of fires and is defined as: *the amount of fire that may be delivered by a position, unit, or weapon system* (NATOTerm). Firepower isa quantifiable capability and is used to destroy, fix, neutralize or suppress enemy forces.

2083. Fire support is defined as: *the application of fire, coordinated with the manoeuvreof forces, to destroy, neutralize or suppress the enemy* (NATOTerm). Notwithstanding this definition, fire support may be applied as a means to create additional effects other than destruction or neutralisation.

Fire support may be used as an information activity such asthe demonstration of capability in order to persuade or dissuade a target audience fromtaking a particular course of action. Fire support and NATO artillery doctrine arecovered in AARTYP-05, *NATO Field Artillery Tactical Doctrine*.

2084. **Fire Support Coordination Measures (FSCM)**. Fire support coordination measures are defined as: *a measure employed by land or amphibious commanders to facilitate therapid engagement of targets and simultaneously provide safeguards for friendly forces* (NATOTerm). All FSCM are established on the authority of the manoeuvre commander and their fire support advisors. FSCM apply to both the fires and their effects.

Combat Function: Information Activities

2085. Information activities are any activities that affect information, information systems (such as communication means and headquarters) or that use information as a tool to create messages to influence a target audience. The first set of information activities – that is, the engagement of information systems – are covered under the combat functions of fires and manoeuvre. The second group of information activities – those that use information for influencing the perceptions of target audiences – use a variety of ways to inform perceptions. These include messaging target audiences through PsyOps, and the presence posture and profile of overt patrols (e.g. their levels of protective dress). They also include those aspects of civil-military cooperation (CIMIC) that seek to create perceptions of legitimacy and gain/retain indigenous support for the operation.

2086. The use of information activities engages on the psychological plane through PsyOps key leader engagement, influence with civilian populations (through

dress and interaction) and through CIMIC and public affairs. In short, these activities take information, createa message designed to influence a target audience in a desired manner, and then issues that message through the best means. The narratives and messages used in these capabilities must be closely coordinated with those of strategic communication, with each other and with the combat functions manoeuvre and fires. Deception uses false information to deceive enemy commanders and is considered under the combat function of protection (see below).

2087. Commanders must plan to integrate **manoeuvre, firepower and information activities** that seek to influence target audiences to create the desired effects. The coordination of manoeuvre, firepower and the information activities is at the heart of manoeuvre warfareand allows the decisive concentration of effects against enemy forces and their strengths.Thus, firepower and manoeuvre will be supported by and coordinated with PsyOps,public affairs and other information activities that use messaging through information to support or achieve objectives. Neutralising enemy strengths, protecting one’s own, and driving towards operational objectives will dislocate the enemy, breaking cohesion and the will to resist. These functions seek not only physical effect, but more importantly, psychological effects.

2088. **Targeting** is defined as: *the process of selecting and prioritizing targets and matching the appropriate response to them, taking into account operational requirements and capabilities* (NATOTerm). It is the means through which fires are applied to a target and the means through which messages are applied to a target audience (that is, it applies to firepower and information activities). Targeting is a normal part of any decision to engage a target, to ensure that it is the correct target, that it is legitimate and that it conforms to any applicable rules of engagement. Targeting may also be conducted as a formal and deliberate process amongst designated commanders and staff as part of a planning process. Details of the process are to be found in AJP-3.9.

Combat Function: Protection

2089. **General.** The combat function of protection is undertaken to preserve fighting power of a military force. All elements of a military force have an integral ability and responsibility for their own protection, such as individual CBRN capabilities and local security measures and defence. The main consideration for protection is termed force protection, defined as: *all measures and means to minimize 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*. (NATOTerm).

2090. During battle procedure a commander's priority concern, as part of achieving the assigned mission, must be the protection of the force throughout all stages of an operation from preparation, to deployment, through engagement

to redeployment. Protection is achieved in an overall sense through the coordination of the six combat functions to identify the enemy's intention and destroy or neutralise him before a decisive engagement occurs. However, specific measures may be taken with the primary aim of protecting fighting power. These measures may be active or passive.

2091. **Active and Passive Protection and Recuperation.** Measures and proactive tasks are ordered by a commander to enhance protection such that the force remains viable and functional. Taken together protection efforts ensure that maximum combat power remains available thereby maintaining freedom of action, achieving the ultimate aim of mission success. The combat function of protection consists of a mix of active and protective coordination areas (see AJP-3.14), followed by recuperation practices. They are described below:

a. **Active Coordination Area.** The active coordination area involves measures, tasks, and activities to deter, prevent, nullify, or reduce the effectiveness of an enemy attack and to counter hazards. These are primarily proactive in nature and provide a defence against a perceived or actual threat, and when necessary, find, fix, and strike threats and hazards before they are realised, with the intention to further exploit the situation wherever possible. The employment of individual force

protection (FP) fundamental elements and actions should be in accordance with the campaign plans and mandate, rules of engagement (ROE), and standing operating procedures (SOPs). It is about taking the battle to the aggressor and either deterring hostile intent or neutralising the ability to attack or pose a viable threat. Active measures will include capabilities such as air defence and counter-mobility actions;

b. **Passive Coordination Area.** The passive area involves measures, tasks, and activities to negate or minimize the effects of enemy attacks and hazards on NATO assets by making them more survivable. Passive measures, tasks, and activities should be proactively employed prior to any attack or hazard materializing. They are designed to protect the force from the operational, tactical, and physiological consequences arising from the use of both conventional and chemical, biological, radiological and nuclear (CBRN) weapons and devices or the release f toxic industrial material (TIM). A force's ability to survive the effects of such weapons or devices should be enhanced by the anticipation of their use. Furthermore, effective passive defence preparation will be likely to reduce an aggressor's incentive to use such measures. Passive measures include camouflage and electronic emission control measures;

c. **Recuperation Coordination Area.** Protection should include an overall plan for forces and installations to resume their primary operational roles following the effects of attack, hazards, or disasters. Recuperation covers those measures, tasks, and activities necessary for the force to recover, restore essential capabilities, and enable operations to continue, with the minimum of disruption and in the minimum possible time. Measures are therefore pre-planned responses that are reactively employed post-incident.

2092. **Fundamental Elements.** There are a significant number of capabilities that may contribute to the overall protection of a force, dependent on the threat as identified in the present and perceived as developing in the future. Each of these capability areas has its own doctrine and procedures which are explained within specific subject matter joint and service doctrinal or policy publications. (See below, Figure 2-8 from AJP-3.14) The fundamental elements (tasks, means, and measures) a commander can employ to ensure the protection of the force include:

a. Tactical area of operations control, including rear area, operating basis and lines of communications security (see below for more details);

b. Military engineer support and other means for survivability measures, including counter-mobility, defensive measures, counter-mines and explosives ordnance disposal;

c. CBRN defence (AJP-3.8, *Allied Joint Doctrine for Chemical, Radiological and Nuclear Defence*);

d. Air defence measures, to defend against both information collection

and attack;

e. Tactical security such as over watch and screen forces deployed to a vulnerable flank;

f. Medical force protection and Force Health Protection (see AJP 4.10(B) *Allied Joint Medical Support Doctrine*);

g. Consequence management;

h. Resilience (both physical and psychological);

i. Others fundamental protection considerations include:

(1) Operations Security (OPSEC), including information protection (AEDP-02(1) VOL I-IV *NATO Operations Security (OPSEC), information protection* (AEDP-02(1) VOL I-IV NATO);

(2) Support to joint personnel recovery. Joint personnel recovery encompasses all military, diplomatic and civil efforts to effect the recovery and reintegration of military or civilian personnel who are separated from their unit or organisation in a situation that may require them to survive, evade, resist exploitation, or escape while awaiting recovery;

(3) Situational awareness, to include combat identification of friendly and enemy forces (*see STANAG 2129 Identification of Land Forces on the Battlefield and in an Area of Operations*);

(4) Electronic protection measures. These are designed to make effective and efficient use of the electromagnetic-spectrum, while maintaining protection of electronic means. Measures are included in the emission control plan which seeks to avoid revealing forces through control of electromagnetic and light signatures; and,

(5) Deliberate force protection assessments, planning and measures in accordance with AJP-3.14, *Allied Joint Doctrine for Force Protection*.

2093. The plans and efforts taken in each of these measures and areas will depend upon the assessment of the threat.

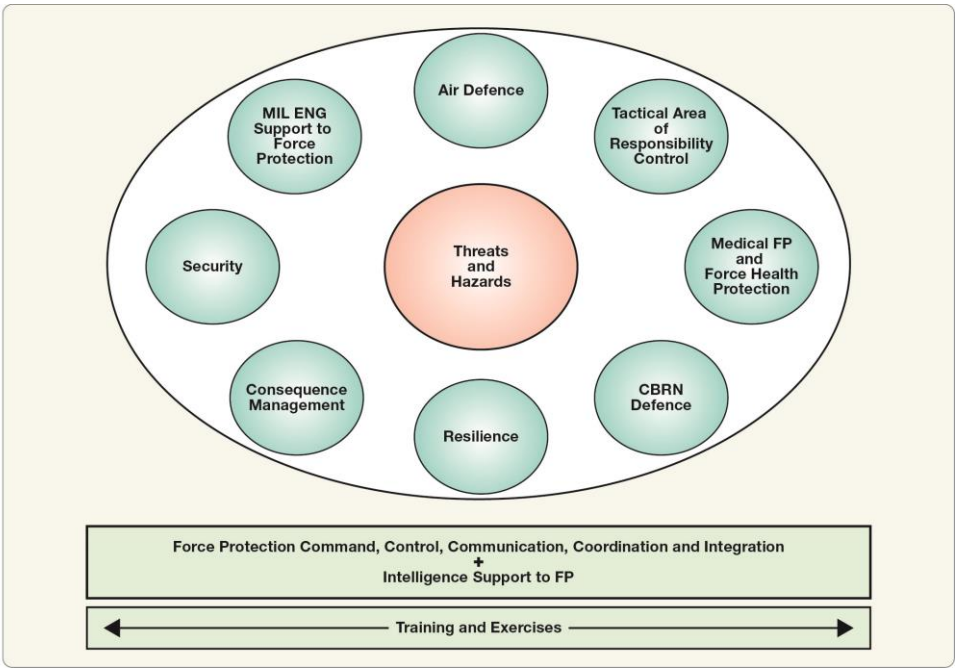


Figure 2- 8: Fundamental Elements of Force Protection

Rear Area, Operating Base and Lines of Communication Security

2094. **General.** Security in direct relation to force protection measures are fully detailed in AJP-3.14. Threats to general security may be greatest for supporting forces and locations and thus require particular consideration and attention, including the potential allocation of dedicated forces. Rear areas and lines of communication are those areas in which CSS functions are conducted and therefore require specific consideration for security and protection measures:

a. Within a non-contiguous battlespace or in campaigns in which tactical level units have been assigned large areas of operations, the concept of a rear area has changed to reflect, in general terms, lines of communication or areas in which no forces are currently concentrated. There may be no linear rear area, particularly when faced with a pervasive, unconventional enemy. Instead there will be large areas and main lines of communication between concentrations of manoeuvre forces that are unguarded. These areas and lines of communication become vulnerable to enemy activity, particularly attack against CSS elements and other agencies as they operate in the areas;

b. Security for these areas and lines of communication may be shared with the host nation government. At times however, the host nation government may be unable or unwilling to provide such assistance. Added to this situation, is the expectation that Alliance forces will secure civilian civilian populations from adversaries that seek to intimidate indigenous civilian populations as a means to undermine the legitimacy and capability of the Alliance. Thus, the onus and difficulties in security for lines of communication and rear areas may be substantial;

c. Seldom will enough troops and resources be available for a standing security contingent to secure lines of communications and other such areas. ISTAR resources, both remote technical surveillance means and HUMINT sources, will be needed to act as triggers to initiate the deployment of reserve forces when a particular threat to the lines of communications is reported;

d. Plans for rear area and lines of communication security cannot be made in isolation. The commander must liaise closely with national military and civilian authorities and respect negotiated agreements that, in some cases, may restrict Alliance operations within a host nation. Most formations and headquarters will be established with special G9 or CIMIC staffs and most formations will normally exchange liaison officers with the appropriate host nation authorities. In some cases, Alliance forces may be training the indigenous forces and rear area and lines of communication security may be part of that training process.

2095. **Purpose.** The purpose of rear area and lines of communication security is to safeguard important facilities, installations, lines of communication and areas from disruption by an enemy and to maintain control of rear areas and lines of communication in order to preserve the tactical commander's freedom of action. There may also be a requirement to secure local civilian populations and their infrastructure from attack by unconventional forces. The type and extent of security required or imposed will depend upon the nature and importance of such facilities and areas, the potential enemy and its intent, and the availability of friendly forces for employment in such security.

2096. **Threat.** The potential for disruption in a rear area and against lines of communication is considerable. The threat ranges from single enemy agents or saboteurs, to large enemy combat formations, enemy information activities and insurgent threats against civilian targets and civilian populations. The enemy may attempt to interrupt support activities, interdict lines of communication and cause diversion of combat forces from the main battle area. Likely targets in the rear area are storage sites, reserves, command and

control installations, rear electronic warfare/air defence artillery sites, airfields, logistic bases, port facilities and major river crossings. Political and military leaders may also be threatened. The goal of enemy activity will not only be to destroy Alliance capabilities, but will be to undermine the legitimacy and authority of Alliance forces amongst a civilian civilian population and amongst Alliance domestic civilian populations, seeking to force the withdrawal of Alliance forces from the operation.

2097. **Methodology.** The methods used to secure rear areas, operations bases and lines of communication will depend upon the nature of the campaign, threat and operating environment. Base areas and vital points, including those of civil infrastructure, will be secured through point defence and standing patrols. At times, concealed patrols, routine clearing patrols around areas and concealed ambushes may be appropriate. In built-up areas, patrols in support of civil civilian population security will be necessary. Part of this security will be constant contact with the local indigenous civilian population. This cannot be left to CIMIC staff and teams but must be a constant point for patrols and local commanders. It will help maintain local situational awareness, gather information and ensure cooperation in collective security.

2098. **Principles.** The following principles apply:

a. **NATO/National Coordination.** All rear area, operating basis and lines of communication security plans and operations must be developed, prepared, coordinated and executed in close cooperation with appropriate national authorities and adjacent formations should they exist and be capable of such coordination;

b. **Allocation of Forces.** Forces must be allocated and positioned to secure rear areas and lines of communication in cooperation with other forces and local security forces if appropriate. The unassigned areas in a non-contiguous battlespace must be secured as well through economy of force measures (e.g. using unassigned reconnaissance forces) or through the conditional allocation of reserve forces. As far as lines of communication are concerned, it is rarely possible to provide complete protection across them. Convoy security along lines of communication must be ensured by integral capabilities and, when necessary, additional escort forces. Alternatively, or even additionally, security forces may be deployed along particularly threatened sections of routes. Accurate, timely, relevant, and predictive intelligence will support these principles by indicating when threats are most likely to occur, thus necessitating the requirement for additional resources;

c. **Command and Control.** Within a formation, authority for the planning and implementation of all rear area and lines of communication security operations should be vested with a single commander. Host nation forces may support him in this task or assume specific responsibilities in accordance with negotiated agreements and their capabilities. At times it may be practical to establish a separate operations centre within a commander’s command post and assign it the responsibility for the command and control of rear area security. In other circumstances a subordinate unit or formation may be specifically assigned rear area security which would be commanded by the subordinate’s command post directly;

d. **Reserves and Allocated Forces.** The commander should nominate a dedicated mobile reserve capable of rapid deployment to counter threats in the rear area or against lines of communication. Other forces

may be responsible to provide security to specific areas only at certain times, such as during the transition of CSS convoys;

e. **Self-Protection.** Every unit and sub-unit in the rear area or transiting lines of communication is responsible for self-protection and the security and protection of any military and/or civilian installations that they use. Units are also expected to protect themselves against sabotage and small scale attacks;

f. **Considered Response.** Enemy attacks must be countered rapidly and with sufficient strength to (at least) contain the enemy in preparation for his subsequent destruction, if possible, in order to ensure the continued freedom of action of the friendly force. The commander must always keep in mind the unintended effects on the local civilian population and the need to avoid them. In many cases, enemy forces attacking against lines of communication will be fleeting and will avoid decisive engagement. Thus, the main effort should be prevention of such attacks vice an over-reaction to them that may lead to unnecessary collateral damage and the subsequent damage to public support for the Alliance;

g. **Transiting Units.** Units moving through or temporarily located in the reararea should be included in the commander's rear area/lines of communication security plan.

2099. **Planning.** Key factors to be considered during the planning process include:

a. Command and control relationships including the defining of areas of operation;

b. Coordination, cooperation, and liaison with forces under national command, together with other services, civil authorities and adjacent forces;

c. Availability of adequate communications links;

d. Designation of alternative routes to allow flexibility and to enable quick responses to a changed situation;

e. Reliability of warning and reporting systems;

f. Responsibilities for surveillance and patrolling;

g. Countermeasures and contingency plans for the range of threats posed by the enemy, from single saboteurs to major incursions;

h. Availability of forces from higher or other formations should reinforcements be required;

i. Countermeasures against air reconnaissance/air attack, including UAS;

j. Measures required to find and neutralise enemy forces. This will require specific efforts for intelligence collection and assessment;

k. Countermeasures against CBRN incidents including coordination and control of CBRN warning and reporting systems.

2100. The ability of the Alliance to secure rear areas and lines of communication, particularly in areas inhabited by civilian civilian populations, will require careful planning and the potential allocation of dedicated forces. This requirement will increase with unconventionaland pervasive threats that may not refrain from attacking civilian civilian populations or Allianceforces co-located with civilian civilian populations. Indeed, such requirements may become a key element of the campaign. The credibility of the Alliance and its campaign may be put at risk should measures fail to secure these areas.

2101. Responsibility for the security of rear areas may be assigned in a number of ways depending upon the nature of the campaign and the threat. It may be assigned to combat service support commanders operating in the rear areas using their integral forces or with additional manoeuvre forces assigned. Responsibility may also be assigned to a dedicated manoeuvre unit (for example, an infantry battalion) as an area of operation.

2102. **Protection of Non-Combatants.** In any operation, situations may arise that require a commander to consider the protection of a threatened local civilian populations or non-military agencies. There are both practical and moral responsibilities in this issue.These responsibilities may manifest themselves in a requirement to directly defend a threatened group, to escort NGO convoys out of or through dangerous areas under threat or to deliver emergency aid. At times, these tasks will take priority over other tactical activities, such as an advance to contact or the offence. Commanders at all levels of command must be prepared to assess what has to be done to provide protection to non-combatants and to take the necessary action.

Deception

2103. Deception is a key aspect of protection and, if successful, preserves fighting power (by reducing casualties) and helps achieve specific objectives by supporting other tactical activities such as an attack. Deception is defined as: *those measures designed to mislead the enemy by manipulation, distortion, or falsification of evidence to induce him to react ina manner prejudicial to his interests* (NATOTerm).

2104. Methods of deception are limited only by the imagination of the force commander.They may be used simply as a means of force protection (such as camouflage) or the activity may be in support of another tactical activity, such as a feint supporting a main attack elsewhere. Deception may include the following, used individually or in conjunction with one another:

a. Camouflage;

b. Electronic emissions that seem to indicate specific friendly force actions such as radio traffic indicating movement in a particular area;

c. Demonstration, defined as: *an attack or show of force on a front where a decision is not sought, made with the aim of deceiving the enemy* (NATOTerm). Note that a demonstration does not involve contact with the enemy. It may simply consist of vehicle movement and supporting false radio traffic;

d. Feint, which is described as an offensive activity, involving contact with the enemy, meant to deceive the enemy. The commander ordered to conduct the feint will likely be given a limit as to the combat power that may be lost in the contact or a time until contact must be maintained. The aim is to deceive the enemy commander as to the true intent and main effort of the friendly force.

2105. Deception is best planned when it is designed to support the biases or pre-conceptions held by the enemy commanders. For example, if an enemy commander expects a mountedattack from a particular direction, a demonstration and supporting electronic emissions maybe conducted to support this belief while the friendly decisive action and main effort is a silent, dismounted attack from another direction.

2106. Deception should be part of the military planning process. It should be considered under the factor of enemy (based on what he expects and thus will help lead to his deception) and under the factor of security (that is, how deception will help conceal the friendly forces' actual intent).

Combat Function: Sustainment

General

2107. General. The purpose of sustainment is to sustain a force with the necessary material resources for the duration required to achieve its objectives. It is the provision of supplies including their storage, handling and transportation, the

maintenance and repairof materiel, medical support of casualties, personnel replacement, equipment replacementand the provision of necessary welfare services. It will also include the rotation of forceelements from front line locations and through rest areas. Combat Service Support (CSS)is the tactical means of sustainment.

2108. Those responsible for sustainment including CSS are tasked to ensure that combat forces are supplied in a timely manner with what they need to accomplish the mission. It is important that the supplies and facilities needed are provided in the right quantity, at the right time, at the right place and in a serviceable condition. In the following chapters the term CSS or CSS units does not specify concrete forces rather than the capabilities, which have to be provided.

2109. Each nation bears ultimate responsibility for ensuring the provision of logistic support to their own forces. Nations and NATO authorities have a collective responsibility for sustainment including CSS of NATO's multinational operations. It is facilitated by standardized or interoperable materiel, such as interchangeable components, weapons, equipment, fuels and general items

of supply, in association with the adoption of common procedures. However, the accomplishment of common tasks, specific agreements and emergency situations in combat may make it necessary for allied forces to support eachother or to redistribute logistic resources. Personnel management is a national responsibility for both national and multinational operations. The features of specific CSS for particular operations are dealt with in the appropriate chapters of this ATP and can also be found in ALP-4.2. The principles of CSS planning and execution are stated in MC 319/2, *NATO Principles and Policies for Logistics*. They are: coordination of tactics and CSS, foresight, simplicity, economy, continuity, firm control, and flexibility.

Fundamental Elements of Sustainment

2110. The practice of sustainment of a force is guided by the following philosophical tenets:

a. Sustainment is central to fighting power and touches upon all three components (conceptual, moral and physical - see AJP-3.2). It underpins the moral cohesion and motivation of the force, and it contributes to the art of the physically possible;

b. Sustainment should be a means to an end in that it should always support the mission. The raison d'être for sustainment activity is to meet the commander's intent. However, because sustainment affects the art of the possible, only a poor plan is based on unrealistic expectations. Integrated planning and trust across staffs, with shared responsibility and mutual support during execution, are therefore essential;

c. Sustainment depends upon responsibility. All commanders and staff at all levels must have an awareness as to how the sustainment system work and how its limitations may affect operations. Flexibility and pragmatism are thus key. Secondly, all must practise diligence. Diligence requires a consistent, conscientious level of attention to detail and care, even when it may be unnoticed. It requires a professional attitude of mind that abhors waste; maintains equipment, infrastructure and materiel with the respect that they deserve; and is meticulous in administration. Commander must build a culture across their force of sound practices and proactive maintenance;

d. The effectiveness and agility of a force requires agile sustainment. A sound network for each aspect of sustainment is required to create agile sustainment. It also requires sound and practical doctrine, including good drills, and extensive training and practice of the sustainment system;

e. Sustainment personnel, despite being specialists, must be soldiers first and have sound, well-practiced basic soldier skills. They must be able to defend themselves and their immediate localities and conduct their specialist tasks in tactical situations and harsh extremes.

Planning Factors for Sustainment

2111. Details for the principles and planning of each aspect of sustainment are given in the respective AJP and ATP series of sustainment publications. Sustainment planning should be versatile, support the mission, be integrated into operational planning, and is usually conducted jointly, across agencies and multi-nationally.

2112. Sustainment activity often has long lead times. An understanding of four main factors for sustainment planning helps to predict requirements in order to meet them on time and support the mission and commander's intent. The four key are: destination, distance, demand and duration, and they apply to both troops and materiel.

a. **Destination.** The destination is defined by the environment of the operation. It determines the pattern of wear on equipment and the physiological demands on troops and informs preventative measures. The destination of resources defines the character of the lines of communication; the design of the regeneration system; and the resources, timing, speed of deployment, reaction and execution of subsequent plans. Destination includes consideration of the degree of dispersion of the force;

b. **Distance.** The length of strategic and intra-theatre lines of communication, including the threats, capacity and topography that apply to them, all affect how resources are deployed and determines the design of the resupply and evacuation aspects of the support network;

c. **Demand.** Demand is influenced by the type of force requiring support, and its rates and amounts of consumption. Complicated groupings clearly demand more complicated and varied sustainment. Demand stems from the commander's intent and the type of military activity that it leads to, and is the sum of 3 elements. 'Steady state' demand represents daily sustainment needs that have little variation, such as predictable nonbattle injuries or the consumption of rations. 'Cyclical' demand represents additional needs to the steady state, caused, for example, by seasonal conditions. 'Surge' demand is driven by increases in activity. It is the least easy to predict and the most susceptible to variation. Surge demand requires a network of responsive command systems, reserve stocks, and a delivery capability able to switch between priorities. It is important to emphasise that demand is not just about scale or volume of supply, but also requires consideration of the wide range of support required. In this context it may be useful to consider the individual dependencies within a grouping, as a subset of demand;

d. **Duration.** The duration of the operation and the rate of demand determine the quantities of personnel and materiel required. Mathematically, volume = rate (or Demand) x time (or Duration). The duration of an operation dictates endurance requirements and the need to rotate or replace equipment and personnel. A commander should balance the risks of a rapid, lightly supported operation against those

of a better resourced, more deliberate operation that takes longer to mount.

2113. Sustainment reach defines the limit at which a force can assure sustainment. It requires an assessment of the optimum design for the support network required and the balance between Directed Logistics and Stockpiling Forward. Beyond this reach, a force may culminate, be cut off or become fixed, unless stockpiles are created. Reach is affected bythe availability of stocks, movement assets and by:

a. destination by terrain, obstacles, and climate;

b. distance by the length of the re-supply loop,

c. dispersal of force elements;

d. demand by the type of operation; and duration by stock consumption.

2114. Reach starts in the sustaining base or node and ends where the item is used.

2115. In effective sustainment, risks should be taken to concentrate resources at critical points rather than to spread resources everywhere. The commander's designation of main effort informs such concentrations. Two aspects of sustainment risks should be considered:

a. Sustainment planning should assess where risks may be taken so as to achieve agility and enhance freedom of manoeuvre. This is done by expressing sustainment reach in terms of options available to the commander, with resulting constraints or freedoms. Excessive pessimism or attempting to over-insure should be avoided; and,

b. Reduction in the volume of stocks increases the vulnerability of supply to unforeseen circumstances. Sustainment assets have an easily identifiable signature and they operate along obvious lines of communication between sometimes obvious nodes, so they need to be protected against detection and attack. They can be protected by enhancing their integral defence capability, by using deception and camouflage, by integrating them into a scheme of manoeuvre, or by allocating other forces to their defence.

Implementation of Sustainment Plans

2116. **Positioning**. The CSS units provide constant support for units employed in combat. They aim to accomplish their tasks as close to the supported forces as possible, however, if they are employed too far forward, there is an increased risk of losses through enemy action, or of their work being hampered. It should be kept in mind that frequent changes of position will also reduce the efficiency of supporting CSS units.

2117. **Pre-positioning**. Civilian infrastructure and suppliers may be used to establish local support. Prior to the commencement of manoeuvre, stocks may be pre-positioned and use made of maintenance resources and medical facilities in fixed installations. It is from these resources that troops may be supplied and supported in the first days of combat.

2118. S**tandard Procedures.** The rapid and continuous provision of CSS requires simple and effective procedures. Standardized procedures and forms should be used whenever possible in order to ensure interoperability.

2119. **Ammunition Resupply.** The high quantity of ammunition required for effective operations makes considerable demands on handling and transportation capabilities. Bulk ammunition should be delivered as far forward as practicable.

2120. **Fuel.** Fuel is transported as close to forward areas as possible, by means of pipelines, rail transport, tankers, inland waterway vessels or air (fuel tanker flights and under slung loads).

2121. **Repair, Recovery and Evacuation.** Preventive maintenance during operations assumes particular importance for prolonging the life of materiel and keeping repair requirements low. Repair should be conducted as far forward as possible. Use must be madeof available transportation to recover or evacuate equipment when repair cannot be achieved. Policies for robbing and cannibalization of vehicles and equipment, along with levels of authority for approval, will have to be established prior to the commencement of operations.

2122. **Movement.** Transport operations must be carefully planned, directed and supervised. Protection of convoys may be necessary as well as traffic control. Air transportation resources may be used to support logistic resupply and medical evacuation.

2123. The fighting power of military formations and tactical units depends on their ability to move. The ultimate objective of movement is to enable combat forces to be in the right location, at the right time and in the right order to best deliver tactical effect. Military police support movement through the planning, facilitation and regulating of movement during a number of operational and tactical actions as well as more generally along lines of communications

(LOC). This ultimately contributes to the freedom of movement throughout the area of operations. MP mobility support is achieved through a contribution to movement planning, movement control and movement security. Details are contained in AJP-3.2.3.3, *Allied Joint Doctrine for Military Police*;

2124. **Medical.** Unit medical personnel and supporting medical units provide initial treatment, carry out preventive medical measures and provide medical resupply. Those casualties requiring continuing care or immediate surgery are evacuated. Although nations bear the ultimate responsibility for the provision of medical support fortheir forces, medical units and hospitals must be prepared to treat and stabilize all casualties until evacuation is arranged.

2125. **Personnel Replacement.** To compensate for losses it is essential that replacements are brought forward promptly. If personnel replacements are inadequate, the commandermay need to establish priorities.

2126. **Reconstitution.** Detailed planning and dedicated resources will be required for the reconstitution of formations following combat.

2127. **Rest and Rotation.** Sustainment will include the policies and practices for the rest and rotation (from the front lines) of force elements. For long campaigns, a unit or formation cannot sustain themselves on the front lines for an indefinite period of time. Rotations must occur. After a given period of time, units and formations will conduct a relief in place and move to rear areas for rest, recovery and reconstitution as required. Although a theatre or Alliance policy may be established, national policies will differ. The rest and rotation may involve units or formations moving to a rear area of communications zone within the theatre or it may include a national replacement and withdraw back to the home nation. Such actionsrequire significant planning, reconnaissance and a detailed hand-over.

Summary of the Combat Functions

2128. The combat functions describe the functions that military capabilities conduct. Fighting power is applied through them to create combat power – what is actually used in military operations. Guided by the objectives to be achieved, the combat functions are coordinated in the manner needed in order for military forces to execute the core functions of finding, fixing, striking and exploiting.

The Core Functions

2129. Fighting power of a land force is applied through the combat functions, guided by a manoeuvrist approach philosophy to execute the core functions. The two primary core functions are fixing and striking the enemy. The requirement to find the enemy and to exploit any strike whenever possible and desirable is implied in the core functions.

2130. The four core functions – finding, fixing, striking and exploiting - are part of the functional framework and are the ways in which fighting power and the

combat functions are applied in order to create desired effects. They are closely linked to the other function and effects groupings within the framework model.

a. Finding the enemy or target is generally an enabling tactical activity, conducted through tactical activities such as reconnaissance. It is done for purposes of shaping the operating environment and situation.

b. Fixing the enemy is generally an offensive or defensive tactical activity, using fires and manoeuvre or information activities. It is done for purposes
of shaping the operating environment and situation, to set the conditions for a successful decisive operation.

c. Striking and exploiting are offensive activities. They are conducted to be decisive in terms of effects on the enemy.

Any of these may occur in deep, close and rear operations, and most likely in some sort of combination.

Core Function: Finding

2131. Finding the enemy or a potential target is a basic function that endures

throughout an operation and is the subject of continual effort. It includes locating, identifying, tracking and assessing the enemy or target. Forces may be directed specifically to fight the battle, or at least make contact, for information, particularly in the opening stages of an operation. This will normally be a sound investment when the situation is confusing and seemingly chaotic. Whatever its source, information is never wholly reliable. It may need checking or corroborating with other sources. Too much information is a form of friction that can impede decision-making.

2132. Finding is the main focus and task of ISTAR systems. It supports and enables manoeuvre and operations. It is planned under the G2 staff branch and includes assessment and analysis of targets as well as application of measures of effectiveness to determine if progress is being made in achieving objectives.

2133. A commander cannot know everything. ISTAR systems can produce so much information that they can overload a commander or analyst who tries to assimilate too much. These problems can be overcome by setting clear and succinct priorities for intelligence gathering, and directing ISTAR elements accordingly. This will be key in the Direction stepof the intelligence cycle.

2134. Finding demands far more physical and intellectual effort than simply locating the enemy. Commanders are far more likely to succeed if they know the organisation and strength of an enemy force, what its intentions are, how it fights, and how it may react to friendlyactions, rather than if they are merely aware of the enemy's position. It is equally importantto establish where the

enemy is not located, and to determine what he is unlikely to do within a given time, as this may provide opportunities for surprise and exploitation.

2135. Finding also involves the assessment of the physical, ethnic, social and political elements within the environment. ISTAR capabilities must examine and assess the various systems that exist in the environment and ascertain their role in influencing the outcome of the campaign. This enables the commander to understand the context and rationale of the enemy's actions and the effects that tactical activities will have on not just the enemy, but on all those other elements that influence the operating environment. Receiving information from a wide variety of sources contributes to the quality and breadth of the intelligence picture that helpsa commander formulate his plan in terms of reaching operational objectives. In short, a holistic and comprehensive approach must be taken to the "finding" function.

2136. A wide range of intelligence collection systems should be used to provide information about the enemy's strength, composition, disposition and location, and information about the various other elements in the environment such as political leaders and clan groupings. Despite the pervasiveness of technical ISTAR systems, HUMINT will be key to ascertaining information regarding the elements within the environment, including any adversary that will affect the outcome of the campaign. Additionally, human analysis and experience is still required to assess likely intentions of targets.

2137. It must be remembered that all soldiers and others in contact with the enemy and local populace are sources of information. Thus, key information requirements should be widely disseminated throughout the force, down to the lowest levels as appropriate.

Core Function: Fixing

2138. To fix an enemy or target is to deprive him freedom of action. This can be done by denying the adversary reaching his goals, by distracting the adversary from his goals and by denying the adversary required information. The fixing of an adversary will involve the application of forces through manoeuvre and firepower. In some campaigns, it may involvethe fixing of the enemy or the adversary's supporters in terms of their influence over the environment and local populaces. This will be done through information activities that seekto separate the enemy and other adversaries from gaining physical and moral support from elements within the environment.

2139. Fixing in physical terms may involve the use of combat elements to hold ground against enemy attack, to block the enemy's movement, to hold or fix an enemy in one location by firepower and/or manoeuvre, or to hold vital points and civilian population centres by protecting against enemy intervention. Deception may be used to distract the enemy from his actual goals. The object is to restrict enemy freedom of movement, deny him his goals, place the enemy in a reactive frame of mind, and thus increase the

Alliance's freedom of action and ability to manoeuvre. The fixing of the enemy's manoeuvre forces may be done through a combination of shaping attacks, force positioning and deception. The use of patrols, searches and vehicle checkpoints will help fix an enemy such as an urban insurgent force, by denying him freedom of manoeuvre in areas key to his operation and expansion.

2140. Apart from using physically superior forces to block the enemy's actions, fixing maybe done by deceiving, luring, and surprising the enemy and the resulting effect will be to distract him. When an enemy is deceived, he may feel certain how to act - but his decision is wrong. When he is lured, he is invited to take a course of action that will make him vulnerable. When he is surprised, he becomes uncertain as to how to react to ambiguous information until it is too late. With this uncertainty the enemy can be forced to cover all options, thereby dissipating his force and being distracted from his purpose.

2141. In fixing the enemy, forces may attempt to deny him information, suppress his abilityto pass orders and inhibit their execution. This may be achieved through domination of allor portions of the electromagnetic spectrum. An unsophisticated enemy or one who decentralizes command will be less vulnerable.

2142. Fixing an enemy may require the use of more direct and confrontational means by battle and engagement. Such actions can consume the Alliance's own forces quickly. Thus, a balance must be struck to ensure that the resources allocated to fixing do not unnecessarily reduce those required for striking and reserve requirements.

2143. Fixing the influence of adversaries within an environment may be done, for short-term effect, by the physical destruction of his propaganda and information means, domination of the electromagnetic spectrum and the dislocation of his presence amongst a civilian population.Long-term fixing and eventual dislocation will occur through information activities that influence target audiences through influence means. Timely public affairs and PsyOps will block the adversary's propaganda and undermine his legitimacy. Additionally efforts to address any reasons for the populace's support of the adversary will fix the adversary's influence. Commanders and their information activity advisors (PsyOps and public affairs advisors) must foresee enemy propaganda aims and messages and seek to counter them and fix or dislocate their influence effects as quickly as possible. Their messages must be alignedwith those larger narratives and messages of strategic communication but must also focuson the specific audience and their perceptions.

Core Function: Striking

2144. Striking the enemy is achieved by offensive action such as an attack, and possibly information activities, either alone or in combination with offensive activities.

2145. Striking may involve an attack on enemy forces to: seize or capture key ground; destroy equipment, vital points, and installations; kill enemy personnel; or, to gain a position of advantage. The object is either to manoeuvre forces or to concentrate and deliver firepower to gain leverage over an opponent.

2146. In accordance with the manoeuvrist approach, striking should ideally be aimed at the enemy's cohesion; that is, it should aim to attack his morale, his sense of purpose or his decision making ability and ultimately his will to fight. The object is to seize the initiative by debilitating him mentally, and eroding his will to fight.

2147. Striking at enemy and other adversary cohesion entails selective psychological attack upon his morale, his sense of purpose, and upon his capability to decide, plan and act with any degree of certainty. Electronic

warfare, deception, Special Forces and PsyOps assets are integrated, when possible, with applied physical attack. By these means the enemy's decision-action cycle can be disrupted and his command and control abilities destroyedor neutralized. Feint attacks, selective jamming, demonstrations of force, the surgical removal of key elements in his force will create a sense of isolation within an enemy.

2148. Striking may also be accomplished through non-lethal actions, advised and coordinated by Info Ops, in order to affect the understanding, will and capabilities, and ultimately the behaviour of an enemy. At the tactical level, these non-lethal information activities primarily refer to the employment of one's own capabilities using informationin message format and assets for media communication, such as PsyOps. They will needto be closely coordinated with information activities conducted by other means and/or at other levels, in order to ensure the overall consistency and credibility of messages.

Core Function: Exploitation

2149. Exploitation is the seizure of opportunity in order to directly achieve a higher commander's objective, or fulfil some part of his intent. Opportunistic exploitation requires action beyond the given mission. It may therefore replace the task stated in orders. For example, a subordinate commander ordered to neutralize an enemy force covering the approaches to his or her commander's objective may find that he or she is able to quickly destroy the enemy then open the approach; therefore, he or she may exploit the situation and move directly to the objective. Opportunities for exploitation can occur at any time while finding, fixing or striking.

2150. Striking the enemy is intended to achieve the purpose of the mission. To turn this success into a greater one requires audacity and determination to seize fleeting opportunities to exploit the initial effect on the enemy. Exploitation

relies on offensive action, surprise and flexibility, along with a commander's initiative and understanding of his superior's intent. Exploitation must always occur in support of the superior commander's intent.

2151. Reconnaissance is a key enabler for exploitation. Reconnaissance should be extensive, expansive and continuous in order to find the opportunities for exploitation. Where reconnaissance forces are not strong enough to strike or exploit, they fix the enemy, limitinghis freedom of manoeuvre and permitting him to be struck by other elements.

2152. In seeking to tactically exploit a situation, commander's must keep in mind that tactical exploitation may have to be delayed or lost in order to support the overall operational objective. For example, advancing forces may have to permit a fleeing enemy to escape in order to secure an area or a populace affected by the recent engagement, thus supporting the operational objective of safeguarding the populace, preventing lawlessness or securing vital sites.

Combining the Core Functions

2153. Conflict includes the constant interaction of the core functions of fixing and striking. In many operations this will involve both physical and information activities. Fixing and striking are not effective in isolation and must be coordinated by commanders in a holisticand complementary fashion. Although the capabilities employed may vary, these functions apply equally at all levels.

2154. In some operations, the conduct of the core functions may be executed through other agencies in conjunction with military forces. Other security forces, the judiciary and even agencies for reconstruction can fix and strike an enemy and its supporting elements in a populace. For example, while an insurgent force is being fixed physically by security forces, his influence over the grievances of a civilian population may be defeated through political, economic and social improvements.

Tactical Activities

2155. As discussed in Chapter 1, all operations and campaigns are conducted through the same set of tactical activities: offensive; defensive; enabling; and, stability. The manner inwhich they are conducted and the balance of efforts and resources across them will be determined by the operational objectives and the nature of the campaign being conducted.For example, a security campaign will likely involve more stability activities andfewer offensive activities than a major combat campaign will require.

2156. Each of these types of tactical activities is discussed in detail in Chapters 5 to 8.

SECTION IV - THE OPERATIONS FRAMEWORK: DECISIVE, SHAPING AND SUSTAINING OPERATIONS

General

2157. The operations framework describes the purpose of an operation and includes decisive, shaping and sustaining operations. It is used to describe and link tactical activities through the commander's scheme of manoeuvre based on the desiredeffect. The framework is used for the formulation and description of courses of action and concepts of operations. The framework refers to the conduct of operations and tactical activities, and is used to conceptualize the purpose and effects of tactical activities and operations. It is the tool by which a commander coordinates the tactical activities of his forces, in the AOO, by purpose and effect over time and space.

2158. Since the operational framework aids the commander in his description of operations to his subordinates, the particular framework used by one commander is not necessarily identical to that of his subordinate or superior.

For example, an operation that is decisive for a particular commander's mission might be a shaping task within his superior commander's concept of operations. It is vital that commanders clearly describe to their staff and subordinates how planned tactical activities will be integrated with one another in time and location and how their will relate to each other in terms of their purpose.

2159. Every tactical operation has one of three purposes: it is decisive, shaping or sustaining. Commander will define and express their intent in terms of decisive, shaping and sustaining operations. Commander selects one task that they consider will be decisive, and then describes the other tasks required to support it as either shaping or sustaining.

2160. This framework allows formations and units to understand the relationship of their missions and tasks to those of other formations and units through the coordination and integration of all operations contributing to the higher mission.

Integration of Shaping, Decisive and Sustaining Operations

2161. Shaping, decisive and sustaining operations should be conducted concurrently where possible in a harmonised and complementary fashion. Not only will each influence the other, but the enemy is best defeated by fighting him simultaneously at many points, some of themin depth. The operations will occur simultaneously and in concert whether they are physical activities, information activities or a combination. Thus, information activities must be planned and targeted together with all other activities within this operational framework.

2162. The operations require continuous and careful coordination and where necessary, integration between levels of command. This is best done by

ensuring that the purposes of those operations are explicit, interactive, complementary and combine in support of the mission and operational objectives.

SECTION V - INTEGRATION OF THE GEOGRAPHIC, FUNCTIONAL AND OPERATIONS FRAMEWORKS

General

2163. Integration is the combination of different parts to form a whole. If one examines the three frameworks discussed above – the geographic, the functional and the operations frameworks – one can understand how they are integrated to support the commander's conduct of an operation and the achievement of the desired objectives.

2164. Integration ensures tactical activities are not planned or executed in isolation but are done in a complementary fashion, in support of a common mission

and objective. Integration includes, but is not limited to, the massed effects of forces and fires at the decisive point. Integration seeks to gain overwhelming combat power through the coordinated use of all available resources.

2165. Integration applies to simultaneous and/or sequential physical and information activities, in that they are planned in relation to one another, considering the resources required and the results to be achieved. For example, the assault against an enemy position may haveto be coordinated with PSYOPS that attempt to convince conscripts to flee and that inform civilians how to react and surrender.

2166. Integration applies to the full range of tactical activities, to ensure that tactical activities from across the spectrum of conflict are conducted in a complementary fashionacross time and space.

2167. Integration, particularly close coordination, must be an integral part of the targeting cycle, in which the desired outcomes and supporting effects are identified and planned in a complementary, reinforcing fashion through tactical activities issued as tactical tasks to becompleted in relation to time and one another. Targeting staff must then be able to coordinate the execution of tactical activities so that the effects caused are complementary and support the desired objectives.

2168. This will not only involve the coordination of military forces, but other instruments of power and agencies acting in a complementary fashion. Thus, military operations maybe coordinated with those of other instruments of power so that their tactical activitiesare harmonised towards common objectives. Such interagency coordination may have to occur outside of formal command relationships. However, the role of the commander will be key to engendering such coordination and cooperation, and should be pursued through not only CIMIC liaison but through the direct involvement of the commander.

Principles of Integration

2169. In attempting to integrate tactical activities in terms of time and space, function and purpose and effect, commanders should adhere to the following guiding principles:

a. **Coordination.** Integration usually requires explicit coordination among the various units and tactical activities participating in any operation. By itself, however, such coordination is no guarantee of integration unless commanders first visualize the consequences, that is, effects, to be produced and how they sequence tactical activities to produce them. Integration first takes place within the mind of the commander who must clearly identify his vision for the conduct of the operation to his subordinate commanders and staffs. It is then continued at all levels at which tactical activities and operations are assigned. In short, tactical activities are integrated by the coordination of their effects across the various levels of command and between levels of command in order to support common and complementary objectives;

b. **Complementary Planning.** In order to achieve proper integration in the pursuit of shared objectives, tactical activities must be planned in a complementary fashion to create reinforcing effects. They must be integrated by: purpose (shaping, decisive and sustaining), time and place (deep, close rear), and through the coordination and cooperation of other agencies as appropriate and possible. Commanders must plan and fight actions defined in place and purpose, simultaneously in a manner that appears to the enemy as one continuous operation against him. Effects in the physical and psychological dimensions must be complementary. Thus, for example, an attack must be coordinated with PsyOps and public affairs so that a message is given, a reinforcing action occurs, and a complementary message is given again. Integration must occur across the range of tactical activities. Stability activities must be planned and conducted so that their effects are integrated with those of offensive, enabling and defensiv activities;

c. **Understanding and Implementing Commander's Intent.** A clear articulation of the commander's intent, that incorporates a unifying theme, will guide his own staff and subordinates and the leaders of other agencies, so that all the instruments of power may be coordinated by activity, location, time and purpose/effect towards a common goal. The staff, guided by the assigned mission and the commander's intent, will use the decision making process, planning factors and tools such as intelligence preparation of the battlefield and the targeting cycle, combat service support capabilities, and combat support assets to coordinate a scheme of manoeuvre and develop an integrated operational plan to fulfil that intent. In doing so, commanders and staff will wish to utilise the following tools and concepts:

(1) Identification of objectives to be reached (these may be issued by higher commanders) through the thematic lines of operation. These may include an enemy's key strengths if they can be identified;

(2) Determination of decisive points to be reached or supporting effects to be created on the path to the various objectives. Here, the identification and integration of the requirement for other instruments of power and agencies will occur;

(3) Ensure a broad dissemination of the commander's intent. This will support mission command and manoeuvrist approach concepts. This intent should support the integration of effects from military and non-military agencies;

(4) Development of procedures for controlling tempo as a way to maintain initiative;

(5) Understanding the interaction of nation's capabilities as they contribute to the overall plan and larger campaign;

(6) Focus on effects before considering the required tactical activities or forces;

(7) Comprehensive planning and targeting that simultaneously incorporates physical activities and information activities.

d. **Sound Battle Procedure and Comprehensive Targeting.** Integration relies upon:

(1) Ongoing planning of operations before and during the action by applicable staff branches led by the commander;

(2) Efficient battle procedure, particularly the issuing of orders in a timely manner;

(3) Targeting that simultaneously considers effects in the physical and psychological dimensions;

(4) Strict adherence and enforcement of control measures and battle plans;

(5) Command and control of the tactical activities;

(6) Continuous assessment that leads to adjustment of the tactical activities to ensure desired effects and outcomes and that allows for further integration.

2170. It therefore follows that in order for Alliance integration to be more effective than that of the enemy, Alliance forces need to establish and maintain a command and control capability that is superior to that of the enemy.

Simultaneous and Sequential Operations

2171. Integration will allow tactical activities to be planned to occur simultaneously, sequentially, or in a combination of the two, in a complementary manner. The

commander must have a clear understanding of the relationship between events in terms of time, space, resources and purpose. Without this the commander cannot establish which events can be done simultaneously, which have to be done sequentially, and in what order. Although there may be a desire to conduct simultaneous tactical activities, resources may be lacking; furthermore, certain tactical activities will have to create planned effects and set certain conditions before other tactical activities may be executed.

2172. Simultaneous operations employ capabilities against the entire enemy system and its supporting systems by concurrently engaging as many decisive points as possible. Simultaneity exploits depth and agility to overwhelm enemy forces. It threatens opponents with immediate consequences throughout the AOO. The presence of multiple threats overloads an enemy’s C2 systems and erodes the enemy’s moral and physical cohesion.

2173. Simultaneous decisive and supporting operations should be planned so as to complement one another. They may involve a combination of physical and information activities. For example, measures seeking to increase public security in a COIN campaign or to dissuade former belligerents from breaking peace agreements should be explained to the local populace as a supporting public information activity. This affects understanding and perceptions, and in turn helps maintain the legitimacy of the military presence and tactical activities.

2174. Simultaneous operations place a premium on information superiority and the ability to employ overwhelming force. In practical terms, the force size and force projection constraints may limit the ability of land forces to achieve simultaneity. Effective campaign designs employ complementary and reinforcing joint and service capabilities to achieve maximum simultaneity.

2175. Sequencing is the arrangement of events within a campaign or major operation in the order most likely to counter or avoid the enemy's strengths and to achieve operational objectives. It can also be thought of as the staging of decisive conditions along lines of operation leading to key operational objectives. Sequencing occurs not only due to limited resources, but also to the need to create supporting effects that build to the achievement of an operational objective.

2176. Land force commanders coordinate subordinate unit tactical activities in time, space, and effects to link the tactical activities to the operational objectives. Without this linkage, operations deteriorate into haphazard battles and engagements that waste resources without achieving decisive results and operational objectives.

2177. Sequential operations achieve the operational objective by phases. Commanders concentrate capabilities and tactical activities at successive points over time, achieving the mission in a controlled series of steps. Often the scale and scope of the campaign or major operation, together with the

resiliency of the enemy, compel commanders to destroy and disrupt the enemy in stages, exposing and neutralising enemy strengths step by step to achieve decisive points key to the operational objectives. In many campaigns, an effect may take time to create and thus must be done in stages. Such would be the case with a COIN campaign, in which winning the support of a local populace for the campaign may take an extended period of time.

Main Effort

2178. In the plan and orders a commander will specify a main effort within the overallscheme of manoeuvre. It may be articulated as a specific activity, namely the essential task in the overall plan. Or, it may be articulated as the efforts of a particular force (e.g, 2nd Battalion is on the main effort). The designation of a main effort is a control and coordination function. It provides a focus for the priority of support and effort, including fire support and logistical support.

CHAPTER 3 - TYPES OF LAND FORCES

SECTION I – INTRODUCTION

3001. The role of land forces is to conduct tactical operations and their inherent tactical activities in the land environment. Within the Alliance, these tactical operations can be in the form of rapid intervention or expeditionary operations normally at great distances from the home garrisons for extended periods. These may involve: rapid deployment in response to, or in pre-emption of, a crisis; deterrence or coercion of potential belligerents from further escalation or confrontation; the conduct of intensive offensive and / or defensiv activities in a major combat scenario, in order to disrupt or defeat a determined enemy. These tactical operations will be planned and executed typically in conjunction with allies and all instruments of national power. They will use the complete range of tactical activities in order to achieve the operational objectives of the operation.

3002. Although land forces are structured, equipped and trained to conduct operations against enemy forces in coordination with air and maritime services, land forces are well suited to assume other responsibilities. Within an operating environment, a land force will be required to conduct a wide range of tactical activities, simultaneously, from the spectrum of conflict, often in concert with other agencies and elements of power. However, land forces must retain the ultimate capability to defeat other conventional and non-conventional land forces in combat.

3003. The descriptions of tactical land forces given below focus on their ability to conduct combat, to engage enemy forces or to directly support those engagements in a high threat environment (that is, on the field of battle). Military forces may conduct a wide variety of tactical activities that have nothing to do with direct combat, but they have a monopoly on direct combat and therefore their primary roles, characteristics and equipping have to be viewed from that standpoint – no other agency can do those things. But by virtue of their inherent capabilities, their equipment types, and their manpower, tactical land forces can undertake other tactical activities and tasks as described in Chapter 1: infantry and other forces can provide civil security; combat service support forces can help deliver humanitarian aid or evacuate refugees; and engineers can help restore essential public services. But regardless of this, land forces must be equipped, structured and functionally organised to conduct their monopoly: to engage and defeat enemy forces or to directly support such action.

SECTION II - FORCE ELEMENTS AND TYPES OF FORCES

Force Elements

3004. **General**. A land force consists of combat, combat support, combat service support and command support elements. The proportion of each within a land component will vary between campaigns and operations.

3005. **Combat Elements**. Combat elements consist of those elements that engage the enemy directly. They fight and typically employ direct fire weapons. They include armoured, infantry, combat engineers (which are organised and trained to fight as combat elements) and aviation units equipped with attack or armed helicopters;

3006. **Combat Support Elements**. Combat Support elements are those that provide fire support and operational assistance to combat elements through operational command and control and fire support relationships. Combat Support elements include: fire support;air defence; ISTAR elements; some engineer elements; MP elements; chemical, CBRN defence elements; EW)elements and some aviation assets.

3007. **Combat Service Support Elements**. The purpose of Combat Service Support is to sustain a force with the necessary material resources for the duration required to achieve its objectives. It is the provision of supplies including their storage, handling and transportation, the maintenance and repair of materiel, medical support of casualties, personnel replacement, equipment replacement and the provision of necessary welfare services. Those responsible for CSS are tasked to ensure that combat forces are supplied in a timely manner with what they need to accomplish the mission. It is important that the supplies and facilities needed are provided in the right quantity, at the right time, at the right place and in a serviceable condition.

3008. **Command Support Elements**. Command Support elements assist commanders in the exercise of command. They include: staff of all types, communications, intelligence and information systems as well as support elements to protect, sustain and move the commander and his staff.

Types of Forces

3009. **General.** Land forces are the means through which fighting power and the combat functions are applied to create desired effects. There are generally three types of land forces: heavy forces; medium forces; and, light forces.

3010. **Defining Characteristics.** The three types of forces (light, medium, heavy) are relative to one another in terms of overall weight and bulk of the forces, particularly at the tactical level. These classifications are general in nature and some overlap or exceptions at some levels of command will exist. These types of forces can be viewed and described along three distinct characteristics:

a. **Protection.** Protection of a force may be gained in the form of armour (heavy forces) or may be gained from an ability to disperse and use close terrain (light forces);

b. **Firepower.** Firepower refers to the integral firepower of a force and may be mounted or dismounted. Forces that are mounted in vehicles are generally equipped with greater firepower.

c. **Mobility.** Mobility will differ at the three levels of command, and with the tactical situation. For example, tracked, armoured forces may be difficult to deploy strategically, but have great tactical mobility over

rough terrain for short distances. However, the same forces will be limited in their ability to move in close terrain. Additionally, their tactical requirements for replenishment add to their weight and thus limit mobility at the operational level.

3011. **Complementary Forces.** Any combination of force elements (combat, combat support and combat service support) must consider a variety of factors. One such factor will be theneed to ensure the force elements are complementary to each other in terms of mobility, firepower and protection. For example, medical evacuation assets allocated to a heavy force should have similar characteristics of mobility and protection so that they can follow closelyin the same types of terrain against the same threats; thus, medical evacuation capabilities assigned to an armoured unit should be equipped with armoured, tracked ambulances, at least in the forward areas. Similarly, combat support elements should have characteristics that are complementary to the combat elements being supported.

3012. **Selection and Employment of Forces**. All types of forces have inherent strengths and vulnerabilities and commanders must understand these and employ the forces as best as possible, to mitigate vulnerabilities and exploit strengths. The commander must select, group and task the best forces or best combination of forces to achieve the assigned mission, considering the desired end state, terrain and enemy. These factors may even drive unique combinations of different types of forces. For example, the commander may employ light, dismounted infantry supported by heavy armoured forces when fighting a conventional enemy in urban terrain.

