



NORWEGIAN ARMED FORCES JOINT OPERATIONAL DOCTRINE
2007

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Foreword by the Chief of Defence

The tasks of the Armed Forces span a wide range of challenges in the field of security policy both at home and abroad. We have moved from a situation in which the Armed Forces had a clearly defined and all-embracing threat which we were trained and equipped to resist – and which we could actually plan for – to a far more complex and unpredictable spectrum of possible scenarios.

It is no longer sufficient to make concrete plans. Today we need to *understand* the possibilities and limitations of military force and, not least, the political and social context in which we operate. For these reasons a knowledge-based understanding of the role and nature of military force has become more important than static defence planning.

The Norwegian Armed Forces Joint Operational Doctrine (FFOD) is thus an important document. Not simply to lay down set procedures and rules for action – there are other documents to do that – but to serve largely as a teaching tool which can help the officer corps develop a common understanding, a shared way of thinking, a joint conceptual frame of reference and thus a foundation on which to build a common professional culture.

In simple terms, the doctrine can be said to have been implemented when the officers pose the same questions relating to operational situations, not only when they come up with the same answers.

Military operations call for commanders and staff officers who can approach operational problems intellectually and analytically, with the ability to assess the use of military force and its effect in relation to political objectives, who can distinguish the essential from the peripheral and who can weigh the short-term against the long-term. Advantages and drawbacks associated with different courses of action have to be assessed and weighed before decisions are taken and given force as orders. Military operations are governed by political objectives. There can therefore be no infallible recipe for success, apart from adhering to the principle that the use of force must reflect its political purpose both in the form it takes and the extent to which it is exercised. In these times an important function that a doctrine must fulfil is therefore to illuminate precisely those dilemmas and conflicting considerations that officers must take into account in an operational situation, and to contribute to the development of a creative element that renders the use of military force more an art than a science.

FFOD is a professional military document, and as such has to be subject to and adapted to the tasks and framework set out in the relevant political policy documents. It is, however, important that a military doctrine should embody an appro-

ach and a perspective that, as far as is possible, will make it timeless and enduring. The development and implementation of doctrines takes time.

FFOD places emphasis on an operational foundation that is based on *effects-based-*, *network-based-*, and *manoeuvrist* approaches to operations, while at the same time going more deeply into three operational methods, namely the *manoeuvre-*, the *attrition-* and the *stabilizing* methods. Thus FFOD forms the foundation for our approach to operational challenges across the whole spectrum of tasks the Armed Forces may face, and it marks out the way ahead in a medium term perspective.

This edition of FFOD replaces that issued in the year 2000 which was the first joint operational doctrine developed for the Norwegian Armed Forces. The aim at that time was to introduce a doctrine as 'a point of departure' for the further development of doctrine. The time has now come to take this a step further and to issue a revised and updated version, more closely adapted to the roles and tasks of the Norwegian Armed Forces in the world of today.

A handwritten signature in blue ink, appearing to read "Sverre Diesen". The signature is stylized and cursive.

Sverre Diesen
General
Chief of Defence

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1. Introduction

0101. The preparation and execution of joint operations are dependent on a solid conceptual foundation and on Armed Forces' personnel having a common understanding of the tasks to be carried out. This edition of the Armed Forces Joint Operational Doctrine (FFOD 07) sets out overall guidelines as to how the Armed Forces should approach today's challenges and those of tomorrow.

Points of departure and ambition

0102. FFOD 07 has the following points of departure:

- The greater part of the tasks carried out by the Armed Forces, and the conflicts with which service units have to deal, are by definition something other than “war” in the traditional sense. They are complex and characterised by unclear boundaries between peace, crisis and armed conflict. The handling of all the challenges that this implies requires a broad spectrum of coordinated military and civil contributions.
- The Armed Forces must be able to contribute to the nation's defence in times of peace, crisis and armed conflict, either in a leading or a supporting role. The Armed Forces must also be able to contribute forces to operations abroad and to operate jointly with allies or other actors.
- The fundamentals for national operations and operations abroad are the same, and all operational units of the Armed Forces must be able to deal with operations in both settings.
- A well developed professional culture, based on shared values and a common understanding, is essential to our ability to carry out our complex tasks.

WHAT IS A DOCTRINE? – DIFFERENT PRIORITIES

A military doctrine can take many forms. Firstly it can constitute an aid to the command and control process, in which case it will place emphasis on the description of methods and processes and the definition of concepts. NATO's AJP series (*Allied Joint Publications*) provides an example of such doctrines. Secondly a doctrine can be produced as a theoretical basis for military activities and would then be focused on reasoning based on military theory and security policy. Thirdly a doctrine can be oriented towards the development of a professional culture within the military organisation. It will then place weight on imparting those ideas, values and attitudes which should characterise the organisation. The earlier edition of the Armed Forces Joint Operational Doctrine (FFOD 2000) had both theoretical and cultural ambitions. First and foremost its aim was to inculcate and implement the concept of a manoeuvrist approach. FFOD 07 is an example of the third category.

0103. This doctrine is intended as a tool for the development of a joint operational culture, starting with the individual, to give robustness in complex operations both at home and abroad. The theoretical content is limited to what is relevant for the *Armed Forces' Operational Foundation* and the foundation itself has an emphasis on how we should approach our operational challenges. *Flexibility* and the combined fundamentals of *effect-based-*, *network-based-* and *manoeuvrist approaches* constitute the joint operational culture that the Armed Forces wants to develop. In this context, *approach* means adopting as second nature the essence of certain theoretical attitudes at the individual level. The Armed Forces choose to focus on these fundamentals instead of describing exact procedures in order to avoid being associated too closely with definite concepts, procedures or technological solutions which can quickly become outdated. The Armed Forces' Operational Foundation also encompasses three operational methods (*the manoeuvre method, the attrition method and the stabilizing method*) which can be combined to achieve the desired effect. This reflects an acknowledgement that the techniques of the manoeuvre method alone are not sufficient in all operations.

0104. The emphasis placed on developing a common operational culture means that FFOD 07 is toned down on the command and control side and contains few descriptions of procedures. On a national basis this is governed by the Chief of Defence's strategic directive for operational activity (*Forsvarssjefens strategiske direktiv for operativ virksomhet* - FSDO), and internationally by those NATO doctrines that Norway has ratified.

0105. FFOD 07 is the starting point for training and discussion as well as providing the guidelines for the development of the component doctrines, other doctrines and conceptual documents. This provides a common conceptual framework and a reference point for research and development (R&D) activities in the defence community. It will also act as an aid for civil partner organisations such as the police, the customs and excise authorities together with other government agencies, non-governmental organisations and others who wish to familiarise themselves with the fundamental principles and ideas on which Norwegian defence and the Norwegian Armed Forces are based.

A DOCTRINE'S TIME HORIZON

What time horizon should a doctrine have? Too short a perspective can result in the doctrine failing to have an effect before a new one is on the stocks. On the other hand a long perspective can mean that the doctrine may in time come to be regarded as a static document with little relevance. The Norwegian Armed Forces take the view that work on doctrine should be a continuing process, not least in order to embody new trends relating to the use of military force. At the same time it is important to have a given document to relate to. This doctrine has therefore been developed with a time perspective of five to ten years.

The doctrine and other guidance documents

0106. Figure 1.1 shows an overview of doctrines and doctrine-related documents for the Norwegian Armed Forces (full lines represent mandatory guidance and stippled lines represent guidelines only). Norway has no approved national doctrine hierarchy, but there are a number of guidance documents at national level.

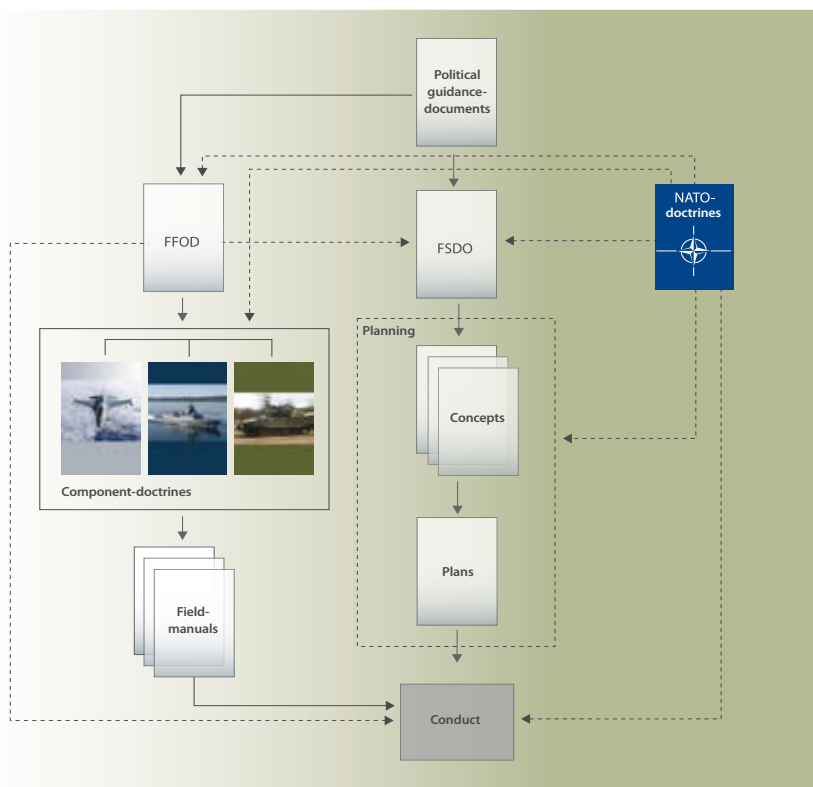


Figure 1.1, FFOD AND OTHER DOCUMENTS GOVERNING THE CONDUCT OF OPERATIONS

0107. The doctrine takes as its starting point guidance documents from the Norwegian Ministry of Defence, including the current Strategic Concept for the Armed Forces. *The Chief of Defence's strategic directive for operational activity* (FSDO) gives a detailed exposition of how the Armed Forces are to employ their operational resources and it forms the basis for the development of concrete concepts and plans at a joint operational level. This doctrine gives guidelines for the further development of FSDO with associated concepts and plans. It also governs the development of national component doctrines which in turn form the basis for the development of regulations and directives applicable to the way in which units of the Norwegian Armed Forces conduct operations. The NATO doctrines provide important guidelines for the development of both FSDO and FFOD. The

NATO doctrines also give direct guidance for operational planning by providing guidelines for the planning process itself.