3013. **Heavy Forces**.[13] Heavy forces utilise automotive power to deploy substantial firepower, protection and tactical (battlefield) mobility. They can apply concentrated firepower to achieve shock action and manoeuvre rapidly under fire cross-country. These kind of forces establish the highest rate of impact force and are able to fight from distance. They are normally mounted in heavily armoured vehicles, often tracked. The force will likely have a preponderance of main battle tanks and infantry will be mounted in armoured vehicles. They are a key element to operations in open terrain and provide the best protection when working in urban areas; however, they are

vulnerable to short range attack and thus require intimate protection in close terrain, usually by dismounted troops. (Note that if the armoured vehicles are equipped with Active Protection Systems, then troops cannot dismount around the vehicles.) Their integral protection and firepower, particular in the infantry and armour, allowthese elements to close with the enemy forces while under fire. Their operational mobilityand strategic deployment are limited due to their size and weight. They require significant logistical support particularly in terms of fuel**.**

[13] Heavy forces in the past have been termed armoured forces.

3014. **Medium Forces**.[14] Medium forces are land tactical forces that are mounted in tracked or wheeled vehicles with some mobility and armoured protection. Although they are generally mounted in armoured fighting vehicles, medium forces prioritise mobility at the strategicand operational levels over protection. The level of protection – and thus weight – is less than that of heavy forces. Although protected they deliver tactical and operational mobility. Often they have integral direct fire support as part of their vehicles but not necessarily. They form a critical intermediate step between heavy and light forces. Medium forces have less protection and integral firepower than heavy forces but more protection and greater tactical mobility than light forces in all but close terrain. Depending upon their integral level of firepower and protection, medium forces may not be able to close with a well-sited enemy defensive position, while under enemy fire. In such cases, the vehicles may be left to the rear or used in a fire base. Medium forces have less strategic mobility than light forces in that they require greater lift assets. Medium forces that are wheel-based (instead of track based) have greater operational mobility in that they can move about a theatre of operations without the need for flatbed transport (which is needed by heavy, tracked forces for long moves).

3015. **Light Forces.** Light forces may be described as forces that are rapidly deployable at all levels of command but optimised for conditions not suitable for medium and heavy forces. Light forces have significant strategic mobility for they can be transported anywhere by aircraft and without the need for lengthy logistical preparations and loading. At the operational level light forces can be moved rapidly to another location in the theatre but due to limited combat power may need to be relieved quickly. They may deploy rapidly at the tactical level but will need integral lift over distance and in open terrain. Light forces are often optimised and trained for specific environments (mountain, arctic or jungle, for example) and close terrain, where large vehicles are hampered. They may be employed as airmobile forces if allocated sufficient resources, support and training. However, they lack integral firepower and protection. Some vulnerability may be reduced through dispersion, concealment and fortification. The lack of firepower may be offset somewhat through priority calls for indirect fire, aviation and close air support (CAS). Light forces may be motorised, in that they will have integral wheeled

transport and are thus have additional flexibility at the tactical level. Thus such light units would be considered motorised units but remain light in relation to other types of forces.Such forces will be able to transport their troops and support weapons into an area of battle but would likely be forced to dismount in covered areas out of contact with the enemy.

3016. **Additional Force Terminology.** In additional to and overlapping the types of forces descriptions given above (heavy, medium and light forces) other terminology includes:

[14] Medium forces in the past have been termed light armoured forces.

a. **Armoured Forces.** Armoured forces are those that move and fight with vehicles that are heavily protected with armour. They generally refer to main battle tanks, armoured reconnaissance elements and infantry mounted in heavy, armoured fighting vehicles. If heavy or medium forces have a preponderance of main battle tanks, the force will likely be considered an armoured force.

b. **Mechanised Forces**. Mechanised forces is an older term meaning forces that are equipped with integral motor transport, particularly for all infantry forces, and normally with vehicles that are armoured. They will likely be heavy or medium forces depending upon the overall firepower and protection. In any case, mechanised forces will be mounted in vehicles, normally armoured and often tracked. If they have a preponderance of main battle tanks, the force will likely be considered a heavy force. If a heavy or medium forces have a preponderance of armoured infantry fighting vehicles or armoured personnel carriers, the force will likely be considered a mechanised force.

c. **Motorised Forces.** Motorised forces are those forces whose elements can be simultaneously lifted by motorised transport. Most motorised forces are transported in integral wheeled vehicles. Light forces – as detailed above – may be motorisedin light, generally wheeled vehicles.

d. **Forces with Specialist Capabilities.** Some light forces will be classified based on the terrain in which they operate or means of deployment. They include airmobile-, air assault-, airborne-, amphibious-, mountain- and reconnaissance forces as described below. They also include dedicated airmobile and air assault forces. Note that air assault forces normally include attack aviation platforms, which provide the necessary fire support to allow manoeuvre. (See ATP-49, *Use of Helicopters in Land Operations Doctrine*) The characteristics of these specialist capability forces are designed to all them to operate effectively in specific terrain or conditions.

e. **Special Forces/Special Operations Forces.** Special or special operations forces are those forces that undertake special operations. Special operations are defined as: *military activities conducted by specially designated, organized, selected, trained and equipped forces using unconventional techniques and modes of employment* (NATOTerm).[15] These forces generally operate in small numbers and undertake specific tasks that entail unique, high-value targets, and higher levels of risk and complexity. They have a great deal of intelligence in support of theirown operations and the operations of other forces. Despite the high levels of security that usually are involved with their operations, it is important that the tactical activities

[15] The term special forces and special operations forces are at times used inter-changeably. The differences in capabilities will vary with each nation.

of special operations forces be integrated into the overall campaign and coordinated with the operations of other forces.

Specialist Capabilities

3017. Specialist Capable forces consist of Airmobile, Air Assault and Airborne Forces, Amphibious Forces, Mountain Forces and Reconnaissance Forces:

a. **Airmobile, Air Assault and Airborne Forces.** Airmobile, air assault and airborne forces exploit the mobility of aircraft to provide reach and agility. They include transport, attack, support and reconnaissance helicopters, ground forces that are delivered by aviation means, and related combat support and combat service support elements. As a type of light force, they lack integral heavy firepower and protection. Their operations should be closely integrated with close air support, fire support and other force enablers that will help reduce their vulnerabilities;

b. **Amphibious Forces.** Amphibious forces undertake littoral or riverine operations, deployed and supported (at least initially) from ships. The land force component of an amphibious force will normally consist of light or a mix of light and medium forces. Amphibious operations are an important part of maritime power projection, which seek to use the littoral as an operational manoeuvre space from which sea-based Joint Amphibious forces can threaten, or apply and sustain force ashore. An amphibious operation is an operation launched from sea by naval and landing force (LF) embarked in ships or craft, with the principal purpose of projecting the LF ashore tactically into an environment ranging from permissive to hostile. There are four types of amphibious operations: Amphibious Assault; Amphibious Raid; Amphibious Withdrawal; and, Amphibious Demonstrations. These operations may be employed in support of the Land Component and will require close coordination and control. In certain circumstances there may be a requirement to establish an Amphibious Component Commander though normally amphibious operations will be commanded by the Maritime Component Commander. Full details concerning amphibious forces are contained in ATP-8.

c. **Mountain Forces.** Mountain forces (often referred to as mountain troops) have specialized capabilities, equipment scales and training to allow them to operate in mountainous terrain. They are by necessity light forces and have limited integral fire support.

d. **Reconnaissance Forces.** Reconnaissance forces function as either combat or combat support elements and may be part of heavy, medium or light forces depending upon their integral equipment. They will be an integral part of each of the three types of forces listed above. Their primary purpose is to gain information, usually on the enemy and the terrain. They support the intelligence combat function. Reconnaissance elements do not generally undertake intentional enemy contact to gain information (known as “fight for information”). They rely on stealth and

undetected movement and surveillance to gain information. If reconnaissance forces are expected to undertake enemy contact to gain information then they must be structured and equipped to do so (larger, well-protected platforms with significant mobility and firepower). Although their primary role is go gain information, some reconnaissance forces may be given fighting roles, typically as part of guard forces providing protection across a frontage or flank. A reconnaissance element that is primarily tasked with provision of battlefield information has a combat support role. One with a more aggressive task, such as guarding another force's flank, has a combat role. It should have appropriate fire, air and aviation support. Some reconnaissance forces may be suited to fighting to gain information. That is, they will have to seek out and engage with the enemy, although still avoid decisive battle. Such reconnaissance forces must be equipped and trained to operate in this manner.

SECTION III - GROUND MANOEUVRE FORCES

General

3018. Ground manoeuvre forces include heavy, medium and light forces. During operations, they may be grouped together in combined arms groupings however, their integration and the nature of their individual characteristics must be carefully considered so that their characteristics complement one another and the force as a whole, rather than detract from it.

Heavy Forces

3019. **Introduction**. Heavy forces normally relate to armour and armoured infantry forces, based on tanks and infantry fighting vehicles. They normally include indirect fire support and other combat support and combat service support elements with compatible levels of protection, range and mobility. They rely on automotive power and large calibre integral weapon systems in the execution of combat functions.

3020. **Characteristics**. As a result of their equipping and training, heavy or heavy forces have the following characteristics:

a. **Firepower.** Heavy forces have integral heavy weapons to provide their forces with close support that is integrated into their tactics, techniques and procedures. Infantry vehicles will have cannon and medium/heavy machine guns to provide close support and is complementary to the firepower of supporting armour. Heavy force firepower is key in destroying or neutralising enemy hardened positions particularly in urban areas. They can assist in the breaching of building walls. While armour destroys hard targets and enemy armour, the infantry vehicle mounted weapons destroy light vehicles and dismounted infantry and neutralise or suppress area targets. Armour also neutralises well defended fortifications in urban areas and assists in breaching structures. The infantry normally consider their vehicle mounted weapons as an integral part of their section and platoon fighting power;

b. **Mobility.** Heavy forces have a high degree of battlefield, tactical mobility due to their speed and cross-country mobility. They are normally track based and can rapidly cross all but the most difficult terrain. They can cross minor obstacles and their mobility assists in the breaching of enemy defences. This tactical mobility makes these forces ideal for rapid manoeuvre to an objective, flanking and for exploitation. Combat support, particularly engineers, and service support elements require compatible mobility in order to keep pace with these forces;

c. **Protection.** The significant and often scalable protection afforded heavy forces increases their survivability in closing with the enemy forces, particularly when the enemy is occupying prepared defensive positions. It defeats small arms and light anti-armour weapons and mitigates the effects of other weapons. It allows infantry to dismount on the objective and to seek shelter near the vehicles when operating in close contact with the enemy. The protection allows increased exposure to enemy forces in order to exploit the other characteristics such as mobility, firepower and shock effect;

d. **Flexibility.** Heavy forces can concentrate with their combat support elements at critical times and places, making them ideal for both assault forces and reserves. They can be used to prevent local defeat in one area or to exploit success in another;

e. **Psychological Effects: Shock Action and Deterrence.** The firepower combined with mobility will create a significant psychological effect on any enemy force. Furthermore, during certain campaigns, the presence of heavy forces can have an effect of deterrence against would-be adversaries.

3021. **Limitations**. Despite their advantages, heavy forces have certain limitations:

a. **Operational and Strategic Mobility.** Due to their weight and requirement for significant echelon support, heavy forces cannot be rapidly deployed strategically or operationally. Tracked vehicles require flatbed lift over long distances and when deployed globally, require sealift vice just air transport;

b. **Close Terrain.** Heavy forces are constrained in close terrain, although they retain great utility in urban areas in the provision of close support to dismounted infantry. They in turn require close support and security by dismounted infantry for they are vulnerable to short-range weapons;

c. **Maintenance and Resupply.** Heavy forces consume significant amounts of petrol products and require constant maintenance. CSS in support of heavy forces must be well planned in detail in order to prevent a loss of mobility;

d. **Limited Dismounted Infantry.** Heavy forces normally have smaller rifle sections amongst their infantry units and thus fewer soldiers to dismount.

3022. **Employment.** The proper employment of heavy forces is key to rapid success, through mitigation of their limitations and exploitation of their strengths. Several factors must be considered in the planning and employment of heavyforces, such as:

a. **Training.** Units that are designated to be part of or to support heavy forces must train together on a regular basis and have established SOPs for the integration of their close support;

b. **Link-Up Drills.** When grouping and regrouping occurs on operations, time must be allocated for grouped units to conduct their link-up drills and coordination. This will include the sharing of SOPs, C2 procedures, target indication procedures and the rehearsal of drills for close support;

c. **Grouping.** Heavy forces should be grouped with forces of similar and complementary characteristics in order allow full exploitation of their strengths across the combined arms grouping. For example, heavy forces will require armoured engineer support for crossing obstacles and CSS echelon vehicles will require similar mobility in order to maintain the speed and mobility of heavy forces;

d. **Close Terrain.** When working in close terrain with the enemy at short ranges, particularly urban areas, heavy forces, particularly tanks, may be employed in smaller groupings to allow movement, avoid concentration and to provide close support to dismounted infantry. Additionally, they will need to have close support and protection provided to them by dismounted forces in order to avoid piecemeal destruction and separation from the infantry. Drills for such support need be well practised and applied even in short defiles when operating in generally open terrain.

3023. **Suitable Tactical Tasks.** Due to their characteristics, heavy forces are ideally suited to the following tactical tasks, particularly in open terrain:

a. Lead force in the assault and break-in (breaching) of an enemy defensive position. This includes the lead force in such urban tactics as a penetration or thrusts;

b. Breaching force for obstacles if grouped with armoured engineers. Breaching of walls with main armament in order to assist in the break-in of a building by dismounted infantry.

c. Pursuit and exploitation force;

d. Reconnaissance in force;

e. Countermoves when defending;

f. Reserve tasks;

g. Fixing and blocking tasks;

h. Stability activities related tasks particularly those requiring mobility in a high threat area;

i. Tasks in support of enabling activities such as a guard force during a

withdrawal.

3024. **Command and Control.** The speed and mobility of heavy forces and their integral command and control systems allow for rapid regrouping and re-tasking. Heavy forces, particularly tanks, may be grouped with mechanised or light forcesin order to mitigate the lack of firepower and protection inherent to those forces.

3025. The characteristics of heavy forces and their mounted, integral C2 systems, allow them to operate at range, so long as measures are taken to ensure resupply.

3026. **Combat Support** .CS elements will need the same mobility and protection in order to be able to support the armoured units in an effective manner. CS elements must be capable of quick re-grouping and re-establishing command relationships between or even during phases of an operation.

3027. **Combat Service Support.** CSS elements integral to heavy forces should have compatible mobility and some protection in order to allow immediate resupply of the forces whilst in battle. The high consumption rates of petrol products and the weight and bulk of ammunition must be considered and integrated into the tactical level plans. CSS elements must be configured and grouped to ensure rapid re-supply of these commodities.

Medium Forces

3028. **Introduction**. Medium forces have some of the same attributes of integral fire power and protection as heavy forces, but to a lesser degree. They are flexible forces that may be employed for a wide range of tactical tasks. If wheel-based, medium forces will have greater operational mobility than heavy forces (they can move from one side of the battlefield to the other more quickly) but less strategic mobility than light forces. It must be remembered that this type includes a wide array of vehicle types and capabilities, and will include forces mounted in lightly armoured patrol vehicles to those mounted in multi-wheeled, armoured personal carriers, mounting rapid-fire cannons for close support.

3029. **Characteristics**. Medium forces embody the following characteristics:

a. **Operational Mobility.** The light aspect of these forces, particularly if their integral fighting and support vehicles are wheeled, allow for significant operational mobility. Within hours, these forces may traverse significant areas in order to counter unexpected threats or exploit unexpected opportunities. Additionally, they are appropriate for employment as part of amphibious forces. To a certain extent light armour and mechanised forces have the ability to be transported by tactical and strategic airlift. Hence, they make appropriate entry forces for the initial foothold into a new theatre of operations;

b. **Tactical Mobility and Agility.** Medium forces, due to their rapid road movement and some cross-country mobility, provide a commander with a robust force with significant tactical mobility. Their reduced impact and weight, particularly if wheeled, enhance their employment in urban

areas during COIN and peace support campaigns and prevent damages to roads and infrastructure. However, in combat, their ability to cross minor obstacles is less than that of heavy forces;

c. **Firepower.** Medium forces will normally include integral vehicle mounted support weapons for close support to dismounted troops. Additionally, the use of vehicles will allow the transport of a range of support weapons to counter various threats and to enable tactics, such as support weapons to breach walls and buildings;

d. **Protection.** Medium forces have a certain degree of protection that varies with the type of vehicle and system used. Often the level of protection is scalable, with the addition of extra armour; however, weight-to-power ratios of the vehicles limit the amount of armour that can be added. The limited protection that they normally have against light hand-held anti-armour weapons, which can defeat them, could be increased by adding reactive armour and active protection systems;

e. **Flexibility.** The combination of firepower and protection, in a mainly infantry force, provides for a wide range of employment options. They can be grouped with heavy forces, given their mobility, or used to enhance light forces with additional firepower and protection. Their mobility allows rapid deployment and re-deployment to counter unexpected threats or to demonstrate will. They can even be employed in a dispersed manner, given their vehicle mounted communications and ability to rapidly concentrate when required. Finally, medium forces tend to have a slightly larger proportion of dismountable soldiers, thus allowing more troops on the ground than heavy forces.

3030. **Limitations.** Notwithstanding the flexibility and inherent characteristics of light armoured or mechanised forces, they do have certain limitations, including:

a. **Protection Against Light Anti-Armour Weapons.** Although medium forces are protected against shrapnel and most small arms fire, they are susceptible to light, hand-held anti-armour weapons. These can have a devastating effect on such forces whether they be employed in an ambush, “hit and run” fashion, or from hardened defensive positions, particularly in built-up areas. In offensive operations, this may cause commanders to order attacking forces to dismount short of the objective, outside the range of light anti-armour weapons;

b. **CSS Requirements.** Although they are lighter than heavy forces, mechanised or medium forces still require the regular re-supply of bulky and heavy petrol products and larger calibre ammunition;

c. **Obstacle Crossing.** Despite their mobility, medium forces cannot cross obstacles unassisted to the same degree as heavy forces. Likewise, their cross-country mobility is limited. Even simple obstacles in an urban area will halt a vehicle and separate it from its integral infantry. In order to cross obstacles, they require engineer support akin to that of heavy forces.

3031. **Employment.** Due to their inherent capabilities and overall flexibility, medium forces may be employed in a large variety of roles at any point on the spectrum of conflict. However, their proper employment requires careful consideration, to include:

a. **Enemy Threat.** The threat posed to the relatively light armour of medium forces must be considered in planning and execution. An enemy force well-armed with light anti-armour weapons will have a significant effect upon the force and attrite them substantially when at close range. This is particularly so in build-up areas. Adjustments to TTPs have to be made to account for this such as decisions to dismount outside of the range of such anti-armour weapons or to use significant quantities of smoke to cover approaches;

b. **Route Selection.** Medium forces that are wheeled must be cautious in their selection of cross-country routes. They are susceptible to becoming stuck in wet or soft ground;

c. **Grouping.** Medium forces may be grouped with heavy forces to augment their flexibility or with light forces to increase their firepower. Time must be allocated for the practise of C2 and SOPs for combined operations, particularly the provision of close support. The speed of medium forces allows them to keep up with heavy forces in supporting and reinforcing roles, depending upon the terrain and the level of tactical mobility of the medium forces;

d. **Tactical Tasks Suitable for Medium Forces.** Given the characteristics and limitations for medium forces, the following may be considered for suitable tactical tasks:

(1) Seize tasks against lightly defended positions and secure against lightly armed adversaries;

(2) Follow-and-assume tasks, particularly as an echelon or depth to heavy forces. The speed of medium forces allows them to keep pace with the heavy forces;

(3) Security and protection tasks such as flank protection and covering forces;

(4) Clearing tasks particularly in areas where the enemy is not well defended;

(5) Exploitation and pursuit of fleeing demoralised enemy;

(6) Convoy escort. The wheeled mobility of medium forces allows them to keep pace with wheeled CSS or NGO vehicles that require protection in threatened areas;

(7) Route security. The speed and minimal route damage caused by wheeled mechanised vehicles makes them a good choice for security of MSRs;

(8) Reserve tasks. The mobility and firepower combined with the relative number of dismounted troops make them suitable for

reserve tasks, particularly during operations that occur in large AOOs;

(9) Tactical tasks related to stability;

(10) Tactical tasks in support of enabling activities.

3032. **Command and Control.** Despite their integral mobility and firepower, medium forces normally lack integral tank support and therefore, when faced with a determined, well-equipped enemy, they will likely be grouped with armour or used in supporting roles.

3033. Their flexibility, due to a combination of firepower, some protection and dismounting troops, make them suitable for use in those campaigns and operations that require a focus on dismounted yet robust tactics. Their ability to present a significant presence yet dismount amongst a local populace is important in peace support and COIN campaigns and enables information collection.

3034. The ability of medium forces to carry integral CSS for a minimum of approximately 48 hours and their robust communications make them suitable for dispersed operations and flexible command structures that allow rapid regrouping.

3035. **Combat Support.** CS elements should be grouped to provide the necessary combat power and protection to the medium forces. CS elements may be allocated in order to counter some of their limitations.

3036. **Combat Service Support.** Due to their demand for petroleum products and ammunition consumption, CSS for medium forces has to be carefully considered and planned, based on sound staff calculations. A flexible and robust echelon system with integral minute-to-minute resupply and an

effectivepush system for daily resupply is essential for sustained operations. However, consumption rates will be less compared to heavy forces.

Light Forces

3037. **Introduction**. Light forces are forces optimized for dismounted operations and operations in close terrain and specific environments such as mountain and jungle, and other environments or situations not suited to armoured vehicles. They are rapidly deployable through a variety of means and are often allocated roles such as airmobile. They have significant strategic mobility, as they can be transported by aircraft to any theatre with little preparation and have fewer sustainment requirements. However, their firepower is limited compared to heavy or medium forces and they are vulnerable without the protection of dispersion, concealment or fortification. Light forces are not necessarily dismounted for they may be equipped with integral, light vehicles that lack protection but can provide transport over large areas however, what makes them unique from other mounted forces (heavy and medium) they must focus on skills for operating dismounted.

3038. **Characteristics**. Light forces embody the following characteristics:

a. **Mobility.** Light forces can be kept at high states of readiness and

deployed rapidly strategically, operationally and tactically by a wide variety of methods. This makes them ideal for Limited Military Interventions such as non-combatant evacuation operations. The lack of armoured vehicles may also make them suitable for stability activities that focus on operations supporting civil civilian populations;

b. **Close Terrain.** Light forces are often optimised in terms of equipment and training to work in regions characterised by close terrain, such as jungle and mountain and may have an advantage in urban areas. They are often trained and equipped to be re-supplied by light ground transport or by air;

c. **Focus on Dismounted Operations.** All forces, particularly infantry, will operate in a dismounted fashion as required by the task and situation at hand. Light forces focus on dismounted operations and their equipment and training should reflect this. Although all forces should be able to operate amongst civilian populations to secure them and to gather information, light forces may be better suited for this. Due to their tactical flexibility, light forces are adaptable to changing situations, although a sudden threat from a heavy armoured enemy force will limit their operational effectiveness;

d. **Robustness and Self-Reliance.** Light forces should be trained to, and expected to, operate in arduous climates and terrain, dismounted and as self-sufficient as possible. They are expected to be highly adaptable to their environment. They often have an esprit de corps that reflects this attribute. CSS requirements are much less than that of other forces.

3039. **Limitations.** Light forces are restricted in their capabilities and subsequently, their employment, due to limitations, including the following:

a. **Protection.** Light forces lack armour protection and are therefore vulnerable to all fires. They therefore must seek protection through tactics such as dispersion, concealment and fortification;

b. **Firepower.** Light forces carry their personal and support weapons and therefore have limited fire support. They lack medium and heavy anti-armour weapons. Some support weapons such as, anti tank guided missles (ATGM), heavy machineguns or automatic grenade launchers are portable, but not normally for extended distances;

c. **Flexibility.** Once light forces are committed, their lack of integral transport precludes rapid re-grouping or re-deployment. They can be allocated armoured or medium forces for close support, but they have difficulty keeping pace with them due to their dismounted structure. Light forces can be made more flexible with increased mobility if they are issued with some form of integral light wheeled transport;

d. **CSS Support.** Although their resupply requirements are less than that of other types of forces, light forces must generally carry all their CSS. Thus they require constant resupply of all combat supplies and cannot be expected to carry additional supplies. Specific plans must be made for casualty extraction from the point of wounding as often the lack of

integral transport precludes the extraction of the casualty to a rearward location by the light forces themselves.

3040. **Employment.** Within the limitations of light forces, the following are key employment considerations for light forces:

a. **Enemy Threat.** Light forces, with their lack of protection and intimate fire support, cannot be employed against enemy heavy forces or even mechanised/medium forces unless defending in close terrain;

b. **Insertion, Resupply and Extraction Plans.** Plans for the insertion of light forces must be detailed and carefully considered in order to avoid enemy strengths. Such operations must include plans for casualty evacuation, resupply and extraction;

c. **Dispersed Operations.** The characteristics of light forces make them suitable for dispersed operations and swarm tactics in urban areas. Without integral transport, their ability to disperse and aggregate rapidly in rural terrain is very limited. However, when deployed in small, coordinated groups in depth, they can cause heavy damage on superior forces, particularly when supported through air support, indirect fires and portable anti-armour systems;

d. **Groupings and Link-Ups.** If light forces are reinforced with light armoured or heavy forces, time will have to be allocated for training in C2 and SOPs.

3041. **Suitable Tactical Tasks**. When considering tactical employment of light forces, it should be kept in mind that light forces need not be dismounted. They maybe mounted in light wheeled vehicles particularly when AOOs are expansive. Given the characteristics and limitations light forces, the following may be considered for suitabletactical tasks:

a. Tasks assigned with airmobile insertion even though the force in question may not be designed airmobile units. Additional training will be required;

b. Security and protection tasks, such as flank security and protection, the latter possible only if facing a similarly light forces threat;

c. Reserve forces, particularly if operating in close terrain or during campaigns in which the potential adversaries are not heavy forces;

d. Follow-on echelon forces to support heavy or mechanised forces when clearing close terrain;

e. Reconnaissance and surveillance tasks;

f. Any tactical task in which the terrain is close and the enemy comparable to the light forces;

g. Tactical tasks inherent to stability activities, particular those in close terrain such as dense urban areas;

h. Tactical tasks inherent to enabling activities.

3042. **Command and Control.** Light forces are best commanded by headquarters with similar training, esprit de corps and capabilities for dismounted operations. The C2 systems for light forces must reflect their potential roles and employment locations. They must be easily dismountable and as robust as possible, able to be carried long ranges.

3043. **Combat Support.** CS units allocated to light forces must have the same levels of mobility and specific training in order to effectively support light forces in specific environments. In certain situations, CS elements with additional firepower and protection may be allocated in order to alleviate the limitations inherent in light forces.

3044. **Combat Service Support**. Although light forces require significantly less combat supplies than heavy forces, the re-supply of light forces must be carefully considered. They cannot carry extensive combat supplies (unless mounted in light wheeled vehicles) and therefore will rely on regular re-supply.

3045. Light forces will often lack integral casualty evacuation means and therefore plans must be made and resources allocated to go forward to the point of wounding and evacuate casualties rearward.

SECTION IV – SPECIALIST CAPABILITIES: AIRMOBILE, AIR ASSAULT AND AIRBORNE FORCES

Introduction

3046. Air manoeuvre describes the integrated use of rotary wing (aviation) assets to support land manoeuvre. (Full details are contained in ATP-49). Based on the meaning of “manoeuvre” – movement supported by fire - such a force will likely contain a combination of transport aviation and fire support aviation. Air manoeuvre includes airmobile and air assault operations.

3047. Airmobile and air assault forces are those specially designed forces that are inserted, resupplied and possibly extracted using aviation resources as their normal and practised means of operation. Aviation resources are either a permanent part of their structure or are routinely assigned to them through standing affiliations and C2 relationships. Airmobile forces are defined as ground combat, supporting and air vehicle units required to conduct an airmobile operation.

3048. An airmobile operation is defined as follows: *an operation in which combat forces and their equipment manoeuvre about the battlefield by aircraft to engage in ground combat* (NATOTerm).

3049. An air assault defined as the movement of friendly assault forces by rotary wing aircraft to engage and destroy enemy forces or to seize and hold key terrain.[16] The use of the term air assault implies that forces will be landing within direct fire range of the objective and thus assaulting the objective immediately. Such a tactic will likely require additional direct and indirect fire support and entails additional risks to an airmobile operation landing away from an objective area.

3050. Air assault forces are differentiated from airmobile forces in that the former contains enough firepower and support to assault and seize objectives immediately upon insertion or as part of the insertion. In other words, during an air assault, forces land within direct fire range of the objective and

therefore require additional firepower and other resources to suppress the enemy during the landing stage. They are often supported intimately with armoured attack helicopters. Airmobile forces are not as robust and normally move to their objectiveareas after insertion is made, out of contact. Airmobile and air assault forces are generally considered light forces.

3051. It should be noted that other ground forces such as light or medium forces (once dismounted from their vehicles) may be used as airmobile forces. However, they will require some additional training in the tactics, techniques and procedures for the use of helicopters. Full details on airmobile forces may be found in ATP-49.

3052. Airborne force is defined as: *a force composed primarily of ground and air units organized, equipped and trained for airborne operations* (NATOTerm). Airborne forces are considered light forces. Although they are trained in parachute insertions, they may be delivered to their operational areas by aviation resources or tactical airlift resources. The characteristics and limitations of airborne forces are similar to those of airmobile and air assault forces. It should be remembered that airborne forces have operational mobility but lack tactical mobility. Airmobile and air assault forces may have both operational and tactical mobility.

3053. Airborne forces give a commander flexibility by virtue of their reach and responsiveness and they permit him to operate throughout his area of operations. They may be initiated either independently, or in conjunction with the forces operating on the ground. The nature of their role is such that they are lightly equipped with only limited means of fire support and mobility once on the ground. Their capability to sustain operations after the initial assault is therefore governed by the ability either to resupply, probably by air, or to link up with them on the ground. Their ability to sustain operations may be enhanced to some extent through long-range fire support, UAS. When sustainment is not feasible, they will need to be extracted.

[16] Taken from the US publication ADRP 1-02.

3054. **Air Landing**. Helicopters and fixed-wing aircraft have a wide range of uses in many theatres of operation. They will often be used for tactical tasks that do not necessarily involve combat. These may include the delivery of humanitarian aid to a remote location, the insertion of an observation post, or the insertion of a patrol to place a presence in a village. These are termed air landed. Air landed is defined as: *moved by air and disembarked, or unloaded,after the aircraft has landed or while a helicopter is hovering* (NATOTerm).

Characteristics

3055. Airmobile, air assault and airborne forces are extensively trained in aviation insertion and support, and embody the following characteristics:

a. **Flexibility and Surprise.** The ability of airmobile, air assault and airborne forces to attack from any direction, to strike objectives in depth or in otherwise inaccessible areas, the over-flying of barriers, and the bypassing of enemy positions, will achieve surprise and reflect a unique flexibility. Despite their specialised training for air insertion, these forces may be employed as light infantry, particularly in environments characterised by close terrain;

b. **Operational Mobility.** Airmobile, air assault and airborne forces are capable of rapid deployment over considerable distances, crossing obstacles and difficult terrain. This capacity allows them not only tactical mobility but also strategic and operational relevance. They can be a tool of deep operations, potentially capable of striking at an enemy's strengths necessary for enemy success. Once inserted, airborne forces[17] have little or no organic mobility. In some cases the provision of light vehicles can provide the organic mobility needed.

c. **Speed.** Airmobile, air assault and airborne forces can rapidly deploy and redeploy, thus permitting quick concentration of combat power at key locations;

d. **Shock Action and Surprise.** Given the nature of these forces and operations, shock and surprise can be immediate effects of the sudden insertion of troops from the air. Their insertion cannot be easily predicted by the enemy given the high altitude of the air movement and the speed of delivery. This shock and surprise will undermine morale and confidence. It will disrupt the enemy mentally and physically;

e. **Range.** Airmobile, air assault and airborne forces give the commander the ability to reinforce or relieve his forces quickly and over long distances;

f. **Theatre Entry Assault.** Like amphibious forces, airmobile, air assault and airborne forces may be used as the initial entry force to a campaign, with the force having been launched out of theatre from the home base or from an interim forward mounting base. Such insertions

[17] Air assault and, in some cases, airmobile forces have organic mobility.

would support a Limited Military Intervention operation;

g. **Economy of Force.** The ability to rapidly deploy airmobile forces enables the commander, under certain circumstances, to commit a larger part of his force while relying on a small airmobile reserve;

h. **Independence.** Airmobile, air assault and airborne forces are able to conduct operations independent of a ground line of communication;

i. **Esprit de Corps.** Airmobile, air assault and airborne forces have a unique esprit de corps that manifests itself in robustness, fortitude and adaptability.

Limitations

3056. Airmobile, air assault and airborne forces and their operations are vulnerable to a number of threats and conditions and thus may be limited in their application by any of the following factors:

a. **Weather Conditions.** Airmobile, air assault and airborne forces are subject to variances in weather. Adverse weather conditions may delay or preclude insertion, re-supply, fire support, casualty evacuation and extraction;

b. **Vulnerability.** Airmobile, air assault and airborne forces are vulnerable to enemy fire and particularly between assembly and take-off and during approach and landing. Once committed, they lack the firepower and protection of heavy forces and cannot be reinforced by heavy or mechanised forces. These forces are also vulnerable to attack from enemy air defence and aircraft and are unlikely to have air superiority in the landing area;

c. **Combat Support Requirements.** Given their vulnerabilities to enemy forces including aircraft and air defence, the insertion of airmobile, air assault and airborne forces requires extensive planning and support, often joint support such as the suppression of enemy air defences (SEAD), EW support, long range fire support and possibly air support in the landing area. During the operation, local and time-limited air superiority is required;

d. **Protection and Firepower.** Once committed, airmobile, air assault and airborne forces lack integral vehicles, heavy support weapons and must seek protection through dispersion, surprise and concealment. Furthermore, they cannot be reinforced easily, particularly with mechanised or heavy forces. Once committed they are vulnerable to enemy armoured or medium forces. Airmobile and airborne forces cannot deliver heavy support weapons[18] but are limited to portable support weapons. They should have good C2 systems and established C2 relationships in order to draw upon long range supporting fires, attack helicopters and close air support;

e. **Mobility.** Once inserted, airborne, air assault and airmobile forces have

[18] Air assault and, in some cases, airmobile forces can deliver heavy support weapons.

no or little organic mobility;

f. **Resupply.** Airmobile, air assault and airborne forces are limited in the amount of combat supplies that they carry on their initial insertion. They must be re-supplied by air and casualties must be extracted by air. This may be difficult and can be easily disrupted. Unless the forces are extracted, there will be an urgent need for link-up by ground forces.

Employment

3057. The unique capabilities and limitations of airmobile, air assault and airborne forces demand special considerations for employment. These should include the following:

a. **Detailed Planning.** Given their complexities, airmobile, air assault and airborne operations require detailed planning and sound intelligence support. They are planned in the reverse order of its execution. Planning includes a ground tactical plan, a landing plan, an air movement plan and a loading plan. Resupply and extraction/relief must be carefully considered and planned as well;

b. **Early Insertion.** Airborne, and possibly airmobile and air assault forces may be the first tactical forces committed to a theatre or campaign and can be used to seize operational objectives. They may be the only land forces employed in Limited Military Intervention campaigns;

c. **Exploitation of Surprise and Psychological Effects.** The sudden arrival of airmobile, air assault and airborne forces in an enemy's rear area and along key lines of communication, and the threat they pose will have significant psychological effects on the confidence and will of the enemy. If identified and deemed to be poorly defended, airmobile and air assault forces can be used to attack a critical vulnerability of the enemy;

d. **Dispersed Operations.** The insertion to the enemy's vulnerable areas, of forces that are capable of independent and dispersed operations, can have significant effects on enemy capabilities and operations by causing them to disperse their forces and efforts;

e. **Coordination with other Forces.** Operations of airmobile, air assault and airborne forces must be coordinated in detail with air and ground forces. The time and planning cycle required for airspace control measures has to be taken into account. Extended-range weapon systems should be integrated with these light forces to provide additional support and allow engagement beyond the range of enemy weapon systems.

f. **Forward Support.** Ongoing air manouevre operations may require the establishment of specific forward operating bases (FOBs) and forward arming and refuelling points (FARPs).

g. **Risk Assessment.** The commitment of airmobile, air assault and airborne forces entails significant risk. A careful assessment must be made with respect to the potential gains that may be made in light of

the possible cost in casualties and equipment losses and possible mission failure.

Tactical Tasks

3058. Given their capabilities and limitations, airmobile, air assault and airborne forces may be assigned a variety of tactical tasks, including the following:

a. Raids, particularly against enemy C2 and CSS sites, or against vulnerabilities of key enemy strengths, followed by extraction. Extraction may include ex-filtration;

b. Seize key objectives for subsequent link-up with other forces, likely ground manoeuvre forces;

c. Deception through feints and demonstrations;

d. Reserve tasks, including the establishment of blocks to counter unexpected threats;

e. Rear and flank area operations to continually disrupt enemy activities, particularly CSS and C2, and to undermine morale and confidence. This will include the conduct of an attack on the rear of enemy positions or cut off of his reserves in combination with offensive action by other ground forces;

f. Reinforcement of encircled forces;

g. The capture of airfields and beaches to form airheads and bridgeheads;

h. Reconnaissance and surveillance tasks. This should include the ability to direct long-range fires and air interdiction;

i. Tactical tasks inherent in stability activities, particularly those that require a flexible response or rapid deployment;

j. Tactical tasks inherent in the support of enabling activities.

Command and Control

3059. Suitable command elements of airmobile, air assault and airborne forces must be integral to the forces and have the same training and capabilities. They must have robust yet man-portable communications capable of linking the airmobile or air assault forces to their controlling HQ.

3060. Given the nature of airmobile, air assault and airborne forces and their lack of integral ground mobility, it is difficult to group these forces with ground manoeuvre forces. Employment of these forces will routinely involve link-ups with ground forces. They must have well practised procedures for this enabling activity and these must be known to the linking ground manoeuvre forces. The provision of C2 detachments and liaison teams to ensure a communications and information link will be an important consideration.

Combat Support of Airmobile, Air Assault and Airborne Forces

3061. Integral CS elements in airmobile, air assault and airborne forces are limited in terms of numbers and capability. Thus these air insertion forces will be reliant upon joint fire.

Combat Service Support of Airmobile, Air Assault and Airborne Forces

3062. Careful consideration must be given to the CSS requirements of airmobile, air assault and airborne forces. They are very limited in terms of the amount of combat supplies with which they can initially deploy. Even if a link-up and relief is anticipated prior to resupply, contingency plans must be in place should the relief not occur as anticipated or if the forces consume there combat supplies more quickly than anticipated.

3063. Resupply may be conducted through aviation support or via parachute airdrop. Given the nature of such operations, combat supplies cannot be delivered to the forces in large, bulk order. These bulk packages must be broken down to individual and section sized commodities for ease of distribution and carriage.

3064. Operations by airmobile, air assault and airborne forces will be enhanced with the use of ultra-light all-terrain vehicles. These may be used for combat supply delivery and distribution and for the transport of support weapons.

3065. If employed in a more conventional role as light forces, airmobile, air assault and airborne forces will likely require augmentation to the vehicle holdings of their support echelons.

SECTION V – TASK ORGANISATION (COMBINED ARMS GROUPING)

3066. Task organisation refers to the re-grouping, usually temporarily, of forces for specific operations and phases within operations. They normally form combined arms groupings. Command and control terminology is used to describe the command relationships between the different elements. Tasked organised forces should be used for all types of forces wherever possible. They balance the inherent strengths and limitations of each force.

3067. Properly employed, task organisations provide a complementary range of capabilities and flexibilities that allow the overmatch of a less well-balanced force. They present few functional weaknesses for the enemy to exploit.

3068. Task organisation normally occurs at the sub-unit level and above. Depending upon the situation, combined arms groupings may involve a combination of ground manoeuvre and aviation elements.

3069. Task organisation may be formed for a specific campaign, operation or even a specific activity. They must remain flexible and adaptive in order to meet changing situations. To be successful, they rely upon common doctrine, sound and well-practised standard operating procedures and drills. They are issued as task organisations within an operational order.They are difficult to undertake during even relatively simple operations and therefore they require a great deal of practice during normal training periods and during in-theatre training. Units that will likely work together on operations should train together routinely and share common drills and standard operating procedures. This will ensure that groupings and re-grouping during operations will occur as smoothly and as quickly as possible.

CHAPTER 4 - OFFENSIVE ACTIVITIES

SECTION I - PURPOSE AND PRINCIPLES

General

4001. Offensive activities are activities in which forces seek out the enemy in order to attack him. Offensive activities will be key to defeating an enemy. Even in the defence, a commander must take every opportunity to seize the initiative and carry the battle to the enemy through both offensive activities and an offensive spirit. It should be remembered as well that information activities may be conducted in an offensive manner as well. (See Chapter 9 and AJP-3.10).

Purpose

4002. The main purpose of offensive activities is to defeat the enemy and his aims either by breaking his cohesion, by physical destruction, or both. The real damage to the enemy's will is caused by destroying the coherence of his operations and fragmenting and isolating his forces. Offensive activities should attack both physical and psychological cohesion. By doing so, the enemy's capability and will to resist or to achieve his objective is destroyed.

4003. Other subsidiary purposes of offensive activities are:

a. The gaining of information through reconnaissance in force activities;

b. Depriving the enemy of resources;

c. Pre-empting the enemy in order to gain the initiative;

d. Disrupting enemy defensive, offensive or other activities;

e. Dislocating enemy forces through decisive engagement or deception;

f. Seizure of ground;

g. Defeating the enemy in detail;

h. Fixing the enemy as an economy of force activity;

i. Influencing or changing perceptions of commanders and other, possibly neutral or hostile, target audiences. This may be done through physical or psychological activities.

Principles

4004. **General**. In offensive activities the key to success is seizing and retaining the initiative. In doing so, a commander maintains momentum, keeps the enemy off-balance, and prevents him from blocking penetrations, mounting counter-attacks, and reforming his reserves. The initiative is seized by selecting the location, target, time and direction of offensive activities all at a faster

decision cycle than that of the enemy. When planning and conducting offensive activities, the following principles must be considered:

a. **Seizing and Maintaining the Initiative.** Offensive activities aim to defeat the enemy's will to resist. This implies manoeuvre, speed and aggressiveness. By wresting the initiative from the enemy, one acquires freedom of action and a distinct psychological advantage. Exploiting success and taking advantage of enemy weakness must be foremost in the minds of all commanders. This requirement may be applied to information activities, for commanders must seize the initiative in PSYOPS and public affairs in order to influence the understanding and perceptions of key audiences and elements of the populace;

b. **Concentration of Force.** A commander must strive to concentrate capabilities and effects superior to that of the enemy at a decisive time and place. Concentration applies to not only the massing of forces or firepower, but the ability to mass desired effects, without necessarily massing large formations. It is essential for achieving and exploiting success. The ability to concentrate is dependent upon movement, flexibility and communications;

c. **Surprise.** Surprise can create success out of all proportion to the size of the force used. Its elements are secrecy, concealment, deception, originality, audacity and speed. Surprise must be exploited. Deception will be a key element in distracting the enemy's attention and in creating surprise;

d. **Security.** Security is a condition that gives a commander sufficient freedom of action to fulfil his aim. Security is manifested in the offence by having a firm base for the assembly, preparation and launching of operations. It includes securing the line of departure (LD), the flanks of an attacking force and the lines of communication. During certain campaigns such as a security and certain peace support, forces will require a secure base from which to operate. Once the desired effects have been created around these base areas, operations can be extended, like oil spreading in water, to less secure areas;

e. **Flexibility.** Offensive activities demand a high degree of flexibility in order to enable plans to be altered to meet changing situations, unexpected developments and to exploit fleeting opportunities, particularly against unconventional enemies. Its elements are flexibility of mind and rapidity of decision-making on the part of a commander and his subordinates, to ensure that time and opportunities are never lost. It is achieved through simplicity of plans, unity of effort and maintenance of balance. Implicit in this requirement is freedom of action for the commander and a mission command environment;

f. **Information Gathering.** Offensive activities must be supported by a broad knowledge base at all levels of command that assesses the interrelated systems within an environment and anticipates the effects that will be created from offensive activities, to ensure that operational objectives are met. A great deal of intelligence and information gathering at all levels is required. At the tactical level, commanders at all levels need detailed intelligence on the terrain over which their troops will

fight. Additionally, commanders must understand the elements of the environment that play a role in their particular area of operations and operating environment as a whole. Intelligence and information gathering at this level will support the knowledge base, although the fundamental element of gathering at this level has a more specific aim. Intelligence on enemy dispositions, strengths and intentions is vital to success in the offence;

g. **Simplicity.** Plans must be kept simple. Complex manoeuvres and intricate arrangements lead to confusion and misunderstanding. A clear concept of operations supported by a simple plan gives subordinate commanders an opportunity to apply their own judgement and initiative in response to changes in the local situation. Simplicity enhances agility and allows better control of tempo. For information activities, messages to the target audience should be kept simple and straightforward with obvious links in logic and links to operational objectives. Simplicity of plans and linkages to desired objectives will also make assessment through measures of effectiveness easier;

h. **Audacity and Shock Action.** Commanders must be prepared to be bold and to exploit a favourable situation aggressively. Shock action is achieved by the bold handling of combat forces, be they armour, mechanized infantry or rapidly moving light forces, in order to break into the enemy defences and drive deep into his area. Fire support is essential and is used during all stages of the operation to reinforce the shock action. Shock action will help lead to a rapid collapse of the physical and moral cohesion of the enemy;

i. **Depth.** Depth is required both in the organisation of offensive forces and in the selection of objectives. Organising in depth contributes to shock action and allows continual operations to occur. It permits a commander to maintain constant pressure on the enemy and to exploit penetration. The securing of objectives in depth breaks the framework of the enemy defence;

j. **Balance.** A balanced force is one that is grouped in such a way that a commander can concentrate forces and capabilities to take advantage of a sudden opportunity or to react to enemy action at the decisive moment. In reaching operational objectives, a balance may have to be created between physical activities and information activities in order to create complementary effects. The initial grouping of forces and allocation of activities must ensure that:

   (1) A covering force can cover the frontage of the area of influence if the operating environment and area of operations are organised in this manner, or may cover key terrain;

   (2) Leading tactical elements have a suitable force mix to deal with likely opposition;

   (3) Fire controllers and air controllers are well forward to provide continuous fire support;

(4) Requirements for engineer support are anticipated and resources are readily available, with engineer reconnaissance parties well forward;

(5) Reserves are constituted, maintained and normally deployed beyond the range of most enemy artillery, so that they can be committed rapidly to battle. In campaigns and operations short of major combat, reserves are still required and are adjusted to the threat and possible, unanticipated requirements. They are often termed as a Quick Reaction Force (QRF);

(6) Elements responsible for information activities are planned and deployed in conjunction with manoeuvre forces;

(7) There will unlikely be enough forces for Commanders to fulfil all the demands given above; thus, they must set priorities in the tasks for his subordinates.

k. **Reserves.** Reserves are required to meet the unexpected. They may be committed to influence the battle, to exploit success or to respond to countermoves. Reserves provide a commander with flexibility and balance. Once reserves are committed, the commander must reconstitute it as soon as possible. Operations that lack a detailed intelligence picture or that may meet unanticipated situations should hold significant forces in reserve if possible;

l. **Coordination of Combat Functions.** The plan for the offensive activity must ensure careful coordination of all combat functions in order to successfully fulfil the aim of the assigned mission.

4005. **Deception**. In addition to considering the above principles, the commander must keep in mind the important role that deception may play in supporting offensive activities. Deception will be used to provide security for the deploying force by drawing the enemy's attention elsewhere, and will be used to lure and distract the enemy and thus allow more freedom of action for the commander. Deception may be conducted through a variety of means, ideally means that support the enemy commander's biases or pre-conceived notions (such as an expectation of a mounted attack may be exploited by the movement of vehicles in the most likely direction while troops approach

as a dismounted, silent attack from another direction). Means of deception include feints, demonstrations false radio traffic or other emissions.

4006. **Terrain Considerations.** Terrain must be carefully considered when planning offensive activities. The best use of terrain must be made in order to:

a. Improve observation;

b. Obtain cover and concealment;

c. Obtain better fields of fire;

d. Enhance manoeuvre;

e. Secure approaches;

f. Improve security of forces;

g. Hamper enemy movement;

h. Allow for a base from which to launch further operations.

4007. Chapter 8 of this publication provides details for considerations to be made when operating in specific environments.

SECTION II - TYPES OF OFFENSIVE ACTIVITIES

General

4008. There are a number of different types of offensive activities with specific purposes. They are closely related and often lead from one to another type and are often linked by enabling activities. They are all guided by the same set of principles outlined above, but a commander must use judgement in their application for each type, depending upon the situation at hand.

Attack

Definition and Purpose

4009. An attack is defined as: in military operations, to take offensive action against a specified objective (NATOTerm). The primary purpose of an attack is to destroy the enemy's capability to resist and subsequently to destroy his will and cohesion. To seize ground may be also a pupose. An attack may be a separate activity or may be carried out in conjunction with other types of tactical activities. A commander undertaking an attack possesses the initiative, in that he or she decides the location, time, direction and weight of force to be concentrated. Once the attack is launched, flexibility and speed in the employment of forces are paramount. The attack must be executed vigorously, exploiting any favourable developments and reallocating resources to areas where there appears to be an opportunity for success. Momentum must be maintained in order to keep the enemy off balance and the attack should not be delayed in order to align units or adhere rigidly to a plan. Indeed, few attacks will develop as planned and commanders must

actively seek to turn unexpected successes to their advantage and to cope rapidly to reverses. To be able to do this they must understand their superior’s intent and desired end state.

4010. The requirement for flexibility demands: simple plans, adjustable fire support, engineers well positioned for anticipated tasks, reserves and sustainment. Each discrete attack should not be viewed as its own entity but as part of the continuous process to break the enemy's cohesion. Commanders should plan to exploit success well before they achieve it.

4011. An attack is often preceded by an advance to contact and seeks to seize and maintain the initiative. Additionally, a hasty attack may occur as a result of a meeting engagement. Counterattacks are also employed by a defending force, even without preparation and on decision of local leaders, to exploit opportunities to strike the enemy at a decisive time and place in order to defeat him. Assuming that the attack has been successful, the force will consolidate and, if possible, exploit success through continued offensive activity.

Types of Attack

4012. **Hasty Attack**. A hasty attack is an attack in which preparation time is traded for speed in order to seize the initiative and exploit an opportunity. It seeks to take advantage of the enemy's lack of preparedness, and involves boldness, surprise and speed in order to achieve success before the enemy has had time to improve his defence posture. In order to maintain momentum or retain the initiative, minimum time is devoted to preparation, and the forces used for the attack are those that are readily available. There will be little time for reconnaissance and none for rehearsal. The element of surprise created by a speedy action will act as a force multiplier. Such attacks must, wherever possible, be mounted from an unexpected direction and supported by the concentrated fire of every available weapon. Commanders should issue brief orders and then position themselves well forward to react rapidly to the development of the attack. There will be a significant reliance on standard operating procedures and well-practised drills. If momentum is lost a deliberate attack may be necessary. A properly performed intelligence preparation of the operating environment may identify areas for a hasty attack from the advance, thereby allowing some more detailed planning to occur before the advance;

4013. **Deliberate Attack**. A deliberate attack is a type of offensive activity characterised by planned and coordinated employment of firepower and manoeuvre to close with and destroy or capture the enemy. When a well-prepared enemy defence must be defeated, a deliberate attack may be required. The emphasis is on preparation at the expense of speed and time, therefore methods other than speed will be required in order to achieve surprise.

4014. **Counter-Attack.** A counter-attack is defined as: *an attack by a part or all of a defending force against an enemy attacking force, for such specific purposes as regaining ground lost or cutting off or destroying enemy advance units, and with the general objective of denying to the enemy the attainment of his purpose in attacking. In sustained defensive operations, it is undertaken to restore the battle position and is directed at limited objectives* (NATOTerm). The purpose of a counter-attack is to defeat an enemy that becomes vulnerable by his own offensive action, by revealing his main effort or creating an assailable flank. It is likely to be conducted as part of a defensive operation by a reserve or lightly committed forward elements and it affords the defender the opportunity to create favourable conditions for the commitment of forces and a switch to an offensive operation.

4015. **Spoiling Attack**. A spoiling attack is defined as: *a tactical manoeuvre employed to impair seriously a hostile attack while the enemy is in the process of forming up or assembling for an attack* (NATOTerm). The spoiling attack is similarly directed at enemy offensive activities but with the limited aim of disruption. It attempts to strike the enemy while he is most vulnerable or while he is on the move prior to crossing his line of departure. A spoiling attack is pre-emptive in nature, as it attacks the enemy's plans, and hence, his cohesion. When the situation permits however, commanders can exploit a spoiling attack like any other attack.

4016. **Preliminary Attack.** A preliminary attack is one that seeks to set favourable conditions for an attack by the main body. The purpose is to generally shape the situation to help ensure achievement of the main objective by a main attacking force. Its specific purpose may be to:

a. Gain more information regarding the enemy’s strength and disposition;

b. To seize key terrain (potentially by surprise) in order to support the main, follow-on, attack;

c. To establish a bridgehead on the other side of an obstacle, in order to support the breakout of the follow-on force in combination with the activity river crossing;

d. To clear lanes through obstacles in combination with the activity obstacle breachingh in order to allow ease of passage of the main attacking force and to preserve its combat power for closing on the main objective;

e. To neutralize enemy command and control facilities or other key enemy capabilities;

f. To cut lines of communication or to block reinforcements of the enemy position.

Exploitation

4017. Exploitation is an offensive activity that usually follows a successful attack and is designed to disorganise the enemy in depth. As a offensive activity,

exploitation is characterized by a rapid advance against lessening resistance. The aim is to retain the initiative by preventing the enemy from reorganizing his defence or conducting an orderly withdrawal. Additionally, exploitation will create confusion and apprehension throughout the enemy command, reducing his capability to react and lowering his morale. This may be decisive in itself. The key to success is speed, as any delay will affordthe enemy the opportunity to regroup and mount counter-attacks or to establish delaying positions in depth. The psychological effect of exploitation creates confusion and apprehension throughout the enemy command, reducing his capability to react and lowering his morale. This may in itself be decisive.

4018. An attack frequently results short-term opportunities to maintain pressure on the enemy. A commander should plan for exploitation and be prepared to adjust his plan as the situation develops. If exploitation is possible,it must be carried out quickly so as not to give respite to the enemy. It may even begin simultaneously with consolidation to ensure that momentum is maintained and the enemy is kept under pressure. A commander must decide whether to commit depth or reserve forces earmarked previously for exploitation or direct main attack forces to exploit. He bases this decision primarily on the condition of the main attack forces, strength of the enemyand the difficulty of moving depth or reserve forces forward.

Pursuit

4019. A pursuit is an offensive activity designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it. It may commence when the enemy force is demoralized and its units are beginning to disintegrate under pressure. Alternatively, it may originate in an operation in which the enemy loses his ability to operate effectively and attempts to disengage. It will often follow an attack that causes the enemy to withdrawal rapidly.The primary objective of a pursuit is the destruction of the enemy force. In the conduct of a pursuit, relentless pressure is directed against the retreating enemy while enveloping forces sever his avenues of escape. Successful pursuits will multiply the psychological effects of a successful attack.

4020. Opportunities may exist to conduct an encirclement of a withdrawing or fleeing enemy. The aim of encirclement is to cut off an enemy force in a particular area, with a view to destroying it there or forcing its surrender. It often results from exploitation or pursuit when the pursuing force overtakes the enemy and blocks his escape. Aviation assets may be used to fly the blocking force ahead of the withdrawing enemy.

Feint and Demonstration

4021. A feint and demonstration are forms of deception and thus elements of information activities in that they affect the understanding and perception of the enemy commander in order to cause him to act inappropriately to the real threat. Both may seek to fix an enemy force and may be supported by other deceptive activities such as false radio traffic.

4022. **Feint.** A feint is defined as follows: *in military deception, an offensive activity involving contact with the enemy conducted for the purpose of deceiving the enemy as to the location and/or time of the actual main offensive action* (Term proposal submitted to LOWG terminology panel for inclusion in NATOTerm.) A feint seeks to distract the attention and action of a enemy force by seeking combat with it. Its intent is often to support the development of the main effort elsewhere on the battlefield, normally by fixing an element of the enemy and distracting the commander. Feints must be of sufficient strength and composition to cause the desired enemy reaction. It is most effective when it supports the enemy's expectations, when it appears as a definite threat to the enemy, or when there are several feasible courses of action open to the attacker.

4023. **Demonstration**. A demonstration is defined as: *an attack or show of force on a front where a decision is not sought, made with the aim of deceiving the enemy* (NATOTerm). A demonstration seeks to distract the enemy's attention without seeking combat. It may be part of a broader deception plan. Demonstration forces use firepower, manoeuvre and electronic warfare to affect the understanding and perceptions of the enemy commander. It should also be aimed at a vital sector of the enemy's defences if he is to be successfully misled.

Raid

4024. A raid is an activity, usually small scale, involving a swift penetration of hostile territory to secure information, confuse the enemy, or destroy his installations. It ends with a planned withdrawal upon completion of the assigned mission. The wider purpose of a raid is to disrupt the enemy usually through destruction or capture of a vital asset or capability. It is based on detailed intelligence. Because raids will often be carried out over a short distance and time period, only a limited amount of supplies need be carried and maintenance will be confined to minor crew repairs. Fire support systems are required to support the raiding force so as to reduce the enemy's ability to react. Armoured reconnaissance, airmobile, airborne and amphibious forces, dismounted infantry, particularly if supported by aviation fire support, are well suited to this type of attack. Nodal attacks in urban areas by heavy armoured forces may be considered a raid if withdrawal follows the activity.

Ambush

4025. An ambush is defined as: a surprise attack by fire from concealed positions on a moving or temporarily halted enemy (NATOTerm). The purpose of an ambush is to inflict damage on the enemy while denying him an opportunity to counter-attack, principally through surprise. It is often conducted in the same manner as a raid and often within territory controlled by the enemy. Normally the ambushing force lies in wait for the enemy force.

Reconnaissance in Force

4026. Reconnaissance in force is defined as: an offensive activity designed to discover and/or test the enemy's strength or to obtain other information (NATOTerm). The purpose of a reconnaissance in force is to compel the enemy to disclose the location, size, strength, disposition or intention of his force by making him respond to offensive action. The enemy's reaction may reveal weaknesses in his defensive system that can be attacked or strengths that should be avoided. Commanders may conduct reconnaissance in force as a means of keeping pressure on the defender by seizing key terrain and uncovering enemy weaknesses. They must also be prepared to seize any opportunity to exploit tactical success.

4027. A formation or unit may conduct its own reconnaissance in force or do so at the direction of a higher headquarters. It must be conducted with enough strength to force the enemy to react, though it may be necessary to place restrictions on commanders to avoid actions that might precipitate a decisive engagement. If the force is still engaged once the actual reconnaissance is completed, it may be tasked to fix the enemy, attack or withdraw.

Breakout of Encircled Forces

4028. **General**. A break-out occurs when an encircled force creates an opening in enemy lines and extricates itself to join with friendly forces. In this operation, it is essential to maintain momentum while retaining the integrity of the force. Normally a break-out is ordered by the superior commander. If no communications exist between the superior commander and the commander of the encircled force, the latter makes his decision to break out based on his superior's intent.

4029. **Organisation**. The break-out force is organised to provide: an assault element to create and maintain the opening; a security element to provide protection and deception on the perimeter; and security elements to cover the front, flanks and rear of the main body while it is moving. If it is impossible for the force to fight its way out, break-out by stealth (exfiltration) is the only remaining option. Usually in this situation the force is organised into small elements that move on separate routes to join with friendly forces.

4030. **Planning.** The responsibility for planning a break-out rests with the commander of the encircled force. Any tactical activities by outside forces in support of the break-out must be in response to his plan. Planning is similar to that for a deliberate attack. A commander must plan the activities of regrouping, deception, assault and subsequent movement to join friendly forces and conduct a link-up. The main body must move protected by advance and flank guards or screens, and a rearguard. The security elements on the perimeter disengage last and may be tasked as the rearguard in the final stage. The following matters require particular attention.

a. **Point of Break-out.** The point of break-out must be selected in relation to the enemy's disposition, routes for subsequent movement and next

mission of the force;

b. **Break-out Routes.** The most direct routes may not be the best. Enemy weaknesses must be exploited and attempts made to avoid him by the use of less direct routes, difficult terrain and periods of reduced visibility. Advance and flank guards or screens provide information on enemy locations. The number of routes used depends on the terrain, location of the enemy, size and composition of the force, and fire support available. The number of routes available to an armoured force is likely less than those for a non-armoured force. Use of a single route simplifies command and control and provides depth for any subsequent attack, thereby maintaining momentum. On the other hand, if the lead elements are stopped, there is a danger of the following elements concentrating and presenting a large target with open flanks. Although the use of more than one route may complicate command and control, it offers protection through dispersion and greater flexibility. If there are lateral routes, units can be shifted from blocked routes to maintain momentum. Normally it is preferable to have at least one alternate route;

c. **Fire Support.** There are times when organic fire support is limited due to movement, particularly just after the break-out opening is established and the main body starts moving. There may thus be a need for increased fire support, including close air support and tactical aviation support, from outside the encircled force;

d. **Engineer Support.** Engineer support is required to breach enemy obstacles and to clear or breach lanes in friendly obstacles. Some engineer resources should be in the rear guard to carry out counter-mobility tasks. They can also assist in the denial of equipment and supplies through their destruction;

e. **Aviation Support.** If the entire force cannot be extracted by helicopters, any limited support available may be used to position forces on key terrain along break-out routes in order to act as security forces. Aviation fire support may be critical to support the initial attack at the break-out point, to provide flank protection of the main body and to prevent enemy manoeuvre. Ideally, it will be placed under the tactical control of the encircled force;

f. **Combat Service Support Elements**. Combat service support elements are grouped with combat and combat support elements within the main body for their own protection and for immediate resupply as required.

4031. **Execution.** A break-out is conducted as a deliberate attack, followed by movement, with the overall objectives of avoiding the enemy and joining friendly forces. A break-out by stealth is conducted similarly to an infiltration.

SECTION III - FORMS OF MANOEUVRE

General

4032. Offensive activities may be directed against the front, flank or rear of the enemy and may be conducted from the land, air or sea. Any combination of these is possible. Normally the point of main effort is placed where the enemy is weakest or where the terrain offers possibilities of breaking deep into his defence area. This is done through the manoeuvre of forces. Manoeuvre is defined as*: employment of forces on the battlefield through movement in combination with fire, or –arms grouping, to achieve a position of advantage in respect to the enemy in order to accomplish the mission* (NATOTerm).

4033. The forms of manoeuvre are frontal, penetration, envelopment (which includes flank attacks, infiltration and attacks against the enemy's rear) and turning movement. To manoeuvre is to gain a position of advantage relative to the enemy. Manoeuvre against, or to threaten, an enemy's flanks and rear may have an impact on his morale and thereby his will and cohesion. Manoeuvre may assist in the achievement of surprise and shock if conducted at high tempo, that is, before the enemy can react effectively.

4034. These forms of manoeuvre apply to all offensive activities but are most used in the scheme of manoeuvre for an attack. Some forms of manoeuvre, such as single and double envelopment, penetration or turning movements may disrupt and dislocate the defence. Envelopment may have a more direct aim: to gain a position of advantage that is the desired objective and thus pre-empt the enemy. At brigade level and below, the most common forms of manoeuvre are the frontal attack and the envelopment.

Frontal Attack

4035. A frontal attack is defined as: *an offensive manoeuvre in which the main action is directed against the front of the enemy forces* (NATOTerm). It can be effective against a weak, disorganized enemy and it may be used to overrun and destroy him or to fix him. During a raid, it will be used as it is fast and exploits the principle of surprise that a raid provides. A frontal form of manoeuvre is often required to support a penetration or envelopment.Unless supported by a heavy weight of fire, it may not be successful, and even if successful it may result in an unnecessarily high number of casualties. A commander therefore must consider these factors carefully before executing a frontal attack.

Penetration

4036. A penetration is defined as: *in land operations a form of offensive which seeks to break through the enemy's defence and disrupt the defensive system* (NATOTerm). Penetration seeks to reach the depths of an enemy position on one or a number of narrow sectors and to seize objectives in the enemy's depth. This will destroy the continuity of a defensive position. The main effort is made on a relatively narrow front or number of narrow fronts.

4037. Successful penetration requires the concentration of superior combat power at the point selected for breaking into the enemy's defences. Such points include gaps in his defences and boundary locations. The concentration must be such that the force can break through quickly, widen and secure the breach, and maintain momentum while seizing the deep objectives. It is a suitable manoeuvre when strong combat forces are available and the enemy is overextended or if his flanks are firmly secured.

4038. It has two principal variants: deep and multiple penetrations. Both may be employed in the same operation. The fundamental tactic is to seek the depth of a enemy's position as rapidly as possible, preferably without fighting. This requires enemy forces to be bypassed by design. That creates a risk that the penetrating force may itself be attacked in its developing flanks. The fear that this might happen may cause forces to move cautiously when boldness is required. Personal example and determination will be required of commanders. The protection of the flanks of the penetrating element is critical to success, although at times protection can be afforded by the sheer speed of the penetrating force:

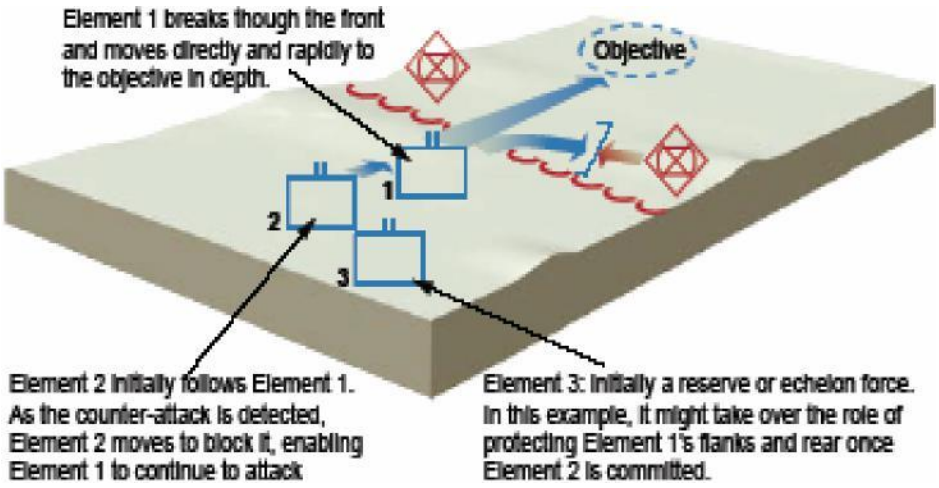
g. **Deep Penetration.** Deep penetration aims either to seize features or to destroy specific objectives deep in the enemy's rear. In doing so it perforates the enemy's positions, introduces a force behind the enemy, and thereby causes fear and uncertainty. It may of itself persuade a enemy commander that he or she has lost, particularly if the objective is critical to him. Such objectives may include river crossings behind his position;

h. **Multiple Penetrations.** Multiple penetration aims to disrupt and dislocate the cohesion of a defensive position. In doing so it achieves simultaneity, presenting the defender with a number of threats. It creates multiple opportunities for surprise and shock. However, it risks dispersion of forces for little overall effect if it is not generally successful and reinforced quickly;

i. **Combination of Multiple and Deep Penetration.** Multiple and deep penetrations may be combined to produce dramatic effects against the enemy on both the physical and moral planes.

4039. Each penetrating force will normally require at least two elements. The leading element is tasked to penetrate to the objective or limit of exploitation as rapidly as possible, bypassing opposition. The second element is tasked to follow the first in order protect its flanks and rear. If required, subsequent elements could be reserve or echelon forces tasked to destroy bypassed enemy, take over the lead of the advance, or exploit beyond the immediate objective. Penetration is unlikely to succeed against an enemy who is more agile, that is, more mobile and flexible. Conversely, it has often succeeded against a more numerous but less agile enemy.

Figure 4-1: Elements of a Penetration Manoeuvre.



Envelopment

4040. An envelopment is defined as: *an offensive manoeuvre in which the main attacking force passes around or over the enemy's principal defensive positions to secure objectives to the enemy's rear* (NATOTerm). Envelopment is a basic form of manoeuvre designed to apply force against enemy weakness, and will normally require diversionary attacks against the enemy's main defensive front. The main effort in envelopment is made against the enemy's rear or flank. Its aim is to seize objectives in the enemy's rear, making his main defensive position untenable.

4041. An envelopment is conducted by passing forces around one side of the enemy (flanking), around both sides of the enemy (double envelopment) or over the enemy (vertical envelopment).

4042. The main attack is conducted by avoiding the enemy's strength en route to the objective and striking him from an unexpected direction. The forces conducting an envelopment should have adequate mobility to be deployed in depth and have secure flanks. Considerable speed of movement, surprise and the identification and exploitation of weak points are required if the enveloping force is to be able to reach its objectives in depth. The commander must not, however, allow attacking forces to try and achieve an envelopment too soon and thus miss the chance of destroying or containing additional enemy forces.

4043. The envelopment may cause the enemy to redeploy or to withdraw. It may cause disruption to his command and control or logistic systems, or open the way to objectives that he was trying to defend. It may be undertaken in order to outflank or trap enemy forces, possibly against a geographical feature.

Airmobile or airborne forces may be employed, as part of an enveloping force in order to conduct a vertical envelopment. In order to ensure a proper envelopment of the enemy occurs, the forces conducting the envelopment should be tasked while they are still some distance away from the enemy. This is particularly important during a hasty attack while forces may still be moving. Depth forces should be considered for the envelopment movement. This will help prevent the moving forces from encountering the enemy before they have had a chance to properly envelopment the enemy at the desired point.

4044. An envelopment manoeuvre will take one of the following forms:

a. **Flank Attack.** This type of envelopment occurs when the main effort is directed at the enemy's flank. The attack seeks to strike at a more vulnerable point of the enemy's position where his concentrated firepower can be avoided. Flanking attacks aim at surprising the enemy and should be the preferred attack at brigade level and below;

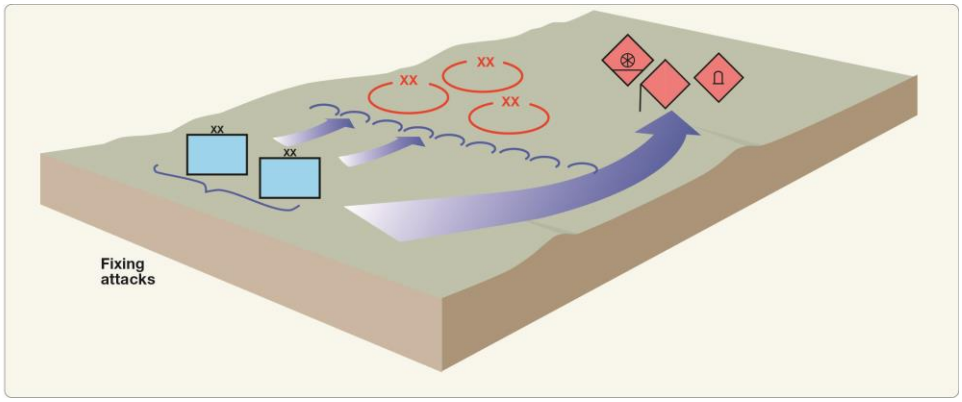


Figure 4-2: Envelopment

b. **Rear Attack.** When the main effort is directed at the enemy's rear, forces are passed around one side, **both** sides (double envelopment) or over (vertical envelopment) the enemy's main defensive position with the aim of securing key terrain **within direct fire range of his rear**. This action leads to his destruction or makes his position untenable;

c. **Double Envelopment.** Double envelopment is an envelopment operation mounted on two axes that is designed to outflank an enemy from both sides with a view to forcing him to abandon of his intentions or withdraw, or as a prelude to encirclement and destruction of the trapped forces;

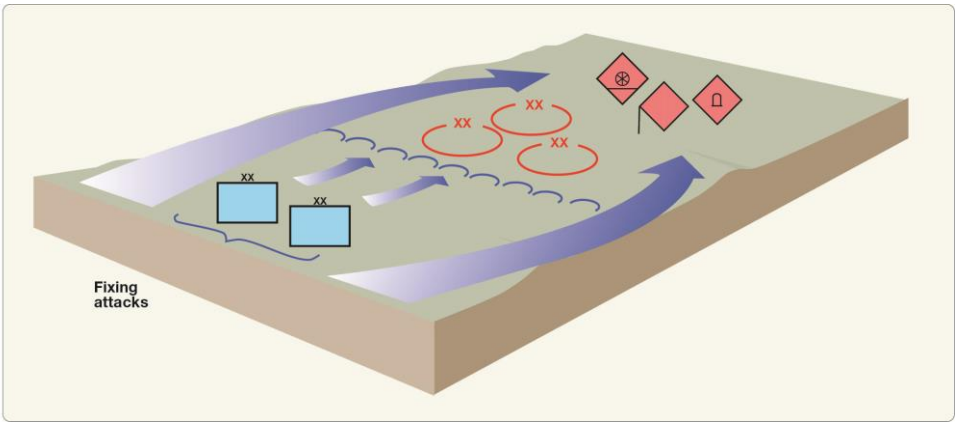


Figure 4-3: Double Envelopment

d. **Encirclement.** If the arms of a double envelopment are strong enough to meet, then encirclement will occur. If the trapped force can be prevented from breaking out, large enemy forces may be neutralized, destroyed or forced to surrender. Large encirclements may be costly operations in terms both of troops and the time taken to reduce the trapped forces. Encircled forces will likely be capable of re-supply only by air. Unless an early decision to relieve them by breakout or break-in is made, then resources will become inadequate to allow the force to breakout and fight their way back to rejoin the main body.

Turning Movement

4045. A turning movement is defined as: *a variation of the envelopment in which the attacking force passes around or over the enemy's principal defensive positions to secure objectives deep in the enemy's rear, to force the enemy to abandon his position or divert major forces to meet the threat* (NATOTerm).

4046. In this form of manoeuvre, a force passes around or over the enemy's main defensive positions to secure objectives deep in his rear beyond the range of his direct fire weapons. The aim of this manoeuvre is to compel him to abandon his position or divert major forces to meet the threat. A turning movement should make those enemy forces more vulnerable to attack, and may allow the use of an approach dominated by the abandoned positions. The force attempts to avoid contact with the enemy en route to its objective.

4047. The attacking force is organized into a turning force, a main body and a reserve. The turning force's manoeuvre causes the enemy to leave his positions. The main body may initially distract the enemy from the turning manoeuvre. It should subsequently exploit the success of the turning force. The turning force is normally smaller than the main body and should be able to operate independently, beyond the supporting range of the main body. Either the turning force or the main body may conduct the decisive operation.

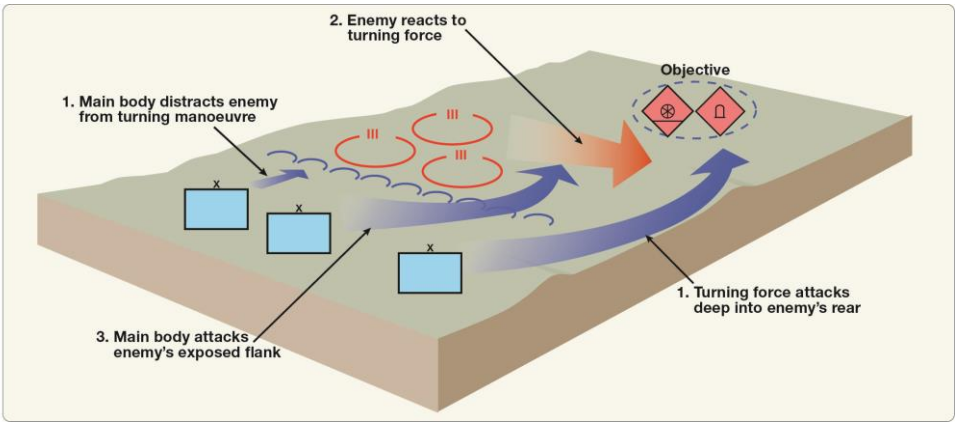


Figure 4-4: Turning Movement

Infiltration

4048. Infiltration is defined as: *a technique and process in which a force moves as individuals or small groups over, through or around enemy positions without detection* (NATOTerm).

4049. Infiltration is penetration based on stealth. It may be used to occupy an objective in depth, or as a precursor to an attack mounted on an objective in depth. It may be single or multiple.

4050. Commanders may use infiltration to attack lightly defended positions or stronger positions from the flank or rear, to secure key terrain in support of the main effort, to gather intelligence or to disrupt enemy rear areas or lines of communication. Infiltration is normally used in conjunction with other forms of manoeuvre.

Integrating Forms of Manoeuvre

4051. Although individual operations or forms of manoeuvre may lead directly to the achievement of the mission, it may be necessary to integrate them into a larger scheme of manoeuvre. Similarly, forms of manoeuvre will often need to be divided into separate tactical tasks. For example, an encirclement will typically require at least two penetrations, exploitation into the enemy's depth, and a link-up operation. That may be followed by defence of the outer flanks of the encirclement, and either attack or defence on the internal flanks. Operations against flanks, the rear, bypassing or penetration allow the creation of shock and surprise at several levels, and hence the possibility of command paralysis and collapse. Any penetration is an opportunity for aggressive exploitation. Manoeuvre is not limited to offensive operations. Skilful counterattacks may in effect be turning movements. Such movements will compel an attacker to desist from his attack and will create a threat to the rear of the enemy forces.

SECTION IV – STAGES AND CONDUCT

General

4052. An offensive tactical activity can be divided into a number of distinct, but closely related stages, which will tend to merge into each other. Indeed, to the participants, the stages are unlikely to be clear-cut, especially if they are involved in other actions in support of the offence. They apply to all offensive activities but specifically apply to the attack.

4053. The stages of an offensive tactical activity (particularly the attack) are:

a. **Mounting/Approach.** During the mounting/approach stage, which includes all activities prior to H-hour, preparations for the attack are completed. Activities may include: intelligence gathering; rehearsing; ammunition dumping; route improving; preparing for the crossing and breaching of obstacles; moving to assembly areas; re-grouping; replenishing; firing preparatory fire; deploying; and, possibly, conducting a forward passage of lines. The approach ends with the arrival of the attacking forces in the attack position, just short of the line of departure. Concurrently, commanders complete their battle procedure. The force may also carry out infiltration;

b. **Assault.** The assault begins at H-hour. In this stage the assaulting element crosses the line of departure (at H-hour), at the forward edge of the attack position, breaks into the enemy defensive position, and fights through the objective to destroy the enemy or cause his surrender;

c. **Consolidation.** Following an assault, a force must consolidate quickly, so that it is prepared to meet enemy counter-attacks or undertake a new task. Consolidation is normally done forward or to the flanks of the former enemy position. It may be followed by **exploitation**.

4054. Once the attack is launched, flexibility and speed in the employment of capabilities are paramount. The attack is usually conducted as a series of rapid advances and assaults by fire and movement until the final objective is secured. The attack must be executed vigorously, exploiting any favourable developments and reallocating resources to areas where there appears to be an opportunity for success.

4055. The commander may have to take action to redeploy or to reinforce, in order to maintain the momentum of the attack, to defeat enemy counter-attacks or to provide security. The momentum must be maintained and the attack must not be delayed in order to align units or to adhere rigidly to a plan. The various components of the conduct of the attack will tend to merge into each other and not all of them will be used in every instance. Against a major defensive position, success will only be achieved after a breakthrough of the defensive position has occurred. A breakthrough has been accomplished

when the enemy's lines have been penetrated so deeply that the enemy can no longer mount a coherent resistance.

Mounting and Approach

4056. Attack forces should be held well back, as long as possible, to complete the battle procedure and to assist in maintaining security. Some preliminary grouping may take place.

4057. During mounting, a number of activities will take place, to possibly include:

a. **Information Collection.** Information is collected in accordance with the intelligence collection plan and the commander's critical information requirements. This activity is initiated early and continues throughout the operation, primarily by reconnaissance forces. Active counter-reconnaissance will also take place in order to secure friendly movement, preparations and activities, and to achieve surprise. This collection should consider not only enemy forces, but also the other elements or systems that will be affected by this tactical offensive activity. This should lead to risk assessment and the assessment for the possible creation of undesired effects through such things as collateral damage;

b. **Route Security and Maintenance.** There may be a requirement to secure and protect key routes for the mounting and movement to assembly areas and deployment to the attack position. Security may be required to allow work forward of the assembly areas early in the mounting stage. If work during the early stages is not possible, engineers must be among the first troops to move forward;

c. **Selection of Assembly Areas.** Assembly areas are selected with regard for concealment, grouping and tasks, and the location of the line of departure. Assembly areas, attack positions and lines of departure should be secured by protective elements prior to their occupation by assault forces;

d. **Move to Assembly Areas.** The move to assembly areas, if used before moving to the attack position, is planned as a tactical movement. Preferably, it should be conducted under radio silence during periods of reduced visibility. This move should be planned to take place as late as possible in the mounting stage to assist in maintaining security;

e. **Deployment in the Assembly Areas.** The first forces in the assembly area secure it for the **main** body. A tactical posture is adopted in the assembly area. Activities here may include final replenishment and confirmatory orders;

f. **Forward Passage of Lines.** There are occasions when a formation or unit attacks through **elements** already in contact with the enemy. The troops in contact remain in position, supporting the passage of lines until their fire has been masked, or they are no longer required, at which time they may undertake another task. Detailed liaison and coordination will be required. The forward passage of lines may be the start of the assault stage;

g. **Obstacle Crossing and Breaching.** Preparations for crossing or

breaching are completed. Such actions should be planned in detail and rehearsed prior. Some obstacles may have to be breached before the force arrives at its attack position. This will require detailed planning in itself, particularly if the obstacle is covered by observation and fire. If attacking forces encounter obstacles which slow their progress, measures will have to be taken to prevent follow-on forces from massing in congestion. Waiting areas will have to be planned. Obstacles must be breached quickly and, if possible, at several points simultaneously. The enemy forces covering obstacles must be suppressed throughout the breach;

h. **Preparatory Fire.** Preparatory fire may involve heavy ammunition expenditure. Insufficient fire may jeopardize surprise, while neutralizing the enemy for only a short time. It may be better to concentrate resources on covering fire or carry out brief, but intense, preparatory fire on selected targets. If a large expenditure of ammunition is planned, a dumping programme may be required;

i. **Infiltration.** A commander must plan to move his infiltration force by stealth from its assembly area to their attack positions in the enemy area. Infiltration forces may be required to assault and hold their positions until a link-up can be completed or, they may be directed to assault and subsequently disperse;

j. **Rehearsals.** If security and time permit, commanders at all levels should reconnoitre the ground over which they will attack and conduct rehearsals with all the elements of the force. Night operations will require night rehearsals;

k. **Deployment.** Planning for deployment ensures that assault forces move from assembly areas, deploy into formation whilst on the move through the attack position, and cross the line of departure at H-hour. If a deployment on the move is not possible, assault troops should pause only briefly in the attack position to form into their attack or assault formation. The formation adopted when crossing the line of departure depends on the ground, distance to the enemy, expected enemy resistance and effectiveness of the suppression of the enemy. A short approach to the objective over open terrain with considerable fire support, including smoke, against a relatively weak enemy favours adopting assault formation when crossing the line of departure. Otherwise, it may be adopted, on the move, in an assault position just prior to closing with the enemy;

l. **Security.** During the approach to the line of departure, flank security/protection/guard will likely have to be established. The line of departure should be secured prior to the arrival of the main assault force. This can be a task for reconnaissance forces.

Assault

4058. The assault is conducted as follows:

a. **H-Hour.** All timings are based on the time troops cross the line of

departure, termed H-hour. It will normally be crossed in a deployed attack formation. In cases where a passage of lines is involved, the line of departure may be the forward line of own troops;

b. **Attack Position and Formation.** Attacking elements form into their attack formation in the attack position as they arrive. (Ideally their attack formation will also their assault formation, that is, the formation used to close with the enemy.) The pause here should be short and just enough time to adopt the formation and orientate onto the objective. The attack position should be the last ground covered from enemy observation and direct fire on route to the objective. At times, a pause may be made while commanders go forward for a final reconnaissance of the enemy and confirmation of the location and orientation of the enemy position;

c. **Armour and Infantry Cooperation.** Lead elements cross the lines of departure at H-hour. Tanks and infantry move together or on different axes. Tanks may be employed in different groups, some forward as an initial assault and some in close proximity to the infantry as intimate support to the infantry. If obstacles, such as a minefield, must be breached armoured engineer elements will support the lead tanks and assist in the breach. The lead between infantry and armour may change during the approach and final assault, depending on the ground. The infantry dismount short of, on, or beyond the objective, depending on the terrain, the disposition and strength of the enemy, the number of anti-armour weapons, the extent and nature of obstacles, and the degree of surprise achieved. The aim is to retain momentum and protection until the infantry are required to fight through the position on foot. Dismounted break-in of the defensive position demands strong fire support and may require infiltration. The terrain and visibility conditions permitting, dismounted forces may infiltrate the enemy's lines and break down his positions from the flanks or rear. The commander must ensure that all forces coordinate closely. In some situations it may be necessary to seize vital ground through infiltration;

d. **Fire Support.** At the same time, fire support resources suppress the enemy on the objective and in depth, mask his observation, and neutralise or destroy threats from countermoves and reserve forces. As assaulting troops close with the enemy, the major fire support effort is directed at the points of breaking-in. Fire support coordination is vital throughout the assault;

e. **Assault Formation.** At times, an assault formation may be adopted in an assault position just short of the enemy. This will occur when, due to the ground or need for additional control, the assault formation cannot be adopted in the attack position. This may be used, for example, if attacking elements must pass through a gap in an obstacle and then adopt their assault formation;

f. **Break-In.** In order to break-in, assaulting troops should concentrate only when they come into close contact with the enemy. Infantry and engineers, ideally supported by tanks, breach the last of the enemy

forward obstacles and break into his defensive system. At this point, close fire support shifts to the depth of the objective and then to targets on the flanks and in depth. Throughout the break-in, momentum must be maintained so the enemy is not allowed time to react;

g. **Fighting Through and Clearing the Objective.** Once the break-in is made, it is vital to maintain the pressure of the attack, not only when assaulting the enemy position to seize initial objectives, but also when fighting through to take the objectives in depth. Sometimes, determined action by troops in the initial assault can clear a position, thus avoiding the use of a much larger force later on when the enemy has had a chance to recover. Attacking forces must move as rapidly as possible between areas of enemy resistance, particularly in a CBRN environment. When enemy resistance is encountered, the leading elements, supported by fire, attempt to overrun and destroy the enemy as quickly as possible. Leading troops should lose no opportunity to reinforce and exploit success and thus keep the enemy off balance. When fighting through objectives, support weapons and command posts are priority targets. Demolition teams destroy enemy bunkers. Tanks that are not accompanying the assault forces in close support manoeuvre to cut-off positions to prevent the enemy from withdrawing or being reinforced. Frequently, smoke is employed to the rear of an objective to hamper supporting fire adjusted by enemy reserve or depth forces;

h. **Commander's Influence During the Assault.** Throughout the assault, commanders seeks to reinforce success, exploit favourable situations and achieve maximum penetration into the enemy defences. they do this primarily by committing his reserves and shifting supporting fire. His decision to commit his reserves must be made quickly but judiciously, as once they are committed it is difficult, if not impossible, to disengage them or direct them to a new task. Once the reserve is irrevocably committed, commanders must reconstitute or obtain a new reserve as quickly as possible, otherwise they lose their major capability to influence the battle;

i. **Bypassed Enemy.** Where leading elements bypass resistance in order to maintain momentum and attempt to secure objectives in depth, follow-up forces will take on enemy positions that have been bypassed, if necessary keeping them contained and under surveillance, pending subsequent elimination;

j. **Security and Protection.** If the momentum of the attack is to be maintained, other elements must be allocated to security and protection tasks, which will include flank protection and the covering of gaps between units. These elements may also be required to provide fire support, to deal with bypassed enemy forces, or to provide protection from ground attack for support units when areas to the rear of attacking echelons have not been cleared;

k. **Depth Forces.** In order to maintain the momentum of an attack, depth forces should be allocated. These differ from reserves in that depth

forces are actually committed to battle and are only one tactical bound behind the lead element;

l. **Constitution and Commitment of Reserves.** Reserves are essential to deal with the unexpected and to maintain the momentum of the attack. A commander may need to increase the size of an assaulting force to allow it to constitute a reserve. In addition, at all times commanders must have an effective and uncommitted reserve if they are to maintain a properly balanced force and be able to exploit success when the opportunity is presented. Once the original reserve has been committed, another must be constituted, even if this means a change in task organisation. Reserves will normally follow the advancing forces engaged in the battle, without becoming engaged prematurely, and must be located so that they can be deployed swiftly in any direction. An airmobile reserve may also be maintained to provide flexibility in the exploitation and pursuit as well as for flank protection.

Consolidation

4059. Consolidation begins immediately after the enemy has been defeated and/or the objective has been taken. This includes: deploying protective elements and possibly laying protective minefields; digging in, normally forward and to the flanks of the former enemy position; bringing forward additional support weapons; altering or completing the defensive fire plan; replenishing combat supplies, particularly ammunition; and evacuating casualties and prisoners.

4060. The commander must ensure that the force is prepared rapidly for counter-attack from the ground and air. If the aim is to exploit the situation, minimum forces are used to consolidate so that the momentum of the attack is not lost. The layout of the consolidation will follow the principles of the defence with key terrain and dominating ground occupied. A new fire support plan should be developed as part of the consolidation and if necessary, a new reserve formed.

Exploitation and Pursuit

4061. Exploitation and pursuit may follow from an attack but are not part of it. They may involve another attack, likely a hasty attack or ambush against enemy troops as they withdraw.

4062. The need to exploit and even pursue a fleeing enemy must be weighed against the mission and the superior commander’s overall intent and operational objectives. If immediate security of the objective is more important in terms of long term and superior objectives than the tactical destruction of a fleeing force, then the commander must place the main effort on consolidation of the objective.

SECTION V - CONTROL MEASURES

4063. **General**. Control measures are a vital aspect of any plan and scheme of manoeuvre. They fulfil several functions including the coordination of manoeuvre and fires, in terms of time and location, and combat identification (by limiting or controlling movement). Control measures are detailed in APP-6, *NATO Joint Military Symbology* and discussed in ATP-3.2.2, *Command and Control of Allied Land Forces*.

4064. Control measures are means and measures that enable the dynamic coordination, prioritization and de-confliction of activity across all dimensions of an assigned area of operations within the operating environment. It enables fire support coordination. Proper area of operations management will ensure the appropriate allocation of three-dimensional space and electromagnetic spectrum to the various competing users in order to avoid conflict, confusion and fratricide. Allocations will be made on a priority basis but it must harmonise the requirements in a complementary and mutually supporting fashion. Exploitation of the airspace over the area of operations must take account of all potential users: air support, aviation, air defence, unmanned aerial vehicles and joint fire. Requirements for flight routes and areas of restricted/specialized air operations must be coordinated with the designated airspace control authority.

4065. **Assembly Area**. An assembly area is defined as: *an area in which a command is assembled preparatory to further action* (NATOTerm). The commander may designate an assembly area that will be occupied by forces prior to the assault and as part of the mounting stage of the attack. It may be used to issue orders, confirm orders, conduct emergency re-supply or as a control measure en route to the attack position. Elements of the fire base may move here first if so ordered, before establishingthe fire base.

4066. **Attack position.** The attack position is the last position held by the assaulting force before crossing the line of departure. It is an area to which troops deploy immediately before an attack and in which they may adopt their assault formations. It is occupied for as short a time as possible although final orders or briefings may be given or orientation carried out. It must be reconnoitred and secured before the assaulting force moves in. The area chosen should be easily recognizable, not under direct fire or observation and not a known or likely enemy joint fire target.

4067. **Line of departure and H-hour.** A line of departure is defined as: *in land warfare a line designated to coordinate the departure of attack elements* (NATOTerm). It serves to coordinate the movement of the attacking forces at the start of the attack. It is at the forward edge of the attack position. It is crossed at H-hour and all timings for support are based on H-hour. If possible, it should be placed on a clearly recognizable terrain feature.

4068. **Assault Position/Line.** The assault position/line is a control measure used to coordinate the movement of a unit or sub-unit out of the assault position, in assault formation, and into the final stage of an attack. It lies between the line of departure and the objective. It is only required if the assault formation could not be adopted when crossing the line of departure due to restrictive terrain. For example, an assault line would be used if the attacking elements had to pass through a gap in an obstacle; in such a case the assault line would be on the enemy side of the obstacle crossing where the elements can spread out and adopt the assault formation. Elements should not pause on the assault position/line but simply adopt the assault formation as they move.

4069. **Axes and routes.** Axes and routes are used to indicate the course of the movement to be followed and the degree of freedom of manoeuvre permitted en route to the objective(s).

a. Axes establish only the general direction of movement. The subordinate commander is permitted to manoeuvre freely between assigned unit boundaries;

b. Designation of a 'route' establishes the specific direction or course which movement will follow;

4070. **Boundaries.** A boundary between adjacent units will always be given in order to facilitate coordination between the units and to establish responsibility for movement, fire, reconnaissance and security. Normally units and elements will not cross or fire over a boundary without specific permission.

4071. **Consolidation**. In offensive activities, consolidation is the process of regrouping and adjustment which takes place on the capture of an objective, in preparation for further offensive operations, or to repel a possible counter-attack. A consolidation area is a zone in which consolidation takes place.

4072. **Firebase**. In an attack or other offensive tactical activity, a firebase is a support element that, from an assigned position, engages the target by direct fire in support of the assault group's advance and assault. It should be sited on a dominating feature, at an angle to the direction of the assault so as to allow supporting fire to be brought onto the objective to the greatest possible extent of the assault, without endangering friendly troops. The firebase should be allotted in orders fire control measures to ensure close coordination with, and effective support to, the assault force.

4073. **Fire Support Coordination.** Fire support coordination is defined as: *the planning and executing of fire so that targets are adequately covered by a suitable weapon or group of weapons* (NATOTerm).

4074. **Fire Support Coordination Measures.** A fire support coordination measure is defined as: *a measure employed by land or amphibious commanders to facilitate the rapid engagement of targets and to provide safeguards for friendly* (NATOTerm).

4075. **Phase Line.** A phase line is used to control or monitor movement. It is defined as: *a line utilized for control and coordination of military operations, usually a terrain feature extending across the zone of action* (NATOTerm). A phase line is marked on traces and included under coordinating instructions in orders. Forces normally report phase lines as they cross them.

4076. **Intermediate Objective.** Intermediate objective is defined as*: an area or feature between the line of departure and an objective which must be seized and/or held* (NATOTerm). The intermediate objective of a unit or formation is often the objective of a subordinate element. In the attack, intermediate objectives are closely related to the importance of terrain and enemy locations and are also used to coordinate the movement of attackingforces with regard to time and space. They are frequently used for reorganisation purposes and for enabling an attack to be continued with other forces. Their capture must not cause the attack to lose momentum.

4077. **Engagement Zone.** An engagemet zone may be defined as: *an area where the commander intends to contain and destroy an enemy force with the massed fires of all available weapons* (AAP-39, term proposal submitted to LOWG terminology panel for inclusion in NATOTerm). In such planned areas, the enemy is forced to concentrate by use of natural and/or artificial obstacles and adequate concentration of resources, so as to create the most suitable conditions for his destruction. Attacks should be planned so as to avoid the enemy's engagement zones.

4078. **Limit of Exploitation**. A limit of exploitation is defined as: *a line beyond which subordinate commanders must not exploit the success of earlier stages of an attack* (Term proposal submitted to LOWG terminology panel for inclusion in NATOTerm). A commander, as part of orders, may indicate a limit of exploitation beyond the objective. This indicates the furthest point to which the assault element may advance before it consolidates, and is usually based on a recognizable geographical feature. At the limit of exploitation, the commander will order consolidation if it has not been ordered already. Upon consolidation, the commander may still establish a security element beyond the limit of exploitation in order to provide security (early warning) and over-watch of likely enemy approaches.

4079. **Objectives**. In terms of an attack, objectives are the physical object of the action taken, for example a definite tactical feature, the seizure and retention of which is essential to the commander's plan. The objective must be clearly defined. It ought to grant the forces sufficient space to avoid massing.

4080. **Objective Area.** An objective area is defined as: *a defined geographical area within which is located an objective to be captured or reached by the military forces. This area is defined by competent authority for purposes of command and control* (NATOTerm).

SECTION VI - FORCES AND TASKS

General

4081. In order to conduct offensive activities a commander will assign various roles, responsibilities and tactical tasks to subordinate elements. The offensive activity is conducted by a series of mutually supporting tactical tasks, such as “support by fire”, “block” and “seize” all linked together with a purpose or desired effect.

Assault Force

4082. The strength and type of combat forces that are available to strike the enemy will be a decisive factor in determining the task, the objectives and the task organisation to be adopted for the operation. An assault force should include depth in order to reinforce local success or maintain the overall momentum. It should include the appropriate balance between infantry and direct fire support, be it armoured forces, integral fighting vehicles and other direct fire support systems. The composition of the assault force will be determined in part by the enemy make-up and the terrain involved.

a. **Armoured Forces.** Armoured forces are particularly suitable for wide-ranging attacks or quick, powerful counter-attacks. They are capable of thrusting deep into enemy positions particularly in rolling, lightly covered terrain. Tanks or armoured/mechanised infantry may lead an attack, depending upon the strength and position of the enemy and the terrain. Infantry and armour will likely be grouped together and operate in close support of one another, particularly in terrain with limited fields of vision or during periods of poor visibility. In close terrain, such as urban areas, infantry may dismount and provide local security to armoured vehicles giving close support. If possible, light armour or light forces should be reinforced with armoured elements to give them covering fire and to neutralize enemy armour. It may be necessary to adjust the organisation of the attacking force as the attack progresses;

b. **Light Armour and Light Forces.** Light-armoured forces are used most effectively where the terrain is heavily broken or covered although, when faced by a similar, light-armoured enemy, they are capable of operating successfully in more open terrain. Their value is also dependent on the type of operation in which they are employed. If the opportunity arises they could be used to infiltrate through gaps in the enemy lines to engage him in the flank or rear. They may also be employed to create conditions suitable for an attack by armoured troops;

c. **Armed Helicopters.** Armed and attack helicopters in a manoeuvre role (air manoeuvre) can conduct close, deep and rear operations in support of the commander's scheme of manoeuvre by attacking the enemy and immediately exploiting any gains. Helicopters can create favourable conditions for the advance of ground manoeuvre forces by controlling

the ground ahead through domination by direct and indirect fire. Helicopters can be allocated their own area of operations. They can be given manoeuvre missions in their own right or in concert with ground forces. Helicopters can attack static or mobile enemy forces and are particularly effective in exploiting gains by a pursuit operation. Helicopters can also be given missions such as flank protection, guard or force or route and area reconnaisance;

d. **Airmobile Forces.** Airmobile forces can be employed to get past obstacles, to take an important objective by surprise or they may constitute a reserve that can be deployed at great speed. Air mobility provides an additional dimension for ground force manoeuvre (air manoeuvre) and may also be conducted as part of an amphibious operation;

e. **Airborne Forces.** Airborne forces are specifically organised, equipped and trained for delivery by airdrop or air-landing into an area to seize objectives or conduct special operations. They may, for example, be delivered ahead of an attacking force to seize and hold an important objective, such as a piece of key terrain, until either reinforced or relieved by other forces. In offensive activities they can also be used to conduct an attack on the rear of the enemy positions to cut off his reserves in combination with offensive action by other ground forces, cover a flank or create a sense of insecurity in the enemy's rear areas;

f. **Amphibious Forces.** Amphibious forces are employed in operations launched from the sea by naval and landing forces against a hostile or potentially hostile shore. They may be combined with an air manoeuvre, airmobile or airborne operation.

Flank Security and Protection

4083. Forces must be allocated to security and protection tasks that may includeflank protection and the covering of gaps between units. These elements may also be required to provide firepower, to deal with bypassed enemy forces, or to provide protection from enemy ground attack against support and sustainment units, particularly when areas to the rear of attacking echelons have not been cleared.

4084. Forces allocated security tasks are usually light or light armoured forces; hence, they can alert the main body of an enemy threat but will be unlikely to destroy it. In order to be allocated a protection task, forces must have enough protection and firepower to destroy, neutralise or at least suppress a threat until the protection force can be reinforced.

Echeloned Force or Reserve

4085. Forces must be held in reserve to deal with the unexpected and to maintain the momentum of the attack by exploiting success when the opportunity is presented. A commander may also need to increase the size of an assaulting force to allow it to constitute a reserve. Once the original reserve has been committed, another one must be constituted, even if this means a change in the task organisation. Reserves should be located so that they can be deployed swiftly in any direction but are able to avoid becoming engaged prematurely. They are held out of contact from the enemy untilcommitted. An airmobile reserve may also be maintained to provide flexibility in the exploitation and pursuit as well as for flank protection. Care, however, must be taken to distinguish between these forces and forces specifically designated for any subsequent phase or phases. These echelon forces can be used to prevent the enemy from penetrating the attacking force, to secure terrain gained by the assault forces, to protect lines of communication, to destroy by-passed resistance and to block enemy reinforcements into the area of the assaulting force. Their most common use is for exploitation and pursuit. Where there are insufficient forces to permit the commander to retain an uncommitted reserve then some form of double earmarking may be required.

Combat Support

4086. **Fire Support**. The success of the attack depends upon the close coordination of the fire support from all the weapons available to the attacking forces, and the overall commander must ensure constant coordination of fire support across the whole attack front. The weight of fire is switched, as necessary, and concentrated in accordance with the commander's plan. The following considerations should be borne in mind:

a. If the attack is to use surprise, fire support may be withheld until enemy resistance is encountered, unless it forms part of the deception plan;

b. Some enemy positions may be neutralized or masked by smoke in accordance with the attack plan;

c. If the enemy position is particularly strong, preparatory fire may be necessary. The purpose of this will be to destroy as much of the enemy force as possible before the start of the attack;

d. Interdiction fire may be used to prevent movement from or into the immediate area of operations.

4087. **Artillery.** The correct use of artillery and the other elements of fire support is key to the success of the attack. Artillery may be deployed forward during preparations for the break-in battle and once the attack commences will follow the combat troops in such a way that there is no break in the supporting fire. It is vital that the whole ISTAR system is coordinated and directed towards the

acquisition of critical targets and linked to the fire support systems able to strike them as soon as they are located. Only by destroying key battlefield functions in the enemy deployment will friendly forces be able to launch an attack with a reasonable chance of success. During the attack the artillery may be required to carry out a number of specific tasks including:

a. **Preparatory Fire.** Preparatory fire may be used to:

(1) Neutralise or destroy enemy artillery, command posts (brigade and higher), EW-systems, FARPs or logistic support elements;

(2) Mask enemy observation;

(3) Suppress enemy air defence;

(4) Illuminate the battlefield.

b. **Covering Fire.** Covering fire may be used to:

(1) Isolate the close battle;

(2) Neutralize the enemy at the point of breaching a defensive position;

(3) Give fire support to combat troops as they fight through the enemy in depth;

(4) Destroy enemy armour;

(5) Be on call during consolidation.

c. **Defensive Fire.** Defensive fire will seek the following effects:

(1) Neutralize threats from the flanks;

(2) Engage enemy counter attack forces;

(3) Block through the use of scatterable mines.

4088. **Naval Gunfire Tasks.** If available, naval gunfire can contribute extensively to the joint fire support of the operation, performing the same tasks as land based artillery.

4089. **Air Support.** Air support is a vital component in the conduct of offensive operations. It is capable of providing a favourable air situation for deployment and movement and can identify, disrupt and destroy enemy forces at long range. It achieves this through the following activities:

a. **Intelligence, Surveillance and Reconnaissance Operations (ISR) by air.** Before the attack takes place, air reconnaissance should provide intelligence on the enemy and during the attack it should allow the early detection of enemy countermeasures;

b. **Counter Air Operations.** For large scale offensive operations local air superiority is essential. Integration and coordination of all counter air assets is desired to achieve this requirement. This includes the integration of army organic air defence into the overall air defence, led by the Air Defence Commander;

c. **Air Interdiction.** AI will support land forces offensive operation by preventing the enemy from reinforcing and strengthening his defence. AI is defined as: *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.*(AAP-06);

d. **Close Air Support.** CAS is an important fire support for ground forces in both in the defence and the offence. CAS is defined as: *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* (NATOTerm).

4090. Both CAS and AI are important means of supporting ground forces and the attainment of a commander's objective. CAS will be vital to a defending force, for both immediate threats (the close battle) and for those in depth. However, it is more economical and effective to located and attack enemy forces while they are concentrated in depth preparing for an attack or advancing along lines of communication through AI, then when those enemy forces are deployed in the battle area in close proximity to friendly forces. CAS, if properly planned however, allows the commander to concentrate fire rapidly on close targets and on those in depth. As much pre-planning as possible should occur in order that commanders may determine and request the required level of effort for CAS.

4091. **Aviation**. Helicopters may support offensive activities with airmobile insertions to exploit opportunities by seizing key terrain ahead of attacking forces. They may also be used for:

a. Command and control missions;

b. Reconnaissance and surveillance of flanks and gaps;

c. Logistic support including casualty evacuation;

d. Insertion and extraction of patrols and observation detachments;

e. Fire support from armed and attack aviation (Close Combat Attack).

4092. **Air Defence**. During the preparation stage of an attack, air defence cover will be given to assembly areas, the approach march routes and assets critical to deep operations. During the attack the priority shifts to protecting the attacking force; however, as the attack progresses the protection of reserves and lines of communication may take on increasing importance.

4093. **Engineers.** In offensive activities, engineer support will be required to maintain the momentum of our attacks. Mobility support is therefore paramount. Counter-mobility tasks, particularly the protection of flanks and rapid protection against counter-attacks, are also important.

a. Engineers will be required to support attacking forces by any or all of the following actions:

(1) Breaching or opening own obstacles (e.g. minefields, wire,

barriers);

(2) Marking and breaching enemy obstacles;

(3) Providing means of crossing dry and wet gaps (e.g., rivers) and other obstacles;

(4) Securing the flanks by means of minefields, demolitions and other obstacles. These also help to shape and structure the battlefield and may allow commanders to use economy of force measures for force protection;

(5) Preparing and maintaining routes for follow-up echelons;

(6) Supporting the consolidation on the objective by construction of field fortifications, laying minefields and creating obstacles.

b. The achievement of these functions depends on adequate reconnaissance, timely provision of the necessary equipment and stores, and on the proper grouping and control of engineer elements, particularly minefield-breaching and gap-crossing armoured vehicles.

4094. **Electronic Warfare**. In offensive activities, EW provides the commander with a means to acquire information to prepare his estimates and plans, and a weapon to delay the enemy's response to the attack. EW operations may be used for:

a. The detection, location and disruption of enemy surveillance and target acquisition systems, in particular air defence, counter-battery and counter-mortar radars;

b. The detection and location of the reserve and counter-attack elements;

c. Electronic isolation of selected enemy units or formations by disruption of communications with their flank units, higher formations and reserves;

d. Detection and location of enemy electronic countermeasures elements so they may be eliminated by physical attack;

e. Deception, either alone or in conjunction with feints and demonstrations.

4095. **Military Police**. The fighting power of military formations and tactical units depends on their ability to move. The ultimate objective of movement is to enable combat forces to be in the right location, at the right time and in the right order to best deliver tactical effect. MP support movement through the planning, facilitation and regulating of movement during a number of operational and tactical actions as well as more generally along lines of communications (LOC). This ultimately contributes to the freedom of movement throughout the area of operations (AOO). MP mobility support is achieved through a contribution to movement planning, movement control and movement security. Details are contained in AJP-3.2.3.3, *Allied Joint Doctrine for Military Police*.

SECTION VII - PLANNING AND PREPARATION

Planning

4096. **Planning Process.** Once a commander has received his mission and analysed it, he or she will make a full estimate, considering the followingfactors in particular, and taking account of time/space. At the unit level, the commander assisted by his operations staff will conduct the estimate. At command levels with staff, an extensive operations planning process will likely occur, based on the commander's initial direction. In periods of severely limited time, the commander will give more detailed direction in terms of course of action development and the process will be shortened.

4097. **Consideration of Factors.** Apart from the assigned and implied tasks, the estimate process will consider the following factors that influence the situation:

a. **Enemy.** The layout of his defence and his capabilities and likely intentions;

b. **Environmental Factors.**

(1) In planning for offensive operations terrain has to be analysed by considering cover and concealment, observation, fire positions, obstacles, dominating ground and avenues of approach;

(2) The place to attack is the location that offers the greatest likelihood of success. Terrain chosen for the main effort should allow for rapid movement into the enemy rear although, occasionally, an attack on less suitable terrain may be necessary to achieve surprise. The effect of terrain on the forward movement of combat support and combat service support elements must also be considered;

(3) Weather must be considered in terms of its influence on mobility, visibility, air support, troops and equipment and the effects of CBRN incidents.

c. **Friendly Forces.** The commander must consider the strength, type and condition of available troops, the tasks required to be fulfilled by his available troops and any additional forces required. Implicit in this is a need to examine the force ratios including combat effectiveness to ensure that they are favourable. An examination of friendly forces also includes consideration of the CSS requirements for the operation and the restraints that might be imposed by a lack of such resources;

d. **Security.** Commanders must consider how they might best make use of deception and operations security (OPSEC) in order to achieve surprise and to protect both his plans and troops. In offensive activities it is particularly important to conceal intentions so that the main force can manoeuvre into a position from which to strike the enemy. Each plan will have to consider security or protection of flanks and rear areas.

This may be done through the use of screens and guards during the attack or pursuit, and observation posts and security detachments during activities such as a raid or ambush;

e. **Time.** Offensive activities become harder when the defender has more time to organize and reinforce his defence. The attacker must, however, take sufficient time to concentrate his force in order to generate all available combat power for the attack. Once an attack is under way time remains critical, as it is only likely to succeed if it achieves its objective before the enemy recovers his balance and reacts against it.

4098. **Development of Courses of Action.** Consideration of the factors will have identified tasks that must be fulfilled in order to conduct a successful offensive activity. These will include assault, fire support, blocking, flank protection, security, depth, reserves, etc. These may be put together in varying forms and combinations to produce a number of possible schemes of manoeuvre or plans, known as courses of action.

4099. **Consideration of Courses of Action.** The courses of action are compared to one another and the most favourable course is chosen or formulated as the decision. From this decision the concept of operations and detailed plan are developed.