A NORWEGIAN DOCTRINE?

The Norwegian Armed Forces Joint Operational Doctrine was first issued in the year 2000. The main ideas on which the doctrine was based – manoeuvre theory and manoeuvre warfare – constituted the doctrine's operational method. FFOD 2000 was based on documents including the *Chief of Defence's fundamental guidelines for the development and use of Norwegian forces in peace, crisis and war* published in 1995. Prior to this there had been no written Norwegian doctrine that applied to the Armed Forces as a whole, although work was proceeding on the development of doctrinal guidelines, including tactical directives, for each of the service branches. Although there were no written doctrines at the joint operational level until 1995, there existed views within the Armed Forces on war, warfare and principles for the development and use of military forces at this level which were shared by the majority of serving officers. Such views formed the basis for teaching and operational planning and so to that extent constituted an implicit doctrine. Some of this thinking found expression in the comprehensive planning work carried out by Headquarters Defence Command and the Defence Commands North Norway and South Norway during the Cold War period.

The structure of the doctrine

0108. The doctrine is divided into six chapters. Chapter 1 sets out its underlying ambition and its place in a Norwegian and an allied context. Chapter 2 deals with the complex challenges and operational framework facing the Armed Forces in today's world, as well as the way in which the Armed Forces transform these tasks into operations at home and abroad. Chapter 3 describes the *Armed Forces' Operational Foundation* and thus forms the doctrine's central core, while Chapter 4 contains the theoretical and conceptual basis for this operational foundation. Chapter 5 describes joint operations with components and functions. Chapter 6 describes the professional culture that the Armed Forces wish to develop and apply in carrying out our missions.



BÅTFØRER

2. Armed Forces' operations and the operational framework

0201. This chapter deals with how the Armed Forces' missions are put into practice at home and abroad. The chapter addresses the conditions affecting the Armed Forces' operations including the current spectrum of conflict and the framework imposed by policy and ethical considerations, international law and technology.

The conflict spectrum

0202. The conflict spectrum provides some measure of the level of violence involved in a conflict. The level is determined by a combination of the intensity of the violence, geographical extent of the conflict and its duration.



Figure 2.1, THE CONFLICT SPECTRUM

0203. The conflict spectrum spans the range from *peace* through *crisis* to *armed conflict*. The latter category includes what is traditionally called “war”. It is a sliding scale between its end points and the spectrum can be used to describe conflicts which swing first one way and then another. The absence of conflict management, or the wrong form of management, can contribute to an escalation in the level of conflict. Similarly, appropriate conflict management can reduce the violence and contribute to a resolution of the conflict. The parties' perceptions of each other's aims and capabilities are major factors in any decision to escalate the conflict. If one party perceives the other to be weak or vulnerable, it may consider its interests to be served by escalating the level of conflict in order to achieve its aims. A robust, clear and predictable conflict management capability can thus have a preventive effect. This is an important factor affecting how the Armed Forces should act both nationally and in missions abroad.

Armed Forces' tasks

0204. The tasks of the Armed Forces at any time are set out in the relevant political documents. The substance of these tasks has remained relatively constant over time but the degree of detail and the way in which they are stated has altered. Furthermore, changes in the global security situation and a range of political considerations have led from time to time to some shift of emphasis between the various tasks. The tasks of the Armed Forces can be divided into those which are to be carried out *nationally without assistance* and those to be carried out *in cooperation with other countries*.

0205. Tasks that will in most cases be carried out nationally without assistance are ensuring a national basis for decision-making through surveillance and intelligence gathering, the exercising of Norwegian sovereignty, the exercise of authority in defined areas and the prevention and management of security-related crises.

0206. Task which in most cases will be carried out in cooperation with other countries are contributing to the collective defence of Norway and other parts of NATO against threats and attacks, including the possible use of weapons of mass destruction, as well as contributing to multinational crisis management. The Armed Forces also have the tasks of providing military support to diplomacy and of safeguarding the security of society as well as other vital tasks in the public interest.

Armed Forces' operations

0207. The Armed Forces' core activity is to plan and execute operations. These operations can be categorised in several ways. They can be divided in the same way as the tasks mentioned above, that is to say those which are mostly carried out nationally without assistance and those which are carried out mostly in cooperation with other countries. In the following section, however, Armed Forces' operations are divided into *national operations* and *operations abroad*, since these are the two arenas in which operations are put into practice.

National operations

0208. The Armed Forces' operations nationally can be categorised according to the conflict spectrum as day-to-day operations, operations in response to national crises and operations in armed conflict.



Figure 2.2, ARMED FORCES' NATIONAL OPERATIONS AT DIFFERENT LEVELS OF CONFLICT

0209. Figure 2.2 shows different categories of operation which the Armed Forces prepare for and carry out at the various stages of the conflict spectrum. (A scale of intensity is shown along the horizontal axis while the requirement for robustness and the Armed Forces' degree of responsibility for the management of the operation is shown vertically). Since the Second World War the Armed Forces have been equipped and trained for operations in war; that is to say situations in which special wartime and emergency preparedness legislation should come into force and in which the Armed Forces are assigned a leading role with the principal responsibility for managing the conflict. The emergency preparedness legislation still applies but today the Armed Forces must be able to manage a broader spectrum of operations with the emphasis on *day-to-day operations* and *operations in response to national crises*.

0210. While the original total defence concept focused primarily on civil assistance to the Armed Forces in situations of crisis and war, the *modernised concept of total defence* embraces mutual support and cooperation between the Armed Forces and the civil community across the entire spectrum of crises from peace to armed conflict. It is an essential condition that the Armed Forces should be



able to contribute its available capabilities, its range of competencies and the resources provided to enable them to carry out their primary tasks. One consequence of the modernised concept of total defence, for example, is that the Armed Forces must arrange their logistics so that they can function without the need to mobilise the resources of the civil community.

THE HOME GUARD

The Home Guard (HV) has undergone comprehensive modernisation and today forms the core of Norway's territorial defence in times of peace, crisis and armed conflict. The Home Guard consists of the *Land Home Guard*, the *Naval Home Guard* and the *Air Force Home Guard*, with the same specialisations as the main three service branches. The Home Guard is a flexible organisation divided into *rapid reaction forces*, *reinforcement forces* and *follow-on forces*. The Home Guard is decentralised and has units in all Norwegian municipalities. The Home Guard district commanders represent a level of command subordinate to the Joint Operational Headquarters but with territorial responsibility which includes responsibility for operational planning. They also have a responsibility to the Chief of Staff of the Norwegian Home Guard for force production.

The Home Guard maintains contact with the civil community through a civil-military network based on mutual knowledge and trust. The local commanders are responsible for fostering cooperation with the police and the civil sector at local and county levels.

The Home Guard protects both people and important communal functions. This entails the guarding of defence installations, the protection of local infrastructure, key personnel and matériel, surveillance and patrols, as well as the provision of support for the civil community. This is reflected in the Home Guard's motto: WE PROTECT people and important communal functions! WE WATCH OVER the local community! WE ACT with strength!

Day-to-day operations

0211. The Armed Forces' operational units uphold Norwegian sovereignty through territorial surveillance along the country's land, sea and air borders, day and night, throughout the year. This surveillance is carried out by the Coast Guard and other parts of the Navy, the Army's Border Guard and the Air Force's air defence surveillance system which, together with combat aircraft at a high state of readiness, uphold sovereignty in Norwegian airspace. The Coast Guard and the Army's Border Guard have special responsibility for the exercise of authority within specific areas. Other examples of day-to-day operations are the Air Force's round the clock, nationwide search and rescue service operated on behalf of the Ministry of Justice and the Police, H M The King's Guard's protection duties and the Armed Forces' routine explosives and bomb disposal service.



0212. Other parts of the Armed Forces are involved in administration and force production. These are mentioned not as day-to-day operations but rather as day-to-day activities. Force production covers the development of equipment, tactics, organisation and personnel together with education and training.

THE COAST GUARD



The primary task of the Coast Guard is to uphold Norwegian sovereignty and associated rights in sea areas under Norwegian jurisdiction and in inner coastal waters. The Coast Guard carries out fishery inspection duties, customs and excise inspections and other inspection duties including those associated with the Schengen agreement and the regulations governing the seaworthiness of shipping. In addition the Coast Guard carries out sea rescue missions and provides general assistance both at sea and to the police and other national agencies, as well as conducting checks in connection with port visits by foreign non-military vessels. The activities of the Coast Guard are regulated by the Coast Guard Act of 1999. The Coast Guard is assigned limited police authority and authority to conduct inspections and checks. It has the right to use measures for enforcement. The motto of the Norwegian Coast Guard is: EVER PRESENT!

Operations in response to crises

0213. A national crisis is an event which puts national resources to the test. Such a crisis implies that one single authority or agency will not have sufficient resources to manage what has happened. Instead it will be necessary to concentrate all or parts of the nation's relevant resources. Examples of such situations range from unpredictable events such as natural or environmental disasters, through mass refugee movements, major catastrophes and pandemics to deliberate acts in the form of episodes in Norwegian sea areas, terrorist actions against people, industry or the infrastructure of society, up to and including limited armed attack.