4100. **Plan.** The plan may contain or provide for:

a. **Task Organisation.** The organisation of forces for the conduct of the offensive operations;

b. **A Concept of Operations.** The concept of operations will outline the plan and include the commander's intent, a scheme of manoeuvre, a desired end state and the designation of the main effort;

c. **Tasks.** The allocation of missions and constituent tasks to subordinate commanders;

d. **Phasing and Control.** A plan and its concept of operation may be broken down by phases for means of control and monitoring. Breaking a mission into phases details the sequence the attack or other action will follow with particular attention to coordination of all the elements involved. Normally, all parts of a phase must be completed before the next phase begins. Re-grouping of forces may occur from one phase to another, as either a pre-planned action or ordered as demanded by the situation. Phasing can cause a loss of tempo and therefore its use must be carefully considered. Phases should only be created for a specific reason and not for their own sake. For reasons of simplicity, commanders should avoid creating phases that differ from those imposed by their higher level echelon. However, where this is necessary, commanders may create sub-phases such as Phase 1a. The possible reasons for phasing a mission include:

(1) Requirements to re-group forces due to changes in tasks or changes in terrain. For example, a need to cross an obstacle will require re-grouping of engineer assets and a need to move from

close to open terrain may require re-grouping of armour forces;

(2) Requirement to conduct a passage of line (for example, to change the lead unit in an advance or assault);

(3) A change of direction;

(4) To conduct sustainment activities such as to re-supply or evacuate casualties.

e. **Timings.** Timings will assist the commander to control the phasing and coordination with flanking formations;

f. **Manoeuvre Plan.** Details of the movement and manoeuvre plan may be required for coordination and will include bypassing policy;

g. **Fire Support.** This will include indirect fire support, aviation fire support and close air support;

h. **Electronic Warfare Support.** This includes all tasks for electronic jamming and other support;

i. **Reserves.** The possible tasks for reserves will be designated in order of priority;

j. **Reconnaissance.** It is important that the reconnaissance effort should be continued throughout the operation so that enemy reaction and movement can be identified and evaluated;

k. **Tactical Security and Protection.**

(1) Specific measures for camouflage and concealment, deception and electronic counter-countermeasures must be laid down;

(2) The line of departure must be secure;

(3) Flank protection should be provided forward of the line of departure.

l. **Consolidation.** Plans must detail the action once the objective has been seized. The area must be secured against enemy counter-attack and the force reorganised for the next operation or phase;

m. **Exploitation.** The commander's intentions for exploitation must be stated;

n. **Combat Service Support.** Details for CSS priorities and activities should include:

(1) Action to be taken before the attack;

(2) Provision for continuous support of the operation;

(3) Provision for collecting, consolidating and controlling Prisoners of War (POWs) and refugees.

o. **CBRN Defence.** The commander must specify which CBRN dress category is to be worn during an operation, balancing the performance degradation that will be caused by wearing CBRN protection throughout

the entire operation against the disruption–should troops have to take an operational pause to conduct protective action. If areas are contaminated it may slow friendly forces down or even stop an assault. CBRN reconnaissance should, therefore, be incorporated into reconnaissance planning to provide advance warning of existing contamination. The reorganisation plan must take account of the possible use of CBRN weapons against the objective once friendly forces have gained control, and, when this is possible, must include early employment of detectors and alarms.

Preparation and Preliminary Actions

4101. Preparation will occur during the mounting stage of any attack or other offensive activity. The extent of preparations will depend on the time available and the requirements calculated during the estimate. The time required for the essential preparations is often a factor to be considered in deciding the time of an attack. Subordinate commanders should be told as soon as possible, normally by a warning order, how much time they have to make their own preparations. Preparations include:

a. **Preliminary Movement.** Preliminary movement is a controlled move that positions the forces either in or near the assembly areas depending on the timings;

b. **Preliminary Deployment.** Preliminary deployment involves the elements of the various combat and combat support forces coming together in the task organisation for battle. At this stage they also receive logistic replenishment so they are fully combat ready. Any combat service support elements that are to move with the attacking force join up with their designated formation or unit at this stage;

c. **Infiltration.** Infiltration can be used, under favourable conditions, for reconnaissance, attacks in depth, the capture of specific terrain features or the disruption of communications. Infiltration, however, requires accurate intelligence and is time consuming;

d. **Preparatory Fire.** If the commander has decided to use fire support prior to H-hour then a plan for preparatory fire will be implemented.

SECTION VIII - COMMAND AND CONTROL

4102. **General**. The commander must be kept informed of the progress of the attack, enemy reactions, and the situation confronting subordinate units. During the attack, he or she may increasingly decentralize control to subordinate commanders to permit them to react more rapidly to changes in the situation. At critical times he or she may place himself at the point of the main effort. Through knowledge of his commander's concept and the changing situation, the subordinate commander implements the plan and modifies it as necessary.

4103. **Orders**:

a. Warning orders should be issued to ensure maximum use of the time

available for preparation mainly through concurrent activity. Written operation orders may cover in detail only the initial phase of a deliberate attack. For subsequent stages, a commander may be able to provide only broad instructions. Orders are written within the philosophy of mission command. Subordinates should be told what effects and end state they are to achieve, all integrated in a concept of operations and its scheme of manoeuvre. The commander will make his concept of operations clear but leave the execution to subordinate commanders. Key will be a clear intent for the operation;

b. As the situation develops, he or she will supplement and amend his original order with fragmentary orders. The success of the operation will depend increasingly on the initiative of subordinate commanders, especially in the exploitation and pursuit.

4104. **Location of Commander.** A commander will decide for himself where he or she is best located at any time. Often the range and reliability of communications enable him to see the whole picture at his principal headquarters where he or she has the support of his full staff and his specialist arms and services advisers. At some crucial moments, however, he or she will be required forward at the critical point in order to assess the full, immediate situation and in order to spot the opportunity that will allow him to exploit the situation faster than the enemy commander. In short, it will allow him to impose his will at the critical time and to personally influence the immediate battle.

4105. **Positioning of Headquarters.** The moves of headquarters must be arranged to meet the requirements of the commander and planned in advance so that early reconnaissance can be made and communications sites selected as far as practical. Normally, a formation headquarters will establish itself forward

immediately before the attack. This makes communications easier when the attack starts and ensures that the commander and his staff are near the assembly area at the critical period. As the attack progresses, the command elements also move forward to enable the commander to exercise control.

4106. **Communications.** Communications security is of the greatest importance prior to the attack. The implications of any restrictions on the use should be considered in advance. Radio communications will be essential for effective command and control during the attack. Provision for alternative communications should be made in case communications should not be available or lost for any reason.

SECTION IX - COMBAT SERVICE SUPPORT

4107. **General.** Continuity of sustaining operations is vital to the success of offensive activities and operations. Indeed, success in pursuit and exploitation may hinge upon the ability of CSS elements to react quickly and in a flexible manner. The commander and his staff must, therefore, give careful consideration to the availability of supplies, and the capability of the CSS support elements to deliver the supplies and to provide other necessary support to units.

4108. **Specific Considerations.** While all aspects of CSS must be considered in planning an operation, the availability of ammunition, fuel and maintenance support must be given the most emphasis:

a. **Forward Positioning.** To offset the strain on the transportation system, the commander must consider pre-positioning supplies and support facilities well forward. Where possible, these should be kept mobile so that they can be deployed forward as the attack progresses;

b. **Ammunition/Fuel Supply.** Adequate planning is necessary to ensure an uninterrupted flow of ammunition/fuel to the front, because of the large volume that must be moved and the often-limited transportation resources available;

c. **Maintenance.** To maintain effectively the force, repairs must be carried out as far forward as tactically feasible. This reduces the demands on the evacuation facilities and returns combat equipment to the battle in the shortest possible time. The forward positioning of major assemblies will greatly assist in the battlefield repair of combat vehicles. In the main, vehicle maintenance will consist of the replacement of complete assemblies rather than repair. There will need to be a well-practiced system in place capable of restocking the system with assemblies;

d. **Medical Support.** When planning the medical support for an offensive operation, the following important factors must be considered:

(1) Medical and surgical timelines are the primary driver for the layout of medical support;

(2) Plans must be flexible, since medical units are normally not held in reserve.

e. **Traffic Control.** Control on routes will be important to ensure the approach march, replenishment of committed forces, evacuation of casualties and deployment of reserves is not impeded. This will be particularly important at the crossing points for breached obstacles.

4109. **Requirement to Support Stability activities.** Should offensive operations progress into areas still inhabited by civilians, there may be an additional expectation and requirement that military forces will assist in immediately securing the civilian civilian population and in providing humanitarian aid to them. Therefore, there may be an additional demand on CSS elements to facilitate these activities. This requirement will ideally be foreseen by the commander and staff and appropriate arrangements made to support it.

CHAPTER 5 - DEFENSIVE ACTIVITIES

SECTION I - PURPOSE AND PRINCIPLES

General

5001. Every campaign and its operations are conducted through a balanced combination of offensive, defensive, enabling and stability activities. The resources and emphasis placed on each type of activity will depend upon a number of situational factors and will reflect the nature of the campaign.

5002. Defensive activities are activities that resist enemy offensive activities. Usually, defensiv activities are undertaken when the enemy has the initiative, to prevent him from seizing terrain, attacking friendly capabilities or breaking through into a defended area. They aim to break the enemy attack, destroy his forces and stop him from accomplishing his aim. In doing so, they create the circumstances for offensive action. This is fundamental to the defensive battle that must not drift into a situation in which the defending force merely reacts to enemy actions. Every opportunity should be taken to grasp the initiative and force the attacker to react to the defensive plan. Defensiv activities include the delay, however the delay is considered separately in this chapter.

Purpose and Concept

5003. The purpose of defensiv activities is to resist and ideally defeat enemy offensive activities. Within that, the objectives of defensiv activities may be:

a. To wear down the enemy’s offensive capability and to cause his attack to fail;

b. To retain a previously determined area and prevent the enemy from breaking through;

c. To gain time for other activities and operations;

d. To allow the concentration of friendly forces elsewhere;

e. To force the enemy to concentrate so that he is more vulnerable to friendly fire;

f. To protect friendly capabilities or indigenous facilities or systems;

g. To create conditions for offensive activities

5004. Defensive activities includes offensive action. The defence should be creative, with every opportunity being taken to grasp the initiative and so disrupt the enemy’s cohesion. For example, by holding terrain, or undermining the enemy’s efforts and resources in one area, a commander may be able to establish the conditions for decisive action in another. The object will be to force the enemy into action that narrows his options, reduceshis fighting power and exposes him to a decisive offensive action. An

effective defence is therefore rarely passive, and it is desirable to incorporate aggressive offensive action to pre-empt, dislocate or disrupt the enemy whenever possible. This may be done by fixing the enemy through deception and encouraging him to make ineffective plans, luring him into situations where one can exploit surprise, denying him information, and striking at his cohesion. Deep operations may be conducted to fix the enemy by denying him freedom of action, and striking in order to dislocate his potential for offensive manoeuvre, and disrupt his ability to pass orders.

5005. Defensive activities should not be merely reactive. A key aim will generally be to limit the enemy's freedom of action and to develop the conditions for future offensive operations.

5006. The defence will play a major role in many campaigns that do not involve a great deal of major combat. Initial footholds and firm bases during a COIN or an operation contributing to peace support efforts, all have to be secured and, depending upon the threats, vital points such as key civilian infrastructure may have to be secured. For these activities, the principles of the defence will still apply.

Principles for the Execution

5007. A commander must consider many principles and fundamentals when planning and conducting a defence. The principles for the defence apply to all types and forms of defence but the applicability of each depends upon the situation. They are frequently in conflict with one another and, consequently, the commander must determine the degree to which each will be stressed.

5008. The following principles for the defence require emphasis during the planning and conduct of defensive operations:

a. **Concentration of Force.** The commander must be able to concentrate his force, that is, his combat power, at the point of main effort. Concentration not only implies massing of forces but also massing of firepower. It includes such elements as movement, flexibility, and communications. At the lowest levels, concentration includes siting weapons and creating fire plans to mass fire effects on the attacker. Concentration cannot be achieved by being strong everywhere. Trading ground for time, or economy of force elsewhere, may be necessary to obtain an advantage at a decisive point. The defender uses deception, concealment, counter-battery fire, screening forces and air defence in order to minimize the risks of vulnerability through concentration of force. The commander must have the freedom of action and the flexibility to concentrate his combat power at the appropriate time and place;

b. **Economy of Force.** The commander must employ forces in the most economical manner possible. While the enemy can sustain an attack by moving up forces from the rear or from other areas, the defender normally has a limited number of reserves at his disposal. It is normally most prudent and less costly to defend in strength initially, rather than to plan to recapture areas later through counter-attack. If enemy forces

manage to advance into the depth of the defended area it will likely be best to block from even hastily prepared positions rather than counterattack, a move for which forces must leave their cover. Counterattacks and counterstrokes are best used when the enemy exposes a flank or stalls at a barrier.

c. **Offensive Action.** Commanders must maintain the offensive spirit in the defence. In doing so, the following should be noted:

   (1) The commander must not remain passive and wait to react. Commanders at every level must seize or create opportunities to surprise the enemy, thus forcing him to depart from his plans;

   (2) Enemy forces should be attacked and destroyed or disorganized and delayed not only at the point of immediate contact but wherever they can be engaged throughout the depth of the area of operations. This implies aggression, imagination, manoeuvre and speed;

   (3) The commander must wrest the initiative from the attacker whenever possible. Patrolling and counterattacking are also elements of offensive action;

   (4) Counter-attacks and spoiling attacks will be a key element of any defence.

d. **Security.** Security is the ability to meet an attack from any direction. It is achieved by the employment of covering forces, screens and guards, coordination and mutual support at all levels, maintenance of surveillance and reserves, and the ability to concentrate forces;

e. **Flexibility.** The defender will strive to avoid or counter the enemy's attacks, while preparing to seize the initiative and thus turn defensive operations to his advantage. This requires an ability to develop new plans rapidly, a willingness to shift the main effort, and a readiness to move swiftly to the offensive without loss of tempo;

f. **Information Gathering and Intelligence.** Information about the enemy and other adversaries is vital to the conduct of defensive operations. The plan for the defence will be based on the best intelligence available, using all the commander's sources and agencies, and intelligence from higher and flanking formations. This will include assessments on enemy capabilities and his intentions with the main tasks of determining the enemy's probable main effort, the likely enemy approaches, and the movement of forces in depth to the limit of the commander's area of interest. Estimating the enemy's planned targets for his artillery and air, along with objectives for reconnaissance and airmobile forces in the depth of the defence area, may help reveal his intent, scheme of manoeuvre and main effort. However, it is unlikely that a complete knowledge of the enemy's intentions can ever be deduced before his attack begins. It is, therefore, essential that commanders maintain their efforts through surveillance (including EW) and to continue to acquire information and intelligence as the battle develops, so that they can control the defence and concentrate and

employ his resources at the right place and time. Information gathered will help confirm the enemy's intent and must be tied to decision points for the commander's commitment of own forces, such as forces assigned countermove[19] tasks or reserve forces. Information is gathered from four sources in defensive operations:

(1) Covering forces;

(2) Guards and screens;

(3) ISTAR elements, including target acquisition systems;

(4) Patrols;

(5) Troops in contact.

g. **Use of Terrain.** The strength of a defence depends to a large extent on the selection and use of terrain. A commander's ability to analyse the terrain, determine the approaches, select vital ground and key terrain, and deploy his forces quickly determines the outcome of an operation. The selected terrain should allow the approaches to be covered by fire. It should also offer the defender concealment, protection and movement, while restricting the enemy's observation and deployment capability. Preferably, a defence area contains natural and/or man-made barriers that can be incorporated into the plan and reinforced by manmade obstacles. Terrain is classified as:

(1) **Open Terrain**. Open terrain is relatively flat and unencumbered by forests, built-up areas, waterways, and other natural barriers. It is covered easily by surveillance and can be dominated by fire. Such terrain requires the construction of barriers to restrict the movement of enemy forces. These areas are defended best by armoured forces and elements equipped with long-range direct fire support weapons;

(2) **Close Terrain**. Close terrain may have considerable relief and may be broken by extensive forests. It includes jungle and built-up areas. This terrain restricts an attacker's movement and provides good concealment and protection for the defender. Natural obstacles can be improved to further delay the attacker and canalize his movement. These areas are defended best by forces strong in infantry;

(3) **Key Terrain and Vital Ground**. Vital ground is ground of such importance that it must be retained or controlled for the success of the mission. Key terrain is any locality, or area, the seizure or retention of which affords a marked advantage to either combatant. Commanders must designate their vital ground, that is, that ground which, if lost, makes the defence untenable. They then identifies the main approaches to his vital ground and the key terrain that dominates or blocks those approaches. Key terrain is ground that

[19] A countermove is defined as: *An operation undertaken in reaction to or in anticipation of a move by the enemy*. (NATOTerm)

offers the holder a marked advantage. From this assessment, they identifies the key terrain that is to be held. They then groups and tasks his forces accordingly. This process is repeated at each lower level of formation and leads to coordinated dispositions that fit the overall plan. Normally vital ground is relative to the level of command but once identified, it remains constant for all subordinate levels of command. For example, a brigade commander's vital ground may only be key terrain from the perspective of the division commander; however, in situations where the corps' vital ground is in a brigade area, the same ground is vital ground both to the brigade and to the division. Regardless, if the defence within a specified sector is to continue, the vital ground must be held or, if lost, recaptured. A commander selects his vital ground, key terrain, and engagement zones by:

(a) Identifying obstacles in various locations, including the forward edge of battle area (FEBA) and likely avenues of approach;

(b) Determining approaches, assessing them and ranking them in terms of likelihood of use;

(c) Anticipating enemy objectives;

(d) Identifying obstacles in the main defence area.

h. **Disruption.** The enemy's offensive operations should be disrupted throughout its conduct, so that the enemy is frustrated in his attempts to manoeuvre and concentrate his combat power. This should be done throughout the depth of his force. Disruption can be achieved by: defeating or blinding his reconnaissance; attacking his cohesion and slowing his tempo through fixed defences and aggressive counter-attacks; and destroying critical assets through deep attack;

i. **Coordination and Cohesion.** All aspects of the defence require coordination, including passage of lines by covering (rearward passage of lines) and counterattack (forward passage of lines), forces, boundaries, liaison, barrier plan, fire support, air defence, airspace control, and combat service support, in order to ensure sound cohesion. The enemy aim is generally to achieve a swift breakthrough of the defended area. Often he will seek to attack along the defender's lateral boundaries; cohesion of defence along such boundaries, particularly where they are shared by different nations, is therefore essential. Tasking of reserves should include missions to maintain or restore cohesion along boundaries. Reserve forces must conduct extensive coordination, including rehearsals, once allocated the task. This must consider likely reinforcement options and focus on ways to avoid fratricide. Coordination takes place during planning and throughout the conduct of an operation. It is a never-ending task to which a commander and his staff must devote considerable effort. Coordination is particularly important during multi-national operations. A commander achieves and maintains coordination by:

(1) Understanding the superior commander's concept of operations;

(2) Understanding the tactics, methods and procedures of coalition partners;

(3) Selecting boundaries and lines of operation so that they do not increase the coordination problem;

(4) Selecting coordinating points along the boundary or line of operation;

(5) Exchanging planning information and liaison detachments;

(6) Planning for mutual support;

(7) Rehearsals, particularly for reserve forces;

(8) Any other means that the commander deems appropriate and prudent for the situation.

j. **Mutual Support.** Mutual support in the defence is achieved when the gaps between defended positions are covered by fire, preferably direct fire, so that the attacker cannot assault one position without being subjected to fire from at least one other. The degree of mutual support achieved depends upon the terrain, visibility and range of weapons. Ideally, the frontages that units must defend are related to their ability to provide mutual support. A commander must balance the need for mutual support with the requirements of depth, dispersion and mobility. Mutual support increases the strength of the defence and therefore influences the selection of boundaries and the location of battle positions. It also gives another advantage to the defender, since an attacker must disperse his covering fire to neutralize the supporting positions;

k. **Depth.** Defence in depth causes an attacker to execute successive stages of his operation without detailed reconnaissance. It also helps to surprise an attacker and draw him into committing his next echelon or reserve. It absorbs the attacker's momentum and thus prevents a breakthrough. It also localizes penetration and facilitates blocking. Finally, it allows a defender time to determine the attacker's main thrust and to counter it. The depth of the defence area should be proportional to the strength, mobility and firepower of the attacker and the frontage to be defended. Depth is obtained by:

(1) Employing protective elements well forward to cover approaches and likely enemy areas;

(2) Employing long-range resources, including electronic warfare elements and tactical air support, to engage, deep in the area of influence, targets which are important to the continuity, momentum and command and control of the attacker;

(3) Siting battle positions and obstacles in depth throughout the area;

(4) Positioning and moving reserves, fire support elements and combat service support elements.

l. **Manoeuvre.** Manoeuvre may be a decisive element of a defence. By

combining movement with fire, the defender can make the best use of terrain to inflict losses on the attacker. Manoeuvre enables a commander to concentrate sufficient combat power to achieve superiority over the enemy;

m. **Firepower.** The effectiveness of the defence is based primarily on the planned and mutually supporting fire of all weapons. The fire of manoeuvre units, indirect fire support, aviation, and tactical air and naval elements must be complementary, coordinated, and applied at the right time and place. Firepower also assists or enables a commander to concentrate sufficient combat power to achieve superiority over the enemy;

n. **Use of Reserves.** Reserves are uncommitted forces that a commander requires to maintain freedom of action to deal with anticipated and unexpected developments. They provide flexibility and balance. Their main functions are to reinforce, block, counter-attack, replace other units and protect flanks and rear areas. Once the reserve has been committed, a new one must be constituted or obtained. It may be necessary to reconstitute a reserve from troops in areas least threatened or from depth forces that are not in contact with the enemy. Although this entails risk, it must be weighed against the requirement to retain the ability to concentrate decisive combat power;

o. **Deception.** Deception seeks to manipulate the enemy's perception of the situation. It is mainly used in defence to give a false impression of:

(1) The exact location of the main defensive positions and friendly forces, thereby inducing the enemy to waste his main effort and resources in the wrong place;

(2) The direction and timing of friendly force counter-attacks, thereby inducing the enemy to deploy his reserves away from positions where they could influence the battle.

SECTION II - TYPES OF DEFENSIVE ACTIVITIES

5009. There are two principle types of defensiv activities:

a. **Defence.** The purpose of defence may be to defeat an enemy force or to hold ground. Generally, both will require a fixed element that denies the enemy freedom of manoeuvre, and a moving element to counter-attack the enemy. The balance between these two forces depends upon the mission and the relative capabilities of the attacker and defender;

b. **Delay.** Delaying operations are those in which a force being pressed by an enemy trades time for space, reducing the enemy’s momentum and inflicting damage without itself becoming decisively committed. Delay may be conducted to slow an enemy’s advance, reduce his fighting power, gather information about enemy intentions, or protect friendly deployments. Delaying operations also allow the commander to shape the battlefield, and to create the conditions for a counter-

attack. A delay activity is usually close associated with a corresponding defensive position that is being prepared while the delay is being fought. The delay is best fought with well-protected, mobile forces that can engage the enemy at range from mutually supporting battle positions and then withdraw quickly before becoming decisively engaged. Note that many of the principles and considerations for the conduct of the defence will apply to the delay to some extent, for the delay will include short-term defensive actions in order to create delay.

SECTION III - FORMS OF THE DEFENCE

General

5010. While defensive operations may take a wide variety of forms, defence can essentially be divided into two broad categories: mobile defence and area defence.

Mobile and Area Defence

Mobile Defence

5011. The purpose of the mobile defence is to defeat the enemy and prevent him from achieving his objectives through a combination of movement and position.

5012. In mobile defence a fixing force denies the enemy his freedom of manoeuvre while a striking force manoeuvres in order to defeat him. Commanders conducting a mobile defence use terrain, obstacles, depth and deception, together with fire and manoeuvre, to encourage an enemy to focus on the wrong objective. This renders the enemy vulnerable to attack. Therefore depth, time and the ability to manoeuvre are particularly important factors in the conduct of mobile defence. Successful mobile defence requires rapid switching between activities, and a readiness to concede ground where appropriate.

5013. Mobile defence focuses on the destruction of the attacking force by permitting it to advance to a position that exposes it to counter-attack and envelopment.

The emphasis is on defeating the enemy rather than retaining or retaking ground.

5014. A mobile defence requires a concept of operations and scheme of manoeuvre using a minimum of four force elements: two elements to create a block or fix of enemy forces, an element to counter-attack the enemy forces once fixed, and a reserve force. The counter-attack elements and reserve force must have the highest degree of protected mobility and firepower.

5015. Mobile defences employ a combination of offensive, defensive and delaying action necessitating the forward deployment of relatively small forces and the use of manoeuvre supported by fire and obstacles to wrest the initiative from the attacker after he has entered the defended area. Consequently the defending force must have mobility equal to or greater than that of the enemy, and the ability to form a large reserve that will conduct the decisive counter-attack.

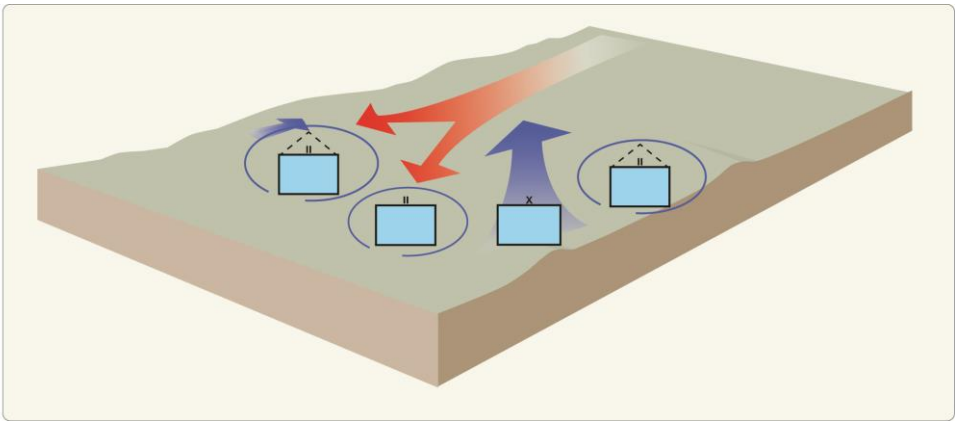


Figure 5-1: Mobile Defence

5016. Mobile defence will require close command and control and the detailed coordinate of movement. A commander will have to ensure that fixing forces do not withdraw before the enemy force is fixed and the counter-attacking force is committed. Likewise, the commander must ensure that the counter-attacking forces are not committed too early or too late and thus miss opportunities. Commanders must be highly flexible and mobile, moving from one area of engagement to another in order to personally control and influence the battle.

Area Defence

5017. The purpose of area defence is to hold ground or deny it to the enemy, thus denying the enemy the attainment of his objectives. It focuses on the retention of terrain by absorbing the enemy into an interlocked series of positions from which he can largely be destroyed by fire.

5018. In an area defence, the bulk of the defending forces are deployed to retain ground, using a combination of defensive positions and small mobile reserves. Commanders organize the defence around the static framework provided by the defensive positions, seeking to destroy enemy forces by interlocking fire or by local counter-attack of enemy units penetrating between defensive positions.

5019. The scheme of manoeuvre for an area defence requires three force elements as a minimum: two to hold terrain and one as a reserve. However, commanders at each level will vary their scheme of manoeuvre with some opting for a dedicated counter-moves force to launch counter-attacks or spoiling attacks, while still maintaining a reserve force.

5020. Unlike mobile defence, a force committed to area defence does not necessarily seek the destruction of the attacking force. Instead, it sets the conditions for other actions and relies on a separate but coordinated attack by other forces to deliver tactical success. In area defence, commanders employ their forces in a framework of static and mutually supporting positions, supported by counter-attacks at all available levels.

5021. The balance between static and counter-attack elements is largely dictated by terrain. The closer the terrain, the greater the proportion of counter-attacking forces and the lower the level at which they should be employed. Unlike mobile defence, for which considerable depth is essential, area defence may be conducted in varying depth depending upon the mission, the forces available and the nature of the terrain.

5022. Defensive positions must be held. They may only be abandoned on the order of those who ordered their occupation in the first place. Positions are only ordered to be abandoned if they are no longer important for the coherence of the defence or if battle can be conducted under more favourable conditions elsewhere. The decision for this rests with the commander who order the position. In order to facilitate rapid abandonment on order, withdrawal plans should be created and rehearsed if possible and the thinning out of non-essential equipment should have occurred prior to the battle.

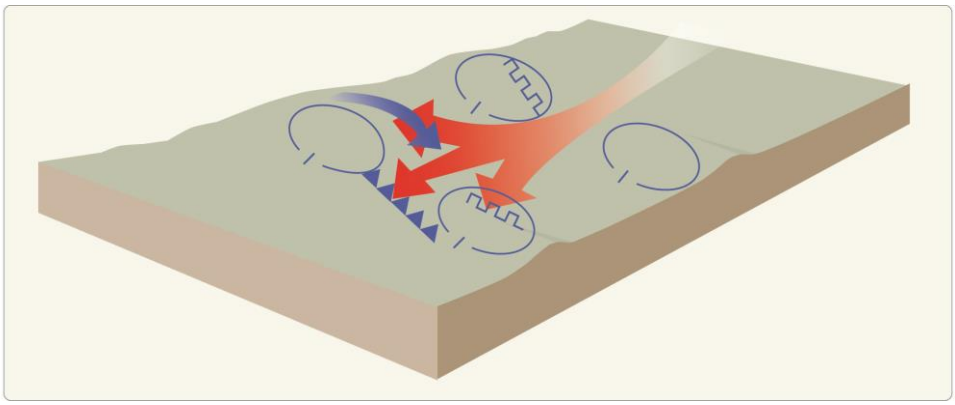


Figure 5-2: Area Defence

Combining Area and Mobile Defence

5023. Although these descriptions convey the general pattern of each form of defence, both forms employ static and dynamic elements. Defending commanders may well wish to combine both patterns in their defensive operations, using static elements to delay, canalize, cause attrition to, and ultimately halt the attacker, and dynamic elements, such as spoiling or counter-attacks, to strike and destroy his committed forces. The balance among these elements will depend on the unit's mission, composition, mobility, and relative combat power, and on the character of the battlefield.

5024. The fundamental difference between mobile and area defence is:

a. Mobile defence seeks to defeat the enemy’s attack by destruction;

b. Area defence seeks to defeat the enemy’s attack by denial.

Defence by an Encircled Force – Perimeter Defence

5025. The purpose of perimeter defence by an encircled force will greatly depend upon the situation and orders from the higher echelon and its concept of operations. It may be to retain ground or draw enemy forces as part of a larger manoeuvre, or to preserve the combat power of forces unexpectedly encircled and unable to break out or exfiltrate.

5026. In larger defensive operations a commander may deliberately allow forces to become encircled and remain so for a long period of time. This may be particularly necessary when vital ground must be held.

5027. A perimeter defence by encircled forces employs all the principles, concepts and considerations in planning and conduct as a main defensive battle. The following considerations may require additional attention:

a. Depth and mutual support will require special consideration in order to prevent enemy penetration and break-up of the defensive position;

b. Fire support from outside the encirclement has to be coordinated with that from within;

c. CSS, particularly existing stocks, will require special attention. It may be necessary to concentrate CSS resources to protect them and so that they can best be used where most needed. Monitoring of CSS stocks and estimates by CSS staff in terms of expenditure rates and thus how long the defensive battle can last will be important;

d. Intelligence collection from all sources will be vital with a focus on identifying enemy deception efforts to draw forces away from the enemy’s actual main effort;

e. Plans for link-up with or relief by other friendly forces (enabling activities);

f. Plans for re-supply during the perimeter defence. This may be by air drop or aviation;

g. Preparations for a break-out when ordered (an offensive tactical activity).

Large Area Defence

5028. In some campaigns, there may be a demand for military forces to defend or secure a vast area but with in sufficient numbers of forces. The purpose of large area defence is to deny the enemy use of a large area, particularly one that is key to a campaign and likely contains civilian civilian populations. The defence of rear areas (often termed rear area security) may be included in this concept, depending upon the size of the threat, although it is normally considered an enabling (security) activity. In cases of large area defence, the scheme of manoeuvre will involve some forces concentrated in certain areas with the ability to move to, and even swarm, areas where enemy threats have been detected.

5029. The principles and considerations for defensiv activities in general apply to a large area defence, however a commander must use judgement in their application in order to best meet the objective of the mission and preserve combat power.

5030. In a large area defence concept, units and sub-units will unlikely have contiguous areas of operation/boundaries. However, the higher echelon – normally the formation – will still be responsible for the defence of those areas not specifically assigned to subordinates. At both unit and formation level, mobility of forces will be key to an effective defence.

5031. Areas where forces will be concentrated will likely be civilian population centres or areas from which the forces may react quickly to approaching or developing threats. Although the forces will be deployed in dispersed concentrations, their areas of operation may well be contiguous or the higher level formation will be prepared to deploy forces as needed into threated areas not permanently assigned.

5032. Such a defensive scheme of manoeuvre will require the following considerations and capabilities:

a. Pervasive ISTAR assets centrally controlled that will quickly identify developing threats at range and allow sufficient time for forces to react appropriately;

b. Large reserve forces that are highly mobile and dispersed, but that can concentrate rapidly from multiple directions;

c. Pre-arranged or rapidly deployable obstacles to hinder enemy movement and create choke points;

d. The potential use of swarming techniques to pose enemy commanders with multiple threats from many directions, thus overwhelming them in their advance.

SECTION IV - PLANNING AND EXECUTION OF THE DEFENCE

General

5033. Commanders task their sub-units one level down while they think in means/assets two echelons below to provide the echelon one below with enough capacity to create the desired effects. Commanders will be briefed in the final commanders back brief how the subunit commander will site his assets.

5034. During the early stages of a defence, the defender will usually have the advantage of fighting from positions of his own choosing. Preparation includes positioning forces in depth, using and improving ground, conducting reconnaissance and security operations, developing plans for counter-attacks, and initiating deception measures. These should conceal dispositions and intentions and misdirect the enemy's efforts.

5035. Detailed coordination will be of utmost importance during the planning of the defensive activity and will consume considerable time. It should include back-briefs by subordinates to their commanders to ensure that the sited positions will create the desired effects.

Stages of the Defence

5036. When a covering force is deployed, the defence, be it area or mobile, is fought in two stages. These stages are:

a. **Covering Force Battle Stage.** The covering force operates forward of the main defensive position. A covering force is defined as: *a force operating apart from the main force for the purpose of intercepting, engaging, delaying, disorganizing and deceiving the enemy before he can attack the force covered* (NATOTerm). The covering force operates and fights distinctly and independently from the main defence force. Thus it must have its own integral fire support and mobility/counter-mobility capabilities. It shapes the battlespace for the main defensive battle for example by trading space for time. Thus it provides security for the main body and gains information. At some point in the operation the covering force withdraws and hands over the battle to the main defence force.

b. **Main Defensive Battle Stage.** The main defensive battle is fought by the main body to meet the objective of the defensiv activities. It includes countermoves (reinforcing, blocking and counter-attacking and spoiling attacking), and it includes the deployment of screen and guard forces.

5037. During both of these stages of the battle, enemy forces in depth will be attacked to prevent or delay their deployment.

Planning

Planning Factors and Considerations

5038. In planning the defence, the following factors require special consideration in the commanders estimate of the situation:

a. **Threat.** Examination of the threat will include consideration of the enemy's tactical doctrine and details of his capabilities, including nuclear and chemical delivery means and munitions, in order to determine his possible courses of action;

b. **Dispositions.** The positions assigned to combat troops, combat support troops and reserves are primarily determined by their mission. This may require some elements to be located in an area that has been assigned to another unit. This disposition in no way changes responsibility for the conduct of operations in that area. Fire support units and CSS units should be sited away from the most probable main axes of the enemy advance;

c. **Terrain and Weather**

(1) **Terrain**. Terrain must be carefully selected in order to maximise and exploit the potential and characteristics of one's own forces, weapons, mobility and capabilities and the negate those of the enemy. The defence concept of operations must focus upon identified vital ground, key terrain, vital ground and planned objectives;

(2) **Weather**. The concept of operations must make allowance for any changes of weather conditions that may affect the conduct of the defence.

d. **Covering Force Area.** When a covering force is deployed, it operates in the covering force area, defined as: *the area forward of the forward edge of the battle area out to the forward positions initially assigned to the covering forces. It is here that the covering forces execute assigned tasks* (NATOTerm);

e. **Assigned Frontages.** If troops are assigned wide frontages commanders have to decide where they want to concentrate their combat power and where they tak8ing risk and rely on weaker forces, e.g. screen forces. In any case commanders need to place greater reliance on mobile reserves, depth, firepower and surveillance;

f. **Resources.** During his planning a commander should identify and request any additional resources needed to accomplish his mission. Requirements and timely availability of resources will be critical information requirements for the commander;

g. **Time.** The time required for deployment to, and preparation of, the defensive positions must be carefully considered and plans and tasks issued within the limitations imposed in relation to time available. Concurrent activity is required at all levels. Commanders should issue intents or effects that subordinate defence plans and positions are to

meet or create. Commanders must ensure that they allow enough time for subordinates to complete their preparations. As a general rule, commanders should ensure the they only consume one third of the time remaining before the start of the operation, thus allowing two thirds of the time for their subordinates. During the preparations commanders must make every effort to visit the subordinate defensive positions to coordinate plans and confirm tasks and direction;

h. **Main Effort.** The commander must determine the point of main effort of the defence operation, which is where the commander intends to defeat the enemy's main strength. Ideally, this will be aimed at a vulnerability of the enemy's main strength and requirement (eg, destruction of the enemy bridging equipment needed for the assault). This is the point at which the maximum effect of fire and barriers must be achieved. Reserves must be kept on standby so that they can be quickly ordered into action at the point of main effort. During the battle it may be necessary to adjust the main effort to another part of the defensive position. Reserves should be prepared for this and have already conducted rehearsals;

i. **Denial Measures.** In accordance with the denial plan, denial measures have to be prepared for execution, if required, in close cooperation with the appropriate host nation authorities. The requirements for infrastructure for the next phase or following the cessation of combat must be carefully considered;

j. **Coordination.** Coordination of the various plans must be carried out not only within the area of operations, but also with flanking formations. Higher headquarters must be kept fully informed;

k. **Local Civilian population.** Even in major combat, the local civilian population will be a significant consideration in planning. In the extreme, their protection and defence may have to be incorporated into the concept of operation. At the very least, the commander must consider how to avoid collateral damage, particularly to vital points, key infrastructure or culturally sensitive areas. In terms of security, the commander must be aware of the potential threat of enemy informers or enemy themselves hiding amongst the civilian population;

l. **CBRN Defence.** Depending upon his estimate of the actual threat, the commander has to consider the need to implement CBRN protective measures. If the enemy unexpectedly stops his attack or withdraws troops deployed forward, it may be indicative of his imminent use of nuclear weapons. Troops, including flank units threatened by the strike, should be warned and the commander will have to decide whether his force should continue to hold, disperse, or seek to interlock with the enemy. Commanders of a defensive position subjected to chemical attack have two basic options: to move or remain in place. Before deciding to move they must consider:

(1) Time the hazard is likely to persist on the present position;

(2) The effect of any move on operational plans;

(3) The need to decontaminate before occupying a new position;

(4) The spread of contamination caused by moving;

(5) Any loss of protection.

m. **Confirmatory Orders.** The defensive position will be based on a set of orders. After the commander has visited subordinate positions and made adjustments to locations, routes, and plans, the commander should issue confirmatory orders for the defence. Commanders at all levels must conduct rehearsals for counter-moves and reserve forces.

Incorporation of Natural Obstacles into the Defensive Plan

5039. In the siting, planning and conduct of the defence, particularly an area defence, a commander should incorporate natural obstacles, particularly water features that will force the enemy to conduct a deliberate obstacle crossing.

5040. As a general rule defensive positions should be established along an obstacle so that its fire power can cover the obstacle. This enhances anti-armour fires in particular and makes it possible to defeat enemy element as they cross the narrow crossing sites. It should be noted that the siting of defensive positions along an obstacle such as a water feature will likely expose the position to intensive enemy direct and indirect fires.

5041. A commander may seek to establish defensive positions back, beyond the range of enemy direct fire weapons, particularly when siting forward along the obstacle will prove unfavourable, if the terrain is too difficult or if it will cause the forces to be committed too early. In such cases the natural obstacle should still be incorporated into the defensive plan, enhanced where possible by man-made barriers and covered by fire. It may also be incorporated into the manoeuvre and engagement plan of the screen, guard or covering force.

5042. In some cases a commander may site a defensive position forward, on the enemy side, of a natural obstacle. This may be necessary to maintain overall coherence of the defensive position, to guard a crossing point or to exploit favourable terrain. This will certainly be the case for guard, screen or covering forces who have to establish battle positions forward of a natural obstacle. In such cases, the commander must leave sufficient movement space forward of the obstacle to allow a sequenced withdrawal in contact. Additionally, all crossing sites must be guarded (to include long-range fires and air defence).

The crossings may even be prepared for demolition. A considerable number of forces will be needed to guard the crossings, in order to protect them from destruction or from capture by enemy airmobile forces.

Obstacles in the Defence

5043. Whatever the form of defence, the skilful use of natural and artificial obstacles will be essential to success. Their purpose is to enhance the tactical commander's own plans by denying the enemy the freedom of manoeuvre he requires in order to gain and maintain the initiative. The integration of obstacles with firepower will be used to support the commander's manoeuvre plan and to shape and restrict the enemy's manoeuvre options. Artificial obstacles will be used to shape the battlefield. The principles to be observed are:

a. Barrier control measures must be coordinated at all levels, but detailed siting will be confirmed by subordinate commanders;

b. Obstacles must complement and not dictate the design for battle. As such, the commander's intent for obstacles, that is, to fix, disrupt, turn or block, must be clearly enunciated;

c. Wherever possible obstacles must be covered by direct fire. When this is not achievable they must at least be covered by observers able to call for indirect fire.

5044. Artificial obstacles must not hinder the ability of forces to operate. Counter-attacks and the rearward passage of covering forces must be granted particular attention.

Siting of Battle Positions and Strongpoints

5045. Battle positions should, whenever possible be mutually supporting. They should be sited such that they are hidden from direct enemy observation and fire. The defender should avoid positions which are easily identifiable and easy to engage such as forward edges of woods, isolated villages and other obvious features Battle positions should dominate the local area by direct fire. Such positions provide a framework for mobile forces operating between them.

5046. The commander must imagine the conduct of the battle and plan defensive positions in depth, either manned from the start or manned on order as other positions are abandoned. They may be positions for dismounted forces (that is, trenches) or positions for armoured vehicles (which may be dug-in, to provide additional protection). These depth positions should be planned and prepared with a view to:

a. Blocking or contain enemy elements that penetrate into the defence area, in order to attrite them or to fix them for a counter-attack;

b. Exploit natural terrain features that will expose enemy flanks or assist in their containment;

c. Ensure that the overall coherence of the defence is maintained and the desired effect of the overall defensive battle is supported.

5047. A strongpoint is a fortified battle position. It is essentially a concentration of direct fire, particularly anti-armour, weapons that cannot be easily overrun or by-passed. It can be defeated by the enemy only with the expenditure of much time and overwhelming forces. It will be located on a terrain feature critical to the defence, or one that must be denied to the enemy and can be used to shape or contain the attacker. Extensive engineer support may be required in the preparation of strongpoints.

Engagement Zones in the Defence Concept

5048. Engagement zones/areas are designated by commanders at all levels based upon their mission and the analysis of the terrain and enemy. They are areas where the terrain, reinforced with artificial obstacles, allows the defender to fix and destroy enemy forces that have been forced to concentrate. As such, they are an integral part of close, deep and rear battles and their purpose and location must reflect the commander's plan and the ability of the terrain to support the shaping of the battlefield, the fixing of the enemy and the concentration of the required combat power.

Direct Fire Planning in the Defence

5049. When planning the layout of a defensive position, direct fire support weapons, particularly those that will defeat an enemy armour force, are the first to be considered and sited. The remainder of the defensive position is then built around them. It must be coordinated by the commander himself. The following points should be applied when siting direct fire assets:

a. **Depth.** The various ranges in the family of direct fire weapons provide an opportunity to have depth in the engagement zone with overlapping arcs of fire. In addition, the anti-armour and support weapon plan should have depth deployment positions on all likely enemy approaches so the mobile systems may have multiple engagements against an attacking force which is not destroyed in the initial engagements;

b. **Mutual Support.** The anti-armour plan should ensure that a force attacking any position can be engaged with support weapons direct fire from adjacent positions. Thus the availability of positions for this mutual support should be a consideration in the selection of battle positions. Coordination of all weapon systems in battle positions is a constant requirement. Direct fire weapons are employed in pairs or groups to allow for mutual support in providing local protection, observation and covering fire as well as to allow disengagement and movement. Note that the systems themselves do not have to be co-located, but the effects they achieve (e.g., beaten zone) should be paired;

c. **Security.** In battalion and battle group areas of operations, armour and other mobile direct fire support weapons normally operate outside of the company battle positions. They must therefore provide their own local protection and have the ability to react to enemy threats. Although weapon systems have small crews, they do have good surveillance capabilities and good mobility. Hence, they not only enhance their own protection but also contribute to the security of the area of operations

and the forces within it. Direct fire weapon sections can be used to patrol or picket areas instead of reconnaissance troops. Their sighting systems, fire power and mobility will allow them to be used as screen, guard or cover forces. Furthermore, when not manning their battle positions, mobile direct fire systems should be held back in hides, on suitable notice-to-move footings;

d. **Integration of Direct Fire Support Weapons.** Armour and direct fire support weapons must be carefully integrated with all the other means of achieving and support the destructive effects against enemy forces. In this way, the integrated use of all weapon systems enhances the effectiveness of each to produce a greater net effect. For example, the combination of anti-armour weapons firing into engagement zones, with minefields to canalize and inhibit movement, supported by joint fire to keep the armour closed down and thus their observation restricted, coupled with smoke to further reduce their visibility, and with aviation to engage from unexpected approaches, enhanced by dismounted troops in defensive positions, produces a significantly better overall effectiveness than the employment of each system alone. It also degrades the enemy's ability to defeat our systems that would be vulnerable if employed alone. Short-range direct fire weapons should be integrated with other weapon systems in battle positions. Furthermore, direct fire weapons should be integrated into the surveillance and target acquisition plan both to contribute to observation capability and to receive information about the location, type and number of targets. Since direct fire weapons rely greatly on their redeployment capability, the anti-armour plan should be coordinated with the barrier and movement plans to ensure they are compatible;

e. **Concentration.** The anti-armour plan should allow for the concentration of sufficient killing power at the locations and times that provide the greatest advantages. This must be accomplished without the enemy being able to detect and counter the concentration. A coordinated plan, secure communications, covered approaches, speed of movement, good drills and rapid dispersion are some of the requirements for effective concentration of direct fire systems. The uses of tank hunting patrols and of helicopter insertion of dismounted direct fire weapons are means of achieving concentrations at unexpected places or times. By concentrating selectively on one of the enemy's critical assets, such as his armoured personnel carriers, his engineer vehicles or his command and control vehicles, it is most likely that his cohesion will be degraded.

Layout of the Defence area

5050. The covering force area is the area extending forward of the defence forces deployed at the FEBA. It is within this area that the covering force must execute its tasks and responsibilities. In doing so, it may use delay tactics. The covering force will have its own fire support means and will operate independently of the main defence area.

5051. The covering force area and the defence area are separated by the handover line in front of the FEBA, where the responsibility for the conduct of operations will change. The handover line lies within reach of the artillery behind the FEBA.

5052. In some situations, the covering force can conceal the location of the main defence area by mounting a temporary defence. In such situations, the covering force cannot become decisively engaged and loose a significant amount of its combat power. The AOO of the covering force will usually be specified by the superior commander who deployed the covering force. In other circumstances the superior commander may simply indicate the general area in which the covering force may operate and allow the covering force commander to select the most suitable positions and scheme of manoeuvre.

5053. The commander of the main defence area may deploy a guard force forward of the main defence area to collect information, assist the covering force in breaking contact and assuming the battle from the covering force, and, to continue the delay or disruption of the enemy advance.

5054. The main defence force must be able to engage between the FEBA and the handover-line in order to help the covering force break clean from any enemy forces pursuing the covering force's rearward passage of lines. This may include the deployment by the in-place force of a guard or screen force.

5055. The defence area extends rearwards from the FEBA. It is that area in which the commander plans and fights the decisive defensive battle.

5056. The rear areas extend from the rear boundaries of formation/unit areas to their subordinate formation's/unit's rear boundaries. It is here that the reserve forces of the formation/unit are normally located. In addition, some long-range fire support units, organic and attached combat support and combat service support units will often be found in thisarea. In the allocation of deployment areas, consideration must be given to the areas needed for the overall concept of defence as well as areas required for combat service support troops and installations. (See the figure below.)

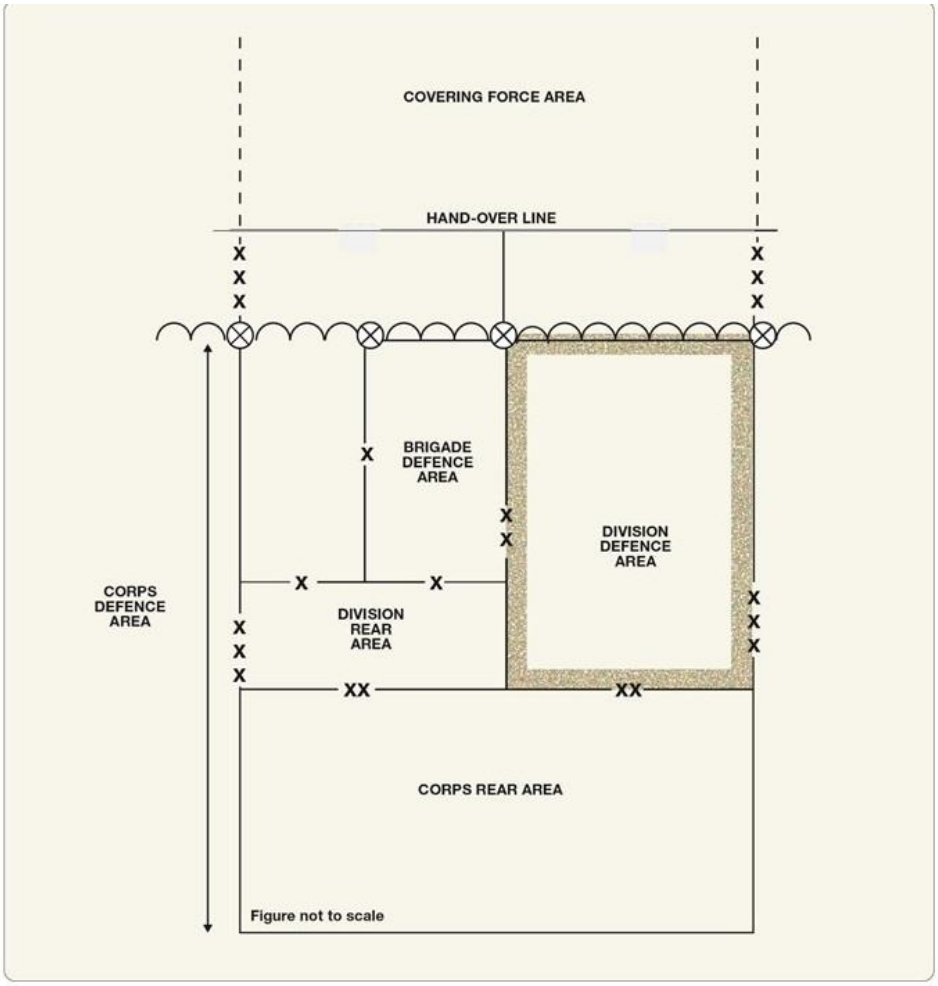


Figure 5-3: Corps Defence Area of Operations (with the Covering Force under Corps Control)

Note: This diagram illustrates a Corps Defence Area of Operations in very basic outline. It should be remembered that on the non-linear battlefield the lines will not always be straight and there may be large gaps between one Corps or division area and another.

Planning Guidance for the Defence

5057. Commanders should provide intelligence requirements to his subordinates in order to best inform planning at the earliest stages. Commanders and their subordinate commanders must ensure the following points are used to inform their plans, warning orders and orders:

a. Critical information on both enemy and friendly forces including the intentions (including CBRN) of the former and limitations of the latter;

b. Task organisation;

c. The assigned or anticipated mission, the superior's and one's own concept of operations and tasks stemming from it;

d. Boundaries, including the division of the area of operations into the covering force, main defence and, if applicable, rear areas, and the

delineation of the FEBA;

e. Additional tasks such as the provision of troops for the covering force, work parties, security of vital points and rear area security;

f. Barrier and survivability plan, in outline;

g. Critical timings;

h. Other measures needed to coordinate the defence plan, including areas allocated for reserves, combat support forces and CSS troops;

i. Blocking positions in depth.

Preparations

5058. In defensiv activities, the time available for preparation is of extreme importance. Priorities must, therefore, be set out clearly and work must be started as early as possible. If it is essential, the time available for the preparation of the defence may have to be increased by adjusting the mission of the covering force. An essential and most time-consuming activity is engineering work. It is important, therefore, that the maximum effort and priority is given to counter-mobility and survivability tasks. The execution of specific denial measures will begin during the preparation phase of the battle, continue through the covering force action and be completed during the main defensive battle.

5059. Preparations for the defence should take place concurrently at all levels and include such important activities as:

a. Reconnaissance and counter-reconnaissance within the formation's area of operations;

b. Planning and shaping the battlefield through the integration of natural and artificial obstacles;

c. Planning the coordination of direct and indirect fire support;

d. Deciding the employment of air defence;

e. Establishing liaison between flanking and subordinate formations;

f. Continuous refinement of the plan by war gaming, if time permits;

g. Rehearsals of all activities such as battle handover and countermoves, if time permits;

h. Production of intelligence in order to determine the time that the enemy will attack, his main effort and locations of his command and control systems.

Counter-Reconnaissance

5060. Common to all defensive operations is the requirement to destroy or neutralize (e.g., by deception and the use of electronic warfare) enemy reconnaissance. Plans must be made for its early destruction in all sectors of the battlefield but these plans must not result in the premature disclosure of key elements of the defence. Success against enemy reconnaissance will help maintain the security of reserves, achieve surprise in offensive action, and retain the integrity of fire support systems and command and logistic infrastructures. Measures that can be taken against enemy reconnaissance include:

a. Use of the covering force to destroy or neutralize it as early as possible so that the dispositions in the main defence area are not disclosed. This requires the coordination of surveillance and target acquisition systems with direct and indirect weapon systems;

b. Protection of friendly dispositions through camouflage, concealment and defensive command and control warfare in order to deny information to the enemy. This is particularly important once enemy reconnaissance has penetrated the covering force. Enemy reconnaissance should be engaged within a framework of patrols and ambushes, forward of and between battle positions;

c. The use of aviation might be considered if sufficient assets are available although targets are likely to be dispersed and exposed only for short periods;

d. Indirect fire can be effective in terms of neutralization and destruction but it is more likely to be committed to larger and higher priority targets. Assets are likely to be limited and 'unmasking' will jeopardize security. Special care needs to be taken to protect the security of reserves and high value targets. Camouflage and deception measures should be employed but critical reserves may require forces assigned to them specifically for protection against enemy reconnaissance;

e. In the rear areas, there is a requirement to be diligent in seeking out and destroying reconnaissance elements. Reconnaissance and reserves may be used if they are not committed to other tasks;

f. When enemy reconnaissance forces adopt unconventional tactics and blend with local civilian populations, measures must be taken to counter this enemy. Troops conducting static defence or framework patrols must watch for suspicious activities, monitoring by those with cellular telephones and the shadowing of patrols. Suspected individuals should bestopped and investigated, keeping in mind the need to avoid alienation of the local populace.

Deep Operations and Shaping Operations in Support of the Defence

5061. Throughout the battle, enemy forces in depth will be attacked to prevent or delay their deployment. Indeed, deep, close and rear operations will be fought simultaneously and there is a requirement therefore for the commander to assign priorities, particularly for combat support and combat service support. Likewise, shaping, decisive and sustaining operations may be conducted simultaneously.

5062. The commander must prevent the enemy from concentrating an unacceptable level of combat power at any given point by pre-emptive, systematic and sustained attacks on enemy echeloned forces. Enemy forces not yet in contact will be monitored throughout the commander's area of interest and engaged throughout the depth of his area of influence.In doing so, the commander intends not only to destroy and delay the enemy force, but to disrupt the enemy commander's plan and seize the initiative. This attack on the enemy'sforces in depth is complementary to both the covering force and main defence battles. Integration of the available combat support assets to conduct this disruption requiresextensive and continuous coordination between air and ground commanders but this willyield a significant capability to see and strike deep targets and is vital to the successful conduct of deep operations.