EVENTS, SITUATIONS, EPISODES AND CRISES

Day-to-day operations and operations in response to national crises are triggered by circumstances of varying degrees of gravity. One commonly used way of categorising these circumstances is to use the scale *event, situation, episode* and *crisis*, where event signifies the lowest level and crisis the highest. These concepts, however, are not absolute and in many cases it is only possible to determine the category with hindsight. Nevertheless the concepts do have value when relating to the types of operation carried out by the Armed Forces. Events and situations are managed as *day-to-day operations*, crises are managed as *operations in response to national crises*, and episodes lie somewhere in the border region between these two categories and are managed either through the normal organisation or by combining resources, and/or co-operating with, other organisations.

0214. A political security crisis is a military responsibility when it affects the territorial integrity or political sovereignty of the state. The crisis will often come as a surprise turn of events, or as a gradually escalated demonstration of strength by an actor who is perceived to be threatening. The crisis will often be characterised by limited time available between decision and action, and by the possibility that an inadequate reaction may have serious consequences.

CRISIS MANAGEMENT: THE RESPONSIBILITY, PROXIMITY AND SIMILARITY PRINCIPLE

The responsibility principle implies that whoever is responsible for a particular sector is also responsible for implementing the necessary damage preventive measures and contingency preparations. The proximity principle implies that crises should be managed at the lowest level possible. In practice this means that the municipalities themselves and the local police should at the outset have responsibility for managing the majority of crisis events in peacetime. The similarity principle implies that organisation in dealing with crises should be as similar as possible to that existing under normal conditions.

The proximity principle does not apply to political security-related crises or nuclear accidents which will always be managed at the central level.

0215. Assistance rendered by the Armed Forces will normally be a supplement to the civil authorities' crisis management. The main principle is that support from the Armed Forces will be appropriate first and foremost when the nature of what has happened is such that the civil authorities, who have the primary responsibility, are not able to deal with the crisis solely with their own resources. Armed Forces resources can be utilised for transport, communications, treatment of the sick or wounded, food and accommodation, area surveillance, clearance and disposal of explosives, chemical decontamination, traffic control, guarding and security duties. The Armed Forces can contribute manpower for various purposes including the temporary repair of infrastructure such as embankments, roads and bridges.



0216. As a basis principle, the Armed Forces will provide support to the civil community in areas where we have a unique competence or where we possess resources which other authorities do not have. The Armed Forces are able to contribute a broad spectrum of robust capabilities including naval, air and specials forces. The latter will for example be able to contribute to the management of hijack or similar situations. Terrorist attacks are essentially criminal in nature and thus the responsibility of the police except in situations where the Armed Forces have, or are assigned, the primary responsibility.

0217. The Armed Forces have primary responsibility for dealing with terrorist actions which are deemed to constitute an armed attack on Norway which triggers the right of self-defence under international law. In addition, the Armed Forces have an independent responsibility in peacetime for dealing with the following situations which are beyond the capabilities of the civil authorities. Firstly, a massive attack on oil installations where there are political or security-related connotations. Secondly, situations involving chaos on a national scale, for example widespread sabotage where it is not clear whether Norway is facing a crisis or armed conflict. Thirdly, the Armed Forces have an independent responsibility to deal with situations which require the alerting of combat aircraft and the engagement of air targets in order to prevent a terrorist attack from the air. Responsibility will also lie with the Armed Forces if air defence systems are required to defend Norwegian airspace or if submarines are required for sub sea security or the engagement of underwater targets.



ASSISTANCE TO THE POLICE

The Armed Forces can assist the police when this is compatible with the primary tasks of the Armed Forces and the police do not have sufficient human and/or material resources. See *Instructions for Armed Forces' Assistance to the Police (Instruks om Forsvarets bistand til politiet)* laid down by Royal Decree of 28 February 2003. Assistance means any form of human and/or material support. A distinction is made *between administrative, operational and enforcement assistance*.

Administrative assistance: The Armed Forces can assist the police with transport and other administrative support, including assistance in cases where the Armed Forces have a particular capability or competence which does not directly involve the military assistance unit in the operational police work of resolving the situation. Any request for assistance in such cases should be made directly by the chief of police to the Joint Operational Headquarters (FOHK) where the request is considered and any eventual assistance put in motion.

Operational assistance: In the event of accidents, including search for missing persons, natural disasters and similar situations, the Armed Forces can assist the police. In such situations service personnel can be deployed on traffic control duties or on guard and security tasks although these latter tasks will not normally be carried out if they involve contact with the civilian population. The Armed Forces can also provide assistance in the disposal of explosive devices or rendering them harmless. FOHK will receive and assess requests and allocate any resulting tasks.

Enforcement assistance: The Armed Forces can assist the police in search for and apprehending dangerous persons when this is necessary to avert danger to life or health. The military contribution will then preferably be concentrated on maintaining watch, ensuring safety and providing cover for the police who should actually apprehend the person(s) concerned. The Armed Forces can also provide assistance if there is a risk of a conspiracy which is either extensive or of an otherwise particularly damaging nature and which is directed against the essential interests of the public, or in order to prevent or counter such conspiracies. In these circumstances service personnel may assist the police on traffic control duties or on guard and security tasks.

If the provision of assistance can endanger service personnel, or give rise to questions which touch on matters of principle or have a political dimension, the police should channel their request via the National Police Directorate to the Ministry of Justice and the Police. The Ministry of Justice and the Police will then request assistance from the Ministry of Defence which will make a final decision and give guidelines to the service units concerned.

0218. Operations in response to crises can be carried out making use of certain principles from the *stabilizing method* which, together with the *manoeuvre* and *attrition* methods, are described in the *Armed Forces' Operational Foundation*. In



addition, principles from the *manoeuvre* and *attrition* methods will be appropriate in the event of an escalation in the scale of a crisis.

In the survey of the Armed Forces' operations, reference is made to various types of actors and different operational methods. The actors are described in section 0265 et seq. and the operational methods are described in Chapter 3.

Operations in armed conflict

0219. Armed conflict implies an attack directed against Norway or Norwegian interests, carried out by regular or irregular forces, and which exceeds a level which can be regarded as criminality. In armed conflict the Armed Forces have a leading role and the rest of the community will provide support. The Armed Forces will then set in motion military operations in accordance with national legislation. Of central importance here is *Act no. 7 of 15 December 1950 relating to special measures in time of war, threat of war and similar circumstances* (the Preparedness Act). (*Lov av 15. desember 1950 om særlige rådegjerder under krig, krigsfare og liknende forhold – beredskapsloven*). This Act can also permit the initiation of military operations without the involvement of the rest of the community.



0220. Operations in armed conflict nationally can include combat against regular or

irregular forces. Combat against regular or irregular forces requires the ability to engage in joint and combined operations with NATO and other partners. The operations are conducted using a combination of the *manoeuvre-* and *attrition methods* with the accent on the former.

0221. In combat against regular or irregular forces, principles from the *stabilizing method* can be a necessary supplement in order to secure operational areas and protect the local population. Principles from this method can, moreover, be essential in the chaotic situation which will often arise when combat ceases. It is of decisive importance to handle this situation correctly in order to increase the possibility of gaining political advantage.

THE CONCEPTS OF “WAR” AND “ARMED CONFLICT”

The concept “war” can have different meanings depending on the context and who is using it. What constitutes war in a legal sense and what is normally understood by the concept do not necessarily coincide. Today the traditionally sharp distinction between peace and war is far less clear than in the past, and the concept of war can be discussed from differing perspectives.

Social science and political perspectives: The war concept is often used in reference to a group’s, or a state’s, ultimate use of force in order to pursue its own interests. War can be seen as organised force between groups, first and foremost states, but also between groups of people within a state or a territory. Such a definition perhaps describes the war’s rationality, that is to say the use of force to pursue interests, but it scarcely says anything about the emotional or legal and ethical aspects.

Emotional perspectives: People who experience extreme violence, chaos, suffering and death often use the concept “war” to describe their experiences. The war concept then reflects the experience of cruelty and does not depend on whether it is war in the political or legal sense. This illustrates the emotionally loaded nature of the concept. “Going to war” implies that the state has put to use its ultimate instrument, and that those taking part have assumed the ultimate responsibility for that state’s survival. The individual will feel his own contribution to be important and will expect the state’s gratitude and support. If the state’s support is not forthcoming, or if the fighting is defined as something other than war, the individual may feel that his efforts are being undervalued.

“War” is often used when an actor wishes to signal that he is prepared to go a very long way in fighting against something, for example “war on drugs” or “war on poverty”. Since 2001 the American administration’s use of “war on terror” has contributed towards the complication of the war-concept. The original intention behind this use of the concept was probably rhetorical in that it emphasised that the fight against terrorism had the highest priority and that it would be fought with all possible means. Subsequent events, however, have shown that many of the actions taken do in fact lie within the

political and legal perspectives of the concept of war. This implies a shift from being at war with *someone* to being at war with *something*, which itself is problematic in the perspective of international law.

International law perspectives: Up to the time of the Second World War, the position in international law was that the initiation of war required a formal “declaration of war”. This was done in conformity with requirements formulated in the third *Hague Convention* of 1907. Since the Second World War, little or no use has been made of declarations of war. If rules for the protection of the individual in war are to depend on the parties to the conflict first having declared war, this implies among other things that states and other parties to a conflict are themselves able to choose which rules for warfare and the protection of individuals are to be employed. This formed part of the background to the use by the International Red Cross, in the framing of the four Geneva Conventions, of the expression “armed conflict” rather than the concept of war in defining the conditions under which the Conventions are to apply. The concept of armed conflict is also used in the UN Treaty regulating the use of armed force. Here the war concept is used only to refer to wars of the past. There are no set criteria for the thresholds of violence which have to be crossed before the conflict can be termed an armed conflict. This is determined by the particular circumstances but the basic premise is that the conflict must be extensive in duration or intensity.

National legality perspectives: In Norway one of the administrative distinctions between war and peace has gone with the implementation of the “Preparedness Acts” of which the most central and general is that of 15 December 1950 (*Act no. 7 relating to special measures in time of war, threat of war and similar circumstances*). This Act uses the words “war, threat of war and similar circumstances” in defining situations in which the Act applies. Even though the Act uses the expression “war”, there does not have to be a declaration of war for the Act to apply. The *Preparedness Act Commission (Beredskapslovutvalget)*, in its report NOU 1995:31, has assumed that the Act can be brought into force when there is “imminent danger of international armed conflict which can affect Norwegian territory or the territory of one or more of our NATO allies”.

The Armed Forces’ operations abroad

0222. The Armed Forces’ operations abroad are categorised in relation to the conflict spectrum and designated as *military contribution in peacetime, stabilization operations, combat against irregular forces* and *combat against regular forces*. Such a categorisation is an aid to describing which operational methods, which force structure and what kind of conduct is necessary under differing environments and conditions. It is important to be clear that these four main types of operations are partially overlapping and that they will therefore not necessarily match a single category exactly.

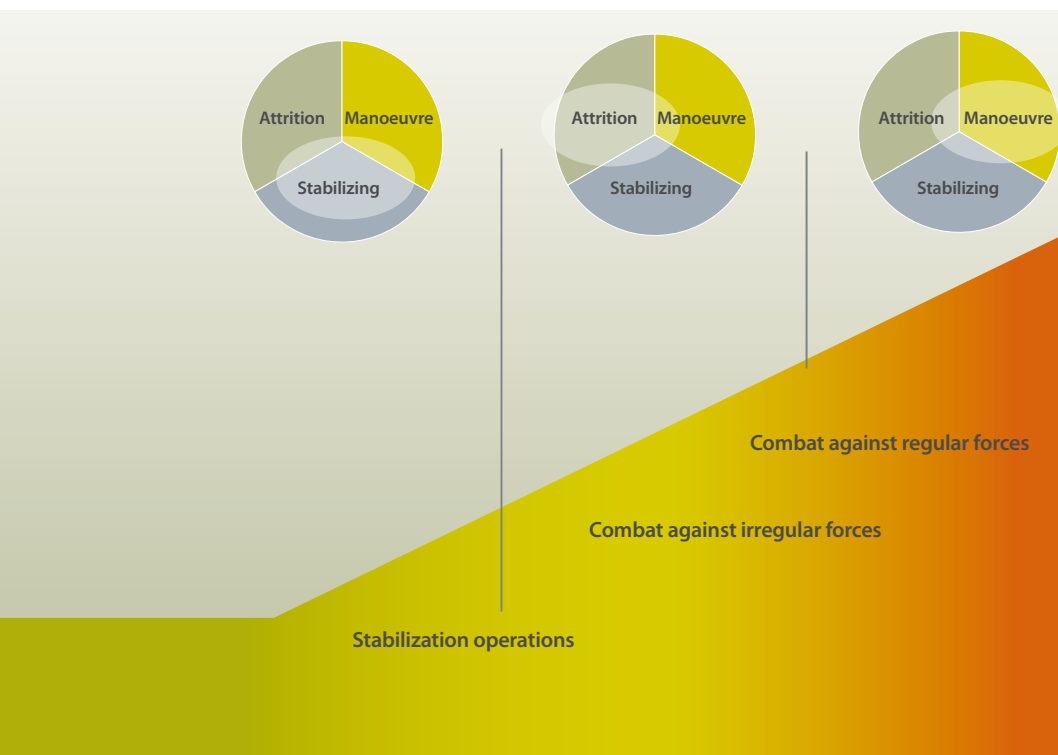


Figure 2.3, THE ARMED FORCES' OPERATIONS ABROAD

0223. Figure 2.3 shows the various categories of operations undertaken by the Armed Forces abroad. (A scale of intensity describing the situation in the operational area concerned is shown horizontally while the requirement for robustness is shown vertically). The figure says something about intensity and the requirement for robustness but scarcely anything about the *complexity* of the operations. Stabilization operations and combat against irregular forces can often be characterised by greater complexity than combat against regular forces. All the operations engaged by the Armed Forces abroad are for the purpose of bringing a conflict to a lower level of tension, a factor which governs the choice of methods and means employed and which forms an important part of the Armed Forces' *effect-based approach*. In stabilization operations the main emphasis will be placed on principles from the *stabilizing method*. In combat against irregular forces the main weight will be principles from the *attrition method*, and in combat against regular forces the main weight will be on principles from the *manoeuvre method*.

Military contributions in peacetime

0224. Military contributions in peacetime are activities which have as their objective the underpinning of political and security-related stability. These activities can take the form of education and training programmes or exercises conducted jointly with allies and other nations. They can involve fixed force contributions to standing NATO forces, cooperation in border control and surveillance, or contributions in the event of natural disasters and major incidents abroad including air transport operations and medical assistance. International collaboration in the field of defence equipment is a related activity although one not directly associated with the Armed Forces' operational activities.



0225. Military contributions in peacetime are normally activities with a long term perspective. The level of risk associated with such contributions is most often low. At the same time it is important to be clear that units engaged in such contributions can be targeted by terrorists or others who wish to affect developments in the area or to cause harm to Norway.

PEACE SUPPORT OPERATIONS

The Armed Forces' operations abroad will often form part of a *peace support operation* mandated under Chapter VI or VII of the UN Charter. UN and NATO operate with the following categorisation of peace support operations:

Preventive Diplomacy: Action to prevent disputes from arising between parties, prevent existing disputes from escalating into military conflicts and to limit the spread of the latter when they occur. Preventive diplomacy can cover confidence-building measures, the preventive deployment of military forces or the establishment of demilitarised zones.

Peacekeeping: Operations legitimised under Chapter VI of the UN Charter (peaceful resolution of disputes) and requiring the consent of the parties before they can be set in motion.

Peace Building: Operations which can be set in motion for the purpose of implementing a comprehensive peace arrangement which has the prior approval of all parties concerned.

Peacemaking: Operations for the purpose of bringing an end to a conflict, essentially through peaceful means as described in Chapter VI of the UN Charter.

Peace Enforcement: Operations with a mandate in Chapter VII of the UN Charter but which do not require the consent of the parties concerned before being set in motion. Peace enforcement operations will often involve combat against regular or irregular forces.



Stabilization operations

0226. A stabilization operation is intended to lower the level of conflict between two or more parties in order to preserve or re-establish peace. Such an operation is often concerned with ensuring that existing agreements are observed and with the creation of a secure environment for non-military activities. This can involve surveillance and policing tasks as described in the section on the stabilizing method. Stabilization operations constitute a separate category since they are normally conducted at lower levels of conflict than combat against irregular or regular forces. A stabilization operation can, however, at times escalate into combat against irregular or regular forces. The robustness needed to deter or handle any such escalation is therefore essential to the effective conduct of stabilization operations. Experience has shown such operations to be of long duration and to call for a high degree of patience, both political and military.

0227. Stabilization operations are conducted mainly with the aid of the principles described in the section on the *stabilizing method*. Different phases of the operation may, however, require the use of principles drawn from the *attrition* or *manoeuvre methods*. Units at the tactical level may, during a stabilization operation, have to carry out operations according to the attrition or manoeuvre methods in order to fight an irregular or regular force.

LOW INTENSITY CONFLICTS (LIC)

The majority of conflicts in which Norwegian forces are engaged can be described as low intensity conflicts. The concept originated in the 1970s even though the phenomenon as such was described in writings far further back in time. The origin of the concept during the Cold War period, and with both world wars in mind, explains the categorisation of *high, medium and low intensity conflicts*.

High intensity conflicts were defined as conflicts in which the existence of the state was at stake and where the entire population had to be oriented towards war. Such a conflict would be characterised by conventional forces facing one another and the methods used being chosen accordingly. In the last resort there was the possibility of an escalation involving the use of nuclear weapons. The last century's two world wars were high intensity conflicts.

Conflicts of medium intensity were then defined as regionally limited wars employing conventional weapons. The war between Iran and Iraq in the 1980s is an example of such a conflict. At that time the concept of *low intensity conflicts* was applied to "all the others".

Low intensity conflicts can be defined as politico-military struggles to achieve political, military, social, economic or psychological aims. They are often long-lasting and can cover everything from diplomatic, economic and psychological pressure to terrorism and rebel movements. Low intensity conflicts are generally limited to a specific geographical area and are often characterised by limitations on weapons, tactics and the level of violence. LIC cover the use of traditional military means up to the level just below that of combat with regular forces.

The scale of low, medium and high, however, does not harmonise well with today's conflicts, especially since it can give the impression that the level of violence is low in "low intensity conflicts". With the exception of the Gulf War in 1991 and the initial phase of the Iraq War in 2003, it is true to say that most of the conflicts of the last fifteen years can be called low intensity conflicts. At the same time, many of the conflicts in this period have involved a level of violence, and numbers of dead, that far exceed those of many medium intensity conflicts. Examples here are Rwanda, Somalia, Iraq and Afghanistan. The terrorist attacks on the United States on 11 September 2001 are other examples showing that the concept is ambiguous and difficult to define.

In reality low intensity conflicts are today an umbrella concept covering everything from guerrilla warfare, terrorism and asymmetric warfare to those operations which are intended to counter these forms of warfare, including stabilization operations. Further, the concept is used either to describe the nature of a conflict or to describe a deliberate strategy. Such a strategy is about inflicting losses on an enemy with the aid of limited resources, and winning the support of the population at large by various means. Mao Tse Tung's guerrilla warfare is often cited as an example of this type of strategy.

Combat against irregular forces

0228. Irregular forces can cover a spectrum ranging from well-organised rebel movements, local warlords and their followers to criminal groups. Combat against irregular forces can occur within the framework of a stabilization operation but is nevertheless described as a separate category of operations because the use of force will generally be more comprehensive than would normally be expected of a stabilization operation. The use of force can sometimes become very extensive in combat with irregular forces.