Covering Force Battle Stage

5063. A covering force fights a battle of movement and there will seldom be time to prepare battle positions. Maximum destruction is inflicted on the enemy so that he arrives at the main defence area disrupted and disorganised. Although the task of the covering force is very demanding, casualties and delay can be imposed on the enemy out of all proportion to the size of the covering force if it is handled skilfully and makes use of favourable ground. In doing so, the covering force can deceive the enemy as to the location of the main defence area and even lead him to give away his intentions.

Planning Considerations

5064. Normally, corps and divisions deploy a covering force whereas brigades and battle groups deploy screen and/or guard forces due to their limited resources. In any case, there will be only one designated covering force beyond the handover line as this negates the need for multiple handovers between successive levels. This however still provides a commander the option of employing his own guard or screen force in the main defence area up to the handover line with his superior formation. When a formation is responsible for the covering force battle, it must understand how it is related to the main defence battle and the impact that the conduct may have on the higher commander's intent and concept of operations in the main defence area. Planning must incorporate contingencies to account for unexpected results or difficulties of the covering force battle.

5065. Based on the definition and the intent of deploying a covering force, the force must consist of enough combat power to meet the commander's intent. The amount of combat power assigned to a covering force determines how long and how far it can operate independent from the main body. Depending upon the commander's intent and concept of operations a covering force may be required to fight a delay battle in support of a main defensive position.

Tasks for Covering Force Battle

5066. The commander will normally establish a covering force to form the first echelon of a defence in depth. A commander avoids assigning conflicting tasks to a covering force. The primary tasks may be:

a. Gaining information on the location, direction and weight of the enemy attack (his main effort);

b. Gaining time (delay);

c. Attrition - inflicting casualties on the enemy;

d. Providing security;

e. Disruption - causing damage to the enemy's cohesion;

f. Deception or canalzing of enemy forces.

Size and Composition of the Covering Force

5067. The size and composition of the covering force will depend on the mission, enemy, terrain and available forces. Wherever possible, the forces used as a covering force should not be required immediately in the main defence area. The covering force should be ancombined arms grouping that is self-contained in all respects. These factors take on added significance and complexity depending on the course of action chosen by the enemy, the depth and width of the area available for the covering force battle and the time requiredto prepare the positions in the main defence area. It must have enough mobility and firepower that it can avoid decisive engagement and break contact from the enemy using its integral resources. The conduct of the covering force battle will depend upon the assigned tasks. If it must gain time to support the completion of the main defence area, then it may be conducted as a delay. Either the corps or its divisions may deploy a covering force whereas brigades and battle groups, due to their limited resources, may deploy screen or guard forces.

Battle Handover from Covering Force to Main Defensive Battle and Force

5068. Forces in the main defence area assume responsibility for the battle at the handover line. In planning and conducting the handover of a battle, a number of issues must be considered.

a. As the covering force approaches the handover line, it may become necessary to increase the intensity of the fire support from the defence area to allow the covering force to disengage. Both direct and indirect fire assets from the main defence force will provide support to cover the redeployment of the covering force and to cover lanes in the obstacle barriers. This rearward passage of lines through the forward positions

in the main defence area must be carefully planned and coordinated, particularly if the covering force is to break clean and if friendly fire incidents are to be avoided;

b. The covering force passes through the main defence area forces as quickly as possible to minimize their vulnerability to enemy fire. Combat support and combat service support resources of the covering force should move to the rear as early as possible to avoid hampering the movement of the combat forces;

c. In non-contiguous areas of operations, commanders must consider the partial redeployment of the covering force. Ground should only be yielded under pressure and the requirement for information may dictate that elements of the covering force remain forward of the main defence area.

Main Defensive Battle Stage

5069. The main defensive battle is fought in the main defence area. Here the effects of deep operations and covering forces, coupled with the efforts of rear operations combine with those of the main defence force to defeat the enemy. The aim of the main defence battle is to stop the enemy advance by a combination of firmly held battle positions within the main defence area together with the use of obstacles and reserves. Tactics in the main defence area will vary and there can be no set course of action. Much of what occurs will depend on a flexible plan incorporating the principles of mobile and area defence.

Initial Actions in Main Defensive Battle

5070. In addition to the covering force, patrols or small protective elements will generally be placed forward to provide security for the forces in the defence area. This must be carefully coordinated across boundaries and will require a coordinated withdrawal plan for these elements.

5071. The main defensive battle begins as the enemy approaches the FEBA. As a general rule, units fight in such a way as to block the enemy attack as far forward as possible. Nevertheless, the action will be extended in-depth in order to counter enemy penetrations that cannot be stopped further forward.

5072. Once the enemy has reached the main defence area, he will try to find weak points and attempt to break-in, possibly by a series of small-scale attacks. If one of these is successful, the defender must block the penetration immediately and destroy this enemy force as soon as possible.

5073. The enemy is likely to launch his main attack as soon as he has adequate intelligence. He will concentrate his strength on selected areas and support these attacks with heavy joint fire and intensive air attacks. The attacks may be supported by other subsidiary assaults, such as airborne or airmobile actions between, or to the rear of, forces conducting the defensive battle.

5074. As the enemy attack begins to develop, the forward units will engage them. As the battle progresses, the enemy advance may be slowed and he may become concentrated by the barriers and the battle positions, thus presenting good targets for defensive fire and offensive air support. The maximum weight of fire must be brought to bear at this stage of the battle.

Defence against Armour

5075. As the main enemy threat is normally from armour, planning for anti-armour defence will be the first consideration when laying out a defensive posture. This is so important that a commander will coordinate it himself. The early destruction of enemy tanks is the key to success in defence. All anti-armour weapons must be coordinated to destroy enemy armour by day and night. The following points should be applied when siting anti-armour defences:

a. Anti-armour defences must be concentrated on likely approaches, although no area should be disregarded;

b. Early detection of enemy units is essential. This allows for the timely employment of anti-tank weapons to destroy enemy armour;

c. Effective siting of barriers assists in the destruction of enemy armour by hindering movement and canalizing it into the coordinated fire of anti-tank weapons, mines, tanks, joint fire, armed helicopters and air support resources;

d. One of the primary considerations in the selection of positions and for the deployment of a combined arms team is the capability to separate the accompanying enemy infantry from the tanks as early as possible;

e. Armoured forces will be given the primary task of blocking or counter-attacking enemy penetrations;

f. If the enemy armour succeeds in penetrating the forward defence, anti-tank weapons located in-depth will attempt to stop further advances. Forces in forward areas may remain in position to continue to destroy the following enemy armour;

g. Armed or attack helicopters are often the most quickly deployed means of countering tank attacks. Conditions of bad visibility may, however, hamper their employment.

Penetration

5076. Undefended areas may be unavoidable between battle positions, but they must not be left where the probable main enemy effort is expected. They must be kept under surveillance, covered by fire or, where possible, blocked by barriers. These responsibilities must be clearly defined. If the enemy succeeds in penetrating the main defence area, the defender must block the penetration immediately and destroy this enemy force as soon as possible,

hence the need for reserves with battlefield mobility. Action may be extended in depth in order to counter enemy penetrations that cannot be stopped further forward. In a mobile defence the commander may allow penetration in a selected area in order to launch his striking force at the appropriate time and place. Any decision to redeploy must take into account the situation prevailing in adjacent defence areas.

5077. A significant enemy penetration may require a withdrawal and the determination of a new FEBA. The withdrawal and this new FEBA may only be designated by the commander who originally ordered the defence operation to be conducted.

Countermoves: Reinforcement, Blocking and Counter-Attack and Spoiling Attack

5078. Penetration by the enemy of the main defensive position may be countered with countermoves: a block; reinforcement; a spoiling attack; a counter-attack; or, a combination of these. (Countermoves may be used in both forms of defence (mobile and area) and in the delay.) A countermove is defined as: an operation undertaken in reaction to or in anticipation of a move by the enemy (NATOTerm). They will often be conducted by forces designated as reserve forces. The decision on how and when a reserve is to be committed is one of the most important a commander must make. Though it may be possible to have reserves at a lower level, commanders at brigade level and above must designate forces for reinforcement, blocking and counter-attack.

5079. Countermoves may be assigned to a dedicated force as part of the defensive plan and its scheme of manoeuvre. In such cases, this force is considered tasked or dedicated and is not to be considered a reserve. Reserve forces may be tasked, as needed, to conduct countermoves and should prepare for (including rehearsals) for such tasks. There will seldom be reserves for all tasks and so any troops not actually in combat must be considered as a possible source of reserves. Details for each type of countermove are given below:

a. **Reinforcement.** Forces that are engaged in combat are provided with additional combat power under a command authority from the designated reserve unit or formation or from any uncommitted forces. The reinforcing forces are either assigned to the commander or employed in a defence area or battle position of their own between forces already engaged in combat. The higher commander who commits these forces specifies the command relationship of the reinforcements to the in-place force or how any change in responsibility for the area is to be transferred;

b. **Blocking.** Blocking is the deployment of forces to stop the attacking force that has broken through the forward positions. The timing of the deployment of a blocking force will depend on the way the enemy action develops, with particular regard to his strength, speed and direction of advance. This must be analysed and related to the location and size of the blocking force available, its reaction time and the time available to prepare blocking positions. Often, it is only by blocking that the enemy can be halted, in preparation for a counter-attack. If the enemy achieves

deep penetration, it is usually necessary for the forward elements still fighting to be withdrawn far enough to preserve the coherence of the defence, provided that they are not needed as a cornerstone for later counter-attacks. Airmobile forces are often particularly suited to this role allowing an armoured reserve to be retained for the counter-attack;

c. **Counter-Attack.** A counter-attack is defined as: *attack by a part or all of a defending force against an enemy attacking force, for such specific purposes as regaining ground lost or cutting off or destroying enemy advance units, and with the general objective of denying to the enemy the attainment of his purpose in attacking. In sustained defensive operations, it is undertaken to restore the battle position and is directed at limited objectives* (NATOTerm). The counter-attack exploits opportunities to strike the enemy at a decisive time and place in order to prevent further penetration or to locally defeat him. The counter-attack will be a key element of any defence. The following should be noted:

(1) Counter-attacks will be part of both types of defence: mobile defence and area defence. Counter-attacks will combine movement and fire power, both direct and indirect;

(2) A counter-attack task may be assigned to a force (thus that force is considered committed to that task alone) or it may be one possible task for a reserve force;

(3) Counter-attacks require detailed planning, close coordination, rehearsals and often will require a pre-determined decision point and set of conditions on which the counter-attack will be ordered;

(4) The opportunity to launch a counter-attack will be fleeting and therefore a commander and his forces must be mentally and hysically prepared for the task. Its planning is a basic and essential part of the defence and it must be updated as the situation develops;

(5) Possible options in a counter-attack could include the cutting off or destruction of enemy units, recovery of lost ground, or any other action that seeks to restore a situation. Once the commander has decided that a counter-attack can be mounted, he or she will launch it with the full force of all available resources necessary to ensure success;

(6) A counter-attack by fire is a counter-attack that is conducted in the form of an attack by fire, that is an offensive activity against a penetrating enemy force using a combination of direct and indirect fire, but without closing with the enemy force. The advantage here is that the counter-attack can be conducted from the friendly force side of obstacles. However, such a plan must ensure sufficient direct and indirect fire resources as committed to the task in order to create the desired effect on the enemy force (destruction or neutralisation).

d. **Spoiling Attack.** A spoiling attack is defined as: *a tactical manoeuvre*

employed to impair seriously a hostile attack while the enemy is in the process of forming up or assembling for an attack (NATOTerm). A spoiling attack differs from a counter-attack in that the attack occurs while the enemy is approaching or in his attack position, and **before he crosses his line of departure**. Ideally, the commander will prevent the enemy from obtaining an unacceptable level of combat power at the FEBA by a systematic and sustained attack on enemy follow-on forces. Enemy echelons not yet in contact and uncommitted reserves will be monitored throughout the commander's area of interest and engaged throughout the depth of his area of influence. In doing so, the commander aims not only to destroy and delay the enemy force, but to disrupt the enemy commander's plan and seize the initiative. A force, including a reserve, may be employed in carrying out a spoiling attack with the intention of preventing or delaying enemy attacks. CAS and other fires should support it. Spoiling attacks are normally launched against enemy forces that are forming or assembling for an attack. Spoiling attacks are usually conducted against opportunity targets with the objective of destroying enemy personnel and equipment, not to secure terrain. The following basic considerations affect the use of the spoiling attack:

(1) The commander should designate the size of the force to be employed and the acceptable risks;

(2) Spoiling attacks should not be conducted if the loss or destruction of the force jeopardises the ability of the reserve to accomplish its primary mission;

(3) Mobility of the force available for the spoiling attack should be equal to or exceed that of the enemy force;

(4) Deep operations may be necessary to ensure the success of the spoiling attack.

Maintenance of Cohesion in the Defence

5080. The importance of maintaining a cohesive, integrated defence, whilst under pressure of enemy offensive activities cannot be overstated. If the defence is to remain viable, the commander must be prepared to adjust the layout to meet changes in the threat in order to maintain cohesion. The following points should be noted:

a. Gaps may be accepted between positions, but they must not be left where the probable main enemy thrust is expected. They must be kept under surveillance, covered by fire or, where possible, blocked by barriers. The responsibility for this must be clearly defined. Forces should be identified to deal with any enemy penetration of gaps;

b. If it becomes apparent in the course of the battle that the cohesion of the defence cannot be maintained, the next higher commander may assign additional reinforcing, blocking or counter-attack forces from his own resources;

c. Any decision to withdraw forces must take into account the situation prevailing in adjacent defence areas. A new FEBA may only be

determined by the Commander who has ordered the defence.

Reorganisation in the Defence

5081. Whenever necessary, even during short intervals in combat, formation and units must be reorganized, re-supplied, and brought up to strength. Work must be carried out to repair any damage to defence positions, barriers and movement/supply routes. Once the enemy attack has been defeated, every opportunity should be taken to restore the situation in conjunction with flanking formations.

Employment of Reserves in the Defence

5082. **General**. Commanders must earmark mobile forces as reserves for offensive tasks, which are an integral part of the defence concept. Once a reserve force is committed, it must be re-constituted from other forces not in contact. The movement of reserves will be a priority target for the enemy and thus protection will be vital. Where the enemy from the air is particularly high, there will be a requirement for air defence assets to be assigned to the security of reserves.

5083. **Purpose of Reserves**. The primary purpose of a reserve is to preserve the commander's freedom of action. The reserve is an uncommitted force, at least initially. It may have a series of contingencies, although commanders will not commit their reserve until they has a reasonable understandingof the enemy intentions. If ommanders must commit their reserve in order to counter an unexpected enemy action, then they must inform their superior commander who must thanre-consider the employment of his reserve and the impact this will have on his superior commander's intent. Reserves are commonly used for:

a. Reinforcement;

b. Blocking;

c. Counter-attack;

d. Spoiling attacks.

5084. Reserves in the Mobile Defence. If commanders decide to conduct a mobile defence they will still need to designate a reserve. It may be called upon to carry out any of the above tasks in order to help the fixing forces shape the battlefield. Attack helicopters may be ideal for this role. The striking force is then committed to strike a decisive blow**.**

5085. **Commitment of the Reserve.** The decision on how and when a reserve is to be committed is one of the most important a commander must make. Reserves should be located where they are best able to react when they are required. Routes may need to be planned and prepared to cover likely deployment options. The commander will designate his decision criteria to assure the timely commitment of his reserves. These will need to be updated as the battle progresses and the enemy's intentions become more apparent. When it is committed, the reserve action maywell become the formation main effort. The success of the reserve action depends on its timely commitment, mass, surprise, speed and boldness.

Forces and Tasks in the Defence

5086. **General.** The concept of the defence to be adopted will be influenced to a great extent by the type of combat forces, armoured or non-armoured, available. The number and type of forces to be used may in themselves be further dictated by the enemy, the terrain andthe weather. Time may also be a major factor as non-armoured forces usually require more time than armoured forces to prepare defensive positions and, unless they are airmobile,more time to move between them.

Heavy Forces

5087. Where the majority of the forces available are armoured, the defence can be conducted with greater flexibility and full use can be made of mobility. Operations will include defence from selected positions, delaying actions and counter-attacks, all of which can be conducted in defensive sectors of greater depth and width than in a defence with non-armoured forces. Armoured combat troops have a high degree of protection from enemy fire, and consequently are capable of going into action rapidly and effectively even in a CBRN environment. This makes them highly suitable for use as reserves.

5088. Heavy forces use defilade positions to strike the enemy in the flank, forcing him to canalize so that he may be destroyed by the full weight of the firepower of the defence. In addition, armoured troops can manoeuvre to delay the advance of strong enemy forces and then immediately change over from a mobile to a more static form of action or to conduct offensive action. Due to their importance in defence, armoured combat forces will always be a primary target for enemy air attacks. Skilful use of cover, concealment, dispersion and local air support can considerably reduce the effect of this threat and, wherever possible, air defence forces should be assigned to cover operations by armoured units.

Light Forces

5089. Light forces forces are capable of staging an effective defence only from prepared positions, and will, therefore, be employed primarily in a more static role. Their defence positions should make the best use of barriers and be located where the terrain offers scope to employ the fire power and the

full range of their anti-armour weapons. They are, therefore, particularly suitable for use in close country. The positions selected should be covered from observed fire for as long as possible, thus enabling them to retain their effectiveness. In most cases, they must be well supported by armoured and combat support resources.

Armed Aviation

5090. Air manoeuvre in defensive operations is very similar in character to air manoeuvre in offensive operations. Helicopters have, however, an important role in defensive operations by causing early attrition of the enemy in the deep battle and by disrupting, delaying and shaping the enemy for the close battle. Helicopters can be effectively employed where a commander does not wish to irrevocably commit ground forces; forward of a reserved demolition or obstacle for example.

5091. Armed aviation can be effective in closing gaps in a defence plan possibly in conjunction with pre-planned joint fires prior to relief by ground forces. Helicopters are also able to counter enemy activity in the rear area and, in particular, airborne or airmobile forces. Some helicopters may be equipped for air to air combat. Provided weather conditions(e.g., visibility) allow, their mobility, firepower and independence from the ground willmake them a useful means for:

a. Operations against enemy penetration;

b. Containment of enemy attacks;

c. Support of counter attacks;

d. Support of airmobile operations.

Artillery

5092. The artillery commander prepares and executes the fire plan in accordance with the mission and with his commander's concept of operations, coordinating artillery fire with the operations of combat troops, helicopters, air support and with the barrier plan.

5093. In view of its long ranges and the high flexibility of its fire, artillery is a powerful weapon to assist in neutralizing an enemy attack. In order to be fully effective, however, it must have the link to sensors that will acquire targets in depth IOT engage the following targets:

a. Artillery systems;

b. Command posts (brigade and higher);

c. Reconnaissance positions/systems (e.g. radar);

d. EW-systems;

e. Forward arming and refueling points ;

f. Logistic support elements.

5094. In defence, the tasks of artillery are:

a. During all phases of the defence give fire support to troops in contact;

b. Attack enemy forces in depth before they can be committed to the main battle;

c. To coordinate fire support to maximise combat power. Fire support will also be coordinated with information activities;

d. More specific tasks include:

(1) Support the operations and withdrawal of the covering force;

(2) Disruption of enemy preparations for attack;

(3) Separation of attacking enemy tanks from dismounted infantry;

(4) Attacking enemy artillery and forward air defence elements;

(5) Covering barriers, gaps and open areas;

(6) Neutralizing or isolating enemy forces that have penetrated the defence area and impeding the movement of enemy reserves;

(7) Supporting counter-attacking forces;

(8) Assisting in battlefield surveillance and target acquisition;

(9) As a last resort, defending own gun positions by direct fire;

(10) The use of scatterable mines (in accordance with the Geneva Conventions and-when applicable-the Ottawa Treaty and Protocol II of the CCW) to block enemy approach routes.

Air Support in the Defence

5095. **Air ISTAR Operations**. Air reconnaissance is extremely important in all phases of the defence, particularly during the early stages, to help determine the strength and direction of the enemy advance.

5096. **Counter Air Operations**. The purpose of counter-air operations is to achieve a desired or necessary level of control of the air, through the destruction, degradation or disruption of enemy aircraft and missiles, in order to allow all friendly forces greater freedom of action, whilst minimizing their vulnerability to detection and attack. Counter-air operations include all actions, taken by any component, to gain and maintain control of the air. Ground forces may aid these operations by army organic air defence or by suppressing enemy forward air defences.

5097. **Close Air Support**. Where air interdiction will engage enemy forces in depth, CAS will be vital to a defending force for immediate threats. It is more economical and effective to locate and attack enemy forces while they are concentrated in assembly areas by, preparing for an attack or advancing to the attack position through interdiction, than when they are deployed in the

attack. However, CAS, if properly planned, allows the commander to concentrate fire rapidly on targets before and during their assault. As much pre-planning as possible should occur in order that commanders may determine and request the required level of support for CAS.

Support Helicopters in the Defence

5098. In defence recce, utility and transport helicopters can support ground force operations through their employment in:

a. Airmobile operations;

b. Command and control tasks;

c. Reconnaissance and target acquisition missions;

d. Logistic support including casualty evacuation.

Air Defence in the Defence

5099. Priorities for the allocation of air defence artillery resources will be based on the commander's estimate of the situation. In addition to other defensive counter-air assets, air defence artillery will be required to protect important areas and points. It is normally used to coverthe following:

a. Troops in forward areas;

b. C2 facilities;

c. Supply facilities;

d. Critical assets and vital points;

e. Airfields;

f. Reserve forces;

g. Demolitions.

Engineers in the Defence

5100. There will seldom, if ever, be sufficient engineer resources to meet all the requirements of a defence plan. The commander must therefore establish priorities, in accordance with the determination of his main effort and apply his limited resources as necessary. Engineers will be assigned a wide range of tasks:

a. **Counter-mobility Tasks.** Counter-mobility tasks serve to disrupt, turn, fix or block enemy forces. They will be carried out in conjunction with combat forces and coordinated with direct and indirect fire weapons, to deny the enemy the mobility he requires, and to cause casualties to his attacking forces. Counter-mobility measures must be covered by fire and closely coordinated with fire support assets. Counter-mobility tasks include:

(1) **Barriers**. The maximum effect is obtained from barriers when as many minefields and other obstacles as possible are employed in combination, and when they are kept under surveillance and covered by fire. Barriers are likely to include the use of natural and man-made obstacles; they must be coordinated with host nation advisors when appropriate and comply with Host Nation Agreements. The barrier plan is part of the overall defence plan that will require continuous adjustment as barriers are improved and supplemented as time permits and the battle proceeds. Barrier restricted areas may be declared in order to retain the required freedom of movement. The restriction may involve time, location or type of obstacle;

(2) **Demolitions**. The system for the control of demolitions must be conducted in accordance with agreed standards and procedures. The number of reserved demolitions must be kept to a minimum, as they tie down large numbers of combat troops as demolition guards and engineers in firing parties.

b. **Survivability Tasks.** The avoidance of detection and destruction will require frequent movement and rapid terrain preparation (includes digging and use of cover, concealment and camouflage to enhance

survivability). Survivability can be enhanced by the use of concealment, deception, dispersion and fortification. Engineer protection or survivability tasks will include assistance to other arms in:

(1) **Field Fortifications.** Engineer work in this area includes the use of equipment to assist in the preparation and construction of such fortifications as trenches, command post shelters, artillery fire positions and anti-tank weapon and armoured combat vehicle positions. Additionally, fields of fire can be cleared for all weapon systems. Strongpoints are heavily fortified positions which cannot be quickly overrun or easily bypassed by enemy forces;

(2) **Protection of Combat Supplies.** Combat supplies should be protected in particular against blast, shrapnel, incendiaries and CBRN contamination. By giving advice to the logistic management on the selection of the most suitable storage sites, the requirements for engineer support can be considerably reduced;

(3) **Camouflage, Concealment and Deception.** Major positions, facilities and operational sites may require special camouflage stores and measures that could be undertaken by engineers. Deception measures often include the use of camouflage and special engineer deception measures can include construction of dummy positions and decoys that must be carefully planned and coordinated within the framework of the tactical plan and real positions.

c. **Mobility Tasks**. During preparations for defensiv activities, engineers will reconnoitre, improve and open routes for use during battle, in preparation for withdrawal of covering forces, main body withdrawal and for the use of reserve forces and counter-attacks. During the main defensive battle itself, mobility tasks include:

(1) **Routes.** The maintenance and improvement of routes will be a major engineer task as the defensive position is subjected to fire from enemy artillery and air. This may necessitate the deployment of assault bridging, track-way and engineer heavy equipment well forward;

(2) **Minefield Gaps and Lanes.** Careful coordination will be necessary to ensure that the required lanes or gaps are left in minefields for the redeployment of troops;

(3) Support to Countermoves. Close engineer support will be required in support of offensive operations to overcome obstacles produced by the enemy;

(4) **Counter Attacks.** Gaps must have been left in major obstacles for the passage of counter-attack forces.

Electronic Warfare in the Defence

5101. EW has the following functions in support of defensive tactical activities:

a. Its primary function will be to continue gathering information on the

enemy and to update information data bases. EW resources will thus concentrate on the provision of vital information on the enemy's:

(1) Intentions;

(2) Grouping, location and axes of advance of: lead elements, main body, supporting artillery and engineer units and forces in depth;

(3) CBRN delivery means;

(4) Air defence systems.

b. As the enemy closes to the main defence position, jamming resources will be concentrated on the neutralization of enemy fire control, target acquisition and intelligence gathering systems, while information gathering resources continue to provide intelligence and steerage for own jamming systems;

c. EW resources will also attempt to locate enemy jamming assets so they may be eliminated by physical destruction.

Control Measures

5102. In planning the defensive operations, commanders should reconnoitre the area of operations or review the terrain analysis before they determine their concept of operations and plans the layout. Furthermore, they should maintain personal contact with his subordinates. In times of stress, a visit or a person-to-person conversation will do much to instil confidence and to impress the commander’s personality upon his command.

5103. Close liaison and good communications are prerequisites to a successful defence. The following should be noted:

a. Coordination points will be designated and liaison established at key levels;

b. In coalition operations, it is particularly important that commanders of temporarily assigned units make personal contact with their superior commander as soon as the situation permits. Higher echelons must be prepared to provide communications detachments to subordinate HQs from other nations in order to provide a secure communications link;

c. Before contact is made with the enemy, electronic emissions must be kept to a minimum. Forces not in contact with the enemy should be on radio silence. Nevertheless, alternate communications must be maintained at all levels;

d. In situations in which there is an enemy electronic warfare capability, cable and radio relay communications are a vital means of communication. After enemy contact and the relaxation of radio silence, radio communication will become significant, but traffic should still be kept to a minimum.

5104. The following control measures may be employed in the defence:

a. Boundaries and control lines such as the handover line and phase lines;

b. Designation of key terrain and vital ground;

c. Fire support coordination measures;

d. Airspace control measures;

e. Coordination points and check points;

f. Barrier areas and barrier restricted areas;

g. Battle positions, blocking positions and assembly areas;

h. Assembly areas of reserves;

i. Engagement zones;

j. Controlled routes and reserved demolitions.

5105. The operational plan must specify which terrain sectors must be held, where areas are merely to be screened or kept under surveillance, or where ground is to be abandoned and under what circumstances.

5106. The defence plan must be carefully conceived to ensure that the enemy attack can be halted and that an opportunity be found to seize the initiative and undertake offensive operations. The importance of cohesion to the overall effectiveness of the defence is particularly significant if the defence is to remain viable. The commander must be prepared to adjust the layout the

manoeuvre plan. A mission to mount a defence is generally of an indefinite duration. It may however be limited to a certain period of time or only remain effective until a certain situation changes. Orders to discontinue the defence or to abandon a defence area can only be given by the commander who orders the defensive mission.

Combat Service Support

General

5107. The CSS plan must be flexible. Particular points of note are:

a. In the defence, it should be possible to preposition stocks and maintenance resources and to establish medical facilities beforehand, and it is from these resources that troops may be supported in the first days of combat. In this way, provision is made for supplies to be available in the event of a surprise enemy attack. A well-established re-supply chain is part of the preparation for the defence. The constant flow of supplies on probable long Lines of Communications must be ensured by sufficient transportation capabilities and safeguarded against any threat in the rear;

b. CSS facilities are usually further to the rear than in offensive operations, both to avoid interfering with tactical operations and to obtain a degree of protection, although delivery should be as far forward as possible;

c. Consideration must be given to the location and security of service support areas and traffic control within these areas;

d. Planning must take into account the requirements of a transition to the offence. Mobility and flexibility in CSS operations must be maintained to support subsequent counterattack and other offensive activities.

Specific Considerations for CSS in the Defence

5108. Specific consideration should be given to the following points:

a. Rear area security and protection;

b. The high consumption of ammunition, particularly artillery rounds, may necessitate special delivery programmes. Bulk ammunition should be delivered as far forward as possible;

c. Fuel should be transported, as far as practicable, by pipeline, rail, road tanker or by inland waterways;

d. Repair should be conducted within defensive positions if possible, in order to minimise movement;

e. Medical and surgical timelines are the primary driver for the layout of medical support. Medical facilities should not, however, be located near likely targets (e.g., other logistics installations) in order to avoid collateral damage to those medical facilities;

f. Coordination of CSS in multinational operations;

g. The location of supplies should emphasise dispersion, good access to supply routes, stock levels and should be conducive to resupply defensive operations;

h. Priority of supplies assists in allocating scarce transportation assets.

SECTION V - PLANNING AND EXECUTION OF THE DELAY

Purpose and Description

5109. A delaying activity is: *an operation in which a force under pressure trades space for time by slowing down the enemy's momentum and inflicting maximum damage without, in principle, becoming decisively engaged* (NATOTerm). It is usually conducted in advance of a main defensive position, in order to give the forces the needed time to prepare the position, mass forces and to attrite the advancing enemy forces. It is often the task for a covering force.

5110. The delaying force commander is normally given a mission of primarily imposing a stated amount of delay upon the enemy and/or a specific amount of attrition upon the enemy. He or she may also be ordered to preserve a specific portion of his own combat power. The delay will often end with a breaking of contact, a battle handover to an in-place, defending force and a rearward passage of lines.

5111. The delay is likely to be carried out in less than ideal conditions. The air situation may well be unfavourable and the initiative will tend to be with the enemy. Nevertheless, in order to enhance the chances of success, every opportunity should be taken to initiate aggressive action, to seize the initiative from the enemy and to force him to adopt a defensive posture. This type of activity is arguably the most difficult to conduct and needs to be thoroughly understood by all involved.

5112. The delay can be conducted independently or within other operations, principally as a prelude to a defensive battle. Thus it is often conducted by a covering force. It is also possible that enabling activities will be involved, the most likely being a withdrawal and a rearward passage of lines. It is also conceivable that other enabling activities, such as a meeting engagement, could occur.

5113. A delaying activity is likely to be conducted in one of the following circumstances:

a. As a covering force for defending or withdrawing main bodies;

b. The advance guard or covering forces when encountering superior forces;

c. An economy of force operation conducted to hold an enemy attack on a less critical avenue of approach;

d. A deception measure to set up a counter-attack.

Principles

5114. The conduct of the delay is akin to that of the defence and therefore, they share many of the same principles. In a delay, a commander attempts to inflict heavy losses on the enemy, trading space for time, while preserving the combat power of his own forces. No decision is sought, as the commander is attempting to gain time. In doing so, he must always determine whether the time to be gained justifies the reduction of his combat power. In planning and conducting the delay, the following principles deserve special consideration:

a. **Intelligence.** A permanent flow of accurate intelligence will be vital to delaying operations. Timely and sound information from intelligence means at all levels of command will be needed throughout the delaying activity on enemy intentions, capabilities and weaknesses;

b. **Offensive Action.** In order to force the enemy to deploy, to delay him and to attrite him, offensive action must be taken. The delaying force must take every opportunity to initiate aggressive action. Attacks should be undertaken whenever losses or damage can be inflicted on the enemy by the delaying force with low risk. It will be required not only to force the enemy to deploy, but likely will be required to disengage with the enemy and to cover the withdrawal to subsequent battle positions. The delaying force should create and seize opportunities for offensive action. Enemy forces that overreach themselves or expose a flank are particularly vulnerable. Limited attacks are undertaken when losses or damage can be inflicted on the enemy with low risk. When offensive actions are planned the commander must think ahead and specify what the forces have to do after having achieved the purpose.

c. **Security and Protection.** Security and protection are vital to preserve the force to allow it to meet its task. The force must avoid being surprised and becoming decisively engaged. This involves not only the maximum use of concealment and camouflage, deception, communications security, electronic warfare and all counter-

intelligence measures but also the protection of critical points required for movements at natural defiles and bridges. The acceptance of gaps is inherent in delaying operations; as a rule formations must provide flank security or protection for themselves. The commander must preserve his force throughout the delay, in order to firstly, be capable of causing the required attrition and delay, and secondly retain sufficient combat power to fulfil subsequent tasks following the force's handover and withdrawal. Thus security of his force will be a constant concern and measures and precautions must be constantly taken to ensure that the force can break contact and avoid envelopment by the advancing enemy;

d. **Manoeuvre.** Movement in combination with long-range fire ensures that the enemy can be worn down without close contact. A delaying force uses manoeuvre so that maximum fire can be applied at long range to surprise and confuse the enemy and to make him pause and deploy. Such fire imposes caution and causes casualties without revealing the disposition of the delaying forces. A delaying force also uses manoeuvre to disengage and move to new positions when the enemy concentrates superior combat power;

e. **Balance and Maintaining Freedom of Action.** The force must be organized so that it can deal with unexpected situations. This requires a judicious balance among those troops maintaining surveillance, conducting reconnaissance, engaging and delaying the enemy, withdrawing to new delay positions and acting as reserves;

f. **Maintenance of Contact.** A delaying force must maintain contact with the enemy to avoid surprise, estimate his rate of advance and determine his main point of effort. This can be done by reconnaissance forces or by target acquisition means giving current information feed, such as unmanned aerial vehicles;

g. **Use of Terrain.** A delaying force must use the terrain to enhance their engagement, add to their security and cause the enemy to conduct time-consuming and costly operations in order to advance. The terrain selected should have natural or easily improved obstacles that can be used to canalize the enemy or slow him down. It should also offer good observation and fields of fire and allow easy disengagement;

h. **Time and Space.** Commanders should know either the minimum length of time that they must delay, based on the requirement of friendly forces to prepare positions, the percentage of enemy forces that must be destroyed, or the percentage of his force that they must preserve, based on his subsequent tasks. The area allocated must have sufficient depth to allow for the conduct of delaying operations, otherwise the duration of the delay must be shortened, or there must be a compensating increase in the strength of the force or an acceptance of high losses. A lack of sufficient manoeuvre space may cause the delaying force to become decisively engaged;

i. **Deception.** Deception is necessary to reduce the inherent vulnerability of a unit during movement to the rear. Deception should be used to help

maintain secrecy during the movement and to aid in achieving surprise;

j. **Electronic Warfare.** The delaying force should employ EW resources to disrupt and confuse the advancing enemy, using jamming and deception against reconnaissance elements, command nets and fire control nets. They may greatly assist in disengagement, counter-attacks and relief of forces. EW resources will continue to provide information on the enemy.

Concept of Operations for the Delay

5115. The delay does not fit neatly into a series of stages. Rather it comprises a series of coordinated offensive and defensive actions, each being broken off when the enemy presses too hard and close to the point where the delaying forces are at risk of being decisively engaged. The action is fought by forces manoeuvring to engage the enemy from previously selected positions in depth and then disengaging and moving to the next position before the enemy can concentrate sufficient combat power to overrun or bypass friendly forces. High tempo is particularly significant in delaying actions. The delaying action ends with the final disengagement and breaking of contact by the delaying force at the handover line. An in-place force may have to assist in achieving disengagement.

5116. In a delaying operation, commanders face several conflicting requirements: to inflict heavy losses on the enemy, but preserve their own combat power; gain time but avoid decisive engagement; balance time gained against their own reduction in combat power. To make these decisions, they must be told either the minimum length of time that they must delay the enemy or the percentage of their force that they must preserve based on their subsequent tasks.

5117. A delay is conducted by a combination of defensive and offensive action. Initially, a commander establishes contact with the enemy across the front using reconnaissance elements. At the same time, he or she prepares a series of delay positions in depth to the extent that time permits. Depending on the mission, forces occupying the delaying positions should be sufficiently strong in combat power to mislead the enemy into believing that he has encountered the battle positions of a main defence area and must be sufficiently strong to cause the desired delay. In the selection of delaying positions and the organisation ofthe delaying force, the commander will consider creating opportunities for offensive action.

5118. The delay is conducted through a series of successive battle positions, sited to be mutually supporting. As the enemy pushes the reconnaissance elements back, he is engaged with maximum fire at long range from elements of the delaying force that manoeuvre in the first line of delay positions. This fire is applied to surprise and confuse the enemy, to make him pause and deploy, to impose caution and cause casualties, and to compel him to make time-consuming and costly preparations for an attack. While the enemy is engaged at long range, other elements of the delaying force may conduct countermoves, especially against forces that have overreached themselves or exposed a flank. Limited attacks are undertaken when losses can be inflicted on the enemy at low risk. If a temporary defence by a covering force (during the delay) promises to be successful beyond the anticipated duration, the forces may be ordered to continue to hold their position for as long as the mission, the commander's intent, or the coherence of operations permits.

5119. When a decisive engagement is imminent, the commander manoeuvres to disengageor to fight his way back to the next line of delay positions. Contact is reassumed by the reconnaissance elements, which in the meantime have been repositioned for the task, or is maintained by the forces fighting their way back. Contact must be maintained in order toavoid surprise, to estimate the enemy's rate of advance and to determine his main effort. Crossing sites, particularly bridges, and other critical points along routes or axis required for rearward movement should be protected.

5120. The same general sequence of activity is repeated until the mission is accomplished. At the handover line, the delaying force attempts to break contact and the force in place assumes responsibility for dealing with the enemy. The in-place force must site itself andtask forces to assist with the delaying force's breaking of contact.

Layout of the Area of Operations

5121. In the delay, the delineation of the terrain or area of operations is similar to that of the defence. The difference is that the area is termed the "delay zone" or "covering force area", rather than the defence area. It will likely have a forward line for initial deployment and will have boundaries at the sides. It will likely have phase lines for tactical reference nd command and control. Additionally, the rear boundary is defined by a handover line where responsibility for the enemy is passed to another force. Unit and formation frontages will tend to be larger than in the defence. Commanders of delaying forces have to decide which parts of the assigned Area of Operations they will use, which parts they may abandon earlier than others, and which ones need only be monitored.

5122. Flank boundaries between elements of the delaying force must be clearly delineated, but elements of the force must be prepared to give mutual support across boundaries. The delay and the terrain over which it will occur will be broken into a number of battlepositions from which the engagements will occur. The battle positions will be manned on order and will act as the key control measure for the conduct. They must be mutually supporting. Ideally, commanders will have time to reconnoitre the battle positions prior and to plan each engagement and disengagement in detail.

5123. A delaying force will not only make use of the depth of the area assigned but it will also attack the enemy in his depth. If there is no opportunity to attack the enemy's flank or rear, it may be sufficient to position combat troops so that they can engage the enemy along his most likely approaches. Gaps must be kept under surveillance and provision must be made for quick reaction, should the enemy decide to utilize them for his advance.

Planning and Preparation

5124. **Planning**. Before ommanders can make his estimate of the situation for a delay they must be very clear of the intention of their superior commander

and what he or she wishes to achieve by deploying the delaying force. Once this is understood they will make his estimate of the situation, develop his concept of operations and prepare his plan to cover the entire action from initial deployment to its termination. It is only possible for the commander to draw up a rough operational plan as the enemy, who will likely be superior in numbers, will repeatedly force the commander to make new decisions in the course of the delay battle.

5125. Commander must take into account that they may not always have a clear picture of the enemy and that the situation may change frequently and rapidly. They must therefore ensure that they have a continuous flow of sound and timely intelligence, a well-organised reconnaissance, uninterrupted communications and a strong reserve. By these means, commanders can ensure that they maintain their freedom of action. They must utilize the forces and means available to them in such a way that the enemy is repeatedly faced with unexpected situations. This requires flexibility and agility as well as strong reliance on the subordinate commanders' capabilities to determine on the spot the most suitable action to be taken. Combat troops will normally conduct the delay by a combination of techniques, both offensive and defensive.

5126. The commander will employ a range tactics to impose delay upon the enemy and preserve his own forces, including the following:

a. To slow down the enemy's advance by inflicting casualties which reduce his offensive capability in order to gain time for subsequent operations;

b. To manoeuvre the enemy into areas where he is vulnerable to attacks/counter-attacks, thereby gaining the initiative;

c. To avoid combat under undesirable conditions;

d. To determine the enemy's main effort.

5127. The concept of operations must focus on control measures and the effects to be imposed upon the enemy, be it delay, attrition or both. The plan must include a clearly articulated intent, a detailed concept of operations, measures to be taken to cover gaps and flanks, and detailed control and co-ordination measures. While a main effort is designated it may change during the delay depending upon the enemy's intentions. The concept of operations and the plan will pay particular attention to:

a. **Tasks.** The allocation of tasks to the forces available. In the delay, tasks must reflect the integral firepower and mobility of the forces considered;

b. **Phasing.** The separation of the activity into phases, all parts of which must be completed before another phase can start, where this is necessary. Indiscriminate use of phasing can slow operations unnecessarily. Phasing may be determined by geographical conditions, timelines or events.

c. **Terrain.** The selection of battle positions from which to delay the enemy will be key to success. The terrain must be selected in order to maximise the long range fires and mobility of the delaying elements and to restrict the mobility of the enemy (natural choke points, defiles, etc). Selected terrain should also facilitate an easy break and withdrawal for the delaying forces. If the terrain is broken, it is frequently necessary to form several delaying units in order to fight largely on their own, due to the difficulty in providing mutual support. In such cases a delaying force may be weaker than one that would be employed in open terrain;

d. **Barriers.** Planning should exploit natural barriers and select best positions for artificial barriers that will achieve maximum benefit with the least amount of required work;

e. **Fire Support.** The use of long-range fire to inflict early casualties on the enemy and avoid decisive engagement;

f. **Covering of Gaps.** Gaps are a feature of operations. However, commanders must be aware of their existence and plan to ensure that they do not pose an unnecessary threat;

g. **Flank Security and Protection.** Flank security and protection will be a constant concern for delaying forces. The commander must try to select positions that offer natural flank protection or establish as a minimum flank security that will allow early enough notification to allow withdrawal. Flank protection may be essential in order to maintain the battle positions that will impose the required amount of delay upon the enemy;

h. **Deployment in Depth.** The force must also be deployed in depth to counter penetration between the forward units and to guard against airborne or helicopter borne assaults on defiles and reserved routes;

i. **Control of Fire and Movement.** Report and phase lines are used to control the movement of forces. Orders can be given to fill any gaps or to adjust the lines should there be a danger of a breakthrough.

j. **Coordination.** Careful coordination between adjacent units, including measures to avoid fratricide;

k. **Demolition Control.** The need to carry out demolitions early can hamper the deployment of friendly forces. It is, therefore, essential that the planning, particularly for preliminary demolitions, minefield gaps and reserved demolitions, is closely coordinated with movement and manoeuvre;

l. **Denial Measures.** The denial plan will be closely coordinated with host nation authorities;

m. **Surveillance.** The maintenance of surveillance coverage of the entire area of intelligence responsibility is normally a considerable undertaking that encompasses imagery, electronic warfare and all human collection resources. It requires careful planning and coordination;

n. **Combat Service Support.** The support of highly mobile operations conducted over considerable distances requires foresight and flexibility.

5128. The amount of delay to be ordered will depend upon the commander's estimate of the situation and the requirements for the main defensive position and overall objectives and aims. The duration of the delay to be obtained is then laid down in the mission.

5129. Additionally, or in place of a delay time, the mission may entail a certain percentage of destruction that must be imposed upon the enemy as part of the delay operation.

Execution

5130. **General.** A delaying force will not only make use of the depth of the area assigned but it will also attack the enemy in his depth. If there is no opportunity to attack the enemy's flank or rear, it may be sufficient to position available combat troops so that they can engage the enemy along his most likely approaches. Gaps must be kept under surveillance and provisions made for quick reaction should the enemy decide to utilize them for his advance.

5131. By these means, ommanders can ensure that they maintains their freedom of action. They must utilize the forces and means available to him in such a way that the enemy isrepeatedly faced with unexpected situations. This requires flexibility and agility as well as strong reliance on the subordinate commander's capabilities to determine on the spot the most suitable action to be taken.

5132. Combat troops will normally conduct the delay by a combination of techniques, offensive and defensive, such as temporary defence, vigorous counter thrusts and deliberate counterattacks.

Reconnaissance

5133. The delaying force requires timely and continuous information about the enemy. This necessitates the employment of reconnaissance elements that immediately establishes and maintains contact. These elements should be of sufficient strength that they cannoteasily be brushed aside by the enemy and that it can provide security through the conduct of counter-reconnaissance. At the start of hostilities, these forces may be the only elements on the ground that can provide accurate information to identify enemy activities. As thebattle develops, a part of the reconnaissance element may be used to provide security and protection of flanks and the gaps between the main elements of the delaying force.

Concept of the Delay

5134. The delay should be executed along the following lines:

a. At the earliest opportunity, the delaying force will engage the enemy, inflicting casualties by providing maximum fire in combination with mobile actions, including quick and limited counter-attacks against enemy troops who have overextended themselves or have exposed an open flank. Opportunities are most likely to occur when the enemy has just crossed an obstacle or is temporarily separated from his follow-up troops;

b. Every advantage offered by the terrain should be exploited. The rapid advance of the enemy, particularly along roads, should be impeded, causing him to bunch and offer himself as target. Every opportunity must be taken to surprise him and to ambush him, avoiding becoming decisively engaged, by timely manoeuvre;

c. Even if elements of the delaying force are in danger of being overrun, or seriously outflanked, they will not disengage unless ordered or unless it is in accordance with the commander’s intent. However, it is an important responsibility of the commander by timely disengagement, to prevent parts of his force being cut off and destroyed;

d. The fluid situation prevailing during delaying operations will necessitate constant and close coordination between adjacent units to ensure that:

(1) Positions and manoeuvre of own troops are known;

(2) Mutual support of fire is possible;

(3) Beginning and end of specific operations are known;

(4) Awareness of the situation and probable intention of the enemy are known.

Disengagement During the Delay

5135. Troops withdrawing from a position must attempt to break contact with the enemy. This can be achieved by withdrawing through a position occupied by another unit, or suddenly breaking off the engagement when the enemy is unable to follow up immediately. The important decision is to judge the correct moment when to withdraw from each position. Withdrawal must not be done too early as it would result in failure to achieve maximum delay; and not too late so that there would be a risk of unnecessary casualties or of being overrun. Counter-attacks may be necessary to achieve disengagement. To maintain the coherence of the defensive positions and operations, it may become necessary to withdraw forces even if the enemy does not seriously threaten a particular area of the overall defence.

Employment of Reserves

5136. Reserves are important for the maintenance of the cohesion and continuity of delaying operations particularly where the enemy has been able to outflank or to penetrate through gaps between delaying force elements. In order to

maintain flexibility over varying terrain, it will often be necessary to establish local reserves rather than relying on one concentrated reserve force. At a lower level, reserves will be minimal or simply consist of the employment of an element of the force that is not actively engaged. At higher echelons, forces may be specifically designated as reserves. Tasks for reserves may include:

a. **Blocking.** Containing the enemy in the area where insufficient forces have previously been deployed;

b. **Counter-attacks.** Normally, these will have limited objectives. It may be necessary to use reserves to counter-attack into gaps or in order to achieve disengagement of heavily committed forces;

c. **Covering actions.** Reserves may also be used in prepared positions to cover withdrawing forces in order to enable them to continue the engagement in more favourable terrain.

Breaking Contact During the Delay

5137. The final disengagement from the enemy will be a complete breaking of contact and will occur with the moving of the delaying force into an area where another force takes over responsibility. This is a critical operation, especially if the delaying force experiences difficulty in breaking clean from the enemy. The overall commander will specify a hand-over line between the delaying force and the in-place force assuming the battle. If the delay is being followed by a defence, elements from the defending force may have to be deployed to assist the delay force in breaking contact.

5138. The enemy should be given as little indication as possible of the intention to break contact. The move back into the main defence area must be planned and coordinated in detail as a rearward passage of lines.

5139. The withdrawing delay force must provide timely information on its planned withdrawal and on the battle situation to the force in the main defence area. Liaison elements will be detached to the in-place, defence force to identify withdrawing units as they approach and pass through.

Command and Control

5140. In spite of the adverse characteristics of a delaying operation, the frequent and fast manoeuvre of troops, the frequently changing types of combat, the air situation and at least initial freedom of action of the enemy the commander must focus on the superior commander's intent and planned end state. To this end, the following must be noted:

a. The commander must command his forces so as to maintain a coherent, cohesive operation. This will require continuous direction to restore critical situations and to try to gain the initiative. Good communications will be essential;

b. There is a requirement for centralized, coordinated planning but decentralized control of the execution;

c. Arrangements must be made by the formations in the rear for the control of the movement back from the handover line by the delaying elements.

Control Measures

5141. The following control measures may be employed in delay operations:

a. Boundaries and control lines such as handover lines and phase lines. Subordinate commanders may designate additional control measures for their areas of operation:

(1) Phase lines may be established in areas which enable the forces to maintain the coherence of the operation and simultaneously provide them a backing for a temporary defence. They should be easy to recognize on the ground, especially when visibility is limited.

(2) A phase line may be used to specify a time or set of conditions to be achieved in relation to the delay. It may also be used to coordinate air and fire support.

(3) When using the phase lines to control the delay, the commander must find the right balance between commitment and freedom of action.

b. Fire support coordination measures;

c. Forward Line of Own Troops;

d. Timings for critical phases or times by which to be clear of specific areas of lines;

e. Airspace control means;

f. Movement control measures such as routes and check points;

g. Barrier coordination measures;

h. Battle positions, blocking positions and assembly areas for reserves;

i. Objectives;

j. Liaison measures;

k. Denial measures and their arrangements for execution;

l. Passwords and recognition signals;

m. Checkpoints and traffic control;

n. Coordinating points (normally established at the point where a phase line intersects a boundary;

o. Arrangements for closing minefield gaps and executing demolitions;

p. The locations (crossing points) and means by which the handover line will be crossed as the covering/delaying force withdraws and hands over the battle to the main defence force. This should be conducted as a rearward passage of lines;

q. **Deployment of liaison officers**. A liaison officer will normally be deployed to the HQ of the in-place force (main defence force) and at the various crossing points on the handover line.

Forces and Tasks

5142. **General.** Given the nature of the delay, the forces best suited to delay operations, will be those that possess integral firepower, protection and mobility. In selecting and grouping the delay force, the balance between these characteristics will depend upon the type of enemy to be delayed and the terrain. It will likely require some sort of combined arms grouping with integral long range fire support and CSS assets.

5143. All commanders to the lowest level possible will benefit greatly from detailed reconnaissance of the route to be used and the assigned battle positions from which the delay will be imposed. Rehearsals will be essential as will close coordination, particularly forall arms groups not accustomed to working together.

Employment of Manoeuvre Forces

5144. **Armoured Forces**. Forces composed of tanks, armoured infantry and armouredreconnaissance elements are highly suitable for delaying operations in most types of terrain. Their firepower permits them to engage the enemy effectively at long ranges, their mobility permits them to move quickly between successive positions or to a flank, while the protection afforded by their vehicles facilitates disengagement. Similarly, their mobility, firepower and superior communications give them the capability of launching counter-attacks when an opportunity to do so has previously been created.

5145. **Light Armoured or Mechanised Forces**. Mechanised or light armoured forces will be suitable for delay operations, depending upon the enemy faced and the terrain. Their employment characteristics and concept of operations will be similar to the employment of armoured forces in the delay, however, they will likely hold their vehicles, depending upon the type of vehicle, to the rear of their battle positions in order that they do not lose them to enemy direct fire. They may be forced to engage for shorter periods of time in order to ensure a successful withdrawal from battle positions. They will likely require extensive barrier plans and close support from armed aviation.

5146. **Non-Armoured Forces.** Non-armoured combat forces only have a limited capability to carry out delaying operations except in broken, close or built-up terrain with extensive use of barriers. They will fight from a succession of suitably prepared defensive positions, in each case forcing the enemy to deploy for a coordinated attack before they withdraw to their next position. Their lack of protection will demand greater attention to the operations of

disengagement and movement between positions, which should be carried out under cover of fire support, using routes that are concealed from the enemy. Similarly, non-armoured troops are not particularly suitable for conducting a fighting withdrawal. However, such an activity is feasible against a dismounted enemy in close terrain, which offers cover for movement and is favourable for ambushes and raids. Non-armoured forces can also participate in stay-behind operations.

5147. **Airmobile Forces.** Airmobile forces can be employed in delaying operations although they face the same restrictions and problems as other non-armoured forces. They are capable, however, of rapid deployment and redeployment, permitting quick concentration of combat power at key locations. Similarly, they are capable of rapid dispersal to reduce vulnerability. They can also be used as a reserve force to permit the commander to commit a larger part of his other forces to the operation, as well as acting as flank protection. The selection and reconnaissance of landing and pick-up sites will be essential to their employment.

5148. **Airborne Forces.** Airborne forces have a more limited capability than airmobile forces in delaying operations because of their lack of mobility and firepower once on the ground and the need for assistance in extrication. They can, however, be employed in area interdiction operations with the aim of preventing or hindering enemy operations in a specific area. Terrain which is heavily wooded, hilly or dominated by a river or other obstacles, and which hinders the enemy's off-road mobility, is best suited to this type of operation.

5149. **Armed/Attack Aviation.** Air manoeuvre in delaying operations is very similar in character to air manoeuvre in offensive operations. Helicopters play an important role by disrupting the enemy's progress through the useof rolling ambushes that produce a fluid and mobile defence throughout the enemy's depth that will delay and shape the enemy for the close battle. Armoured attack helicopters can effectively support delaying ground forces by engaging enemy armour - preferably from the flanks or long range. They may be used to achieve rapid deployment of the anti-armour defence including deep attacks to cover the disengagement of combat forces and to achieve surprise. Helicopters can also be effectively employed where a commander does not wish to irrevocably commit ground forces to the delay, such as forward of a reserve demolition or obstacle.

Combat Support

5150. **Artillery**

a. Artillery can make a major contribution to delaying operations by striking the enemy with concentrated fire at maximum range. Its capability to defeat a wide variety of targets in a short time and to deliver scatterable minefields (in accordance with Geneva Conventions and-when applicable-the Ottawa Treaty and Protocol II of the CCW) should not only be used to inflict casualties and weaken the enemy's offensive capabilities but also to create situations which permit aggressive manoeuvre of combat forces. Interdiction fire against follow-on forces can restrict the immediate battle to the enemy's committed forces;

b. Artillery will be key to allowing delaying forces to break contact with the advancing enemy and to break clean at the handover line;

c. By providing immediate and accurate support, the artillery can halt the leading elements of an enemy attack and by delivering suppressive fire during the disengagement of friendly forces it can prevent the enemy from closing with the delaying force;

d. The artillery must be organized and positioned so that it can provide uninterrupted fire support throughout the delaying operation.

5151. **Air Support in the Delay**. Air operations contribute to overcoming the enemy's initial advantage in freedom of action in the following ways:

a. **ISTAR.** ISTAR operations contribute to identifying the enemy’s strength and disposition at an early stage, allowing the commander to concentrate his forces in favourable positions;

b. **Counter-Air Operations.** It may be necessary to gain local air superiority to enable delaying forces to move;

c. **Air Interdiction and Close Air Support.** Air Interdiction and CAS, particularly at defiles and crossings, can divert, disrupt, delay, or destroy enemy follow-on forces on their approach routes and thereby assist in gaining time to defeat the enemy's leading elements. Often it is only through the employment of aircraft that enemy penetration through an area or gaps can be delayed until ground forces can be moved to engage them. CAS in certain situations will make it possible

to create an additional concentration of fire. In this, as with all forms of tactical air support, a close cooperation with all airspace users must be assured. CAS will also assist in the breaking of contact as forces prepare to abandon a battle position;

d. **Aviation.** Armed or attack aviation can provide close support to ground manoeuvre forces and be key to the destruction of lead enemy armour and other forces. Reconnaissance, utility and transport helicopters can play an important part in delaying operations by:

(1) Providing command, control and communications facilities;

(2) Providing reconnaissance, surveillance and target acquisition;

(3) Moving demolition guards, firing parties and barrier munitions;

(4) Lifting non-mechanized infantry, particularly before the delaying activity and during their disengagement;

(5) Laying scatterable mines (as limited by the Geneva Conventions and -when applicable-the Ottawa Treaty and Protocol II of the CCW);

(6) Evacuating casualties;

(7) Moving supplies, spare parts and maintenance working parties.