0229. In operations against irregular forces it is often necessary to combine political, military, economic and psychological means in order to combat the rebel movement and its external support, and to isolate the movement from the inhabitants themselves. Combating irregular forces will often, as in stabilization operations, require considerable time.

0230. Combat against irregular forces is conducted mainly using principles from the *attrition method*. Experience shows that it is necessary to bring about a long-term and systematic breakdown of both the will and the capability of the irregular forces in order to stop them. This is due to two factors. Irregular forces are often



ideologically motivated and largely unaffected by the type of rationality that underlies the *manoeuvre method* – that the opponent must realise that it is useless to continue the struggle. Irregular forces also often take the form of small units without an overall command structure, a factor that can mean that there is no central decision-maker who can be out-manoeuvred. In combat against irregular forces, principles

from the manoeuvre method can nevertheless be effective at lower levels. The Armed Forces will also be able to employ principles from the *stabilizing method*, primarily to protect the civil population and their own area of operations as well as making it possible for civilian agencies to operate in the area.

Combat against regular forces

0231. Combat against regular forces is most often combat against the forces of other states conducted in accord with the traditional picture of military combat as described in military theory and doctrines. Combat against regular forces is characterised by a high level of violence and will often be conducted over a shorter period than in the case of stabilization operations or operations against irregular forces.

0232. Combat against regular forces will often take place during the introductory phase of a campaign in which, at a later stage, the emphasis will shift towards stabilization operations or combat against irregular forces. It is important to be clear that the distinction between combat against regular forces on the one hand and combat against irregular forces on the other will often be blurred. Combat against regular and irregular forces may also be conducted in parallel.

0233. Effective combat against regular forces requires the ability to conduct joint operations in multinational environments. Such operations are most often conducted using a combination of the *manoeuvre* and *attrition methods* with the emphasis on the former. The *stabilizing method* can also be employed as necessary to protect own or allied forces, or a third party.



Armed Forces' rationale

0234. Taken overall, operations at home and abroad suggest that the Armed Forces must today be capable of preparing and implementing operations across the entire conflict spectrum. The Armed Forces are thus dependent on a wide range of capabilities. It is, however, the capability to engage in armed combat in high intensity conflict situations that constitutes the principal rationale of the Armed Forces. A capability that makes particularly stringent demands with regard to robustness and the ability to carry out joint operations, and therefore must form the basis for the further development of the Armed Forces.

The overall approach to complex conflicts

0235. The precondition for a lasting peace is that the underlying causes of the conflict have been addressed. Operations today will often involve initially putting a stop to the violence and addressing the problems of disease, hunger and poverty. It will then be important to disarm the opposing groups and to lay the foundations for the peaceful development of the community. Against this background, military means will often have a limited role, primarily focused on creating and maintaining a secure environment in which other activities can safely be conducted.

0236. Today the ambition internationally is to link military and civil means more closely together. Within the UN system and in an EU context the concept of *Integrated Missions* is frequently used. In the UK this is often referred to as the

Comprehensive Approach while in NATO the concept is more generally called the *Effects Based Approach to Operations* (Chapter 4). Even though the content of these concepts may vary somewhat, they are all based on an acknowledgement that the handling of complex conflicts often requires the coordination of diplomatic, economic and military means. In many cases there will also be a need for coordination between different states, organisations and other actors. A corresponding overall view of conflict management forms a central element of *effect-based approach* in the Armed Forces' Operational Foundation (Chapter 3).

Operations – the political framework

We see, therefore, that war is not merely a act of policy, but a true political instrument, a continuation of political intercourse, carried on with other means. What remains peculiar to war is simply the peculiar nature of its means.

Carl von Clausewitz

0237. The use of military force is politics and the political objectives are always of overriding importance in the conduct of a military operation or campaign. The political framework has both a national and an international dimension. Nationally the political objectives are shaped by weighing the relative importance of various considerations such as opinion at home, opposition and the media. Internationally, during the conduct of multinational operations, the contributing nations varying interests and objectives have to be taken into account, something which means that the aims stated are often characterised by compromises.



0238. It is common to operate with four levels, the political, the military/strategic, the operational and the tactical. Figure 2.4 illustrates the connection between the various levels. The political level embraces all the others. Among other things this means that each action, right down to the tactical level, must be in harmony with the overriding political objectives.

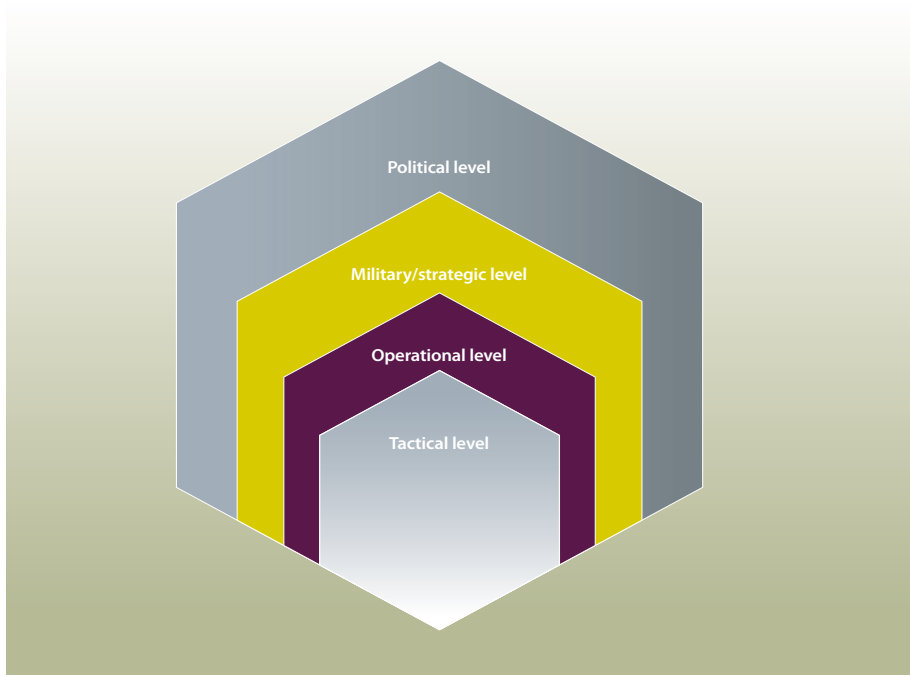


Figure 2.4, THE OPERATIONAL LEVELS, THE BIG PICTURE AND POLITICAL CONTROL

WHY FOUR LEVELS?

This subdivision into four levels was developed during the inter-war years and its practise was a central feature of the operations of the Second World War. The need to coordinate the war effort on the different fronts and sectors with the military/strategic objectives required there to be a linkage between the strategic and tactical levels. The establishment of a so-called operational level of war was an essential requirement if the strategic level was to be at all capable of conducting ever greater and more complex operations on several fronts. That in turn was essential if a united war command (political and military) was to progress towards achievement of the common aim (first the German, and then the Japanese capitulation). This multi-level structure was carried forward with the establishment of NATO's military command structure at the beginning of the 1950s for which it still remains the key foundation. In the 1980s the operational level as we know it today was developed in the United States and the NATO countries.

0239. One consequence of today's complex security picture and conflict spectrum, in which the boundaries between peace, crisis and armed conflict are often unclear, is that there is an element of political control at all levels in a military operation. Information technology increases the possibility of exerting political and military/strategic control and also means that individual events in the conflict area can be broadcasted around the world with possible repercussions at many levels. In addition, Norway operates most often with various coalition partners with whom many political, historic and cultural factors come into play at all levels of decision-making. Partly as a consequence of these conditions, some elements of the strategic leadership (the Chief of Defence and his strategic functions) are integrated with the Ministry of Defence.

LEVEL:	AREA OF RESPONSIBILITY:	ORGANISATION:
Political/strategic	Develops and defines the political objectives, sets frameworks and allocates resources.	Norway: Government NATO: North Atlantic Council (NAC)
Military/strategic	Produces the relevant forces. Provides military advice to the political level. Coordinates all military means, looks after cooperation with civil authorities and organisations centrally.	Norway: Chief of Defence NATO: Supreme HQ Allied Powers Europe (SHAPE)
Operational	Acts as the link between the political/military/strategic level and the tactical level. Converts political objectives into realistic plans and operations.	Norway: Joint Operational Headquarters (FOHK) NATO: Joint Forces Command (JFC)
Tactical	Carries out concrete tactical tasks associated with the operational objectives.	Norway: Tactical staffs NATO: Component Commands

Figure 2.5, THE LEVELS WITH THE ASSOCIATED NATIONAL AND ALLIED INSTITUTIONS

0240. The often indistinct boundaries between the levels can in practice mean that military operations have closer links to the political level that has previously been the case. This in turn can entail the operational level having a less central role in the preparation and execution of operations. In certain situations, especially politically sensitive situations that can develop rapidly, it will not always be appropriate to have many levels and the political leadership may have a strong need for first-hand information and more direct control over the situation. It is important, however, to be clear that the operational level alone has the competence and capacity required for the preparation and execution of major joint operations.

Operations – the legal framework

0241. *International law* is an umbrella term for that part of the law which governs relations between states in peace and during armed conflict. International law includes *law of peace*, *law preventing war* and *law of armed conflict*. International law also includes rules relating to international organisations, and, to a certain extent, individuals and non-governmental actors. International human rights are a part of international law and the most fundamental guarantees of human rights in situations of armed conflict. Areas covered by International law cover the law of the sea, rules for determining land borders, rules for diplomatic relations and agreements associated with international finance and trade.

0242. Law aiming at preventing war (*jus contra bellum*) is contained in the UN Charter and includes the right of self-defence (*jus ad bellum*) and the powers vested in the Security Council to authorise the use of armed force. Law of Armed Conflict (*jus in bello*) sets out what the parties in an armed conflict may legally do, including the means that it is permissible to use including disarmament treaties. The use of Norwegian forces and the conduct of Norwegian soldiers in military operations is further governed by Norwegian law which in some cases may set further limits within the relevant framework of international law and human rights.