5152. **Air Defence.** Delaying tactical activities are likely to be conducted in conditions of air threat. Good coordination and close liaison between manoeuvre and AD forces is the key for successful protection against attacks during delaying operations. Movement through choke points and the rearward passage of lines of the delaying force are critical.Detailed planning and coordination with the Air Defence Commander is required to ensure the timely provision of air defence for these actions. There are unlikely to be sufficient air defence resources available to provide adequate cover throughout the areaof operation. Priorities of tasks must, therefore, be established and redeployment planned to ensure effective air defence at critical times and points.

5153. Engineers

a. Engineers support delaying operations primarily by preparing barriers including minefields and demolitions. Situational minefields with a predetermined effective time in combination with anti-tank weapons contribute decisively to reducing the enemy's offensive potential. Difficult terrain may make it necessary to give some priority to improving and maintaining routes for the manoeuvre of the delaying force;

b. Engineers are employed on request of the combat forces. They should be given the maximum time to plan and accomplish their tasks;

c. The responsibility for barriers must be carefully laid down in orders in order to include the detailed arrangements for their security and closure. All delaying forces must know which gaps through barriers and crossing sites will be kept open for their use, and the commander responsible for the closure must be clearly designated;

d. Engineers will also be required to give advice and help in the preparation of defensive positions and in the clearance of fields of fire, particularly in built-up areas;

e. Armoured engineers should move with the troops closest to the enemy to undertake route denial, fire demolitions, and lay or scatter mines.

5154. **Electronic Warfare in the Delay.** The delaying force should employ electronic warfare (EW) resources to disrupt and confuse the advancing enemy; using jamming and deception against reconnaissance elements, command nets and fire control nets. These actions should be carried out in all phases of a delay and they may greatly assist in supporting disengagement, counter-attacks and relief of forces. EW resources will continue to provide information on the enemy.

Combat Service Support

5155. CSS considerations for delaying operations are similar to those for the defence and include the following:

a. Support elements and stocks echeloned rearward on successive positions; whenever possible, for the delay, stocks should be kept mobile in the assigned area of operations. Significant amounts of supplies should be dumped only to the rear boundary of the delay operation. If it is necessary to preposition dumps due to distances or resupply cycles, these stocks should be consumed during the delay in order to avoid large scale evacuation;

b. The evacuation of supplies and equipment that have been pre-positioned should be planned as early as possible; those which cannot be moved should be destroyed. Medical support must provide for the rapid evacuation of casualties to rear area medical facilities. Medical supplies and equipment, in accordance with the Geneva Conventions, must be marked as such and left in place if they cannot be evacuated;

c. Maintenance should be concentrated on the equipment required to conduct delaying operations and withdrawal. Unserviceable equipment which cannot be repaired immediately should be evacuated to rear areas. Recovery vehicles should be positioned at critical locations to keep routes open;

d. Transportation priority should be given to the movement of combat troops and their supplies, the movement of material used to impede the enemy, and the evacuation of casualties and repairable equipment;

e. A major consideration is to sequence and coordinate the movement of CSS to ensure that the delaying force has continuity of support. After crossing the handover line the delaying force will often need to be refurbished..

CHAPTER 6 - STABILITY ACTIVITIES

SECTION I – INTRODUCTION AND DESCRIPTION

6001. The fundamental premise underpinning the range of tactical activities is that military forces are likely to be engaged in tactical activities from across the spectrum of conflict, simultaneously: offensive; defensive; stability; and, enabling. Together, they constitute the range of tactical activities that will be conducted by military forces within a campaign. The balance between those tactical activities will reflect the type of campaign theme. The overall principles of joint and combined operations (outlined in AJP-01, Allied Joint Doctrine) are applicable to any operation within any campaign theme; however some of these principles may need special attention across the spectrum of conflict. Military forces must be prepared to switch rapidly between the tactical activities as the situation demands. However, in order to achieve long-term solutions to campaigns and conflicts, stability activities will be a necessary undertaking.

6002. Military stability activities can be described as activities that seek to stabilise the situation by setting the conditions that allow for reconstruction and development. These tactical activities will normally be carried out in close cooperation with other actors, because they are not exclusively tactical activities. They impose security and control over an area while employing military capabilities with the purpose to maintain, restore or create a situation in which the responsible administrative bodies can function correctly. Stability activities should establish and maintain the conditions for normal civic activity and responsible government and address the immediate needs of a civil civilian population where possible. It provides the security and control over areas in order to allow this development and the freedom to function for other elements of the inter-agency framework to bring lasting security, particularly for local governments and civilian populations. The security and control provide freedom of movement for a local populace so that normal civil activities such as local markets may take place.

6003. Many of the described tactical stability tasks, especially those belonging to the categories support to initial restoration of services and support to initial governance are tasks of another origin. Many of these tasks have a pure civilian or legal basis or deal with financial and infrastructural issues. Military units will, however, often be the first (and the only) to meet challenges with respect to these civil-support issues. This means that the process of solving problems in those areas has to be started by military commanders, their staffs and their units. This initiative will also contribute to the improvement of the security situation in the area and will enhance the feeling and the attitude of the local populace towards the NATO force.

6004. The purpose of stability activities is to create and sustain security and control, restore services (or support civilian agencies in doing so), and support civilian agencies to develop more effective and accountable organisations and mechanisms of government. Stability activities involve both coercive and cooperative actions. They may occur before, during, and after offensive and defensiv activities, or as the primary focus of an operation. Stability activities provide an environment in which the other instruments of Alliance strategy and non-NATO actors can operate, in cooperation with an indigenous lawful authority or government.

6005. Stability activities cannot be viewed as a special set of tactical activities that are considered to be separate from the other three types of tactical activities – offensive, defensive and enabling. They all relate to each other as they support their own and common objectives of the same campaign. For example, a campaign objective may be to remove insurgent threats from all local villages. This may require an offensive activity (an attack) in some areas where the enemy have strongpoints, but will also require stability activities (such as standing patrols) in the villages to keep the enemy out. Those villages may then need military assistance to restore essential public services and to mentor their local defence forces. So in short, stability activities are part of the overall campaign and the amount of time and resources they consume will depend upon the nature of the campaign at any given time. Some campaigns, such as a peace support or a short disaster relief operation, may focus mostly on stability activities.

6006. Many stability activities will require interaction with other agencies who, ideally, will eventually take the lead in many of these tactical activities: aid agencies will provide humanitarian aid; government agencies and international organisations will help with essential services; and, civilian police will assume security and control for the civilian populations. (See Chapter 1 under comprehensive approach for more details.)

6007. Regardless of the relationships established, some interaction will be required and military commanders may have to take the lead as some non-military agencies will be leery of military forces, or reluctant to interact with them. Commanders must understand though that some agencies will have their own plans and objectives and not be interested in close coordination with the military. In other cases, other agencies, particularly those of the host nation government, will, or at least should, seek close coordination with military forces in order to ensure that all actions are conducted in a complementary manner to achieve the objectives of the campaign, and in a manner that is acceptable to the indigenous civilian population.

Principles for Stability Activities

6008. Stability activities have a specific position and a specific purpose in any operation. Since this group of activities is probably the most influenced by external factors, some of the generic principles for joint and combined

6009. operations are of specific interest for stability activities. A detailed explanation of this specific interest can be found in the ATP-3.2.1.1, Stability activities.[20]

6010. In addition to these generic principles and their specific interest for stability activities some stability activities related imperatives and attributes have been developed and described in detail in ATP-3.2.1.1, Stability activities. These are:

a. Imperatives:

(1) Effective integration with other tactical activities;

(2) Effective coordination and integration of indigenous security infrastructure.

b. Attributes:

(1) Rules of engagement;

(2) Impartiality;

(3) Host nation responsibilities;

(4) Knowledge, understanding and respect for local culture.

SECTION II - TYPES OF STABILITY ACTIVITIES

6011. Stability activities consist of the following tactical activities:

a. **Security and Control.** The provision of general security and control allows the civilian populace and other elements of the inter-agency framework the freedom and safety to conduct normal civic activities and to build institutions that support a lasting stability. Security and control should be the first consideration following the completion of major offensive engagements, particularly in the populated areas;

b. **Support to Security Sector Reform (SSR).** A key aspect to the long term stability and development of a nation may be the reformation of the various elements of a nation's security sector. The military will have an initial key role in reforming/developing the nation's military capabilities. SSR includes a wide range of activities such as Security Force Assistance (SFA) to build the capabilities of local forces.[21] Unless very limited in scope, SSR will require an inter-agency approach with other government and international agencies dealing with judiciary and police forces and the re-integration of demobilized forces. SSR may include, particularly in its early stages, **demobilisation, disarmament and reintegration** (DDR) process for former fighting factions. (Reintegration refers to the return of former soldiers to civil society or a newly formed security force.) This involves the standing down of select

[20] Chapter 2 ATP-3.2.1.1, *Stability activities*

[21] Security Force Assistance (SFA) comprises all the activities that develop and improve or directly support the development of local forces. Local forces comprise indigenous, military security forces. SFA activities can be provided during any phase of an operation. It may be termed Security Force Capacity Building.

former combat forces and their reintegration to civil society or a newly structured military force. With respect to DDR, military forces will have a supporting role to play while other agencies will be best suited to lead in this area, in support of the indigenous government. DDR may well require special attention paid to the issue of the demobilisation and reintegration (to civil society) of child soldiers and other issues related to vulnerable civilian populations;

c. **Support to Initial Reconstruction and Restoration of Essential Services.** Ideally the reconstruction of essential services will fall to agencies other than the military. In the early stages of a campaign, the military may have to fill the void until the security situation improves and other agencies become capable of such operations. Additionally though, the military may wish to pursue some of these tasks, particularly on the tactical levels, in order to engender ongoing support from local populaces, that is, create effects on the moral plane. Civil-military cooperation (CIMIC) staff will play a major role in identifying and coordinating the tactical tasks for support to public services. Many of the tasks will be undertaken by military engineers but ideally will be transferred to other agencies best suited for support to the development of civil services;

d. **Support to Initial Governance Tasks.** The provision of governance to a nation in which an Alliance campaign is being conducted will ideally be done by agencies that specialise in such duties. In the early stages of a campaign, the military may have to fill the void until the security situation improves. This may see the military reconstructing schools and helping to establish local markets, for example. Such activities will not only assist an indigenous civilian population to return to a normal state of affairs, but it will help to engender support from local populaces, that is, create effects on the moral plane in pursuit of the operational objectives. Civil-military cooperation (CIMIC) staff will play a major role in supporting and coordinating the tactical tasks for support to the institution of basic governance. In many cases CIMIC staff will facilitate the cooperation with other, non-military agencies best suited to assist the development and maintenance of civil authority and effective governance.

6012. Stability activities and specific tasks are discussed in detail in ATP-3.2.1.1, Stability activities. In the case of support to the restoration of essential public services and support to civil governance, other agencies will be best suited to undertake these responsibilities. Military forces may have to take an early lead in certain situations, but should seek to pass these stability tasks to other agencies as they arrive in a theatre of operation. Coordination and

cooperation will still be required after non-military agencies assume these responsibilities. Some technical support may still be required and of course military forces may be required to provide a security framework for these agencies to work safely.

CHAPTER 7 - ENABLING ACTIVITIES

SECTION I - INTRODUCTION

7001. Enabling activities link and support the transition between different types of tactical activities, for example, between deliberate attacks or when transitioning from one defensive position to another. They may be conducted to make or break contact with the enemy or may be conducted out of contact. An enabling activity is never carried out in its own right. Its execution must lead to the active prosecution of another type of tactical activity. The successful and rapid execution of these tactical activities relies on such factors as devolution of decision, collocation of headquarters, liaison and a simple plan.

7002. The effective execution of enabling activities will help ensure the following:

a. The ability to make a transition between phases and tactical activities without a loss in tempo;

b. The forces taking over the battle having the most up to date information;

c. Fluid movement;

d. Fire control so as to use all weapons to further the aim and to avoid fratricide;

e. Quick regrouping.

7003. The following enabling activities are described in more detail:

a. Reconnaissance;

b. Security and protection (including freedom of movement);

c. Advance to contact;

d. Meeting engagement;

e. Link-up;

f. Withdrawal;

g. Retirement;

h. Relief of troops and relief of encircled forces;

i. March (including convoys);

j. Obstacle breaching and crossing.

7004. Enabling activities link and support the transition between different types of tactical activities, for example, between deliberate attacks or when transitioning from one defensive position to another. They may be conducted to make or break contact with the enemy or may be conducted out of

contact. An enabling activity is never carried out in its own right. Its execution must lead to the active prosecution of another type of tactical activity. The successful and rapid execution of these tactical activities relies on such factors as devolution of decision, collocation of headquarters, liaison and a simple plan.

7005. Enabling activities are diverse activities and thus have unique considerations depending upon their nature. Unlike the other types of tactical activities (offensive, defensive) they do not share a common set of considerations or planning factors. Their conduct will be guided but the circumstances present at the time and other operations to which they will lead. The control measures used in offensive and defensiv activities will apply to enabling activities, guided by the judgement of the commander.

SECTION II – RECONNAISSANCE

Purpose

7006. The purpose of reconnaissance activities is to obtain information about the enemy, other adversaries, terrain and environmental conditions or indigenous civilian population of a particular area. Gaining information and providing it to the relevant staff elements is a general task for all formations.

Types of Reconnaissance

7007. Types of reconnaissance include the following:

a. **Area reconnaissance.** Area reconnaissance is the reconnaissance carried out over a specified area. It is normally conducted by a mounted force;

b. **Point reconnaissance.** Point reconnaissance is reconnaissance conducted on a specific point. It may be conducted to ascertain enemy use of a particular feature or to ascertain the conditions or situation at a particular point, such as the characteristics of a geographic feature (such as an engineer reconnaissance detachment inspecting a bridge or obstacle crossing location);

c. **Route reconnaissance.** Route reconnaissance is the reconnaissance conducted over a specified route to support future operations. Specific information requirements will be issued with the task, such as the route's use by the enemy, or its suitability of the route to support future operations or tactical or administrative movement (for example, the route's ability allow movement of heavy vehicles or large loads).

d. **Special reconnaissance.** Special reconnaissance tasks are undertaken by special operations forces for they occur in particularly difficult or sensitive circumstances that require specific specialist skills.

Planning and Execution

7008. Tasking of reconnaissance forces must be done with care. They normally execute their missions while planning is ongoing for other the forthcoming mission and are then re-tasked to support follow-on missions with little or no opportunity for recovery.

7009. The employment of reconnaissance forces must be closely tied to the intelligence cycle and integrated into the overall ISTAR plan. Key is the rapid dissemination of information gained, particularly to those units in contact or potential contact.

7010. Any combat or combat support troops may be employed in reconnaissance tasks, and many combat and combat support units have integral specific reconnaissance capabilities and dedicated troops. In general, the following forces will be dedicated to reconnaissance:

a. Armoured reconnaissance units;

b. Reconnaissance troops and platoons in armoured and infantry units;

c. Infantry units (infantry forces are generally capable of conducting basic reconnaissance tasks);

d. Engineer reconnaissance sections or detachments;

e. Military police for the purposes of route reconnaissance in rear areas or areas not occupied by enemy forces;

f. Special operations forces for special reconnaissance.

7011. Most reconnaissance activities will take the form of a patrol beyond the forward line of own troops and often in enemy control territory. Therefore, they require a great deal of detailed planning and coordination, particularly as lines and boundaries are crossed. Well-practised drills and rehearsals will be vital.

SECTION III – SECURITY AND PROTECTION (INCLUDING FREEDOM OF MOVEMENT)

Purpose of Security

7012. The provision of security, protection and freedom of movement are all generally referred to as security activities. The purpose of security activities is to provide early and accurate warning of enemy dispositions and activities, and, in some cases, provide protection by counting those enemy forces. Security activities may also apply to control of a territory, be it a locality or a larger area.

7013. Force elements deployed for security activities are a key aspect for advance to contacts and defensive operations. They may be deployed to the front, rear and/or flanks of a force in any combination deemed appropriate – wherever

the commander assesses a threat to be or potentially be.

7014. Depending upon their mission and structure, security forces may provide an element of protection for a main body force or gain time for the preparation of other deliberate activities. Security activities are normally conducted as part of a larger enabling activity or in support of another type of tactical activity such as the defence. Security activities have a shaping role.

7015. In large areas of defence with relatively small forces, security will likely rely on various means such a static Ops, unmanned aircraft systems (UAS) or other remote sensors. Forces dedicated to security activities will likely focus on lines of communication and key areas. Security forces will be key in triggering decisions by the commander including the commitment of reserves.

Types of Security Activities

7016. Security activities and assigned forces consist of screen, guard, cover, local security and area security. They are defined as follows:

a. **Screen.**

(1) A screen is defined as: *a security element whose primary task is to observe, identify and report information, and which only fights in self-protection* (NATOTerm). A screen provides security but not protection. It fulfils its role through observation, reconnaissance, or by any combination of these methods;

(2) A screen force is deployed by a main force and works in direct support of it, takes its orders from that commander and works within support range of the main force. A screen force's primary task is to observe, identify and report information and normally only fights in self-defence; that is, it provides early warning for the main force that deployed it and generally has no ability to protect the main force (see guard force below);

(3) A screen force will normally consist of reconnaissance elements, possibly supported by indirect and tactical air fire support controllers. It will be key to finding the enemy for subsequent fixing and striking. A screen force may be employed for a static force (such as one in the defence) or for a moving force, to the front, flanks and/or rear.

b. **Guard.**

(1) A guard is defined as: *a security element whose primary task is to protect the main force by fighting to gain time, while also observing and reporting information* (NATOTerm);

(2) Apart from gaining time for the commitment of the main body, the guard force, depending upon the circumstances, may contribute to the attrition of an enemy, may conduct counter-reconnaissance tasks, or may fix an enemy element for striking by the main force (particularly in an advance to contact situation);

(3) A guard force is deployed by a main force in order to protect it (whereas as a screen force only provides early warning for the main force – see above). Thus a guard force must be structured with enough capability to provide a level of protection against likely threats. It operates within support range of the main force, follows its direction and hands-over the battle to the main force;

(4) A guard force may be employed by a static force (that is, one in the

defence) or by a moving force, normally to the front or the rear, but possibly on the flanks depending upon the commander's assessment. Note that although a guard force may fight for some time and deplete or disrupt an enemy force, or to fix it, in support of the main force (and thus adopt some of the tactics of a delay battle), it does not fight a formal delay battle which is one possible role for a covering force.

c. **Covering Force.**

(1) A covering force is a force operating apart from the main force for the purpose of intercepting, engaging, delaying, disorganizing and deceiving the enemy before he can attack the force covered;

(2) A covering force is deployed by either corps or divisions, in order to shape the battle for itself and subordinate elements. Thus a corps would deploy a covering force for its subordinate divisions. (In contrast, a screen or guard force is deployed by a main force commander (a unit or formations) to support, through security or protection, itself);

(3) Although a covering force may conduct many tasks similar to that of a screen and guard force, it is separate from those elements in that it operates separately from the force being covered and not as part of it. It thus has its own integral fire and engineer support.

d. **Local Security.** Local security is provided by a force for its own force protection. It is a low-level security activity conducted in the immediate vicinity to prevent surprise by the enemy and to provide local defence in the case of an attack. It is often key for bases and support locations, both permanent and temporary. Local security provides immediate protection to the friendly force. The principles for the establishment and contact of local security are identical to those of the defence. Even in areas of low threat, a reserve force should always be constituted. (These may be termed a QRF). In fixed bases, there will be a need to permit access to indigenous representatives and other forces, but such access must be closely controlled.

e. **Area Security.** Area security is a security activity conducted to protect friendly forces, installations, routes (lines of communication) and actions within a specific area, beyond that of the immediate area of a stationary force. Area security preserves a commander's freedom to move reserves, position fire support assets and to conduct sustainment. Aspects of area security are as follows:

(1) Area security may support echelon forces (such as rear area security);

(2) Area security may seek to protect lines of communication, particularly when they are being used for sustainment;

(3) It may also seek to secure a civilian population from an irregular threat;

(4) It may have to focus on installations, both military and civil;

(5) It will normally require a dedicated force. While all forces, including sustainment forces must protect themselves, additional assets may be allocated to increase protection in high threat areas;

(6) Principles for area security are as follows:

(a) A strong reserve force may be useful to meet the unexpected;

(b) High levels of mobility for assigned forces. Forces to secure a relatively large area will not be able to be in all places at once. Quick reaction times, flexibility and the need to concentrate and cover large areas will require integral mobility in the assigned forces;

(c) Focus and concentrate forces at key times and locations. The commander of the force responsible for area security must conduct an estimate, based on own forces, their plans and the threat, as to when and where the limited forces will best be placed and when. For example, lines of communications may be secured through constant over-watch surveillance, patrols a dedicated escort to moving forces or any combination deemed necessary. If areas are threatened by enemy air landings, there must be a special focus on them. Probable landing or drop zones may be secured by additional forces;

(d) A heavy reliance on engineers. Engineer forces will be in high demand to clear routes and vulnerable points, block likely enemy approaches and build defensive structures for one's own forces and possibility for civil civilian populations and infrastructure;

(e) Economy of forces through good intelligence for early and accurate warning. Clearly the area of be secured will be too great for the assigned force to occupy and control all at once. Forces that attempt to do so, will quickly expend themselves and their resources. Thus economy of forces and efforts will be key. Accurate, timely, relevant, and predictive intelligence will be key to ensure that the forces available are applied where they will most likely be needed and at the right time;

(f) Constant liaison with local authorities and civilian populations, and their protection. Security for local authorities and civilian populations will likely fall to the force assigned area security. Thus a constant liaison with them will be key to ensure their needs are met and their expectations are managed. Additionally, such liaison will likely produce excellent intelligence particularly concerning enemy forces and their operations. Commanders must realise that in such situations, local civilian populations will likely be the target of enemy attack and intimidation and thus a real responsibility rests with the commander for their security, particularly where adequate local police authorities are absent;

(g) Avoidance of patterns in operations. Forces conducting area

security must vary their patterns of patrolling and other activities in order to avoid predictability and allow exploitation by enemy forces.

(h) Dedicated support forces. A commander responsible for area security should be allocated support forces at all times so as not to have to wait the piecemeal allocation of combat support and other forces when the need suddenly arises. Without such a fixed grouping, the required support forces may not be available when truly needed.

7017. **Freedom of Movement**. A force's freedom of movement within its own boundaries is a key element to security and operational effectiveness. It can be threatened by enemy forces operating in rear areas, belligerent and adversaries in peace support campaigns. Impediments may also be natural terrain obstacles, purpose built obstacles or collateral damage and residual effects of previous operations, to include areas contaminated by unexploded explosive ordnance (UXOs) or chemically or biologically contaminated areas. At other times, enemy forces will seek to deny friendly forces and others freedom of movement through ambushes, mining or the use of IEDs) The more irregular in nature the threat, the more likely they will be to use IEDs and other ad hoc means at their disposal. It must be remembered that often their aim may not only be to impede movement and create casualties but to show their own freedom of action to the indigenous civilian population and to undermine that civilian population's confidence in the security forces.

7018. Clearing such obstacles and impediments to one's freedom of movement and manoeuvre is considered an enabling activity. Any military force must be prepared to conduct these activities although those dealing with the removal of explosive ordonances and other obstacles will normally be the remit of military engineering forces.

7019. Freedom of movement must include security for lines of communication and supply. This is particularly key when forces are deployed over large areas, particularly in an operating environment of non-contiguous areas of operation. Irregular adversaries will seek to disrupt and block lines of communication/

supply and urban civilian populations upset with military operations and aims may pose crowd control threats to such lines. Commanders must consider all of this and assets must be allocated to guard against and react to such threats. Commanders will have to maintain reserve forces (often titled quick-reaction forces) that are on short notice-to-move standing and can deploy rapidly with a combined arms package, to include engineers, medical assets and potentially PsyOps assets.

7020. Surveillance means will be key to giving early warning of impediments to movement and in disrupting the actions of enemies. Persistence means such as tethered balloons with ISTAR assets affixed, standing patrols and UAS will assist in all of this.

7021. Freedom of movement for civilian civilian populations will also be a concern for a force commander within a given area of operations. Such an issue is a key characteristic of a safe and secure civil environment. Planning and execution considerations for ensuring the freedom of movement for civilian civilian populations are generally the same as those for ensuring the freedom of movement for military forces.

7022. Means to ensure freedom of movement will vary with the threat and campaign but the following will likely be applicable:

a. Sound, active intelligence collection to identify threats;

b. Forces committed to security of rear areas and lines of communication, and where civilian civilian populations are concerned, for their security;

c. Robust rules of engagement to enforce freedom of movement during peace support campaigns;

d. Liaison and coordination with belligerent forces in peace support campaigns to in order to avoid conflict and ensure coordination and cooperation;

e. Mobility support activities for opening and proving routes and removing residual threats to friendly forces and the civilian civilian population (such as mine clearance).

Planning Considerations for Security Activities

7023. Security is a mandatory factor to be considered in any planning. A commander must carefully assess the threats to the force and undertake activities that will counter the most likely and reduce the risk of others and mitigate their effects.

7024. The composition of any security force will be determined by its mission and the intent that the commander has in terms of effects to be created by its commitment. It must be task-tailored to meet its role and tasks. The following will likely be considered:

a. **Mobility.** Regardless of the nature and tasks (screen or guard) of the security element, it will have to be a mobile force as it will likely have to cover large areas of terrain, react to enemy threats as they are identified and move quickly to break contact. A high degree of tactical mobility will give the force flexibility. A screen force, with its requirement to simply report on enemy threats, may be based upon aviation or remotely operated systems, however, given this technical reliance, a redundancy in capability should be considered.

b. **Firepower.** The nature of the task and force will determine what its firepower requirements area. Guards, with their need to both report and counter threats (ideally to the point of defeating the threat) will require significant integral fire power. The force may also be assigned combat support resources such as joint fire resources. Screen forces will only require enough firepower for their own defence. A covering force, with its tactical concept of engaging, breaking contact and then preparing to re-engage, will require significant firepower with a long range.

c. **Protection.** The levels of protection inherent in the security element will depend upon its role and tasks. Clearly, a guard or screen force and covering force, with their requirement to disrupt or defeat enemy threats, will require a high degree of protection. Even a screen force, faced with the requirement to collect as much information on a threat as possible, should have some level in inherent protection. Air defence protection of security forces must always be considered.

d. **Information gathering.** All security forces, with their requirement to collect information on the terrain and enemy, will require an information gathering capability. Thus reconnaissance forces are ideally suited for these tasks, as the force itself or grouped as part of a combined arms force. Other information collection means such as electronic warfare monitoring means or aviation reconnaissance may be grouped with a security force.

SECTION IV – MARCH AND CONVOY

7025. The march is a enabling activity that involves tactical movement from one point to another by combat and other forces without the expectation of combat. It differs from an advance to contact in that forces conducting the march are prepared to counter enemy activities but are not expecting nor seeking to make contact en route. March activities include military convoys.

7026. A convoy is defined as: *a group of vehicles organized for the purpose of control and orderly movement with or without escort protection* (NATOTerm). Details for convoys are contained in ATP-76, *Convoy Operations*.

7027. The march may be used by forces moving from one location to another to conduct other tactical activities such as stability activities in a given area. It is generally used in non-linear, non-contiguous areas of operation in which the

enemy is unlikely to be located in a fixed location. The greatest threat to forces on the march will be ambush, IEDs and air attacks.

7028. Movement during the march is done tactically and schemes of manoeuvre and the use of security activities will reflect the tactical situation and enemy profile.

7029. The conduct and planning considerations for the advance to contact may be applied to the planning and conduct of the march. Given the possibility of contact during the march, the commander will assess the need for the security of the force throughout the activity, and will take the necessary precautions, such as the deployment of security forces and the clearing of defiles and danger areas.

Convoy Operations

7030. Convoys must be treated as a tactical operation in all theatres and not simply as a routine administrative procedure without tactical planning and protection requirements or as scheduled, routine military road traffic. Instead they should be treated as carefully planned military operations. Tactical planning and force protection must be the consideration for all convoys. More than ever, convoys and their escort forces face a range of threats, including those from irregular forces. Attacks against static and moving soft targets will increase as the enemy chooses to attack perceived weaknesses rather than confront the superior protection and firepower of combat forces. This is particularly true of irregular threats.

7031. All units and formations mounting a convoy must ensure a tactical security of the convoy. Convoys are responsible for their own protection. If the threat warrants it, an additional force may be tasked to provide a convoy escort for additional protection. A convoy escort is defined as: *an escort to protect a convoy of vehicles from being scattered, destroyed or captured* (NATOTerm). Detailed doctrine for the conduct of convoys with or without escorts can be found in ATP-76, *Convoy Operations*.

SECTION V - ADVANCE TO CONTACT

Purpose

7032. The purpose of the advance to contact is to gain or re-establish contact with an enemy under the most favourable conditions. To achieve this, forces may be employed in both supporting security and reconnaissance missions. It differs from a meeting engagement in that contact is not made unexpectedly. The advance to contact is normally executed in preparation for a subsequent offensive activity and therefore ends when the main force is positioned for the subsequent activity and in accordance with the commander's plan. Subsequent activities will be determined by the mission assigned to the main

force. This may also be determined from the posture of the main body when contact is made with the enemy.

7033. By advancing to contact, the force seizes and maintains the initiative. The activity may involve destroying or forcing the withdrawal of minor enemy elements and seizing ground of tactical importance.

Planning and Execution

7034. In the advance, the tempo will change in accordance with the situation encountered. Bold rapid action should be combined with the retention of balance and control, so that enemy reaction and changes of terrain can be met without disruption. Subordinate commanders must be prepared to act boldly within the superior commander's intention and their missions, in order to surprise the enemy, keep him off balance and exploit unexpected opportunities and success. The advance to contact ends either when the intended posture is achieved or when enemy action requires the deployment and coordinated effort of the main body.

7035. Planning for the advance to contact should note the following:

a. The primary consideration in planning for an advance to contact is anticipating actions that may occur during the activity and the requirements for manoeuvre and fire support when contact is made. At all levels, even down to the lowest tactical levels, contingency plans should be issued, prior to commencement that anticipate possible contact and required actions;

b. During the planning and the advance to contact, the commander will need to analyze the situation continually using current reports and intelligence from all sources. The positions of units and groupings in the formation are dictated by the threat, mission and ground, particularly the anticipated employment of combat forces. Combat service support units are integrated in the movement of combat forces to provide support but without interfering with tactical movement;

c. Planning must make the best use of intelligence from all sources, including air reconnaissance, which will be of particular importance. When moving, it is best to advance with multiple columns. This permits combat power to be deployed well forward and decreases the dependence on any one axis. In this operation, security elements are of particular importance because the force is vulnerable on all sides.

7036. **Situational Awareness**. Screens, guards or even covering forces deployed will support the advance to contact. While reconnaissance forces and other ISTAR capabilities (such as forward deployed UAS) will provide a good deal of situational awareness, the advance to contact will never be conducted with full situational awareness. This is particularly true in close terrain and situations involving unconventional adversaries. The commander will adjust plans such as speed of advance and formations used, depending upon the level of awareness provided, the adversary and the overall amount of risk he or she is willing to accept.

7037. **Organisation and Scheme of Manoeuvre**. The commander will task, array and commit forces as demanded by an assessment of the situation (see figure 7-1):

a. **Covering Force Action for an Advance to Contact.** The advance to contact may be led by a covering force that normally contains reconnaissance forces and may be reinforced with other combat elements depending on anticipated tasks. It will normally be deployed by the advancing force's higher headquarters in order to shape the operation. It will be primarily functioning as a security (screen) force providing information on terrain and enemy although may undertake some guard force tasks (if suitably structured) to shape the conditions for the advancing force. It should be a highly mobile, well-balanced force capable of undertaking the tasks listed below, in accordance with the commander's intent. Integrated aviation and armour forces provide a mobile and flexible force capable of achieving rapid reconnaissance in the advance. The covering force will assist in **finding** the enemy and other information, to support subsequent fixing and striking. The

covering force may have sufficient combat power to fix initial enemy units or even destroy them. Whenever possible, axis should be given in the most general terms to the leading elements. Axis should be allowed to develop as the battle unfolds so that success can be exploited. Possible tasks of the covering force may include the following:

(1) Locate and determine the strength of enemy positions;

(2) Find and exploit gaps so as to provide information on possible routes for enveloping or bypassing action by the main body;Obtain information on routes, obstacles, terrain conditions affecting movement, as well as civilian civilian population distributions;

(3) Conduct deep penetration either to disrupt enemy communications and logistic units or possibly to seize a crossing site, in particular, a bridge or defile. Integral engineer support will be required to make safe and remove any demolitions on the crossing and the main force must follow very quickly. If these tasks of seizing and temporarily holding key points are assigned, then a covering force will require appropriate combat capabilities;

(4) Provide security for the advance guard and main body by conducting counter-reconnaissance;

(5) Support subsequent activities such as an attack by securing lines of departure, identifying attack positions and fire bases, etc.

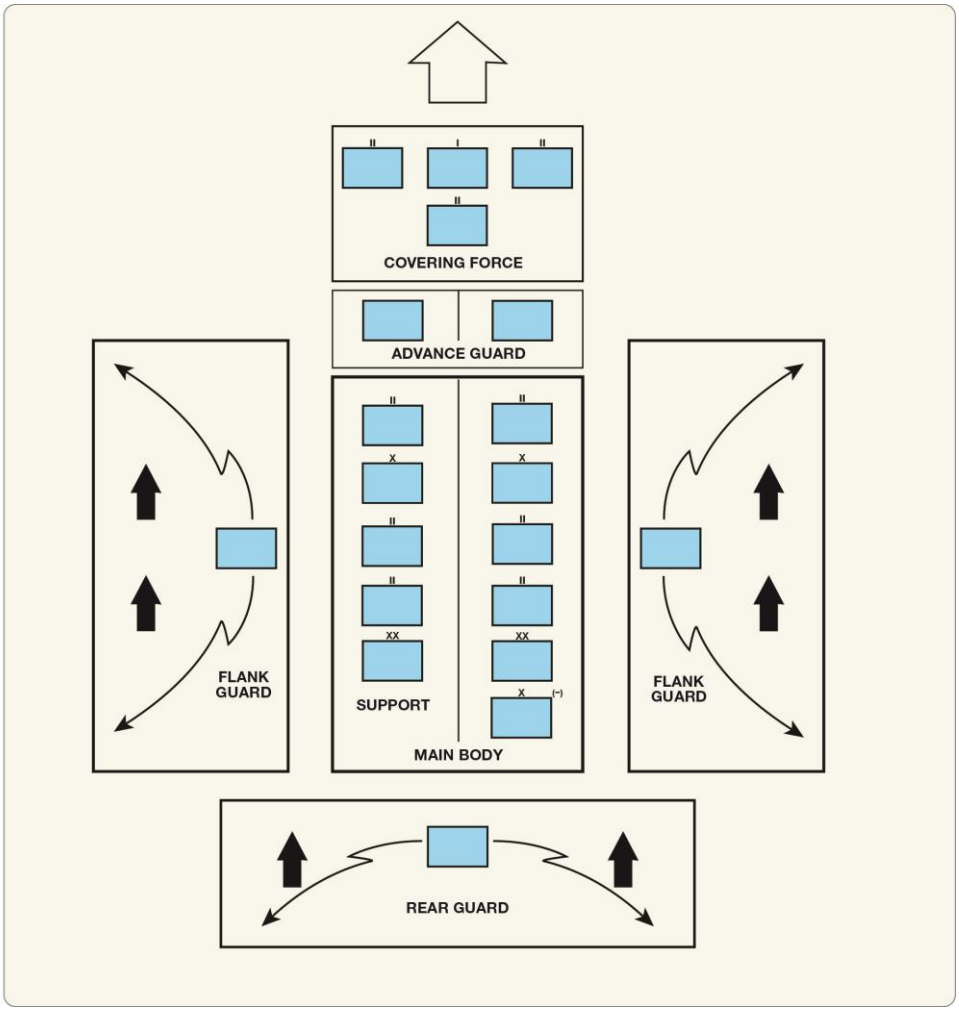


Figure 7-1: Example Organisation for an Advance to Contact (Division size force shown)

b. **Advance Guard and Main Body.** An advance guard may be deployed to provide additional security for the main body, to counter unexpected situations and to **fix** enemy forces for subsequent striking by the main body. It may be used to expedite the force's movement, maintain contact with the covering force, and provide security and protection tothe immediate front of the main body. The tactical handling of the advance guard will depend on the number of routes available;

c. **Main Body.** The main body contains the main combat power of the force. Its units are organized into combined arms elements and are so positioned in the advancing columns to permit maximum flexibility for employment during the movement or once contact with the enemy is established. The position of the main body in relation to the covering force and advance guard is an important decision for the commander. Observation, surveillance and close coordination with air reconnaissance contribute to the security of the main body. The rate of advance will vary across the front and will depend on the terrain, the location and strength of enemy positions and the possibility of bypassing the opposition. Advances through urban areas will be particularly slow if advancing across a wide frontage or using an urban

saturation technique. The main body must be prepared to reinforce other elements in the advance or to undertake tasks, such as a hasty attack, on order from the commander in order to meet threats. The grouping within the main body must be sufficiently flexible to allow elements to:

(1) Assume the advance guard role;

(2) Change direction or route of any of the elements of the main body either to bypass enemy positions or to take advantage of better routes;

(3) Deal with the enemy that has been bypassed or is holding up the main force;

(4) Assume tactical tasks to defeat threats encountered in the advance.

d. **Flank and Rear Guards.** Flank and rear guards protect the main body from ground observation and surprise attacks. They should be strong enough to defeat minor enemy forces, or to delay strong attacks until the main body can deploy. The deployment of the flank and rear guards will depend on the assessment of the enemy and other adversaries.

(1) The rear guard follows the main body. During a withdrawal of the main body, the rear guard's initial task is to deceive the enemy into believing that the force is still there at its previous strength. It is ordered what to do in the event of an attack and when to break contact. If the enemy takes up the pursuit, the rear guard must cover the withdrawing forces. It must continue to fight until the main body is far enough away from the enemy. Armoured elements of the rear guard may remain in contact with the enemy until he attacks again. They must then fight in accordance with the principles governing delaying operations;

(2) Flank guards normally move on routes parallel to the route of the main body, moving either continuously or by successive or alternate bounds to occupy key positions on the flanks. In some situations, flank protection may be provided by a flanking formation. Armoured reconnaissance units are suitable for flank protection of the advancing force by moving on a route parallel to the main axis or by picketing likely enemy approach routes. These reconnaissance forces are unlikely to be able to deal with a strong enemy force, but will give early warning of an enemy approach that can then be dealt with by reserves. Attack or armed helicopters are particularly effective in this instance. Mobile air defence units are particularly effective against the helicopter threat.

e. **Action on Contact.** On contact, speed of manoeuvre and initiative may overcome the enemy before he can react. The sequence of action on contact might be as follows:

(1) Within its capabilities, the covering force destroys enemy forces that can interfere with the movement of the main body and pickets

or blocks those that it cannot destroy. It should be prepared to quickly pass responsibility for pickets or blocks to the advance guard and to resume its assigned tasks;

(2) The covering force should develop the enemy picture and inform the commander of the main body of terrain that will support a subsequent offensive action, such as positions for attack and fire base;

(3) Elements of the advance guard or of the main body may be committed to reduce pockets of resistance contained or bypassed by the covering force;

(4) Any elements of the covering force tasked with containing such pockets initially are relieved as rapidly as possible and rejoin the covering force to avoid dissipating its strength;

(5) The commander monitors the progress of the leading and engaged combat forces and anticipates their requirements. When resistance is encountered, he or she commits forces from the main body in order to maintain the momentum of the advance;

(6) Significant enemy forces may require the commitment and deployment of the entire force. This will likely involve deliberate operations.

f. **Maintenance of Momentum and Subsequent Actions.** It is of the utmost importance that the momentum of the advance be maintained. Whenever possible, enemy positions should be outflanked. The commander must lay down whether they are to be bypassed and cleared by follow-up forces, or to be taken by the leading elements. A commander may well decide that a hasty attack by troops in contact is to his advantage, while another part of the force continues the advance. In either case, if the enemy established a continuous front and the strength and width of his positions preclude an outflanking move, an attack may be mounted to force a gap;

g. **Bypassing Policy.** The policy for bypassing enemy elements encountered by the lead forces must be carefully considered and clearly specified. It will always be extremely difficult to determine the exact strength of a position, and much will depend on accurate reconnaissance and intelligence. Should an enemy element by bypassed, it must be picketed until it is destroyed or rendered ineffective;

h. **Routes.** Once routes have been opened it may be necessary to employ forces to ensure their security, particularly if small pockets of enemy have been bypassed and remain to the rear of friendly forces. Routes used for logistic traffic should be kept separate from those used by combat forces, if possible. These routes are especially vulnerable to enemy action and require security against land and air attack. CSS assets may require planned convoy security particularly when dealing with a non-contiguous area of operation and an unconventional enemy and other adversaries;

i. **Airmobile and Airborne Forces.** Airmobile or airborne forces achieve surprise and maintain momentum by being deployed ahead of the covering force to seize key terrain, including defiles, bridges and crossing sites and to overcome obstacles. The ground force can then link up with them and continue the advance without the need to undertake an activity that may slow the momentum of the advance. Such forces must not be deployed too far ahead and against targets that they are unable to overcome, as the force may be lost before assistance arrives and momentum will suffer;

j. **Transition to Other Tactical activities.** The advance to contact ends either when the intended posture is achieved or when enemy action requires the deployment and the coordinated effort of the main body.

Command and Control

7038. Commanders should move well forward so that they can influence the battle quickly and make the most of fleeting opportunities. Normal command arrangements will be strained by distances and rapid movement. Command posts will be on the move, particularly at lower levels, as follows:

a. As the main body normally moves on radio silence the problem of maintaining coordination along the routes will require special arrangements and may also cause a restriction on the use of air defence assets;

b. Special arrangements may be required to provide additional radios for relay purposes;

c. Extensive use will have to be made of liaison elements;

d. Coordination with supporting air forces will present special problems;

e. The command responsibilities for each route and for traffic control must be established;

f. Traffic control systems should be able to:

(1) Easily rearrange the order of march on routes allocated;

(2) Improve measures to keep routes open;

(3) Assist in regulating the flow of traffic to help units reach their destinations in a timely manner;

(4) The command relationship between the various elements of the force must be established beforehand.

Combat Support

7039. **Artillery.** Immediate and effective fire support will enable the force to engage the enemy, retaining freedom of action to bypass or to attack the enemy force. A heavy volume of fire will reduce the need to deploy troops on contact with the enemy.

7040. As the nature of the advance to contact is one of sustained movement, a high degree of fire support coordination is required. Joint fire asstes must move in such a way that maximum support is available at all times. Forward observers must accompany leading elements and units on exposed flanks.

7041. **Air Support.** Tactical air support is required in the advance to contact, to:

a. Assist in protecting advancing units from enemy air attack;

b. Provide information and intelligence about the enemy;

c. Provide close air support to supplement artillery, particularly when it is not possible to concentrate its fire;

d. Interdict enemy units attempting to withdraw or reinforce.

7042. **Aviation.** Helicopter support is used mainly for the following purposes:

a. Surveillance and reconnaissance;

b. Flank protection;

c. Exercise of command and control;

d. Seizure of critical points and key terrain features;

e. Resupply and medical evacuation.

7043. **Air Defence.** Air defence weapons must keep up with the advance. To achieve this, ground-based air defence must have a priority for road movement. Likely tasks will include protection of vulnerable points on the route and cover for critical operations such as an attack, river crossing or breaching operation.

7044. **Engineers.** The main role of engineers in the advance to contact is to open and maintain routes using specialist engineer equipment. They also have the tasks of assisting the leading troops to overcome obstacles and to clear mines, and of helping in the protection of the flanks. Engineers and their heavy equipment should be positioned so that they can be deployed quickly when required. An engineer reconnaissance element must move with the leading troops and engineer resources may have to be well forward.

7045. **Electronic Warfare**. Emphasis will be placed on the employment of passive EW (intercept and direction finding) resources in order to detect and locate the enemy.

Combat Service Support

7046. CSS must provide for the requirements of the advance to contact and for the anticipated requirements of any subsequent mission. The support problem in the advance to contact is that of sustaining forces that are moving and thus extending the supply lines. Because there will seldom be sufficient transport, a careful calculation of anticipated requirements must be made and priorities established.

7047. At the start of the operation, units should be as self-contained as possible and arrangements made so that they can be refuelled during the move. Engineer stores for bridging and route repair are likely to be a large transport commitment. It is important that maintenance and recovery resources and traffic control are deployed to keep routes open and assist units.

7048. At all times, medical units should be able to provide medical support in line with the timelines prescribed in AJP 4.10B Allied Joint Medical Support Doctrine and apportioned to the supported civilian population and risk. Helicopters should be available for evacuation of high priority casualties as the lines of communication may become extended.

SECTION VI - CROSSING AND BREACHING OF OBSTACLES

General

7049. An obstacle is a natural or man-made restriction to movement which will may require special equipment or munitions to overcome it. An obstacle may include water obstacles, dry gaps, minefields, explosive devices, wire, earth works, concrete, timber, metal, debris or defiles in the terrain. A coordinated series of obstacles is known as a barrier.

7050. Forces require an ability to cross obstacles in order to continue movement in support of operations. Although crossings normally occur during offensive operations, they may also be necessary during defensive or delaying operations. They can occur throughout the combat zone and along lines of communication further to the rear. Often they involve a passage.

7051. **Obstacle Crossing** is an activity where forces go across an obstacle, without destroying, clearing or removing the obstacle. Water crossing is the most important example. Obstacle crossing could be unopposed or opposed. In the latter case often the establishment of a bridgehead beyond the obstacle is necessary to facilitate the crossing of the mainbody.

7052. **Obstacle Breaching** is an activity where forces use any means available to break through or secure a passage through an enemy defence, obstacle, minefield or fortification. Obstacle breaching will be most likely opposed. In this case organisational principles for crossing of obstacles may be applied accordingly.

7053. Obstacle breaching and crossing activities are combined arms action.

Types of Obstacles

7054. **Inland Areas of Water or Waterways**. After the destruction of fixed bridges areas of water become normally obstacles, because detours are normally not possible. The need for crossing operations can normally be foreseen, from existing geographical data and confirmed by intelligence.

7055. **Minefields**. Minefields are principally covered by observation and fire. A detours or bypassing may be possible. The need for a breach may not be anticipated.

7056. Other obstacles might be:

a. Rough, soft or marshy ground, terrain covered by deep snow;

b. Craters and ditches;

c. Vertical steps and slopes;

d. Contaminated areas;

e. Abatis, extended wire entanglements, concrete obstacles, earthworks, and debris, including collateral damage from the effects of weapons;

f. Existing and reinforcing obstacles including craters, mines, landfalls and avalanches. Bypass will almost always be difficult or impossible;

g. Artificially induced flooding and inundation.

Types of Crossing and Breaching of Obstacles

7057. **Hasty Crossing/Breaching**. A hasty crossing/breaching takes place from the line of march, with little preparation, using resources immediately available. The intent of conducting such an operation is to execute a crossing before the enemy has the opportunity to prepare his defensive position fully.

7058. **Deliberate Crossing/Breaching**. A deliberate crossing/breaching requires thorough reconnaissance, detailed planning, extensive preparations, rehearsal and heavy or special engineer equipment. It is conducted because of the complexity of the obstacle, or when a hasty crossing/breaching has failed.

7059. **Assault Breaching.** This type of breaching activity requires a force with the mobility it needs to gain a foothold in an enemy defence and exploit success by continuing the assault through the obstacle. The assault breach allows a force to penetrate an enemy's protective obstacles and destroy the defender comprehensively.

7060. **Covert Breaching**. The covert breach is a special breaching operation used by dismounted forces in conjunction with an infiltration during limited visibility. It is carried out silently to achieve surprise and to minimize casualties.

General Planning Considerations for Braching and Crossing of Obstacles

7061. Any obstacle can be overcome given sufficient resources and time. A commander should aim to seize intact crossing sites or to conduct hasty crossing or breach of the obstacle before the enemy has time to react.

7062. Bypassing an obstacle is often more expeditious, even if forces have to move greater distances. On the other hand, bypassing an obstacle may comply with the intentions of the enemy where it is not expected by the enemy. Combined with deception measures, it may thus be possible to surprise the enemy and to avoid losses.

7063. The movement of troops and equipment across the obstacle and their deployment on the far side must be strictly controlled to maintain momentum, avoid congestion, provide flexibility and establish sufficient force to defeat any enemy counter-action.

7064. Limited visibility creates favourable conditions for overcoming obstacles while impeding observed enemy fire. The protective effect of limited visibility may be reduced by modern surveillance and fire control means, while our use of night vision aids allows for use of periods of limited visibility with an advantage; speed, situational awareness and ability to conduct operations may be greatly improved.

7065. If the obstacle is defended, successful breaching must be preceded by the suppression of enemy fire, obscuration of the enemy or screening friendly movement, and securing the breach/ crossing site by either fire or force as necessary.

7066. Commanders should avoid massing of forces at the obstacle to not provide the enemy a large target;

7067. **Crossing Sites**. If possible crossings should be conducted on a broad front with multiple crossing sites. Wherever possible, the enemy must be diverted from the intended crossing sites by means of deception. Areas selected for the crossing of obstacles should have, either naturally or through engineer development, the following features:

a. A suitable number of crossing sites, with alternatives, which are dispersed to reduce vulnerability and to provide flexibility. The number of crossing sites established is normally twice that required by the desired traffic flow. This is necessary as time does not normally allow other sites to be started, should the initial ones fail. In addition, the threat may dictate moving to another site;

b. Cover from observation;

c. Routes to and from crossing sites, to include lateral routes which have the required load classification and capacity;

d. Waiting areas that provide cover for units and sub-units;

e. Sufficient space for the establishment of a bridgehead;

f. Adequate fire support for the establishment of the bridgehead and breakout;

g. Battle or firing positions for elements providing support by direct fire and observed indirect fire;

h. Assembly areas which are located some distance from the obstacle where forces wait to move to the crossing site. The assembly areas need to be dispersed and have good routes to the crossing sites, and good cover and concealment.

7068. The following planning factors are applicable to all crossing and breaching operations:

a. Adequate and timely intelligence and reconnaissance will:

(1) Confirm the existence and nature of any obstacles;

(2) Assist the commander’s decision to bypass or mount a hasty or deliberate operation. From this decision, the requirement for any deployment of engineer equipment and other forces will be

established.

(3) Effective movement control measures including timings;

(4) Maximum use of deception to achieve surprise;

(5) Adequate air defence and fire support, particularly tactical air support and counterbattery fire;

b. Adequate CBRN defence measures must be undertaken;

c. Adequate logistics support for clearing/breaching the obstacle.

7069. **Equipment Reserve**. Selected items of equipment must be held in reserve, ready for short notice replacement or to maintain crossing sites and equipment. Once a crossing is completed, equipment must be recovered for re-use or replaced with permanent equipment as soon as possible.

7070. **Liaison.** The tactical commander must keep the engineer commander informed of his intentions and plans. Thus the engineer commander is able to make his estimate of the situation and advise on the resources available, the number and location of suitable crossing sites, the assistance needed from other elements and the time required for preliminary work. Additionally this allows the crossing area commander and the crossing site commander to operate away from each other in times of reduced communications or changes in the situation or threat.

Water Crossings

7071. **General.** Water crossing procedures are fully described in STANAG 2395. An opposed assault water crossing is a divisional-level undertaking, due mainly to the engineer resources and fire support required.

Planning

7072. **Selection of a Bridgehead.** The bridgehead is secured on the far (enemy) side of the obstacle by the assault crossing forces. In selecting areas for the establishment of a bridgehead, the following should be considered:

a. Defensible terrain of sufficient extent that the enemy cannot seriously interfere with the crossing. The bridgehead should be sited so as to remove all enemy from positions of direct fire and observation onto the crossing site and bridgehead area;

b. Sufficient crossing and movement facilities to avoid congestion;

c. A base for the continuation of the operation;

d. To seize intact bridges leading to the bridgehead the conduct of a raid mayx be necessary.

7073. **Crossing Area.** The tactical commander - generally the commander of a brigade or higher formation - will order a crossing area only if the tactical situation or the natureof the obstacle requires it. The depth of the crossing area is normally not very great. However, its depth will depend on the size of the obstacle and the terrain. Its near and far boundaries should be positioned within the closest lateral routes approximately 3 km from the water or on easily recognizable terrain features, which run parallel to the obstacle.There may be a number of crossing locations, or sites, within the crossing area.

7074. **Phases.** Once the near side of the obstacle has been secured, a crossing of a water obstacle is executed in three phases:

a. **Assault.** To gain a lodgement on the far side of the obstacle. This phase is not required for an unopposed crossing;

b. **Build-Up.** To extend the lodgement into a bridgehead;

c. **Consolidation.** To establish a firm base within the bridgehead from which to break out and continue the operation.

Command and Control

7075. **General.** The need for a clear command organisation, which plans and executes a complete but simple crossing plan, is paramount in all water crossing operations. The controlling headquarters must provide a flexible organisation and make the best use of the resources available to react to any changes in the crossing flow and the tactical situation.

7076. The basic requirements for control are:

a. A crossing control organisation with clearly defined responsibilities;

b. A movement control organisation;

c. A command and control communications network.

7077. The commander has overall responsibility for command and control of the crossing operation and will issue the Crossing Plan. The commander may select, determine and allocate the following:

a. Crossing sites;

b. Crossing area, when several crossing sites have to be established;

c. Assembly and waiting areas;

d. Deployment routes;

e. The commander may also issue special instructions for crossing and times and, if necessary, the organisation of convoys.

7078. For major crossings a crossing area HQ and crossing site HQ for each crossing site may be required. Within a crossing area HQ the following elements may be represented:

a. Engineers;

b. Movement control;

c. Logistics;

d. Communications and EW;

e. Liaison elements from crossing formation/units.

7079. The engineer commander is responsible to assign crossing site commanders. The crossing site commander is normally an engineer officer. He or she will normally provide the crossing site HQ, which has the following responsibilities:

a. To develop and maintain the crossing site including entrances and exits;

b. To construct, operate and maintain the means of crossing;

c. Movement across the water at his crossing site including the giving of orders to troops during the crossing;

d. Advice to the Waiting Area Controller on movement to his crossing site;

e. All technical aspects of maintaining the survivability of his crossing site and crossing equipment.

7080. The commander's **crossing plan** should include the following items:

a. Tactical situation;

b. Commander's intentions, special directives and any arrangements for delegating control;

c. Protection, security, reaction to enemy attacks and instructions for denying the crossing;

d. Designation of crossing sites, alternative crossing sites and routes leading to and from them;

e. The grouping and tasks for the engineers;

f. The boundaries of the crossing area;

g. The movement control plan to include routes to and from the obstacle, lateral routes, movement control posts and waiting areas;

h. A crossing schedule that provides a timetable for the crossing as well as:

(1) Movement credits per unit;

(2) Priorities for the crossing.

i. Any limitations such as the capacity, speed and Military Load Class (MLC);

j. Nicknames for each crossing site.

7081. The detailed layout of an obstacle crossing area and sites is illustrated in the figure below.

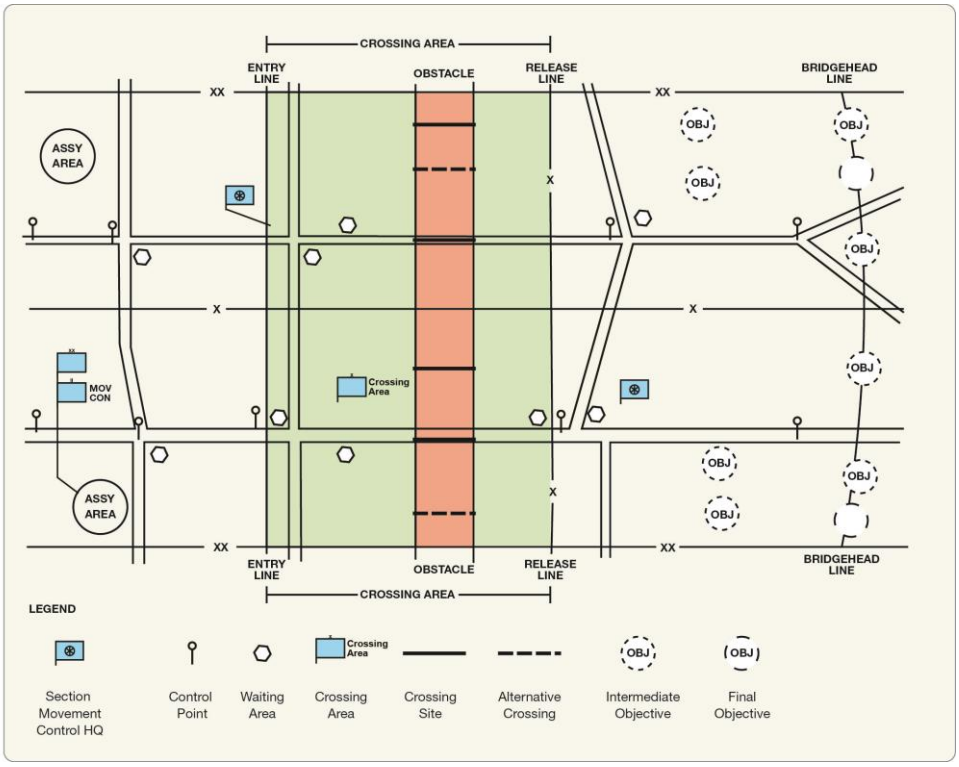


Figure 7-2: A Schematic Diagram of a Divisional Crossing Plan

Execution

7082. Forces and Tasks. Normally, a force conducting a crossing must pass through an in-place force that has cleared and secured the near side of the

obstacle. A crossing force consists of a bridgehead force and a breakout force.

a. **In-Place Force.** The in-place force secures the near or friendly side of the obstacle in order to support a forward passage of lines and the assault onto the far side of the obstacle. It provides fire and other support to the bridgehead force during the crossing. Within its area, it has normal responsibilities regarding security, including defence of the obstacle and the home bank (near or friendly side);

b. **Bridgehead Force.** The bridgehead force consists of an **assault echelon** and a **main body**. Its mission is to seize or to control ground in order to permit the continuous disembarkation, landing or crossing of troops and materiel. It will also provide the manoeuvre space needed for subsequent operations;

(1) The **assault echelon** is tasked to gain the lodgement, normally seizing intermediate objectives. This must be done so as to prevent enemy ground observation and direct fire onto the obstacle, and thus allow crossing sites and equipment to be prepared and operated with minimum interference to bring the main body and breakout force to the far side;

(2) The **main body** of the bridgehead force conducts the build-up, including the seizure of the objectives on the bridgehead line, and consolidation. Within its area, the bridgehead force has normal responsibilities for security, including the defence of the far side of the obstacle.

c. **Breakout Force.** The breakout force is tasked with the continuation of the operation. In some situations this may be an additional task for the bridgehead force.

7083. **Assault Phase of a Water Crossing**. Once the near bank is secured, plans for the assault crossing complete and preparatory movements complete, the conduct of the assault phase may commence by the bridgehead force.

a. The **assault echelon** of the bridgehead force establishes a lodgement on the far side of the obstacle to eliminate enemy direct fire and observation of the crossing sites. The lodgement is achieved either by:

(1) Infiltration;

(2) Boating, swimming, fording or snorkelling a force;

(3) Air lifting.

b. At H-hour, the assault echelon crosses the line of departure, which is normally the near bank, and proceeds across the obstacle. Fire and other support is provided by elements of the in-place force on the near side of the obstacle. Normally this support includes direct and indirect fire support and the protection of crossing sites from air attack and from attacks along the obstacle by divers, sabotage squads, vessels, mines or drifting objects.

7084. **Build-Up Phase of a Water Crossing**

a. Once the assault echelon is across the obstacle and secure on the objectives, the tactical commander orders the crossing area into effect. Engineers complete their preparation of crossing sites and means, and movement control elements complete their deployment and control the move of the main body across the obstacle, in accordance with the crossing plan;

b. The crossing area organisation must be flexible as, once a crossing site is detected by the enemy, it is extremely vulnerable. Equipment, such as bridging, may have to be dispersed at short notice and alternative means and sites may have to be used. In some cases, it may be necessary to split a bridge into rafts, or alternatively, use smoke to obscure the site;

c. Once across the obstacle, the lead elements of the main body pass through or around the assault echelon and carry on to secure the final objectives in the bridgehead. Once these have been secured, the bridgehead is established.

7085. **Consolidation Phase.** This phase is an extension of the build-up phase. Enemy pockets of resistance are eliminated and the remainder of the main body and assault elements of the breakout force are moved across the obstacle. Crossing sites are improved and preparations are made for the breakout and the continuation of the operation which must be resumed as quickly as possible.

Combat Support

7086. **Artillery.** Artillery and mortars are usually positioned so that they can provide continuous support during all phases of a crossing. The primary task of both of these weapons is to provide supporting fire to troops in the bridgehead. They should also mask enemy observation of the crossing sites and employ counter battery fire to neutralize enemy forces defending the obstacle. Deception fire can also be used in order to draw the enemy's attention away from the actual crossing site.

7087. **Air Support and Air Defence.** Forces conducting a crossing present a particularly attractive target to the enemy. The time and location of the crossing must be carefully coordinated with requested air support and air defence. The ground force should have integrated air defence elements and coordination should be made with the air defence commander and the joint force air component for potential CAS requirements.

7088. **Aviation.** Helicopter forces could have much to contribute to obstacle crossing and both attack helicopter and other helicopters can be used to

secure the approach to the obstacle during the assault phase. AH also provide the commander with additional and flexible fire support.

7089. **Engineer.** Nearly all crossings require engineer support. The main task of the engineers is to enable the bridgehead force to cross the obstacle. As a secondary task, they may be required to prepare obstacles to protect the flanks of the crossing force. Usually most personnel and equipment committed to both of these tasks are drawn from forces not involved in the crossing or subsequent operations as these forces require their own engineers for the assault and tasks in and beyond the bridgehead. Operations may be restricted by the amount of specialized crossing equipment available. Additionally, engineers are required to support following forces.

7090. **Electronic Warfare**. EW support to crossing operations will be based initially on passive measures to aid intelligence gathering. Electronic deception and jamming may be used to support the obstacle crossing.

7091. **Provost Marshall (PM).** Traffic control will be vital at crossing sites and defiles to prevent congestion with vehicles becoming static and exposed.

Combat Service Support

7092. **Replenishment.** The assault echelon commander should ensure that his force isself-sufficient in combat supplies, as during the assault phase, his force will be temporarily separated from its full combat service support. Provision should be made for emergency replenishment, possibly by helicopter. Within the crossing plan, it is important that ammunition and fuel replenishment vehicles cross early to ensure timely replenishment.

7093. **Repair and Recovery.** Repair and recovery resources must be included in the movement control plan to ensure that routes, particularly at defiles and crossing sites are kept open. Resources should be positioned on both sides of crossing sites. Special consideration must be given to the arrangements for the repair and recovery of vehicles in the process of crossing the obstacle.

7094. **Medical.** The movement control plan must include medical arrangements particularly for the evacuation of casualties. Medical facilities with casualty evacuation assets should be established each side of the water obstacle crossing and there may be a need to deploy a medical holding facility on the other side of the obstacle. Aviation is particularly useful in this situation.

Water Crossings as Part of the Delay Battle

7095. During a delay battle, there may be a requirement to withdrawal back across a water obstacle once the required amount of delay has been imposed.

a. **Preliminary Withdrawal and Rearward Passage of Lines.** During a delay battle, those units and forces not required to actually conduct the delay should be withdrawn over the crossing as early as possible. Maximum use should be made during this phase of existing bridges (if these are available) as directed by the tactical commander. Bridges or ferries may be ordered as part of the withdrawal plan;

b. **Delaying Battle and Withdrawal of Delaying Force.** Once the desired delay has been imposed or the delaying force is ordered to do so, the

delaying force will seek to break contact with the advancing enemy, withdraw and cross the obstacle to conduct a rearward passage of lines. The rate of crossing is dependent on the pressure from the enemy: the commander may risk employing all the crossing means available concentrating on those crossing sites which are best concealed. By the end of this phase all crossing sites should if possible have been withdrawn or dismantled, or destroyed;

c. **Withdrawal Phase.** During this phase obstacles to movement on either side of the crossing are improved or activated. The last vehicles are withdrawn by ferries or on pontoons, or by swimming or snorkelling (if the river bed and banks are suitable). These are protected by an infantry screen supported by joint fire. The last troops are transported by boat, helicopter or any available means.

Breaching Obstacles

7096. Before an obstacle can be crossed, a breach of the obstacle may have to be created. Normally breaching activities are planned and executed on a lower tactical level.

Planning

7097. Seizure of minefield lanes intact or an opportunity for a hasty breaching must be exploited. If this fails a deliberate breaching will be necessary.

7098. For breaching to have a reasonable chance of success the minimum information required is the minefield depth, its front and rear edges and details of enemy weapons covering the minefield.

7099. The aim must always be to breach paths and lanes through enemy minefields from the very beginning in order to enable dismounted infantry and combat vehicles to cross the barrier. Whether paths may be prepared in advance will depend on the situation, terrain, type of barrier and breaching equipment available. Paths are to be enlarged rapidly to form lanes. As many lanes as possible should be breached. As a minimum, two breaches should be attempted.

Command and Control

7100. The level of command is likely to be lower than for water crossing. Minefield breaching may involve a number of independent simultaneous actions each with its own commander, whereas water crossing is a centralized operation. The breaching commander is the commander who has the tactical responsibility for operations in that area.

Execution of an Obstacle Breach

7101. For enemy obstacles, reconnaissance should include, if possible, the breaching of a patrol path or lane through the minefield.

7102. If the enemy situation allows, dismounted troops cross the minefield and establish a lodgement on the far side, although this may not always be possible. In either case, it is necessary to form a breaching force to open lanes for personnel and vehicles of the assault echelon.

7103. If the minefield has been prepared by friendly forces, it is crossed using existing gaps or lanes, or newly breached lanes.

7104. Once lanes are open, traffic control posts both ends of the lanes are required. In addition, recovery posts will be established at the approaches to all lanes and, occasionally, on both sides of the minefield.

7105. With the assault echelon across the minefield and secure, engineers complete their preparation of breaching sites to include marking. Movement control elements complete their deployment to control the movement of the main body across the minefield. Complete clearance of barriers requires a considerable amount of time and resources. Therefore, it can usually be justified only if operationally necessary.

SECTION VII - MEETING ENGAGEMENT

Definition and Circumstances of the Meeting Engagement

7106. A meeting engagement is defined as: a combat action that occurs when a moving force, incompletely deployed for battle, engages an enemy at an unexpected time and place (NATOTerm). The meeting engagement may occur when moving forces unexpectedly encounter the enemy and have to enter into combat with him straightaway. It will often occur during an advance to contact and can easily lead to a hasty attack. In offensive or defensive activities it will often mark a moment of transition in that the outcome may well decide the nature of subsequent activities. This is the reasons a meeting engagement is described as a transitional phase. Even when the main part of a force is attacking, defending or delaying, individual elements may find themselves in situations that have the characteristics of a meeting engagement. The meeting engagement normally occurs at brigade level and below.

7107. The meeting engagement differs from the advance to contact in that it occurs unexpectedly whereas in the advance to contact the commander is deliberately seeking to establish contact with the enemy.

7108. A meeting engagement may occur in various circumstances:

a. When a force that is moving makes contact with an enemy about whom the friendly force has little or no information. It may occur if reconnaissance has been ineffective;

b. When both sides become aware of the other and decide to attack without delay in an attempt to obtain positional advantage, gain ground of tactical importance, maintain momentum or assert dominance over the enemy;

c. When one force deploys hastily for defence while the other attempts to prevent it from doing so.

7109. The important characteristics of meeting engagements are a shortage of information about the enemy and a limited amount of time available for the commander to develop the situation. Plans must be drawn up and executed as quickly as possible, and ideally are based on anticipatory orders given during the initial planning and orders process (before the advance wasbegun). Success will depend primarily on the ability of the commander to anticipate a meeting engagement and to bring to bear, fully and quickly, the combat power at his disposal. Thus, at all levels, bold, vigorous action by subordinate commanders is often the key to success. Prompt action to gain control of the situation quickly will reduce the enemy's chances of carrying out his plans and may help to preserve freedom of action. Well-rehearsed drills will be of immense importance.

Seizing and Retaining the Initiative

7110. Meeting engagements will usually force a commander to reconsider and often to adjust his plans. The basic principle in a meeting engagement is to seize and retain the initiative. Success depends, to a large extent, on the speed of reaction of the commander and of his forces. He or she can then decide how to develop the meeting engagement into offensive or defensive activities.

7111. If the enemy is much stronger, or if he is at a higher state of combat readiness, it may be necessary for the force in contact to engage him with the maximum combat power available, in order to hinder him from deploying his forces and prevent him from using favourable ground. This will gain time to allow action to be taken by a superior commander.

Preparing for a Meeting Engagement

7112. It will not be possible to plan in detail for a meeting engagement. However, a force that is properly deployed in accordance with recognized tactical principles will be poised to react to most situations. Commanders must prepare for the possibility of a meeting engagement through:

a. well trained forces with sound battle drills;

b. flexibility in plans and combined arms groupings in order to balance forces;

c. a good use of screen or guard forces, potentially using multiple sources (for example, reconnaissance forces in a screen supported by UASs);

d. good anticipatory planning and briefing to subordinates;

e. a rapid passage of information.

7113. Meeting engagements will invariably force a commander to reconsider and often adjust plans. The basic principle is to seize and retain the initiative. This will give commanders the freedom of action they need, whether to accomplish their mission as they originally intended or to change their plan to suit the new situation.

7114. While commanders can make no firm plans, they should make use intelligence and detailed map-based contingency planning. They should study the terrain and the map to deduce areas that are favourable to a meeting engagement and areas where they are likely to occur; based on this the commanders should issue anticipatory orders to subordinates as what they can expect to do if a meeting engagement occurs. Additionally, they should take particular note of the latest situation or intelligence reports and assessments concentrating on likely enemy capabilities, objectives, avenues of advance, terrain and natural obstacles.

7115. Meeting engagements are such that there will not normally be enough time for complete battle procedure to take place as the two opposing forces close. Assuming a reasonable balance of forces, victory will go to the side with the higher tempo. The commander who assesses and reacts more quickly to the situation, strikes the first blow and keeps the enemy off balance and gains a distinct advantage. In the planning stage, this implies careful reconnaissance, balanced grouping, forward command and responsive indirect fire support on call. Planning in this type of battle should never be so detailed as to lead a commander into a preconceived course of action, as a plan is not a substitute for initiative and bold leadership that overturn material superiority.

Scheme of Manoeuvre

7116. Commanders whose forces make contact with the enemy in a meeting engagement must immediately decide how they want to fight the battle. In deciding on a course of action they must not lose sight of their original mission and of their superior commander’s intent. On the other hand, they must not shirk their responsibility to act independently. Their decision must be notified to their superior commander immediately.

7117. One of the commander's first tasks in a meeting engagement is to determine the enemy's strengths and dispositions. He or ashe should particularly ascertain the situation on the enemy's flanks. The identification of, and an attack on, an assailable flank will generally disclose the enemy's dispositions more rapidly than a frontal attack and will give more opportunity for tactical surprise and decisive results. Whilst trying to identify the enemy’s weakness, the commander must ensure his own flanks are secure.

7118. Often, it may not immediately be possible to use all the forces that commanders may wish to deploy. In this case, they must establish an order of priority for deployment early in the activity. Throughout the activity, they must keep a clear picture of the location and status of all elements of his force.

7119. The commander's decision on how to continue a Meeting Engagement should, wherever possible, be based on his personal assessment of the situation on the ground. However, he or she must not sacrifice valuable time in order to obtain detailed information. He or she must realize that he or she is in a race for time and space with the enemy commander. It is, therefore, extremely important that, before the operation starts, the commander evaluates possible routes for movement and assesses any area of terrain that may be useful, and that he or she keeps these in mind while his force is moving.

7120. The speed of reaction and considerable fire power of armed helicopters, allow them to be committed very quickly against the enemy in a meeting engagement. In particular, early deployment of reconnaissance and AH in a combat as opposed to a combat support role will nearly always give a commander an advantage.

Command and Control

7121. A meeting engagement will create a number of challenges for commanders, in terms of command and control:

a. Initially, they will have little intelligence on the strength, location and intention of the enemy. It may even be necessary for him to confirm the locations of his own forces. Immediate and clear situation reports from lower commanders are essential to allow him to make his plan;

b. The headquarters may be on the move, and, therefore, its effectiveness may be restricted. The staff may be dispersed or the commander separated from them. Characteristically, units will be moving in radio silence and it will take time to activate communications between HQs;

c. If a meeting engagement is likely, therefore, it is vital that commanders are well forward and able to speak to each other, even if their HQs temporarily cannot.

Combat Support

7122. **Artillery**. The amount of initial fire support available to the forces which become involved in a meeting engagement depends on the organisation for movement laid down by the commander. It is, therefore, particularly important that there is fire support available to support the leading elements of a moving force. Fire control elements must be allocated to the leading elements of a combat force. A meeting engagement is also an ideal situation in which to make use of scatterable mines (as limited by the Geneva Conventions and, when applicable, the Ottawa Treaty and Protocol II of the CCW) to restrict the enemy's freedom of manoeuvre.

7123. **Air Defence.** Air defence weapons should be positioned along enemy air avenues of approach to overwatch forces on the move. Enemy ground forces will often be supported by armed helicopters or they may approach under air cover, or by air transport.

7124. **Engineers**. The rapid deployment of engineers can be crucial in transitional phases of the battle. Engineer reconnaissance must be well forward as must armoured engineers. Combat engineers must be readily available for mobility or counter mobility tasks. An appropriate and quick employment of engineer equipments can ensure freedom of movement and deny it to the enemy. Engineer planning of scatterable mines, for example, can provide responsive counter-mobility support if the assets are available.

7125. **Electronic Warfare**. EW (intercept and direction finding) resources will provide additional information on the enemy prior to the meeting engagement. Once battle is joined, jamming of enemy command and control and fire support communications will assist the commander in achieving his aim.

Combat Service Support

7126. CSS must enable the commander to seize and maintain the initiative and must be capable of responding quickly to the rapid changes in plans which may occur. Because of the limited information available when a meeting engagement occurs, combat service support commanders must be ready for the unexpected. Ensuring that combat supplies and materiel levels are maintained at the maximum practical level is one means of achieving this readiness. At a certain extent, CSS elements must be able to protect their material and combat supplies against enemy attacks in unclear situations.

7127. In a meeting engagement speed is the major criterion and combat service support planning is subordinated to achieving that. At the level above that which is in contact, combat service support should concentrate on directing its efforts on the formation or unit involved both during and after the battle. This might include:

a. Ammunition for the battle if there is time, and certainly after reorganisation;

b. Refuelling after reorganisation;

c. Prioritization and/or movement closer of medical support and the review of the casualty evacuation plan;

d. Ensuring maximum availability of equipment both during the engagement and in preparation for subsequent operation;

e. Planning for the recovery of battle-winning equipment.

SECTION VIII - LINK-UP

Purpose and Concept

7128. Link-up is conducted to join two friendly forces in enemy controlled territory. It may therefore be necessary to destroy through offensive action the enemy between these forces before a link-up is established. It is often

followed by another activity such as a forward passage of lines, a withdrawal or a relief.

7129. The mission to carry out a link-up operation will always be given in the context of a subsequent mission for the forces involved. It will normally state the location or the route where the link-up will take place. Frequently, a time will be stipulated for the link-up.

7130. In a link-up, both forces may be moving towards one another, or one may be stationary or encircled by enemy. They may have the same or differing missions. A link-up activity could occur under the following circumstances:

a. A link-up between two forces engaged in converging attacks or advances may take place when each force captures adjacent objectives, thus completing encirclement. In this case, both forces may be moving or one will be stationary, holding its position;

b. A link-up with encircled or cut-off forces may take place on the perimeter of the defensive position established by that force. When the link-up is combined with a break-out action, it may take place at another designated objective. The encircled force should try to break out, or at least mount some form of diversionary action in order to ease the task of the relieving force by diverting enemy attention;

c. A link-up activity with an air delivered or infiltrated force may take place on the perimeter of its defensive position. In this case, the link-up is normally followed by a passage of lines or by a relief of the forces involved.

Planning

7131. Link-up operations are generally offensive in nature. The size and composition of the force will be determined by the requirements of the link-up as well as those of the subsequent mission.

7132. The requirement for the link-up may be part of the concept of operation. Equally, a link-up may become necessary in the course of an operation and must be planned as the situation develops. In any event, details of plans must be passed to all concerned in good time, without undermining security.

7133. When planning a link-up activity, particular attention should be paid to:

a. The coordination of manoeuvre forces involved;

b. Command relationships;

c. Communications, including code words and pass words common to both forces;

d. Control measures.

Execution

7134. The following planning and execution considerations and procedures apply:

a. A major consideration in this type of activity is speed in establishing the link-up in order to reduce the possibility of enemy reaction and to minimize the period of vulnerability;

b. For the moving force in a link-up, the operation may involve deliberate attacks or, if circumstances permit, the more rapid movement of an

advance to contact deployment;

c. Ground link-up points must be coordinated at locations where the axis of advance of the moving force intersects with the security elements of the stationary force;

d. A restrictive fire control measures are required to coordinate fire from the converging forces;

e. During the last phase of the link-up operation the speed of advance of the forces must be carefully controlled; reconnaissance elements must seek to establish contact with the other force as early as possible and additional information will be obtained to confirm/adjust earlier plans;

f. When the link-up is made, the moving force may join the stationary force or pass through or around and continue to attack the enemy. If they join up to continue activities, a single commander for the overall force must be designated. Subsequent activities must be launched as quickly as possible so as to exploit the success achieved by the link-up;

g. Primary and alternate link-up points are established on the boundaries where the two forces are expected to converge;

h. As they move closer to one another, the need for positive control to avoid incidents of fratricide is important and must be coordinated to ensure that the enemy does not escape between the two forces;

i. Leading elements of each force should communicate in a common radio net.

Command and Control

7135. The convergence of friendly forces in the area of the link-up may present particular problems that require the appointment of a single commander in the area. This procedure will also be normal when there is a significant difference in the size of the two forces taking part in the operation. Where this is the case, this commander must be designated beforehand and in sufficient time to allow for concerted action to be planned. The time or conditions under which command is assumed must be clearly stated.

7136. The following control measures require emphasis:

a. Axis of advance or boundaries for the link-up;

b. Objectives to be held and/or to be captured by each of the forces taking part;

c. The locations where contact between the two forces will be established;

d. The timing of the operation for the forces involved;

e. Fire coordination lines to avoid fratricide, particularly as the two forces are converging.

7137. Liaison between the forces taking part and with the overall commander is very important. Communications in these circumstances can normally be maintained by radio only. The majority of detail for liaison and communications will be laid down in the overall commander's plan; where that is not possible; these arrangements must be judiciously expedited on the initiative of the two forces carrying out the link-up operation. The measures include:

a. Liaison teams;

b. Passwords and visual identification signs;

c. Measures for combat identification;

d. Report lines and reference points;

e. Contact frequencies, radio authentication procedures and codes.

Combat Support and Combat Service Support

7138. **Fire Support**. Fire control must be carefully exercised until a link-up has been achieved in order to avoid losses. Link-up forces will use normal fire control measures. Specific coordination must be established, however, for any phase when the fire of one force may affect the operations of the other.

7139. Particular attention must be given to the control of CAS in the area between the forces as they approach the area of the link-up.

7140. **Engineers**. In link-up operations, mobility support of forces that are moving to linkup is critical. Clearing of routes and enemy barriers is essential for the timely completion of the operation.

7141. **Electronic Warefare**. Employment of EW must be carefully coordinated in order to avoid mutual interference and duplication of tasks.

Combat Service Support

7142. Apart from taking account of the requirements of the link-up force itself, the commander has to consider the need to provide combat service support for the force with which it is intended to link-up. In principle, CSS considerations are generally the same as those for offensive operations.

SECTION IX – RELIEF

Purpose and Types of Relief

7143. When activities are taken over by one force from another, this is referred to as the conduct of relief activities. It includes a relief in place (one force replacing another force in a defensive or static position), a relief of encircled forces, or a passage of one force through another (forward or rearward). Its purpose is to sustain the overall level of combat power. Relief activities are undertaken when forces:

a. Are unable to continue with their mission;

b. Are required for activities in another area;

c. Have accomplished their mission;

d. Are due for rotation to avoid exhaustion;

e. Are not suitable to accomplish the new task.

7144. The types of relief are as follows:

a. **Relief in Place.** A relief in place (RIP) is defined as: *an operation in which, by direction of higher authority, all or part of a unit is replaced in an area by the incoming unit. The responsibilities of the replaced elements for the mission and the assigned zone of operations are transferred to the incoming unit. The incoming unit continues the operation as ordered* (NATOTerm). In certain circumstances the force being relieved may be encircled by enemy forces and unable to breakout. The force being relieved is termed the outgoing force. It is replaced in a sector by an incoming force;

b. **Passage of Lines.** A passage of lines is defined as: *an operation in which a force moves forward or rearward through another force's combat positions with the intention of moving into or out of contact with the enemy* (NATOTerm). A passage of lines are broken down as follows:

(1) **Forward Passage of Lines** (FPLO). A relief in which a force advances or attacks through another force which is in contact with the enemy;

(2) **Rearward Passages of Lines** (RPOL). A relief in which a force effecting a movement to the rear (outgoing force) passes through the sector of a unit occupying a defensive position.

(3) With regard to a passage of lines, the unit or formation conducting the move into or through the area is termed the “moving force”. The unit or formation being relieved or through whose area the passage is occurring is termed the “in-place force.

General Considerations

7145. Relief is normally undertaken in order to sustain the overall level of fighting power. Inherent, is the transfer of operational responsibility for a combat mission. The requirement is that this transfer should take place while maintaining the required level of operational capability. Commanders normally co-locate to affect the handover.

7146. The mission will be determined by the commander's intentions, the type of activity in which the force has been engaged, the type of enemy force involved and his anticipated course of action. Inherent in any relief activity is the transfer of operational responsibility for the combat mission currently undertaken by the in-place force. This transfer should take place without a loss in operational capability; that is, the mission should be maintained throughout the relief. This requires detailed collaborative planning, reconnaissance and coordination.

7147. During any relief, there is a period when congestion increases the vulnerability of the forces involved. The possibility of confusion is inherent, as two parallel command systems will be operating in one area at the same time. The complexity should not be underestimated, but by contrast, the beneficial and possibly decisive effects to be gained from successful coordination of the combat power of both forces should not be forgotten should it be required. Close and careful coordination and detailed combined planning between both forces is essential to avoid confusion and misunderstanding.

7148. It is quite possible that a relief activity will involve forces of differing nationalities. In this instance, the following additional points should be considered:

a. Dissimilar unit organisations may require special adjustments in some areas, particularly during a relief in place;

b. Control of fire support may require special liaison;

c. Language difficulties may require the increased use of guides;

d. Special communications arrangements may be required including additional liaison teams and communications detachments.

Planning

7149. In planning for any relief (including a passage of lines), the following should be considered:

a. **Security and Protection.** The intention to conduct a relief must be concealed from the enemy. Deception measures should include the continuation of normal patterns of activity. Additional protection such as the deployment of a screen may be required due to the increased vulnerability during such operations;

b. **Passage of Responsibility.** The passage of responsibility during the operation and the related matter of the location or co-location of the commanders involved should be clearly defined for each stage of the operation. This is particularly important during a relief in place in terms of the point at which the incoming commander assumes command of the tactical situation. The passage of respopnsibility will be effective on order of the superior commander or by coordination beween commanders involved. In any case the inplace force remains responsible until the in-coming force will be effective. By high enemy pressure during the relief the relieved forces have to be prepared to support the relieving forces for alimited time also after passage of command;

c. **Early Reconnaissance, Liaison and Coordination of Operational Plans.** Close cooperation and coordination are required at all levels and at an early stage between the troops in position and those that are moving. As much detailed reconnaissance as the tactical situation allows must be made by an incoming force. Liaison officers must be deployed well in advance from the moving force to the in-place force. Plans should be coordinated by commanders or liaison officers as early

as possible so that the forces have sufficient time to plan. Details of the current enemy situation, terrain and tactical tasks must be exchanged between the incoming or moving force and the in-place force;

d. **Allocation of Routes and Waiting Areas for Movement.** Incoming and outgoing forces should, where possible, be allocated separate routes. Waiting areas and other traffic control points will have to be planned and issued for use even if only for contingencies should there be a delay in the operation;

e. **Obstacles and CBRN Threats.** The obstacle and barrier plan must be issued to the incoming or moving force. For a relief in place, the incoming force must be prepared to assume these. Complete information regarding CBRN operations and threats must be passed along including contaminated terrain, downwind hazard areas, pre-planned decontamination sites and CBRN survey and observation posts;

f. **Allocation of Areas.** This will include the allocation of areas for staging and deployment, including areas for artillery;

g. **Timings.** The detailed timing of the operation will be made within the guidelines set by the overall commander;

h. **Control Measures.** Control measures for the relief must be issued by the overall commander and coordinated between the two forces;

i. **Communications Arrangements.** The forces must coordinate any communications arrangements to be established in support of the operation including frequencies, codes, passwords and electronic support measures available;

j. **Fire Support.** The force in position will always provide fire support for the moving force and this must be closely coordinated in planning;

k. **Combat Service Support.** The forces involved must coordinate any CSS that is to be given to or transferred between the two forces.

The Relief in Place

7150. **Purpose**. The incoming force normally assumes the mission of the outgoing force, usually within the same boundaries and, at least initially, with a similar disposition of forces, where possible. RIP is normally conducted in defensive activities and might occur in the following circumstances:

a. When the existing force is depleted or exhausted and needs to be replaced;

b. When troops of one capability or role need to be replaced by troops of a different role;

c. For routine rotation of troops.

7151. **Planning.** Once begun, all relief activities take place as quickly as possible. Where possible, the activities should take place at night or during periods of reduced visibility. Detailed planning and preparation for a relief in place is required if the activity is to be conducted successfully in that it will limit confusion and congestion. The incoming force should conduct a thorough reconnaissance if time permits. If time is limited, relief is planned and executed from oral or fragmentary orders. The liaison personnel are left by the outgoing formation or unit to assist with the coordination. Personnel from combat, combat support and combat service support units remain with the incoming force until barrier, fire support, counterattack and combat service support plans are coordinated.

7152. **Command and Control of RIP.** The moving force establishes liaison with the in-place force before and during a relief. The in-place commander is responsible for the defence of his sector until responibilities passes. The moment when responsibilities have to be transfered is determined by mutual agreement between the two unit commanders within the overall direction of the higher commander. Both commanders should be collocated throughoutthe operation. Following the transfer of responsibilities, the incoming commander will then assume the appropriate control of all elements of the outgoing unit which have not yet been relieved. The change of command will be reported to the higher commander. Responsibilities for the various planning requirements will be split between the different headquarters involved in the activity.:

a. **Superior Headquarters Planning and Direction**. The superior HQ of the two forces involved will conduct the initial planning and command the relief. The in-place force will be responsible for the detailed control of the relief within its areas of operations, until mission transfer. The headquarters ordering the relief must plan and issue orders with attention to the following:

(1) Allocation of sufficient time at all levels for a detailed handover of essential information, including the current tactical situation, the current operation orders and plans and the organisation of the area, assignment of tasks, arcs of fire, and location of facilities, obstaclesw and routes;

(2) The general sequence of the relief (although the controlling headquarters will provide detailed direction for sequence);

(3) The timeframe within which the relief is to be conducted and the time of transfer of command;

(4) The general control measures and features;

(5) The designation of main routes for use in the operation;

(6) The liaison arrangements to be put in place. Generally, liaison goes from the moving forces to the in-place forces;

(7) Guidelines for any reconnaissance activity including any limitations;

(8) Guidelines for security measures to be taking including the

allocation and positioning of reserve forces to be made available;

(9) Arrangements and timings for the passage of command;

(10) Any special communications to be established or maintained during the operation including frequencies, codes, passwords and electronic support measures;

(11) Any additional fire support or tactical air support and surveillance assets (e.g., unmanned aircraft systems) available for the operation;

(12) Arrangements to effect airspace control and to coordinate air defence for the operation;

(13) Any special engineer or other combat support available for the operation;

(14) Any special or additional combat service support available for the operation;

(15) The guidelines to be followed in regard to the exchange of compatible equipment and supplies between the forces involved;

(16) Consideration of reducing vulnerability by moving at night or limited visibility.

b. **Controlling Headquarters in a RIP.** The in-place force remains in command of the local situation and controls the detailed relief until the handover of the mission and transfer of command is complete, as arranged by the superior headquarters. It is considered the headquarters controlling the conduct of the relief and setsthe following details:

(1) The specific timings within which the relief will be conducted;

(2) The detailed control measures and features include specific routes, details of traffic control plan and waiting areas;

(3) The sequencing of the operation to include the order in which elements are to be relieved;

(4) The outline of the liaison plan including the direction as to the exchange of liaison officers;

(5) The outline of security, deception and other protective measures to be instituted prior to and during the operation;

(6) Any direction needed for the passage of command during the operation;

(7) Details for the coordination of all fire support, surveillance systems and tactical air support allocated for the operation;

(8) Details for the coordination of all engineer and other combat support available for the operation;

(9) Direction and coordination of details pertaining to the handover of any barriers and field fortifications to be exchanged;

(10) Confirmation of all communications to be established or maintained during the operation including call signs for incoming forces, frequencies, codes, passwords and any electronic support measures;

(11) Details for the handover of the overall mission and supporting tasks including patrols and observation posts;

(12) Details for the coordination of all available CBRN defence assets;

(13) Details for the coordination of all combat service support for the operation
including detailed movement plan and associated traffic control;

(14) The confirmation of policies and direction for the exchange of compatible equipment (such as machine gun tripods already sited) and supplies between the forces involved.

7153. **Coordination Between Outgoing and Incoming Elements.** Both headquarters involved in executing the relief must, whenever possible, co-locate control elements and provide direction as to their elements already set by the controlling headquarters (see details listed in previous para).

7154. **Route Allocation.** Throughout the relief operation vehicle traffic must be restricted to what is absolutely necessary. Careful route planning and movement control are essential to avoid congestion. The movement control plan must be simple in concept but in sufficient detail to ensure that it meets the aim. Movements in opposite directions will be conducted on separate roads and tracks if possible, and lateral movements will be avoided. Incoming forces have precedence. Outgoing forces can rally in assembly areas where they will be assigned new missions. Where possible, incoming and outgoing formations and units should make shared use of transport allocated for the activity.

7155. **Execution.**

a. The relief in place depends essentially on the time available and the local conditions. It can take place simultaneously over the entire width of the sector, or it can be decentralised and staggered across the formation with regard to time and place. If forces are relieved simultaneously over the entire width, a shorter time is required, but the readiness of the defence is considerably reduced and the enemy is more likely to be able to detect the higher level of movement. By contrast, a relief staggered with regard to time and place takes longer, but a larger element of the outgoing forces is combat ready at all times and concealment is easier;

b. Combat support troops should not be relieved at the same time as combat troops;

c. Reserves must not be withdrawn until the relief in place has been completed;

d. In general, night and limited visibility will be exploited for the relief,

particularly when close to the enemy. If possible, the advance parties of the incoming unit will make a reconnaissance in daylight. If this is not possible or if the incoming unit needs assistance from the outgoing unit to familiarize itself with the local conditions quickly, rear parties of the relieved unit will carry out the orientation;

e. Communication links must be maintained, unaltered if possible, for the entire duration of the relief;

f. Combat service support troops of the outgoing unit will be sent back as early as practicable. Prepositioned common user bulk supplies and barrier materiel will normally be taken over by the incoming unit;

g. The relief then consists of a series of relief activities conducted by formations and monitored by respective superior headquarters. Once the relief has started commanders and staffs are concerned with:

(1) Timings and movement of formations and units;

(2) Coordination of transportation resources;

(3) Movement control;

(4) Current activities;

(5) A constant surveillance and intelligence collection capability;

(6) A coordinated air defence plan involving air, aviation, air defence and all arms air defence resources;

(7) The availability and notice to move of reserves.

7156. **Defence Plan Review.** The assumption of responsibility for an existing defensive position and barrier may force the new commander to fight the previous commander’s plan, unless significant adjustments are made. A full review of the barrier plan, fire support plan and manoeuvre plan should be conducted to ensure that the new commander's intent may be met.

Relief of Encircled Forces

7157. The purpose of relieving encircled forces is to break through enemy positions to reach an encircled force, thus restoring its freedom of action. In such a situation, it is unlikely that the encircled force will have the combat power necessary to break out of the encirclement, even with support from another force. The breakthrough will result from a deliberate attack, followed by a link up activity with the in-place, encircled force, and then the relief.

Extended Relief in Place

7158. During campaigns that are short of major combat (such as peace support campaigns and COIN campaigns) a relief in place being conducted between units or formations may be conducted over an extended period of time. They still follow the same procedures and principles, but will require additional time for incoming commanders to learn and understand the complexities of an AO such as key political leaders, persons of influence, power structures, aims and desires of local civilian populations and tribes, cultural habits and conventional and unconventional enemies and other adversaries. In short, the relief in place will include a handover of the knowledge base that considers all aspects of the AO that influence the achievement of the activity and strategic end states.

7159. In coming commanders must gain an understanding of the end states and objectives sought, and the current lines of activity driving towards those objectives. During the period of relief, they will be able to reflect upon the prosecution of these lines of activity and begin to make an assessment as to how they may be adjusted if necessary.

7160. Much of the information that will support a relief in place may be passed to the incoming/moving force by the in-place force during the period leading up to the relief as part of the battle procedure of the incoming force. The in-place force can even dispatch trainers and advisors to the relieving force in order to assist in their battle procedure and training.

Forward Passage of Lines

7161. **Purpose**. During a forward passage of lines, a moving force passes through an in-place force in order to assume the latter's mission or a new mission, which might be an attack or an advance to contract. The force in contact (in-place force) remains in place and must provide the moving (advancing) force with as much assistance as possible including tactical and logistical support. A forward passage of lines will be used when:

a. An attack is to be continued with fresh or more suitable forces;

b. A moving force is required to pass through an area held by another force, such as a bridgehead or crossing site;

c. The advancing force has to take possession of suitable terrain in order to continue the battle.

7162. **Planning**. Although a relief operation it is also an offensively oriented activity that requires careful planning and both headquarters to consider a wide range of factors. Detailed planning and close coordination and liaison are necessary for success. The following is to be noted:

a. The planning procedures for a forward passage of lines are similar to those for a relief in place, although less physical reconnaissance may occur;

b. The moving force will be organized so that the mission can be carried out immediately after the passage of lines. If the moving force is to immediately conduct an offensive operation such as an attack following

the passage, then the forward line of the in-place force may be considered a line of departure for the moving force, which is in fact an assaulting force;

c. The in-place force should adopt a posture which will facilitate the passage and provide the maximum support;

d. The plans for the moving force take priority. On receipt of the warning order, the commander and staff of the moving force establish liaison with the force in place;

e. The moving formation/unit will normally co-locate its tactical or main headquarters with that of the in place force;

f. All levels of command should exchange liaison personnel;

7163. **Command and Control of FPOL.** The overall command and control of the operation should be with the superior headquarters of the forces involved. Normally, the commanderof the moving force assumes responsibility for the conduct of the operation after the passage is complete, as the follow-on mission is started. Responsibilities for the various planning requirements will be split between the different headquarters involved in the activity. They are detailed below. The list is not exhaustive and any given activity may require a different allocation of responsibilities:

a. **Controlling Headquarters.** The headquarters ordering the forward passage of lines must detail:

(1) The initial, intermediate and final objectives of the force passing through the in-place force and its positions. Usually, the mission may be an attack or to resume the advance to contact;

(2) The timeframe within which the forward passage of lines is to be conducted;

(3) The overall plan including the scheme of manoeuvre. This will include the sequencing of the operation, but so as to support the tactical plan of the moving force;

(4) The general control measures, including timings, control lines, routes and rendezvous points. The overall commander will likely designate:

(a) Control lines and areas;

(b) The time for the beginning of the attack or advance;

(c) The extent of support for the attack by the outgoing force;

(d) Particular reconnaissance requirements;

(e) Command relationships

(f) The routes through the established position as well as the subsequent axis or axes of advance.

(5) Arrangements for liaison, reconnaissance and advance parties;

(6) The guidelines for security measures to be taken prior to and

during the operation, to include allocation of reserves;

(7) Fire support coordination including tactical air support;

(8) Arrangements for the exchange of combat information;

(9) Guidance as to arrangements for passage of command during the operation;

(10) Deception plans, including emission control and electronic warfare, and restriction on forward reconnaissance;

(11) Any special communications to be established or maintained during the operation, including frequencies, codes, passwords and any electronic support available;

(12) Movement control and restrictions;

(13) Airspace control measures and coordination of air defence;

(14) Any special engineer or other combat support available;

(15) Combat service support including criteria for handover of equipment, combat supplies and medical support.

b. **Headquarters In-Place Force.** The in-place force is there to support and facilitate the movement of the moving force which will assume the mission or launch a new one. The in-place force will control the operation and movement through its lines until the passage is complete. The in-place force is responsible for the following:

(1) Intelligence, including enemy dispositions and topographical information. This will also include information concerning the local populace, key figures, attitudes, aims, intentions and power structures;

(2) Detailed timings within the window given by the headquarters ordering the passage. These timings must be based upon any fixed timings for completion of the moving force's subsequent mission;

(3) Coordination of reconnaissance and exchange of combat information;

(4) Detailing and coordination of control measures and features and allocation of terrain, including routes, hides, and waiting areas. This headquarters may have to provide traffic control points and guides;

(5) Liaison where required. (Normally the moving force provides liaison to the in-place force);

(6) Allocation of supporting tasks to its own subordinate forces, to include fire support, screens and standing patrols. This must be planned and allocated based on the tactical plan of the moving force to achieve its passage and follow-on mission;

(7) Security of the line of departure of the moving force. Selection of the line of departure should be done in line with the plans of the moving force;

(8) Selection, security and maintenance of routes and movement control;

(9) Other security measures including deception and other protective measures to be instituted before and during the operation;

(10) Confirmation for passage of command if necessary;

(11) Details on the location and type of barriers and obstacles that may affect the movement of the moving force;

(12) Details for the coordination of fire support. This will include fire support until the pre-H hour fire plan starts. Thereafter, details will include the provision of fire support while the moving forces is still in range. Ideally, the in-place force will be able to position assets to support the moving force across the line of departure;

(13) Provision of air defence cover, essentially up to the line of departure and desirably, forward of it;

(14) Any communications arrangements between the two forces including frequencies, codes, passwords, signals and electronic support measures;

(15) Coordination and assignment of any required engineer support, to include the breaching of obstacles and the improvement of routes;

(16) Forward replenishment, especially fuel, after the move forward and before the commitment of the moving force. This will ensure that the moving force begins the passage and its follow-on mission with a full combat load.

c. **Headquarters Moving Force.** The moving force must conduct detailed planning for the forward passage and the follow-on mission and whenever possible forward reconnaissance of the area and plan for the forward passage and the follow-on mission. The moving force, in conjunction with the in-place force, must ensure the following:

(1) Provision of a headquarters, to be co-located with the headquarters of the in-place force. There should be representatives from the staff and artillery and engineer advisors;

(2) Agreement with the in-place force over provision of terrain, especially for gun areas, concentration/assembly areas, waiting areas and attack positions for follow-on tasks;

(3) Liaison officers to subordinate headquarters or units of the in-place force. This should include arrangements for guides and escorts;

(4) Assistance with movement control;

(5) Confirmation of and coordination for the overall scheme of manoeuvre, including timings, sequence and movement control;

(6) Detailed groupings and tasks, to include support from the in-place force;

(7) Detailed coordination of reconnaissance including arrangements for the reception, briefings, and escorting of the reconnaissance parties of the moving force;

(8) Detailed coordination of deception, security and local protective measures, to include screens, standing patrols and the allocation of surveillance assets;

(9) Detailed arrangements for the exchange of combat information;

(10) Confirmation and agreement of command responsibilities and any passage of command as needed;

(11) Detailed coordination of all fire support and tactical air support available and tasked for the operation, along with the handover or coordination of existing fire plans;

(12) Detailed coordination of barrier plans and the need for guides through them;

(13) Detailed coordination of CBRN activities and threats;

(14) Detailed coordination of all combat support and combat service support including movement control and support (e.g., recovery assets pre-positioned).

7164. **Timings in a FPOL.** The detailed timings of the activity will be made within the guidelines set by the superior commander commencing with a timely warning order. Time must be allowed for:

a. Planning, initially at force level and then at subordinate levels;

b. Movement and co-location of command elements;

c. Movement of reconnaissance, advance and combat support elements;

d. Battle procedure;

e. Movement of the main body.

7165. **Execution of a FPOL.**

a. **General.** The moving force will take advantage of the security provided by the in-place force to deploy for the attack. The entire movement from the rear through the in-place force should be completed as a single fluid movement in order to avoid congestion. The indirect fire support elements of the moving force may be deployed in the in-place force's area prior to the arrival of the manoeuvre force;

b. **Grouping.** Whenever possible, re-grouping should be carried out before the move forward. Regrouping in a forward assembly area should be avoided. The moving force will be organized so that the mission can be carried out/continued after the passage of lines;

c. **Order of March.** The order of march will generally be reconnaissance elements, followed by combat support units which may have to move early in order to support the move of the combat units, followed by combat units. The combat support elements may initially lead and deploy amongst the in-place force in order to support the crossing of

the line of departure and launch of the moving force; and

d. **Forward Assembly Area.** A forward assembly area may be necessary for the replenishment of vehicles, rest for crews and any final orders on regrouping.

Rearward Passage of Lines

7166. **Purpose.** The RPOL is an activity in which one force passes through the static position of another, in-place force. It normally passes back, rearward from the direction of orientation, through a defensive position. In terms of planning and coordination, it is very similar to a forward passage of lines, except the in-place force may have to help the moving force break contact with the enemy. A rearward passage of lines may occur for various reasons including the following:

a. As the final phase of a delaying activity in which the moving force has completed the delay, breaks completely from enemy contact and passes through an in-place force manning a defensive position. The moving force will likely be a guard, screen or covering force having completed its mission and requiring assistance with breaking contact with the enemy. It may also need immediate combat service support such as replenishment and medical support;

b. As a means of changing the type of force facing the enemy;

c. When terrain can be abandoned;

d. As a means of relieving a force unable to continue with its mission;

e. As part of a withdrawal activity. Forces withdrawing may have to conduct a rearward passage of lines when moving back through a new position or intermediate positions manned by other forces. Again, the in-place force may have to assist the moving force in breaking contact with the enemy.

7167. **Planning of a RPOL.**

a. The moving force should be organized for disengagement from the enemy. It will likely have to deploy a rear guard to assist in breaking contact.

b. The in-place force will be organized so that it can assist the moving force in breaking contact and then carry out its mission as soon as it assumes this responsibility. This should be planned to maintain a continuous engagement of the enemy. Additionally, it will ensure the smooth passage of lines of the moving force. For this purpose a handover line will be established, which will indicate when the in-place force assumes responsibility for the engagement of the enemy. The handover line should have some or all of the following characteristics:

(1) The line should be forward of the feature from which the enemy can first engage the next defensive position with observed fire, and be situated so that crossings and defiles used by the outgoing force can be protected;

(2) The line should be in an area which can be defended at least

temporarily;Good lateral routes should exist behind the handover line to allow the use of alternative entry points;

(3) The line location should be easily identifiable on the ground.

c. The planning procedures for forward and RPOL are similar although movement to the rear is likely to be more difficult because:

(1) The desire for speed and lack of troops will make detailed liaison, reconnaissance and recognition of friendly troops difficult;

(2) If the moving force has been in action, its soldiers and units will be tired and possibly disorganized;

(3) The enemy may be pressing hard on the moving force, trying to overtake them, cross simultaneously, or cut them off from withdrawal. Close coordination is needed for this complex action.

d. The sequence of the RPOL should allow for the early passage by elements not essential to the immediate operation, in order to reduce the density of the force when it moves.

7168. **Command and Control of RPOL.** The actual transfer of responsibility will normally be agreed between the two commanders executing the operation. Clear conditions must be set under which transfer of responsibility will occur. This can be carried out most effectively if the commanders are collocated. Where appropriate, as the operation progresses lower level commanders may also be collocated. Responsibilities for the various planning requirements will be split between the different headquarters involved in the activity. They are detailed below. The list is not exhaustive and any given activity may require a different allocation of responsibilities:

a. **Ordering Headquarters.** The headquarters ordering the rearward passage of lines must detail:

(1) The timeframe within which the rearward passage is to be conducted;

(2) The general scheme of manoeuvre, including groupings and tasks. Tasks must include any tasks to the in-place force to assist the moving force, including assistance in breaking contact with the enemy;

(3) General control measures including control lines;

(4) The designation of routes through the established positions (in-place force) as well as routes to the new locations. This must be planned in conjunction with the in-place force;

(5) Liaison arrangements to be put in place for the operation;

(6) Guidelines for any reconnaissance activity including any special considerations;

(7) Guidelines for security measures to be taken prior to and during the operation, including the allocation of reserve forces;

(8) Arrangements for the exchange of combat information and combat

intelligence;

(9) Guidance as to the arrangement for passage of command during the operation including location of the handover line;

(10) Special communications arrangements in support of the operation including frequencies, codes, nicknames, passwords and electronic support measures;

(11) Any additional fire support and tactical air support available for and allocated to the operation, along with the allocation of support;

(12) Arrangements to effect airspace control and to coordinate air defence activities for the operation;

(13) The allocation of additional surveillance means in support of the operation including the provision of unmanned aircraft systems;

(14) Any special engineer or other combat support available;

(15) CBRN defensive arrangements including the allocation of decontamination facilities;

(16) Any special combat service support available. This may include provision of additional recovery, medical and logistical assets pre-positioned to support the moving force as soon as it cross the handover line;

(17) Combat identification measures;

(18) The subsequent employment and disposition of the moving force.

b. **Controlling Headquarters.** The in-place force controls the RPOL, in line with the direction of the ordering headquarters. The orders for the passage of lines issued by the controlling will include, as a rule:

(1) The location of the crossing areas or points;

(2) Combat identification measures as directed by the ordering HQ or details for hem if not already arranged;

(3) The scheme of manoeuvre, including sequence, task organisation and mission of the in-place forces, in relation to support for the moving force and for subsequent tasks and intent;

(4) Detailed timings, although enemy activity will influence the exact timing of the moving force;

(5) Allocation of control measures for the moving force, including control and report lines, handover line, traffic controls, guides, markings, sufficient routes, waiting areas before and behind the handover line, and replenishment areas;

(6) The time by which the in-place force's defences are to be ready;

(7) Confirmation of liaison arrangements and the passage of combat information and combat intelligence between the two forces. This should include updates from the moving force to the in-place force

and higher headquarters regarding current enemy disposition and intent;

(8) Security, deception and protective measures to support the operation, prior to and during its execution;

(9) Details regarding barriers that may affect the operation, including the responsibility for the closure and activation of barriers;

(10) The passage of command for the conduct of activities and new command relationships;

(11) Details for the coordination of all fire support to be provided to the moving force;

(12) Details for the provision of engineer and other combat support to be provided for the moving force;

(13) Details for the coordination of CBRN related details, defensive measures and decontamination arrangements;

(14) Communications, identification and recognition signals. This should include the standard practice of vehicles of the moving force turning their gun barrels towards the enemy as a means of friendly force recognition by the in-place force;

(15) Details for CSS to be provide to or coordinated for the moving force including replenishment and medical support once the handover line has been crossed;

(16) The subsequent employment and disposition of the moving force if placed in a command relationship.

c. **Moving Forces and In-place Forces.** Close coordination and cooperation are mandatory between the two forces. Liaison officers from the moving to the in-place force will be key. This should include the following:

(1) Plans must be coordinated for fire in support of the moving force. If necessary, the force in-place must occupy gun positions forward of their main position at the handover line, in order to give maximum coverage and to help guarantee a clean break for the moving force from enemy contact. These forward elements of the in-place force may take the form of a guard force. In any event, the in-place force will be prepared to provide fire support for the moving force;

(2) Plans must include a detailed groupings and tasks, particularly as to how the in-place force will support the passage of the moving force;

(3) Sequence of the passage, to include the order of march for the moving force, and confirmation of routes and forces moving;

(4) The in-place force must physically show all obstacles, and the routes and gaps through them, to the moving force. They must also be prepared to provide guides and movement control;

(5) Control of movement to the rear of the handover line is the responsibility of the in-place force. The number of routes back should be considered against the requirements for dispersion and the need to close routes to improve the effectiveness of barriers;

(6) The moving force requires information about routes, obstacles and fire support, whereas the in-place force requires information on the enemy;

(7) The moving force provides liaison detachments at all crossing sites that will see elements of the moving force coming through the in-place force. The liaison officers must have communications with the moving force elements coming through their area so that they can inform the in-place force of times and numbers;

(8) Planning must include mutually agreed recognition measures for day and night. That must include passwords, visual and audio signals, and the exchange of liaison personnel and the provision of guides by the in-place force;

(9) There should be checkpoints for the moving force to enable tight movement control to be exercised and to inform commanders of when the passage of lines is complete. If possible there should be no pause by the moving force in the forward areas in order to avoid congestion;

(10) Confirmation planning must occur to confirm movement details and timings;

(11) Confirmation and coordination of security arrangements, deception and local protective measures;

(12) Confirmation of and command responsibilities and changes to command authorities;

(13) Confirmation of the location of commanders for the two forces and how they will communicate;

(14) Detailed coordination of fire support, the coordination of existing fire plans and the allocation of reserves if needed to support the moving or in-place forces;

(15) The provision of any combat service support to the moving force, such as replenishment after the passage, decontamination and medical evacuation of casualties.

7169. **Execution.**

a. The moving force must be prepared to break contact with the enemy, and move through the in-place force to a new concentration or deployment. Movement should be at night or in conditions of poor visibility if at all possible. Note that vehicles of the moving forces should turn their guns towards the enemy (over the back of the vehicle) as they approach and pass through the in-place force. Such a precaution will help avoid unintentional engagement by in-place friendly forces;

b. Before the operation starts, casualties, non-essential vehicles,

equipment and supplies should be evacuated early so that routes are kept clear for the movement of the main force;

c. The first elements to move will normally be combat support units that must clear the forward area at an early stage. Vulnerability to enemy attack is reduced by selecting areas or points of passage that permit the moving formation to pass around the flanks of the formation in position and by designating release points well to the rear of these positions. The moving formation must have priority on an adequate number of roads and facilities to ensure its rapid movement through the defended area;

d. The in-place force must be deployed so that it can carry out its task when it assumes responsibility for the continuation of the mission. It must ensure that its elements in location to cover the handover line are of sufficient strength to conduct a temporary defence and to hold open crossing sites, passages and other defiles until the rearward passage of lines is complete;

e. Protective elements in position must be of sufficient strength to conduct a temporary defence until the RPOL is completed;

f. It may be necessary for elements of the moving force to be placed under operational control of the in-place force to deal with a critical situation caused by enemy action. Additionally it must facilitate the breaking contact of the moving force by providing routes, guides and traffic control;

g. The movement across the handover line, where responsibility changes, must be without interruption;

h. The commander of the moving force is responsible for identifying the last of his forces as it passes through the in-place force and for reporting his force clear to his formation’s commander and to the in-place force's commander.