Jus ad bellum – the regulation of the use of force

0243. The UN Charter's Article 2.4 requires states to refrain from the threat of or use of force in their relations with other states. This prohibition of the use of force is later emphasised in the UN's *Friendly Relations Declaration* in requiring full respect for the principles of international law concerning friendly relations and cooperation among states. The prohibition of the use of force covers war of aggression, military occupation and the use of force or threats of use of force for any other reason.

0244. The UN Charter describes two exceptions from the prohibition on the use of force. Firstly the right to use military force in self-defence in the event of an armed attack (UN Charter Article 51), and secondly if there is a mandate from the Security Council (UN Charter Chapter VII). In addition, it would not contravene the UN Charter's system to use force on the territory of another state with the consent of that state.

0245. The right to use military force in self-defence applies only in the event of armed attack and is limited by the principles of *necessity*, *immediacy* and *proportionality*. An attack can be classified as armed with regard to Article 51 if the attack is either occurring, or is clearly imminent, and qualifies as an armed attack both in

terms of frequency and level. Mere border incidents and isolated episodes will not normally be considered to be of such an extent that they can be classified as armed attack according to the UN Charter. The UN Charter does not, however, prohibit states from defending their territory by military means, for example in the event of border incursions, as long as the use of force is not directed towards another state's territorial integrity, political independence or in any other way not compatible with the purposes of the UN Charter.

Jus in bello – the Law of Armed Conflict (LOAC)

0246. The LOAC covers the rules of international law relating to *international* and *non-international* armed conflicts. The purpose of the LOAC is to reduce human suffering and the infringement of rights among soldiers and civilians as well as preventing unnecessary material destruction. The main part of the LOAC is regulating interstate armed conflicts while a limited number of rules deal with armed conflicts within a state. Today account needs to be taken for the fact that many armed conflicts are *intrastate*, where at least one of the parties is a non-state actor. Those rules and limitations which apply between states are considered to a substantial degree to constitute a customary law basis also for rules applicable to conflicts within a state.

0247. The LOAC is based on a number of general principles. The most important of these are:

- The *principle of proportionality*: It is prohibited to launch an attack which can be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.
- The *principle of precaution*: Every effort shall be made to minimise incidental loss of civilian life or injury to civilians or damage to civilian property (this follows as an extension of the principle of proportionality).
- The *principle of distinction*: There shall be a distinction between the civilian population and combatants and between civilian objects and military objectives.
- The *principle of necessity*: Only those actions that have a legitimate military rationale may be taken. Military necessity justifies the use of force not otherwise prohibited by the LOAC to the extent necessary for the purpose of the armed conflict.
- *Principle of humanity*: Not even military necessity can justify unlimited human suffering. It is also a requirement that the sick and wounded in one's care should be treated.

The Martens Clause states that in the absence of specific rules under international law, the requirement for humanity shall still apply.

THE LAW OF ARMED CONFLICT

The best known collection of rules governing the conduct of war (*jus in bello*) are contained in the *Geneva Conventions* and their additional protocols as well as in several treaties regulating specific means of combat. *The Martens Clause* is an interpretative rule included in the *Hague Convention*.

0248. LOAC does not address the question of whether the resort to use of force was lawful or not (*jus ad bellum*). Nor is LOAC formulated to affect the outcome of a conflict. Whether or not a party has the right to resort to force under the terms of the UN Charter the rules of war must be obeyed. Conversely, abiding by the LOAC cannot be used to legalise an act of aggression which is essentially incompatible with the purposes of the UN Charter. The purpose of LOAC is to ensure that the use of force is directed towards targets of military significance and not against persons, places and objects which have no such significance.

Human rights

0249. Human rights are laid down in international treaties, among others the *European Convention on Human Rights*. Fundamental human rights include the right to life, the right not to be subjected to torture or to inhuman or degrading treatment and the right not to be arbitrarily deprived of liberty.

0250. The human rights limit the rights of states to arbitrary exercise power over individuals in times of peace, crisis and armed conflict. Some of the human rights are non-derogable, even in extreme situations which can arise in armed conflicts. During recent years the international focus on human rights has increased. Among other things this has led to increased international pressure on, and willingness to intervene in, states where there have been serious violations of human rights. Grave breaches of human rights are an international problem and this has been used to justify military intervention, as for example on the occasion of the war in Kosovo in 1999.



Armed Forces' teaching on human rights and international law as applied to war (the law of armed conflict)

0251. Armed Forces personnel are to receive instruction and training to ensure that all have knowledge and understanding of human rights and the LOAC. This is important in ensuring the Armed Forces' ability to deal with different situations during an operation without causing unnecessary suffering. The instruction and training is to be adapted to the needs of the particular functions that individuals will be performing. *The Chief of Defence's Rules for Soldiers* of 14 January 2005 summarises some of these rules which are of central importance. NATO regulations (STANAG 2449) make it mandatory for all participants in international operations to provide their personnel with such training.

THE 10 SOLDIERS' RULES

Issued by the Chief of Defence, 14 January 2005

1. Only attack military objectives. In addition to armed forces, military objectives also include objects which, by their nature, position, purpose or use, make an effective contribution to military actions.
2. Civilian persons or objects must not be attacked but must be respected and, as far as possible, protected against the dangers arising from military actions. Looting is forbidden.
3. Arbitrary attacks are forbidden.
4. You must not carry out attacks which may be expected to cause incidental loss of civilian life, injury to civilians or damage to civilian objects, which would be excessive in relation to the concrete and direct military advantage anticipated.
5. You must not attack persons "hors de combat" the sick, wounded or shipwrecked, or personnel parachuting from an aircraft in distress, but must rather respect and protect them.
6. Personnel, transport and objects which are marked with international protective emblems must not be attacked but must be respected and protected.
7. Misuse of protective emblems, or pretending to have the status of a protected person, is forbidden (perfidy). You may combat the enemy by ruses of war (misleading information, camouflage etc).
8. Enemy personnel who surrender, or who are taken prisoner by other means, must be treated humanely and protected. They must be disarmed and handed over to a superior officer. Mistreatment or physical abuse must not take place.
9. As a prisoner of war you have the right to retain personal protection equipment, clothing and uniform, identity papers and identity tags, and personal belongings. You must only give your name, rank and personal or serial number.
10. Do your best to prevent any breach of the LOAC. Refuse to obey orders which violate the LOAC. Report any breaches to a superior officer.

INTERNATIONAL PROTECTION SIGNS

Military and civilian medical units (personnel, vehicles, buildings etc), Chaplains	 or 
Medical and safety zones	
Cultural buildings or objects	
Civil Defence	
Parliamentary flag	
Installations with hazardous facilities (dams, dikes, nuclear powerstations)	
Prisoner of war camp	PW or PG
Place of civil internment	IC

RED CRYSTAL

Since the Chief of Defence's Soldiers' rules were issued, the Red Cross and the Red Crescent have been complemented by the Red Crystal as a protection symbol for military and civilian medical units.



Figure 2.6, THE CHIEF OF DEFENCE'S SOLDIERS' RULES OF 14 JANUARY 2005.

Rules of Engagement (ROE)

0252. *Rules of Engagement, ROE*, are directives to military forces that define conditions, degree and manner in which force may be applied. ROE are used in all types of operations nationally and internationally. They are worked out at an operational or at a military/strategic level and are approved at a political level. Within NATO they are approved by the political authorities represented by the *North Atlantic Council/Defence Planning Committee (NAC/DPC)* and in Norway they are approved by the Ministry of Defence.

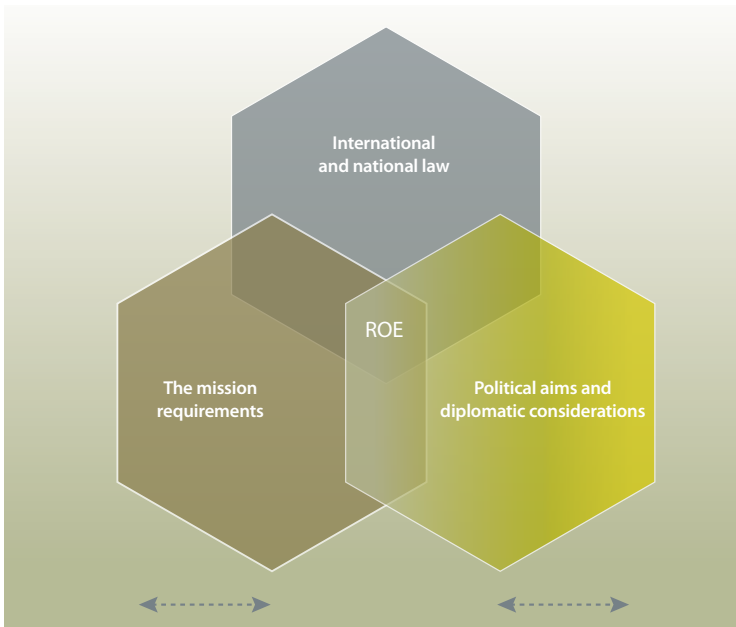


Figure 2.7, FACTORS GOVERNING THE FRAMING OF RULES OF ENGAGEMENT

0253. A mandate, often in the form of a UN Security Council resolution forms the basis on which ROE are framed. Such a resolution will normally be based on a compromise and will therefore often be formulated less precisely than a military commander would have preferred. Resolutions therefore have to be interpreted and in many cases it is a challenging task to ensure that the ROE provide the greatest possible flexibility for the forces concerned without leaving the forces open to the possible allegation that the UN's intentions have been misunderstood and the mandate misinterpreted.

0254. Rules of engagement must always be given by a competent authority. They are framed as a result of weighing three factors against one another. *Militarily* it is important that the forces have the mandate and the robustness to deter and deal with a possible escalation. *Politically* it is important that there is no use of

force which conflicts with the political intentions and that no use is made of degrees or types of force that are politically unacceptable. *Legally* it is important that the force and the procedures which are prescribed should not contravene international law and that the use of force which has been authorised is in accordance with the national law of the countries participating in any multinational force. The rules of engagement may be changed during the course of an operation.

0255. The commander who authorises a mission is responsible for ensuring that those who are to carry out the mission have the relevant rules of engagement. A subordinate must never be put in a position where inadequate or unclear rules of engagement leave doubt as to which rules in fact apply. Rules of engagement are delegated downwards through the organisation in the form of orders. Rules of engagement are regarded as *implemented* when they have been imparted to individuals within a unit and when training in the procedures described in the rules of engagement concerned has been carried out.

0256. At the individual level, rules of engagement are often provided in the form of a soldier's card which describes the procedures which apply during the execution of mission.



The soldier's cards must be readily understandable and must give unambiguous instructions regarding the use of force: which procedures are to be followed and which limitations apply to the actual use of force in different situations.

0257. In today's operational environments situations will often arise in which rules of engagement and pre-defined procedures may be insufficient. Individuals must then use their own personal judgement, something that is fundamental to the military profession (see Chapter 6). It is therefore of utmost importance that the individual has a good situation awareness and understanding of the overall aims of the operation.

0258. RULES OF ENGAGEMENT NEVER LIMIT THE RIGHT TO SELF DEFENCE

Individuals and units have the right to defend themselves against an attacker or an immediately imminent attack. This is governed by the principles of international law and by national laws and is never limited by rules of engagement. Self defence is the use of necessary and proportional force, including lethal force, to defend oneself.

0259. In multinational operations all forces under the same command are in principle bound by unified rules of engagement, just as would always be the case in a national operation. At the same time it will be possible at the political level to impose limitations on one's own national force contributions even within a multinational framework. Individual countries can also impose on their own forces special national restrictions and/or amplifying instructions which are not associated with the ROE, so-called *caveats*. These will often take the form of limitations which are necessary for political reasons, inadequate equipment or insufficient training.

0260. Unless otherwise agreed, Norwegian units under NATO command are to follow the rules of engagement laid down by NATO for the operation and implemented by the force commander. Principles for dealing with ROE within NATO are described in MC 362/1, *Rules of Engagement*. In cases where national rules of engagement have been laid down for a unit under NATO command, it is the national rules that are to apply.

The operational environment

0261. The operational environment consists of everything that surrounds a military operation. This can be divided into two categories: *physical environment* and *actors*. Physical environment covers factors such as geography, climate and infrastructure. The actors are the hostile forces, civil organisations, individual actors, the local population and representatives of the media with whom the Armed Forces' personnel have to deal in the course of an operation.

Physical environment

0262. Norwegian forces have their primary operational areas in Norway and the adjacent sea areas. A solidly-based capability to handle extreme climatic conditions and rugged terrain on land, especially in the northern regions, is therefore a critical factor determining the nature of both training and equipment. The Armed Forces' participation in international operations means, however, that the Armed Forces must also be trained and equipped with matériel for operations in jungle and desert conditions.



0263. Norway's civil infrastructure is well-developed and well-functioning. Even if parts of it could be knocked out and disrupted by an attack on Norwegian territory, the sum of the country's military and civil capacity would require any attacker to devote huge resources in order to negate the Armed Forces' use of the domestic infrastructure. In war-torn areas the infrastructure might be incapacitated to a greater or a lesser degree. Military units deployed in such areas will often require solidly-based logistic support in order to be able to operate during the period until the local infrastructure has been sufficiently restored. If the general structure of the operational area has been comprehensively destroyed, the use of military resources will often



be needed for reconstruction, especially if the security situation puts civil efforts at risk of attack.

0264. Urbanisation is a characteristic pattern of development in large parts of the world today. To an increasing extent military forces have had to adapt to the



requirements of operations in urban areas. Towns are often important in ensuring the safety of the infrastructure, social development and maintaining the support of the local population. Irregular forces often see towns as attractive areas for their operations. Towns provide good opportunities for concealment and access to resources and re-supply is good. Large towns and cities are characterised by low visibility due to man-made structures of different shapes and sizes. City structures can cover large areas, have many sub-ground storeys

and perhaps tens of storeys above ground. Thick floors, walls and roofs of reinforced concrete provide good possibilities for cover. A large number of civilians in the area greatly complicates regular combat operations both technically and from a legal and ethical standpoint.

Actors

0265. In the operational area there will be a range of different actors, hostile and non-hostile, military and civilian. The following section describes regular and irregular forces as well as other actors such as *the local population, aid organisations, private commercial enterprises and the media*.

Regular forces

0266. *Regular forces* are essentially those under the control of a state, often part of an alliance, and they may consist of traditional land, sea and air forces. Their command structure is often traditional and hierarchical. Such an opponent will possess the competence that is required to co-ordinate his force components. The operations may be supported by special forces and information operations. A proliferation of relatively cheap and easily accessible rocket and missile technology has made cruise missiles and short to medium range missiles with chemical or biological warheads into a possible threat. A regular opponent is able to change his *modus operandi* if his original way of operating is not bringing results and to switch from regular operations to guerrilla operations.

0267. A *weakened regular force* is under the control of a state or a powerful warlord and may consist of relatively small land forces possibly augmented by some seaborne vessels and aircraft. In addition they may often include irregular land and seaborne forces of limited combat capability. The force will frequently operate with no direct coordination between components but will be able to take good advantage of local knowledge and the ability to make use of local infrastructure. Anti-ship missiles and anti-aircraft guns and missiles may be used against ships and aircraft. Civil information structure may be used for information operations. A weakened regular force will be capable of using relatively inaccessible terrain, the urban landscape and the civil inhabitants for concealment and logistic purposes.

Irregular forces

0268. Irregular forces are most often under non-state control and may, for example, consist of militia groups, rebel movements, terrorists and criminal groups. A common characteristic of irregular forces is often their aim is to acquire power and influence in the conflict area based on political interests, ethnic or religious reasons or simply for financial gain.

0269. Irregular forces are seldom in uniform and are therefore difficult to distinguish from the local inhabitants. Their organisation is often based on a cell structure and a network with decentralised leadership. They often use elements of the local infrastructure such as mobile phones and the Internet for communication. They employ unconventional methods and will seek to avoid direct encounters with regular combat units. They can use man-portable surface-to-air missiles and anti-aircraft guns to provide an airspace threat and by employing sabotage against ports and airfields they are able to threaten the other party's freedom of action at sea and in the air. In many cases they have the ability to conduct information operations. Irregular forces can be defined as combatants if, among other things, the conditions set out in the first Additional Protocol to the Geneva Conventions, Article 43, are fulfilled. If they are not defined as legal combatants, they will be

seen as civilians who are actively participating in an armed conflict and, as such, they may be made the direct target of military operations.

0270. An insurgency is an organised force which seeks power centrally or regionally. Insurgencies are the type of irregular forces which are often the best organised and they may be capable of representing the greatest challenge for Norwegian forces. Combating an insurgency cannot be isolated as a local or regional problem but the relationship between different insurgencies, their strategies and any external supporting players, must also be taken into consideration.

COUNTER INSURGENCY OPERATIONS

NATO designates operations against insurgencies as *Counter Insurgency Operations (COIN)*. Such operations combine military, diplomatic and economic measures designed to combat the movement, its external support and support from the local inhabitants.

0271. An insurgency will attempt to achieve its aims through methods such as subversion, propaganda, infiltration or violence, including armed combat. Their actions may be directed against the local population in order to win, or force their support, or against other parties to the conflict. They may also be directed against international civil actors or directly against the stabilization force in order either to attract attention or create international splits or disunity. Effective insurgencies will adapt their methods and tactics to the existing circumstances and will be dependent on:

- support from the local population,
- a clear, unified leadership,
- strong and consistent organisation and a clear shared vision,
- external support in the form of resources and safe areas for recruiting and training,
- the ability to form conventional units and possibly to operate together with conventional forces from supporting or allied organisations.

0272. *Terrorists and criminal groups* seldom have the capacity to operate in military formations. Ideology, visions and aims may have a global dimension even though the action itself may be local or regional. Their strategy may be to combine actions in the operational area with direct attacks on states that they see as hostile. The groups prefer to operate “underground” but can be provoked into attacks or acts of terrorism if their primary activities are threatened. They often operate among the local population and make use of towns and civil infrastructure for operations and attacks. Target groups are then preferably soft targets such as civilians or lightly armed military units. In general, civilians who make use of terror to achieve

their aims must be regarded as *criminals*. Under international law this category is not given rights and obligations other than as individuals. The main responsibility for combating criminality lies with the police but if terrorists or criminal groups participate actively in an armed conflict, they may legally be targets for military operations even if they are not actual combatants. In such cases this will normally be covered by the rules of engagement.

CONFLICT ENTREPRENEURS

A characteristic feature of the armed conflicts which have dominated the international scene since 1990 are the so-called *conflict entrepreneurs*. They live off wars and conflicts and amass power and riches by exploiting the anarchy and lack of central control that typifies an armed conflict. Thus they are not interested in rapid solutions but would rather work for the continuation of the conflict for as long as possible. Conflict entrepreneurs will often avoid a direct encounter with a military force. Their strategy would rather be to avoid losing in the long term. The patience and endurance of the international community is limited and, sooner or later, more precarious situations will find their way onto the international agenda.

The local population

0273. In armed conflicts civilians must not become the targets of military attack and the local population in the operational area must be protected. Experience shows, however, that it is often the civilian population that suffers most. War and conflict have often created very difficult living conditions for those living in the conflict area. Civilians are often under great stress due to illness and loss of family members, their sources of income and their homes. In such situations events that might in our eyes seem trivial can have serious repercussions expressed, perhaps, in the form of aggression, rioting and acts of violence.