Combat Support

7170. **Artillery.** Firing positions of incoming artillery should be sited so that further redeployment is not necessary. They should not be in positions that have already been located by the enemy. In a forward passage of lines, fire support units of the in-place force should not redeploy as long as they can provide support from their positionsto the moving force.

7171. **Air Support.** Local air superiority may reduce the vulnerability of the forces during periods when congestion cannot be avoided on the ground. For relief in-place operations there will be situations where CAS could assist the successful completion of operations.

7172. **Aviation.** Helicopters may be required to save time in the deployment of liaison and reconnaissance parties. Otherwise they are used in their normal operational role.

7173. **Engineers.** Whether conducting a forward or rearward passage, the in-place force has the responsibility to provide mobility for the passing unit along cleared routes or corridors through its sector. Creating lanes through the in-place units obstacles requires permission from the force commander who is in command of both the stationeryand moving forces. Tasks will include:

a. **Relief in Place.** Assistance with survivability tasks and the takeover of the existing barrier plan;

b. **Forward Passage of Lines.** Opening and maintaining routes, including the crossing of obstacles;

c. **Rearward Passage of Lines.** The maintenance of routes and counter-mobility tasks, including the closure of routes and the destruction of crossing points to impede the enemy.

7174. **Air Defence.** The unavoidable concentration of units during relief operations will increase vulnerability to air attack. This may require the adjustment of the air defence posture.

7175. **Electronic Warfare**. EW assets will support the deception plan, as well as continuing to provide information on enemy locations and intentions. Should the enemy potentially look to interfere with the relief, EW assets may be used to attack and disrupt such enemy actions.

7176. **CBRN Defence.** CBRN defence units will monitor units passing to the rear for contamination and conduct decontamination operations to prevent the spread of contamination.

Combat Service Support

7177. During a relief activity, the stationary force should assist, whenever possible, with casualty evacuation, traffic control, vehicle recovery, fuel and ammunition. A force taking over responsibility for further operations should be fully replenished.

7178. The higher commander may direct that the outgoing forces hand over stocks that are not required for their subsequent mission. Stocks must be checked for interoperability prior to any such operations as this may influence the plan. Some compatible equipment such as machine gun tri-pods may be left in place by the outgoing force, and taking those brought by the incoming force.

7179. CSS units may have to move early to be in place on arrival of the combat forces. Alternatively, if CSS units are following, plans will have to take account of a reduction or discontinuity in sustainment; in both cases logistic coordination is essential.

7180. During a forward passage of lines, the moving force may undergo a replenishment in the rear area of the in-place force so that it begins its next task with a full combat load. This should be arranged by the higher headquarters.

7181. During a rearward passage of lines, the moving force may need to undergo a replenishment including casualty transfer and vehicle recovery once it has passed through the in-place force. This should be arranged by the higher headquarters.

SECTION X – WITHDRAWAL

Purpose

7182. A withdrawal occurs when a force disengages from an enemy force in accordance with the will of its commander. It is a planned activity in which a force in contact disengages from an enemy force. Note that it is a planned activity. It seeks to disengage its combat forces from the enemy although contact may be maintained through other means such as indirect fire, reconnaissance or surveillance. The withdrawal will be followed by another specific activity such the defence in a new location.

7183. The order to withdraw will not normally be given by the commander without the agreement or direction of his superior commander. A withdrawal may be undertaken for the following reasons:

a. If the object of the activity cannot be achieved and the force is threatened by defeat;

b. The objective is achieved and there is no further requirement to maintain contact;

c. To avoid battle in unfavourable tactical, CBRN or environmental conditions;

d. To draw the enemy into an unfavourable posture, for example, to extend his lines of communication;

e. To conform to the movements of adjacent friendly forces;

f. To avoid fighting in sensitive areas, be they near potentially toxic industrial sites or culturally sensitive sites;

g. To allow for the use of the force or parts of the force elsewhere;

7184. For combat service support reasons; i.e., the force can no longer be sustained.

7185. **Withdrawal under Pressure**. At times, the enemy may have closed with the defensive position and may be engaging forces during the withdrawal. At other times, as part of a scheme of manoeuvre, it may be necessary to hold a position for a certain amount of time or to ensure a certain level of commitment by enemy forces, before withdrawal occurs. In such cases the withdrawal is planned to be conducted under pressure from the enemy, that is, under contact with the enemy. Thus the term, “withdrawal under pressure” may be used, but it is simply considered to be a withdrawal while in close contact. This in turn drives planning considerations. As with all other withdrawals, orders will specify when the withdrawal will occur, most likely based on the level of enemy commitment to be achieved, the time before which withdrawal must not occur, or simply to withdraw on order. Withdrawal under pressure is considered a withdrawal under contact with the enemy and is conducted as such.

Principles

7186. The withdrawal should be conducted so as to minimise enemy interference and preserve fighting power. The ability to move rapidly to offensive or defensiv activities should always be retained. There will be an emphasis on intelligence, surprise and speed. However, as it must always be assumed that the enemy may react, provision must be made for the security of the withdrawing force. Protective elements must be organized and tasked in accordance with the enemy’s capability. Even if enemy contact is not expected during the withdrawal forces must be tactical prepared to counter enemy interference with the withdrawal.

7187. Due to the inherent difficulties of this type of activity the commander must have the flexibility to temporarily switch to any other activity as the situation demands in order to ensure the eventual withdrawal.

7188. The commander’s mission is to disengage his force. If it is in response to the deliberate intention of a higher commander, the mission will be included in a complete operations order. If, on the other hand, the decision has been forced upon the commander by highly unfavourable circumstances, the order to withdraw may contain nothing more than the authority to do so and will give only minimum direction.

7189. The conditions under which a withdrawal takes place are often adverse. The enemy will then have the initiative on the ground and the force will be vulnerable to ground attack while moving rearward, perhaps having to redeploy to protect itself. In addition, the air situation may be unfavourable. In this case, the operation may have to be initiated in darkness or under conditions of limited visibility.

7190. The withdrawal takes place when a force is in contact with the enemy. The commander's primary concerns in planning and conduct will be:

a. To disengage;

b. To retain an intact front by the deployment of strong guard or screen force;

c. To safeguard withdrawal routes;

d. To maintain balance throughout the activity.

7191. Success will depend on the maintenance of morale, tight control and secrecy. A commander must also be ready to take the offensive if the opportunity arises, albeit with only limited objectives.

Planning

7192. A withdrawing force should normally be organized into:

a. A protective element that covers the withdrawal, deployed by the higher echelon, such as a covering force;

b. A main body protecting itself with advance, rear and flank guards or screens.

7193. The withdrawing force's subsequent mission will have an influence on its organisation and on the sequence of the withdrawal. Depending upon the subsequent tasks, there will likely be required to send an advance party, often under the command of a second-in-command, in order to conduct the reconnaissance and planning for the next task.

7194. Forces not required for immediate operations, including combat service support elements and wounded, should be moved out early to keep routes clear for the withdrawal and to allow for a rapid withdrawal.

7195. The commander's estimate of the situation should consider:

a. The distance to be moved;

b. The weather/ground conditions and the degree and duration of darkness. To maintain secrecy, achieve surprise and reduce casualties from the air, withdrawals are generally better carried out at night, although, against an enemy with a good surveillance capability, darkness will not hide movement. Bad weather conditions, however, such as heavy rain, mist or fog, may enable a withdrawal to be carried out effectively by day. Difficult ground conditions may make a withdrawal in daylight the only practical way to avoid loss of control;

c. Possibilities of impeding the enemy's mobility - particularly by barriers;

d. Enemy ground strength;

e. The situation on both flanks;

f. The mobility of the force;

g. The air situation;

h. Combat service support.

7196. The scheme of manoeuvre for a withdrawal must cover the entire operation. It must be simple and normal organisations should be retained as far as possible. Regrouping during the activity should be avoided. Particular attention should also be paid to:

a. The plan being simple to permit flexibility;

b. Grouping for the withdrawal remaining the same, if possible, throughout the operation;

c. Surprise and deception, possibly including noise coverage by artillery;

d. The maximum use of cover and concealment to achieve protection;

e. Allocation of routes and an appropriate traffic control system.

7197. The withdrawal is coordinated and controlled through key timings:

a. The time at which thinning out may occur;

b. The time until when the position must be denied. This is the main coordinating timing of the withdrawal plan;

c. The time to be clear of the current position;

d. The time to be clear of any specific coordination line. This will be needed for the coordination of supporting fires;

e. The time by which the subsequent task (such as manning a new defensive position) is to be completed.

7198. The preparation of denial measures, demolitions and other obstacles along the withdrawal routes must be carried out as early as possible. This is particularly important for preliminary demolitions, which must be carefully coordinated with the plan for the withdrawing force.

7199. Along boundaries the preparation of denial measures should be coordinated by the appropriate higher level commander. The final decision on the execution of any denial measures will be made by the higher commander after consultation with adjacent commanders.

7200. A withdrawal will either be conducted directly to a new main position, or indirectly through one or more intermediate positions. The decision to use intermediate positions will depend on the distance, the strength of the force, the state of the enemy and the delay required to prepare the new position. In this case a rearward passage of lines will be required in order to disrupt and delay the enemy at the intermediate position.

7201. Considerations when planning and selecting intermediate positions are:

a. They must be strong enough to force the enemy to deploy early and to undertake time consuming preparations for an attack. This will mean selecting positions that incorporate natural obstacles and deploying long-range direct and indirect weapon systems;

b. They should be far enough from one position to the other to force the attacker to move his artillery each time to engage;

c. The time before which there will be no rearward movement except for normal traffic and reconnaissance parties;

d. The time up to which the position has to be denied to the enemy;

e. The time at which troops may start moving equipment and supplies not immediately needed to the rear;

f. The time by which all troops will be clear of a line behind the position. This will be needed for the coordination of supporting fires.

Execution – Scheme of Manoeuvre and Sequence

7202. The disengagement of the main body could be executed either by stealth and concealment or after a successful engagement. Normally, the withdrawal is

planned to be conducted under contact. It uses supporting fire and movement to break contact with enemy forces and to cover its rearward movement until a complete break of contact can be gained. If necessary, the commander must enable the withdrawing force to break contact by launching an attack to fix the enemy that is pressuring the withdrawing force.

7203. Based on the timings issued in the superior's orders (for such activities as withdraw of surplus supplies and equipment, time to which the position must be denied and time for the crossing of any coordination lines), the sequence for the withdrawal from a position may be:

a. Reconnaissance parties move back, wounded are evacuated, and all nonessential vehicles and equipment are cleared from the position (often termed "thinning out"). Reconnaissance parties will usually be commanded by seconds-in-command and will go to prepare for the arrival of the force at the new position or for a new task. If the withdrawing force is to occupy a new position, the reconnaissance party will likely have to plan and lay out this new position;

b. The higher level commander may deploy a covering force to assist in the withdraw and its clean break. The covering force may deploy forward but often deploys to the rear of the withdrawing force and the force withdraws through the covering force;

c. Any additional barriers deemed necessary are put in place to impede enemy movement forward and on the flanks. Some re-grouping may be necessary to balance forces and provide additional combat power in a particular location based on likely enemy intent. The security elements (guard, screens or covering forces) take up areas forward of the position and reserves move to the appropriate locations;

d. The withdrawing force deploys its own screens or guards, normally in positions (slightly rear or in line with the main body) that will allow the force to withdraw through them. They allow commanders to provide for their own forces security and guards in particular may help break contact;

e. Troops on the position withdraw through the security elements (screens, guards and/or covering forces);

(1) Patrols are generally withdrawn first. At night they may be kept in position until the depth elements are withdrawn thereby providing security to the last possible moment;

(2) By night, where surprise is easier to achieve and a commander considers a disengagement possible without immediate enemy contact, depth/rear elements should pull out first leaving those forces deployed forward until later;

(3) In day light (when enemy visibility is good), or when forward forces are in immediate, close contact and engaging the enemy, forward troops will move first while covered by those forces in depth;

(4) All forces move back under control through their own screens or guards, which then follow. They all move back through any deployed covering force which assumes the battle;

(5) Control is essential and thus each level of command, from section upwards, uses a checkpoint, followed immediately by a rendezvous point (RV) location. As a level of command moves, they pass through a check point manned by their own second-in-command or other delegated commander and immediately into an RV, and adopt a local defensive posture. Once commanders arrive and confirm the situation, the force moves to the check point and RV of their superior command. Once the entire withdrawing force is clear, they move from the last RV to their next position or task;

(6) At each level of command, commanders and their fire support controllers are the last to leave a position.

f. The task of the security force is to prevent the enemy from engaging the main body and to ensure a clean break from contact. It stops any enemy advance or attempts to out flank or pursue the withdrawing force;

g. The main body withdraws on order with all elements at once across the entire frontage or in a staggered manner. Forces must initially pull back in their existing organisations. Re-grouping does not occur until the situation permits. At the lower tactical levels, the plan must include a staggered withdrawal of one element moving while covered by another element until a clean break with any enemy has been achieved;

h. As soon as the main body has disengaged and is at a safe distance, the security elements (such as guards or screens) start their disengagement, although they could remain in their original position until the enemy attacks in force, so as to achieve the maximum deception and delay. If the enemy launches a strong attack, they will continue their protective task with a delaying activity. If the distance to be moved is great and the enemy is expected to react quickly, a portion of the protective force may occupy a number of intermediate defensive positions in the rear of the position being abandoned before the withdrawal of the main body;

i. If the protective element is not able to disengage or to prevent the enemy from closing in on the main body, it must either be reinforced by elements from the main body, or the overall commander must commit the majority, or all, of this force. In this event, the withdrawal must be resumed at the earliest possible time. If the protective element has disengaged, it will follow the main body and continue to provide security. In this case, it will maintain surveillance of the enemy until ordered to break contact completely or until this task is taken over by another force;

j. This sequence is repeated at each intermediate position. The withdrawal is terminated when a force is ready to assume its next task.

7204. The sequence of a withdrawal is summarised in the following table:

Withdraw by Day or Under Close Contact (Withdrawal Under Pressure)	Withdraw by Night	Remarks
Reconnaissance parties deploy to prepare for new positions or tasks.	Reconnaissance parties deploy to prepare for new positions or tasks.	
Non-essential elements and equipment are removed from the positions.	Non-essential elements and equipment are removed from the positions.	Orders will detail when these activities must be complete.
A covering force may be deployed to the rear by the higher echelon. Forces withdrawing deploy screens and/or guard forces.	A covering force may be deployed to the rear by the higher echelon. Forces moving deploy screens and/or guard forces	Generally, withdrawing forces move through their own guard forces or the deployed covering force which assume any enemy contact.
Deployed patrols are withdrawn.	Rear or depth elements are withdrawn to maintain surprise. They move to the various checkpoints and RV locations.	Some technologies will reduce the benefits of darkness but not completely.
Forward elements are withdrawn through the depth elements and into RV locations.	Deployed patrols are withdrawn.	
Depth elements are withdrawn and move through screens/guards. Link up with forward elements in the RV location. Screens and guards follow.	Forward elements are withdrawn to the check point and RV.	Depending upon the terrain and the situation (including the proximity of the enemy) the covering force may assume the battle at an earlier stage in the withdrawal.
Withdrawing forces move through covering force. Covering force assume any contact.		

Figure 7-3: Sequence of a Withdrawl

Command and Control

7205. Control measures of particular importance in the withdrawal are:

a. Liaison elements;

b. Routes/axes;

c. Report/phase lines;

d. Traffic control measures;

e. Check points and waiting areas;

f. Timings as required for critical phases or sequences.

7206. Good communications are vital, and the policy for radio and electronic silence must be clearly stated. Communications links, methods of operation and density of communications traffic should remain unchanged for as long as possible to avoid disclosing, to the enemy, the intention to disengage. The creation of radio traffic by forces remaining in contact, will add to the overall deception of the enemy. Elements which have disengaged from the enemy will normally be ordered to keep radio silence.

Combat Support

7207. **Artillery.** Artillery must be organized and deployed so that it can cover the entire operation. Long range artillery will be withdrawn early and placed far enough back so that they can cover the withdrawal. Artillery elements remaining with the protective elements will endeavour to maintain the previous fire support cover for as long as possible.

7208. **Air Support**. Air interdiction and close air support may play an important part in defeating and degrading enemy forces, in destroying their supporting infrastructure and in generating psychological effects to shatter morale and cohesion. Close air support will be particularly useful, especially where withdrawing artillery causes a reduction of, or interruption to, indirect fire support. Joint terminal attack controllers will be required with the protective element. Defensive counter air (air defence) efforts may be needed for protection against enemy air and missile attack.

7209. **Aviation**. Transport helicopters can enhance the speed with which withdrawal operations can be carried out. Helicopters in a reconnaissance role may be used to observe enemy activity during the withdrawal. Helicopters can also be used to extract stay-behind forces. Armed aviation may be used to provide a covering force in order to assist with disengagement and a delay of any advancing enemy.

7210. **Air Defence**. It is unlikely to have sufficient organic air defence resources available to provide comprehensive cover throughout the whole area of operation, so priorities of tasks must be established. The deployment plan of air defence units should ensure that they are effective at critical periods to cover locations where the withdrawing forces are likely to be particularly vulnerable or areas which the enemy might select as landing sites for air delivered forces.

7211. **Engineers.** Engineers will be heavily committed in the withdrawal. Many will be used in preparing any new defensive position to which forces are withdrawing. Some however may remain to assist with the withdrawal:

a. **Mobility.** Withdrawal routes must be cleared and maintained. The main body and rear echelon elements are assisted in breaching unforeseen obstacles and crossing restrictive terrain;

b. **Counter-mobility.** Demolitions and obstacles are prepared to delay

enemy forces near the withdrawing forces.

7212. **Electronic Warfare.** EW assets will be particularly useful in executing the deception plan, as well as in disrupting enemy command and control communications. They should also be used to collect information to monitor enemy activity and plans.

Combat Service Support

7213. General. The CSS plan should ensure that the requirements of the withdrawing force are met and that useful materiel, particularly fuel, does not fall into enemy hands. It may take considerable time to evacuate stocks. The supply of ammunition to protective elements and artillery must be guaranteed.

7214. **CSS Planning Considerations.** The enemy must be denied the use of the military equipment and supplies of own forces, other than medical equipment and supplies. Maintenance is to be concentrated on the readiness of materiel required to conduct the operation. Recovery equipment is to be marshalled at critical locations to keep routes open and recover all materiel possible.

7215. **Supply.** Before rearward movement begins, the forward stocks will be reduced by stopping forward supply and, when possible, back-loading any unnecessary forward stocks. Mobile distribution points should be established to meet urgent needs and changes in the operational plan. Losses of equipment may exceed normal wastage rates and special arrangements for replacements may have to be made.

7216. **Medical Support.** Medical and surgical timelines are the primary driver for the layout of medical support and casualties should be evacuated swiftly. Visible evidence that casualty evacuation is operating effectively will help maintain morale.

7217. **Military Denial of Equipment and Stocks**. This must be coordinated with the timings used in the operational plan, so that tactical security is not prejudiced. The plan should provide for the denial of any equipment or dumps which cannot be back-loaded. However, it is not permitted under the Geneva Convention for medical equipment to be destroyed.

7218. **Traffic Control.** To expedite rearward movement military police may be deployed at critical junctions and potential defiles.

SECTION XI – RETIREMENT

7219. A retirement is defined as: an operation in which a force out of contact moves away from the enemy (NATOTerm). A retirement is different from a withdrawal. It is a movement away from the enemy by a force out of contact with the enemy. It is completed generally in the same manner as a withdrawal; however, since the force is out of contact, it is unlikely that there will be a requirement for a robust security and protective forces. However, security must always be a consideration in planning and an operational awareness and tactical profile must be maintained throughout the operation.

CHAPTER 8 - OPERATIONS IN SPECIFIC ENVIRONMENTS AND CIRCUMSTANCES

SECTION I – INTRODUCTION

8001. This chapter describes the planning and execution of activities under the influence of specific conditions. Sometimes there is a combination of these conditions (for example, extreme cold and mountains). These specific conditions may also be combined with those that occur in forests, built-up areas and in poor visibility. The subordinate sections of this chapter should thus be read in combination with each other.

8002. Weather and terrain affect every military operation and therefore the range of military activities, tasks and actions. Extreme temperatures and terrain will impose a considerable burden on the troops. Potential areas of operation differ significantly in terms of terrain and climate.

8003. Determining the effects of weather and terrain is part of the intelligence preparation of the battlespace (IPB). In the evaluation of the area of operations, meteorological data, observation zones, fields of fire, concealment and cover are used to draw conclusions regarding obstacles, key terrain and avenues of approach. The former aspects being the more traditional ones, the scope of the IPB should also be the collection of data in relation with the stability actions.

8004. **Limited Visibility**. Regardless of the environment at hand, all commanders and forces must expect to operate under conditions of limited visibility, mainly night conditions. Any possible advantages by technique must be balanced against the risk of increased collateral damages and fratricide as a result of the darkness. Additional time and control measures may be prudent when working in periods of limited visibility. Additional rehearsals may be necessary and commanders may choose to slow the pace of operations to ensure positive control.

SECTION II – OPERATIONS IN WOODED AREAS

Introduction

8005. The collective term of wooded areas refers to an area of terrain that consists mostly or completely of forests and of which the obstacle value is such that dispersed mounted operations are barely possible, if at all. Wooded areas affect the operation because of their location, size, density, structure, soil composition and available roads. The structure of wooded areas is seldom alike. As well as a variation in structure, there may also be scattered clearings. Operating in wooded areas is extremely demanding for commanders and troops. Normal practice is to deploy infantry in these areas. They mainly conduct close combat. After a prolonged period of drought, one must take account of the possibility of forest fires as a result of fire support.

Characteristics of Operating in Woods and Forests

8006. The following characteristics apply to operations in woods and forests:

a. Short observation zones and fields of fire;

b. Good concealment, but limited fire cover;

c. Slow-moving combat actions, because movement mainly takes place on roads, paths and in clearings, and these movements can be seriously impeded by just a few obstacles;

d. The effects of joint fire on unprotected personnel are increased by the fragmentation effect on tree branches;

e. The deployment of fire support is restricted if fire is delivered a short distance ahead of friendly troops;

f. Problems with orientation, observation, reconnaissance and communication.

Planning Consideration

8007. In many ways, offensive and defensiv activities in large woods and forests are akin to fighting in built-up areas. The infantry supported by engineers and where possible by armoured vehicles and tanks, will conduct the majority of activities. The emphasis is on close combat, conducted on a de-centralized basis by units of company and platoon strength, who operate more or less autonomously in the separate sectors. The through-roads and paths often form the key terrain where the battles are initially fought. The ground between them, particularly the lateral routes, can be used for flanking (counter) attacks and other offensive activities carried out by means of infiltration. During activities with mechanised infantry, it is the traversability of the forests and the density of the roads and paths that determine whether operations must be mounted, dismounted or carried out on foot. In the last, most unfavourable case, weapons and necessary ammunition are adapted. The crews staying behind with the vehicles are kept to a minimum.

8008. In the event of operations in wooded areas, plans will have to be adapted. Some of the necessary adjustments are:

a. More security measures at all levels to eliminate surprise;

b. Strict movement control and allocation of routes;

c. Decentralisation of armoured assets and of combat support;

d. Small reserves which are kept ready just behind the forward units.

8009. If CBRN weapons are used in wooded areas, the following effects must be borne in mind. Trees will be brought down by the air pressure of nuclear weapons, thus impeding movement even further. The effect of heat radiation from nuclear weapons is substantially reduced; the risk of forest fires, however, is considerable. If chemical weapons are used, the size of the contaminated area is relatively small in comparison to other types of terrain. The period of contamination, however, is longer.

8010. Since woods and forests can be used as hiding places for combatants as well as non-combatants, commanders should always plan on the possibility that stability activities need to be carried out. This means that infantry units not only need to be reinforced with armoured vehicles and CS elements, but also need extra reconnaissance elements and the possibilities to bring in humanitarian aid immediately after combat actions have been completed.

Offensive Activities in wooded areas

8011. Offensive activities in forests should be avoided. An envelopement or turning movement around the enemy is preferable, as the enemy is thus outmanoeuvred. The enemy may, however, organise his defence in such a way that the attack must be conducted through forests.

8012. The preparations for offensive activities in forests cost a great deal of time. Reconnaissance in advance, including air reconnaissance, generally yields little information. Simplicity is the key element when formulating the plan. Subsequent phases are prepared in broad outlines and refined on the basis of combat reconnaissance and the course of the battle. The axes of advance are largely determined by the available roads and paths. One must bear in mind that the enemy defence only starts deep inside the forest.

8013. The attack is primarily determined by the intent of the higher commander. This is used to decide whether it is necessary to rid the entire forest of the enemy or whether it is enough to take control of one or more corridors in order to break out at the other side. Other aspects of the attack (order of battle, formation, main effort) are to a great extent determined by the size and density of the forest. In dense forests, (mechanised) infantry is the most suitable option. Support must always be provided in the form of armoured assets, even if these are confined to the roads and paths. Armoured units are used to attack in forests wherever movement is possible (limited density, open areas of land). But as in urban operations, armoured vehicles will likely require close support from dismounted infantry in order to prevent destruction by short-range anti-armour weapons.

8014. If the enemy mounts a defence in a wooded area, he will normally employ only weak forces forward of and on the edges of the area, while ordering the bulk of his forces to fight from positions within the wooded area. It should be anticipated that the enemy will seek to control clearings, lanes and trails with fire, employing single tanks to do so. He will always use anti-armour weapons and barriers in an attempt to cause the attacking forces to congest forward of his positions and will then launch assaults against the flanks.

8015. Capturing a forest with limited depth or a corridor through forests is done by pushing through with infantry to the exits from the area preferably without phasing. Battalions are usually assigned relatively narrow sectors, each having, if possible, two through-roads as approach possibilities. A

simultaneous airmobile operation may be considered in order to attack the defender via the rear exits and to cut him off from his service support. In deep forests, the attack is conducted in phases with intermediate objectives at short range in order to ensure cohesion in the operation. Broadly grouped reconnaissance should also be used, behind which the grouping of combat forces should be narrow and deep. In this way, weak points in the enemy defence can be exploited immediately.

8016. The attack within the forest commences from intermediate objectives which have provided a firm foothold in the forest. The forward elements should avoid roads and paths, as these are easy for the enemy to control with obstacles and fire. If possible, enemy positions are located by combat reconnaissance, bypassed by most of the unit and attacked from the rear.

8017. It must be possible to shift the main effort quickly, as the way the enemy defence is organised only becomes clear once the battle is underway. Not all assets should, therefore, be committed prematurely. Reserves generally follow close behind the forward units, preferably in their (armoured) vehicles, so that they can quickly take advantage of any success.

8018. Maintaining the tempo of the attack is usually only possible by passing forward units that have got stuck or by carrying out a forward passage of lines. To continue the attack in darkness is ultimately a problem and can only be done if thorough preparations have been made for operating in such circumstances.

8019. If it is necessary to mop up the enemy in the whole forest, this can be done on both sides of the original axes of advance by following units, for instance by parts of the brigade or division reserve. They mop up the entire area systematically. Timely preparations must be made for breaking out of the forest. The required order of battle is established while troops are still in the wooded area to enable a fast, mounted break-out. If necessary, mechanised units are brought up on time.

Defensiv Activities in wooded area

8020. Forests favour defensiv activities, certainly if the necessary preparations have been made. Executing defensiv activities in forests is only useful if the attacker, given the mission and the possibilities offered by the terrain cannot execute a turning movement and has to capture the wooded area in order to proceed. Making full use of the obstacle value of forests results in a manoeuvre grouped over the full depth. The preparations for defensiv activities, particularly the reconnaissance and the selection and setting up of the positions, are normally very time consuming.

8021. The defence commences in the forward edge of the forest. However, the fringe of the forest draws a great deal of direct and indirect enemy fire. Tanks and long and medium-range anti-tank weapons are flanked as much as possible or positioned in front of the edges. The (mechanised) infantry establishes its positions so deep in the forest that the enemy cannot attack them directly with armoured units, nor is he able to observe indirect fire. From forward positions on or in front of the forest edge, troops

can combat the enemy approach. If this is not possible - because of the limited depth of the forest, for example – positions can be prepared on the edge and not used until later. The units for these positions are keptready in assembly areas deeper inside or behind the forest. Effective security and fire support must provide enough time to take up these positions.

8022. If the enemy has gained a foothold in the forward edge, friendly troops fall back to positions deeper in the area. The manoeuvre in the depth of the forest is based on the (temporary) defence of positions which control the through-roads and paths. Positions in the forest must be located in such a way that:

a. Roads, paths and clearings are controlled;

b. The units can support each other;

c. All-round protection is possible.

8023. It is virtually impossible to control the entire area between the positions. Intensive patrolling, observation posts and unmanned sensors provide time and space to be able to respond in this area. The laying of artificial obstacles in this area costs a great deal of time and resources, while the effect against troops operating on foot is often limited.

8024. In clearings in the forest, armoured units can be deployed to prevent the enemy from turning around forest sectors. These units are also deployed if, in the event of a successful enemy attack, friendly troops have to disengage to leave the area under cover. Tanks and anti-tank weapons of long and medium range are deployed at places with sufficient fields of fire, usually on and along paths and roads, in support of the infantry's operation from their positions. Tanks can also be deployed at a low level for anti-armour defence at locations under threat.

8025. If the enemy penetrates positions, he must be attacked with fire and counterstrokes. Immediate counterstrokes by small, local reserves are usually more effective than counterattacks started later. Counterattacks by armoured units are confined to clearings which offer sufficient space to carry them out. If the enemy manages to penetrate deep into the defence area, uncommitted elements should be concentrated as quickly as possible to block the breach. Elements which still occupy their original positions conduct attacks on the enemy flanks. When positions are released and troops move on to a delaying operation, the contact with adjacent units may be lost. In a forest, this quickly leads to the loss of cohesion in the higher level's defence.

8001. If there are a limited number of friendly troops available, the same unit will be forced to operate over the entire depth. In such a situation, the preferred option is a mobile operation with ambushes and raids, whereby the unit ultimately falls back to positions at or behind the exits from the forest, where a prolonged defence is possible.

SECTION III – OPERATIONS IN URBAN ENVIRONMENT

Introduction

8026. STANAG 6509 ATP-99, Urban Tactics is the overarching NATO authoritative document concerning urban operations (UO).

8027. An urban environment (UE) is a topographical complex and its adjacent natural terrain, where man-made construction or the density of population are the dominant features. It is a complex environment comprised of the physical aspects (buildings, industrial production facilities, subways, sports stadiums, hospitals, etc.), the social aspects (affluent areas, middle class and slum areas) including criminal threats, the religious dynamics (Christian, Islamic, Buddhist, etc.) and economic and cultural complexities. All of these are inter-related to varying extents and form a total system of systems environment that characterize a centre of population.

8028. Throughout the world, the UE continues to grow in size and number. Most will be particularly significant as centres of civilian population, many will be operationally significant as centres of communication and some will have tactical value being near or on important ground. To an increasing extent military operations are bound to be conducted around, in or through them. The need to understand and perfect the tactics and techniques of operating in the UE has become increasingly important.

Descriptions of the Urban Environment

8029. The UE presents the most complex set of conditions that exists. Every UE shares three main characteristics that are intertwined and are virtually inseparable; these are civilian population, physical terrain and infrastructure. These characteristics interact to make each UE a dynamic system of systems, with a unique physical, political, economic and cultural identity.

8030. The civilian population of a UE is a significant factor in characterizing the operating environment like the physical terrain. Like physical terrain, it is subject to stratification by a number of factors. Stratification can be by levels of wealth, or differentiation by such factors as race, ethnic identification, language, age, gender, religion or political affiliation. Even when reasonably homogenous and apparently unified under normal conditions, in times of unrest – especially involving a loss of confidence in government – the civilian population will tend to fracture along self-identification lines.

8031. The urban physical terrain is characterized by both natural terrain features such as shorelines, as well as man-made structures, buildings, etc. Generally, the UE can be divided into eight distinct types of terrain. These types can be used as a basis for conducting UE analysis as they all have their own characteristics. Terrain types are as follows: historical centre/old town; financial/business centre; heavy industrial area; light industrial area; high density residential; low density residential; slum/shanty area and subterranean.

8032. The urban infrastructure consists of man-made structures built to support the civilian population. Since nearly all buildings fulfil some purposes necessary to the lives of the civilian population they can be regarded as more or less essential parts of the infrastructure. The urban infrastructure thus can be seen as the link between the physical terrain and the civilian population. This can be categorized into utilities, transportation, industry and public facilities.

Offensive Activities in Urban Operations

8033. The offence in an urban environment may - beyond the general purpose of offensive activities – have the purpose to secure a port or a communications centre, to eliminate the threat to a friendly government or the urban civilian population, or to deny the adversary freedom of movement within the UE. Combined arms operations including information activities are the key for success.

8034. Offensive urban operations contain the principles of surprise, concentration, tempo, and audacity:

a. Surprise can be attained by attacking when and where least expected or by attacking with different forces than expected. A combination of frontal attack and vertical assault can accomplish considerable surprise. Tactical surprise can also be gained by an asymmetrical approach. This involves close coordination between operational actions in IO, EW and tactical actions. Other elements of surprise are secrecy, concealment, deception and originality;

b. Tempo of operations needs to be at a higher level than the adversary's in order to retain the initiative. Commanders should guard against being overly cautious when clearing buildings or entire blocks: but rather strike a balance between preparation/planning, speed, security and the possibilities for resupply;

c. Audacity, used in conjunction with a boldly executed simple plan, will achieve success. Execution and calculated risk exemplify audacity. Well trained and well led soldiers, confident in their ability to execute UO exploit a favourable situation aggressively and foster audacity.

8035. The five approaches for offensive activities in UE are:

a. **Isolate:** the aim is to isolate the area by seizing terrain and dominating likely approaches. Enemy defences may prevent complete encirclement;

b. **Seize a foothold**: The assault in order to seize a foothold in the UE is a critical stage of the offensive, when the attacker is most vulnerable and it must be decisive;

c. **Seize clear objectives:** this task should be launched from the foothold secured by the break-in. The aim is to secure objectives that provide a firm base to launch an assault from on to the next objective or to unhinge the enemy's defence;

d. **Clear remaining pockets:** This is a methodical clearance of the whole

area of the operation. The aim is to clear all remaining threats from the area, This task is likely to be executed by follow up force elements.

e. **Reorganize:** In general this is not different to any other offensive operation. The conduct and time available for reorganisation will be dictated by plans for subsequent operations.

Defensiv Activities in Urban Operations

8036. The concept of defensive operations should be mobile and in depth, with the defender concentrating on moving forces from key terrain features or buildings to similar features. A detailed understanding and shaping of the area to the defenders advantage is critical. To be successful a defender will have to seek to disrupt the enemy throughout all phases of the battle.

8037. Although the principles employed are generally the same as for other defensive operations, the differences are in the techniques employed and the emphasis on certain essential features. These principles are:

a. **Preparation time**. Time is essential to enable the necessary pre-positioning of supplies and MILENG resources and concurrently to fortify defensive positions;

b. **Detailed planning**. Planning for a defensive operation should be detailed and centralized. Since most actions are conducted by small units, control id decentralized. The defender should seek to exploit the multidimensional nature of UE;

c. **Mutual support**. Although concealment and cover will be plentiful, observation will be limited. Special attention has to be given to achieve mutual support and all-round defence to counter enemy infiltration. The nature of the terrain usually leads to close-quarter combat.

8038. Different from the defence outside UE, defence within an UO may be conducted in three stages:

a. **Perimeter force battle:** At battle group level the perimeter force provides guard or screen forces, ideally in mutually supporting locations that provide information about the enemy and also start his destruction. They move or withdraw when they can no longer influence the battle. They may have secondary tasks in the main defence area or as reserve.

b. **Disruption force battle:** The disruption force should cause attrition, disrupt the attack and draw the enemy towards selected killing area. Essentially the disruption force should conduct a delaying operation.

c. **Main defensive battle:** This is a series of defended localities with mutually supporting strong points focused around a main killing area. A local reserve should be designated in each sector or area. This battle will comprise an aggressive defence, small and large counter-attacks, preventing the enemy from grouping or regrouping, encircling or trapping any defended locations.

SECTION IV – OPERATIONS UNDER WINTER CONDITIONS

Introduction

8039. Winter conditions are from freezing temperature and below. Executing tactical activities in those cold weather conditions requires special techniques, training and equipment. Snow, ice, frost and fog are likely to occur in such conditions. Wind intensifies the effect of cold on people.

Characteristics of Operating in Winter Conditions

8040. Cold conditions have a number of radical effects on operations. Once normal conditions have returned, these effects usually disappear quickly. Depending on the time and place, conditions can change extremely quickly. The following characteristics can be identified:

a. Severe frost can improve the condition of terrain that was previously difficult or impossible to negotiate. The obstacle value of waterways can be reduced or eliminated completely if low temperatures persists;

b. Heavy snowfalls can make movements over previously passable terrain impossible. Roads can then only be used after they have been cleared;

c. After a period of temperatures below freezing point a thaw can make sizeable areas impossible for vehicles to cross;

d. Keeping weapon systems, vehicles and other equipment combat ready requires special measures, equipment and facilities. Metals and plastics becomes harder as the temperature drops and the risk for it to brittle increase;

e. The living conditions are particularly tough for personnel and impose heavy demands on their physical stamina. Measures need to be taken against frostbite, hypothermia and dehydration. Special provisions in terms of clothing, equipment, food and medical support are necessary to keep the combat power up to the required level. Because of the cold, it is often impossible to remain for any length of time in unheated positions without the risk of cold injuries;

f. Making trenches and cover is problematic. Normally, this can only be done with the aid of explosives. Under condition with snow trenches and cover is easy to make by hand. Different snow conditions requires different thickness of the cove;

g. After a snowfall, special measures must be taken for camouflage;

h. The effect of artillery and mortar fire is considerably reduced by the smothering effect of snow; proximate fuses is recommendable to use. This reduced effect applies to all explosive ordenace. Measures are needed to be taken in order to gain the expected effect when using pyrotechnical devices such as smoke grenade, flares etc in order to prevent these to melt down and disappear in the snow;

i. Fuel consumption is higher than normal, because of extra needs for heating, which is necessary to prevent breakdown. Semi-arctic areas

have many hours of daylight in the summer and few in the winter. Biting winds make it more difficult to see with the naked eye.

Considerations of Operating in Winter Conditions

8041. Cold affects all activities, tasks and actions: these cost a great deal more time than under normal circumstances. The effect of cold weather on the terrain and on enemy and friendly operations usually leads to an adjustment of plans. Units must be able to survive in these extreme conditions and be deployed for prolonged periods. This requires proper training and equipment and a modified organisation. The combat is usually conducted by relatively small units which can hold out independently over a prolonged period. It is often difficult to make any changes in the order of battle during the course of the operation.

Offensive Activities in Winter Conditions

8042. In cold weather, the chances of success are significantly increased if the attacker manages to separate the combat units from their combat service support. Without food or fuel to survive, the effectiveness of combat forces is drastically reduced.

8043. Heavy snow, storms and fog provide excellent opportunities for a surprise attack. Severe frost over a prolonged period reduces the obstacle value of waterways, swamps and lakes. However, movements in a winter landscape are more easily observed. The attack is delayed, as more time has to be spent on service support for both personnel and equipment.

Defensiv Activities in Winter Conditions

8044. The number of personnel available for combat actions in cold weather conditions is usually limited. It is also difficult to construct defensive positions. As a result, it is often impossible to set up a complete defence with mutually supporting positions. Certainly (mechanised) infantry will operate in relative isolation from various positions with perimeter protection. This applies less to tanks.

8045. The use of observation posts and the use of UAS is necessary for the surveillance of unoccupied areas between the positions in order to enable the timely deployment of reserves. The reserves will, therefore, be deployed in a more decentralised manner. Account must also be taken of the fact that once a unit has been deployed, it cannot automatically be moved; this may even be impossible because of heavy snowfalls or thaw. The choice for the initial positions is, therefore, extremely important.

8046. The possibility that the enemy’s avenues of approach could differ from what was originally expected must also be borne in mind. Given the dispersion, it is relatively simple for the enemy to infiltrate and then seize the logistic support installation and the lines of communications. The protection of the rear area thus requires special attention.

Stability Activities in Winter Conditions

8047. The problems and limitations that are caused by the conditions described above in the paragraphs on offensive and defensiv activities are applicable

for this category as well. However the impact of these severe weather conditions may even more hamper the civilian populace, which often suffers much more from the bad conditions through lack of food, heating and shelter.

8048. Restoration of services is also negatively influenced by severe cold. It will take considerable more effort to restore water and electricity supply and all types of infrastructure.

SECTION V – OPERATIONS IN DESERT AND HOT REGIONS

Introduction

8049. A dessert is a waterless, desolate area of land with little or no vegetation, typically one covered with sand.

8050. Operations in desert regions are mainly affected by features of the terrain: the lack of infrastructure and local supplies; good fields of observation and fire; and, significant temperature ranges and arid conditions. Temperatures have a major effect on the performance of personnel and equipment. Ground water is often so deep that only small amounts can be obtained by digging wells.

Characteristics of Operations in Desert and Hot Regions

8051. Desert regions are usually located in warm or tropical climate zones, which mean that there is a combined effect of climate and terrain. Deserts consist of large stretches of terrain with a passable surface, fairly flat and relatively uninterrupted by obstacles. There are also areas with great differences in altitude and with steep rock formations, sometimes even in the nature of a low mountain range, and vast sand dunes. The following characteristics can be identified:

a. The lack of water makes the desert an inhospitable region. It is sparsely populated and has an extremely limited infrastructure. Inhabited areas are few and far between and are only to be found where there is water.

b. The surface conditions away from the few roads require equipment with some degree of off-road capability, such as tracked vehicles.

c. Vegetation is scarce in the desert, which means that artificial aids have to be used for camouflage.

d. The extensive fields of observation and fire require a permanent all round protection, mobility and long-range reconnaissance. Because of the limited possibilities for orientation, the use of navigation apparatus is essential at all levels.

e. There are enormous differences in temperature in the desert; during the day in the summer the temperature can rise to above 45°C, and at night in the winter it can drop to -5°C. Temperatures can vary some forty degrees from day to day. Intensive rainfall occurs sporadically in desert regions. Because of the lack of vegetation, the ground is unable to soak up the enormous amount of water, which results in local flooding. Some low-lying areas (wadis) then become dangerous. The wind can be

extremely strong and cause sandstorms, in which units may become completely isolated. This can also cause considerable damage and wear to equipment. Good uninterrupted visibility across terrain with few features can cause people to underestimate distances. Rising air can limit visibility; the effect of vibrating air is compounded by the use of binoculars. Atmospheric refraction distorts the shape of objects, especially vertically. All of this combines to reduce orientation and observation capabilities.

Considerations of Operations in Desert and Hot Regions

8052. **Effects on Personnel**. Surviving in desert regions over a prolonged period imposes heavy physical and mental demands on personnel. Operating in the desert affects them physically and psychologically, particularly because of dehydration, exposure to the sun and the high temperatures. Physical capabilities are more limited and water consumption is extremely high. Strict discipline and extra personnel care are essential if the negative effects are to be kept to a minimum. Acclimatisation is necessary to allow the body to adjust to the extreme heat. A period of approximately four weeks is usually enough. If that is impossible, deployment in hot conditions must alternate with a period in a cool area. Protection against the effects of the sun and sandstorms is also vitally important.

8053. **Effects on Equipment**. Heat and sand take their toll on much of the equipment. The performance of helicopters diminishes considerably. The heat can have an adverse effect on supplies. Sand and dust can also have adverse effects, such as the accelerated wear of equipment. Frequent maintenance is thus highly important.

8054. **Planning and Execution**. In flat desert regions, the operation is mainly conducted by armoured units, sometimes supported by airmobile and airborne units. Combat will usually take place in a large area which offers good scope for conducting highly mobile combat. In general, the command and control will not differ greatly from that under normal circumstances; the time and space factors, however, will be different.

Offensive Activities in Desert and Hot Regions

8055. Because of the large amount of space available, the desert region is ideal for envelopment and turning movements. Assault troops should use the enemy's open flanks to circumvent the enemy main effort and occupy key terrain in the depth; the enemy will thus be outmanoeuvred. Because of the lack of cover, assault troops are also vulnerable.

8056. Close cooperation between ground, airmobile and air components is essential. Covered approaches for helicopters are by no means always available; the enemy will thus observe these airmobile movements relatively early and it will be simple for him to attack. The consequences of the lack of camouflage possibilities are reduced by surprise, rapid movement and operations security (communications discipline and

deception). Ideally, the combat is conducted at night because of the relatively higher degree of protection, favourable temperatures and the possibility of fighting without air superiority.

Defensiv Activities in Desert and Hot Regions

8057. The extensive fields of observation and fire, the lack of obstacles and the numerous avenues of approach are the specific problems for defensive operations. This can be compensated by conducting the defence in depth and by keeping a strong reserve. The initial emphasis should in any event be on establishing the location of the main enemy effort, so that it is possible to concentrate the counterattack force or the reserve on the enemy flank or rear. Key terrain in the desert consists of logistics facilities, road and rail intersections, water-collection areas, mountain passes, and so on. Holding the desert region itself will seldom be a deciding factor in achieving the ultimate objective. A cohesive defence is not usually possible without a major engineering effort. Both sides will make much use of minefields in the defensive operation.

8058. Special attention is required for timely reconnaissance, the preparation of positions in the depth and maintaining contact with the enemy in order to prevent turning movements. The extensive fields of fire mean that the enemy can be attacked at the longest possible range. Field artillery, aircraft and attack helicopters can be used to support the withdrawal and the subsequent movement to the depth. Smoke can also be used to conceal these moves.

Stability Activities in Desert and Hot Regions

8059. As these regions will have less dense civilian populations in general, there will be built up areas in its entire occurrence, ranging from small farmer settlements to larger cities and industrial areas. This means again that the establishment of security and control and, inherent, SSR will be the direct effects that an operation will focus on. The harsh climate affects the execution of such activities in the same way it affects offensive and defensiv activities, but beyond that there is an absolute urgency to carry out these categories of tactical activities as soon and effective as possible.

8060. In relation to restoration of services, water supply will probably be the key issue. One of the characteristics of such terrain is the absence of roads and tracks, and quite often the impossibility to use the terrain outside these, makes it urgent to open as soon as possible key roads. Usage of air transport is also a necessity, special for the most remote areas.

SECTION VI - OPERATIONS IN MOUNTAINOUS TERRAIN

Introduction

8061. Mountainous territory has extremely uneven terrain, which has steep slopes and valleys and which covers a large area. Mountainous terrain includes built-up areas and lowlands between the mountain ridges, highlands and passes. Towns and other built-up areas are concentrated in the valleys. The weather conditions are extremely changeable.

Characteristics of mountainous Terrain

8062. Mountainous terrain has the following characteristics:

a. The enormous differences in altitude offer good observation possibilities, but at the same time create large areas of dead space. These differences also affect the range of communications equipment;

b. The road infrastructure generally follows the pattern of watercourses. This affects the manoeuvre, as most of the assets are confined to the road network. At higher altitudes, the road network is extremely limited. Movements off the roads and paths in such areas are only possible for troops on foot;

c. On the lower slopes, the vegetation often consists of woods and bushes, which provide the necessary concealment. There is virtually no cover above the tree line;

d. At higher altitudes, the ground is made up of rock; digging trenches is thus time consuming and can only be done with special equipment;

e. Operating on foot in mountainous terrain is extremely demanding in physical terms because of the thin air and the enormous differences in altitude;

f. The weather is often unstable and can change very quickly.

8063. These characteristics result in the following restrictions:

a. Armoured units can only be used to their full advantage in the valleys and in the areas near the roads over the passes;

b. Because of the limited scope for movement, changing the combat organisation after the initial deployment is complicated;

c. The differences in altitude often hamper mutual support between units; this requires a low-level order of battle of essential weapon systems;

d. The limited road infrastructure imposes restrictions on the combat service support for tactical formations.

Planning Considerations for Operations in mountainous Terrain

8064. **Effects on Personnel**. The effects of the weather on personnel under normal circumstances is intensified in mountainous terrain (for example, the dazzling effect of the sun, hypothermia caused by cold winds and snowstorms, avalanches, floods caused by heavy rainfall, altitude sickness, thinning of air as altitude increases). For this reason, only those personnel who have had good mental and physical training and who have the necessary equipment can operate effectively in mountainous terrain. An acclimatisation period of at least a few days is required.

8065. **Effects on Equipment.** Extra training is needed for driving in mountainous terrain. Tracked vehicles can easily skid in loose stones, rubble, mud or snow. Not all roads are passable for large service support

vehicles. The thin air also has an adverse effect on engine performance. Above certain altitudes, there will be loss of power from engines.

8066. **Planning and Execution**

a. The area is compartmentalised because of the great differences in

altitude; this makes it difficult to maintain the cohesion in the operation. Operations in mountainous territory focus primarily on key terrain. In mountainous terrain, this consists of areas which control passes, road intersections, exits from valleys, defiles and through-roads. The possession of these key areas of terrain has a canalising effect; they can often be controlled from a higher altitude. Combat actions to gain or hold high ground will often dominate mountain warfare;

b. Infantry can operate virtually anywhere in mountainous country. Only infantry can capture and hold key terrain that is situated high in the mountains. Units of platoon and company size can often delay or halt a larger enemy unit by occupying critical high ground near passes or on mountain ridges. Movements are ideally carried out by helicopter, as passing critical high ground any other way is extremely time consuming. Support by artillery and mortars and close air support makes the helicopters even more effective.

Offensive Activities in mountainous Terrain

8067. More assault troops are needed than in flat terrain in order to compensate the terrain advantages of the defender. The scope for influencing the operation is increased if a central reserve with a high degree of mobility is available. Airmobile units are particularly suitable in this respect. Axes of advance which follow the course of the valleys are the most favourable. The speed of attack will be lower than in flat terrain.

8068. The assault troops will encounter the most resistance in the valleys, as long as the enemy controls the valleys with fire from higher ground. In that case, it is necessary to first take up forward positions, if possible on the flank and in any event on higher ground, before the attack can be mounted in the valley. If this is not possible, the enemy is first fixed frontally so that he can be circumvented via the surrounding valleys and high ground.

8069. The reserve follows along the roads so that it can be deployed quickly. Normally, tank units can only conduct an attack via the roads. Turning or enveloping movements by infantry should be carried out via higher ground. This is very costly in terms of combat power and time. Airmobile units can play an important role in this respect.

8070. The terrain may restrict the attack direction of the CAS strikes and may limit communications. However, mountain terrain may force the enemy to concentrate his forces along roads, valleys, reverse slopes, and deep defiles, where CAS can be very effective. Attack helicopters can get close to the enemy positions as they are barely affected by the nature of the terrain and the mountains can provide extensive cover. Unstable weather conditions can, however, impose sudden restrictions on CAS and the deployment of attack helicopters.

Defensive Activities in mountainous Terrain

8071. The combat organisation is heavily influenced by the terrain. Task forces often need to be formed for prolonged periods. The size of units that receive independent orders must be such that they can also form their own reserve. The need for a central reserve is determined by the estimated reaction time for its deployment.

8072. The defence is mainly conducted on passes, road intersections and critical high ground. Mountain ranges running transversely in the defence area favour the operation. Although it is possible to select positions with extensive fields of observation and fire, it is often difficult to introduce cohesion into the defence. The defence is characterised by local combat actions on a small scale.

8073. In terrain with good visibility and few obstacles, armoured units can conduct mobile operations. Counterattacks of any substance are only possible in wide valleys or on upland plains. When the enemy attacks, armoured units will stop him in the valley. These combat actions may be supported from positions in areas of higher ground. The later troops open fire, the deeper the enemy will penetrate the defence area and the greater the possibility of attacking him on the flanks. If, despite counterattacks and counterstrokes, the enemy pushes through, he must be countered with a defence grouped in depth.

8074. Mountainous terrain provides favourable possibilities in this respect. The use of transverse connecting routes makes it possible to attack the enemy quickly in the flank and rear. The main effort of the friendly operation is situated at the point at which the terrain allows a rapid enemy drive with armoured assets. It is difficult to shift the main effortin mountainous terrain. The nature of the terrain often means that reserves have to be decentralised and located close behind the forward units.

8075. Reserves from the higher level are, on the one hand, intended for reinforcement of forward units in the identified main enemy effort and, on the other, for disabling enemy airmobile or airborne elements. Friendly airmobile units thus make an ideal reserve. Engineer units support the defence by setting up obstacles, particularly on passes and roads.

Stability Activities in mountainous Terrain

8076. Security and control will focus on the valleys and the key terrain around these. The larger part of the populace and the life-supporting means, such as agriculture and industry will be found here. The main focus on establishing security and control and SSR activities will lie in these valleys. However, since opponents most likely will pull back in the mountains, their strongholds will require constant attention as security in a whole region depends on the neutralisation of these strongholds.

8077. Restoration of services will focus mainly on the valleys. A special problem will be the opening and securing of roads and the facts that distances will be enormous. Bringing in supplies and building up such an area will consume lots of time and transport means. The process will be very

vulnerable for quick changing weather conditions and the fact the height of an area can limit the transport capacities of air lift means.

SECTION VII - OPERATIONS IN JUNGLE AND TROPICAL TERRAIN

Introduction

8078. Jungles are vast tropical forest areas which are often combined with mountainous terrain or swamps. They have extremely dense vegetation with relatively few open spaces.

Characteristics of Operations in Jungle and Tropical Terrain

8079. There are virtually no roads in jungles; paths must be cleared and kept open by hacking through vegetation. Because of the dense vegetation, the fields of observation and fire are extremely limited; areas which would normally be designated as key terrain no longer have this value. The larger rivers form good approach routes. The living conditions are tough, not least because of the exhausting climate. Reliable maps are often unavailable or have limited value because of the lack of orientation possibilities, but this may be compensated by the availability of navigation equipment. It should be noted though that navigation equipment that relies on satellite systems may be severely hampered in this terrain. Commanders must prepare for this limitation.

8080. The unfavourable terrain can restrict communications and navigation systems, and limit the possibilities for movement. Helicopters are essential for movements andsupport tasks.

8081. The planning considerations for operations in woods and forests apply to operations in jungles.

Offensive Activities in Jungle and Tropical Terrain

8082. The attack is conducted by infiltrating on paths that troops have themselves cleared along the flanks of the enemy defence and then capturing objectives in the enemy’s rear.These units usually operate independently over a prolonged period. They must be specially trained and equipped for such operations. For reasons of secrecy, it may be necessary to dispense with airmobile supply. In that case, the unit has to carry the own provisions.Support from porters is indispensable in this respect. As the attack progresses, reserves are brought up, ideally in armoured vehicles, along the cleared and secured tracks and paths. Rivers can also play an important role here.

Defensive Activities in Jungle and Tropical Terrain

8083. The defence focuses primarily on the available routes, including the rivers. Along these routes, positions that can be defended on all sides are grouped in the depth and normally occupied by units of platoon size. The protection of the defence area, the service support installations and the friendly routes is ensured by extensive patrols and by laying ambushes. In

this way, enemy infiltration can be prevented, or a decision can be made on where to deploy a reserve. A large number of friendly troops are deployed for this purpose.

8084. Deployment opportunities must be created for the reserve, which will move on foot or, preferably by aviation (airmobile). The routes to be used must be prepared in detail.

Stability Activities in Jungle and Tropical Terrain

8085. Despite the likely lack of civilians and dense urban areas in this type of terrain, the establishment of security and control in these areas is extremely important. Restoration of essential services will be important and civilian civilian populations must be secured as they will be vulnerable due to their likely remote locations.

8086. Jungles and tropical regions may be bordered by extremely important agricultural or industrial areas. In this case the security and control of these areas is vital. Destruction often means the destruction of the complete future of large parts of a civilian population and willcause immense environmental damage.

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