0274. People who experience stress and insecurity will, naturally, hope for a rapid improvement in the situation. This means that there will often be fertile ground for populism, with charismatic leader figures gaining a large following, or that parties to the conflict who promise a swift improvement in local living conditions will win support. Dealing with the local inhabitants requires a general insight into how human relations are affected by stress and a specific understanding of the culture and traditions of the area concerned.

Aid organisations

0275. International organisations (IO) which operate in conflict areas are a large and varied group, but can be divided roughly into non-governmental organisations (NGOs) and organisations which have state affiliations. A common feature of these organisations is that their work is based on the principles of *humanity*, *impartiality* and *neutrality*. Humanity implies stopping human suffering. Impartiality implies that all individuals, irrespective of gender, ethnic background or religion, have a right to support, and that the prioritisation of support should be based on need. Neutrality means not taking sides for or against any of the parties in conflict.



0276. A military force is dependent on well functioning cooperation with aid organisations for the success of an operation. (In *Integrated Missions* such cooperation is an essential precondition). Such cooperation requires mutual knowledge of one another, dialogue and a mutual respect for the various mandates identities, priorities, time perspectives and organisational cultures that military organisations and aid organisations represent.

INTERNATIONAL ORGANISATIONS

International organisations with state affiliations have their origin in agreements reached between states at national level and are often financed and operated through the UN. Examples of such organisations are UNHCR (*The United Nations High Commissioner for Refugees*) and UNHCHR (*The Office of the High Commissioner for Human Rights*), or OCHR (*Office for the Coordination of Human Rights*) and UNICEF (*United Nations International Children's Emergency Fund*). These and similar organisations are directed towards mitigating human suffering.

The *Red Cross* and *Red Crescent* occupy a special position compared with the other aid organisations. They originated from private initiatives while at the same time they have their role and status enshrined in the Geneva Conventions and its Additional Protocols. They are acknowledged to be impartial and independent organisations which, on a humanitarian basis, work to protect life and support those who suffer as a result of armed conflict. In addition they monitor how the parties to a conflict treat and exchange prisoners of war.



Non-governmental organisations (NGOs) are voluntary organisations. They differ from organisations with state affiliations in that they themselves decide on their programmes and tasks. The concept of an NGO is a broad one which covers everything from large international organisations and organisations associated with particular faiths (in Norway, for example, the missionary organisations have traditionally occupied a central position) to smaller regional or local organisations engaged in aid work in various areas. Some examples of NGOs are Médecins Sans Frontières, Amnesty International and Norwegian Church Aid.

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Private commercial enterprises

0277. Private commercial enterprises often feature in many of the areas in which Norwegian forces may have to operate. These enterprises and their employees are not, in general, working under any mandate or for any humanitarian cause, but for business and financial reasons. Apart from this common denominator, such enterprises constitute a very broad category ranging from multinational companies to local one-man businesses. In a reconstruction phase such private commercial enterprises will have a part to play in creating employment and, in the longer term, helping to build a fully functioning society.

PRIVATE MILITARY COMPANIES

Private military companies can be divided into three categories: those that supply purely military services, those that supply support for normal military operations and those that provide consultancy services to normal military organisations.

The use of mercenaries is prohibited while the use of civilian contractors is permitted. Suppliers of purely military services often offer guard and security services, something that raises questions under international law. Suppliers of purely military services prefer to recruit former elite forces personnel in return for very favourable pay and insurance terms. Examples of such enterprises are *Executive Outcome*, which recruited personnel from the former South African regime's defence forces when it was set up in 1989, and the British company *Sandline* which, among other things, carried out a military intervention in Papua-New Guinea in 1997. In more recent times such firms have signalled that they are ready to take on more extensive missions. The American firm *Blackwater* stated in 2006 that they were in a position to undertake peacekeeping missions in Darfur with a full brigade-strength combat group. Following the collapse of the Soviet Union there has been a marked increase in the number of such companies in the East and they have been used in areas including Chechnya.

The second category, private military companies that supply support for normal military operations, has now assumed a very central role in many countries, especially in the United States. These companies support military operations in a whole range of areas, particularly on the logistics side but also, for example, in the area of guarding and security. They like to recruit former military personnel and can become indispensable when major operations are to be carried out. One example is *Kellogg, Brown and Root* in the United States with more than 20,000 employees and currently responsible for vital supplies to the US military.

The third category is firms that supply military consultancy services. One example is Military Professional Resources Incorporated (MPRI), which is mainly staffed by retired US officers. The company's services include studies, reports and exercise planning for the US military.

0278. Companies engaged to support the Norwegian forces must have their activities regulated by agreements and regulations and they must be open to oversight regarding, for example, how they conduct their business and those areas relevant to the maintenance of operational security (OPSEC). In accordance with limitations laid down by Parliament, the Norwegian Armed Forces may not enter into contracts with private commercial enterprises for any combat functions or in connection with the handling of prisoners. In addition, caution must always be exercised in concluding other types of contract with private enterprises and particular weight must be given to considerations of human rights and international law.

Media

0279. The media have the right to report from conflict areas in which the Armed Forces are operating. The status of war correspondents is governed by the provisions of the Geneva Conventions. It is important to ensure good relations with the representatives of the media who are present in the operational area in order, for example, to help to ensure that they convey a true picture of the area and of the Armed Forces' operations. Contact with the media, however, entails a difficult balance to strike between meeting the needs of the media for information and the need to maintain operational security. The operational staff will have a *press and information section* which is responsible for taking care of contacts with the media and the production and distribution of a media policy for the operation concerned.

0280. The media play a central role in today's conflicts. Live pictures from the area of operations are often broadcasted direct and affect public opinion both domestically and internationally. There have been cases in which hostage-taking and other high-profile actions have been used to influence an actor or to affect public opinion at home. In certain cases such actions have contributed to the changing, or even the termination, of military involvement.

0281. Potent pictures of soldiers abusing other military personnel, or local civilian inhabitants, are of major significance to the legitimacy of an operation. The Internet has turned cameras and mobile phones into global instruments of information. Any individual action, incident or operation can in seconds be transmitted worldwide – and can thus be used for either good or evil.

The technological dimension

0282. Technological developments and military operations are closely interlinked. Technology which is developed and used in a military context has as its objective to support the military activity in achieving its desired effect. At the same time it is important to be clear that armed conflict is won or lost by people, not by technology. It is the personnel of the Armed Forces who, in the end, will determine whether an operation succeeds or fails.



TECHNOLOGICAL DEVELOPMENT

Technological development can be divided into two categories: Technology which gradually *improves/reforms warfighting ability* and technology which *revolutionises warfare*. Under the latter category would be, for example, the expansion of the rail and telegraph networks in Europe and the development of the machine gun in the latter half of the 19th century. Another example would be the development of air combat technology and nuclear weapons during the last century. More recently the development of the microprocessor and the associated technology for the processing and distribution of information has played a similar role.

New possibilities and threats

0283. New technology allows greater precision and security in military operations. Advanced sensors and processors make it possible to discover threats, process information and implement countermeasures more quickly than would have been possible a few years ago. At the same time this same technology has also created new threats. The terrorist attacks on the United States on 11 September 2001 showed how commercial, and originally harmless, technology can be used in attacks which have powerful effects, both direct and indirect, on many levels.

0284. The latest gene-technology makes it possible to produce advanced biological weapons in substantial quantities at low cost. Access to fissile material worldwide could make it possible for new actors to acquire nuclear weapons or, perhaps more likely, conventional bombs contaminated with easily spreadable radioactive material, so-called “dirty bombs”, which could have a hugely damaging effect in densely populated areas.

0285. Information technology and society’s dependence on such technology is perhaps the area in which the threats and society’s vulnerability are greatest. It is true that information technology has opened up new and effective ways in which operations may be carried out, but at the same time it has created new possibilities with adverse connotations. For instance the Internet has created a new arena in which persons with limited resources can act in ways that have a significant effect on public opinion, for example through hostage taking or extortion. The Internet can also be used in terrorist actions, for example as a means of command and control.

Technology trends in today’s operational environments

0286. Today’s operational environments make partially conflicting demands on technology and current developments in military technology are heading in many different directions. The Armed Forces, however, see *four* lines of development as being especially worthy of attention.

0287. Firstly, the opponents encountered by Norway and our allies in the course of operations in recent years have been equipped with low-technology conventional weapons. These actors have been reliant on a level of military technology corresponding to that current in the West in the 1960s and 1970s and their airborne and maritime combat forces have been relatively insignificant. These opponents, however, have often chosen to operate in a way that renders the state of technology largely irrelevant. They have made use of old technology, for example in home-made roadside bombs (*Improvised Explosive Devices*, IED) and suicide bombers. They have also combined these and similar methods with the use of new civil technology, for instance, use of mobile phones and the Internet.

0288. One conclusion might be that the Armed Forces should not invest in new and expensive technology but rather focus on existing technology and matériel. However, such a conclusion could be too hasty: The Armed Forces could in future be faced by high-technology opponents. Alternatively the Armed Forces could concentrate on the development of technology in such a way that it is constantly adapted to relevant operational environments. Such a course of development is already under way. In parallel with the development of new and advanced military technology, for example, attention is being focused on sensors for the detection of explosives in public places, on technology which can prevent or interfere with the remote detonation of bombs, and on a broader spectrum of non-lethal weapons.

0289. Secondly, there is naturally a very low level of tolerance regarding the injury or loss of own personnel, the unnecessary use of violence, or the infliction of unintentional damage (*collateral damage*). This makes severe demands on the development of technological solutions and has contributed to acceleration in the development of precision guided weapons delivered from platforms at a safe distance from the conflict area. The low tolerance regarding the injury or loss of personnel has also led to increased investment in unmanned platforms and sensors as well as non-lethal weapons.



0290. Thirdly, technology development today is, to an extent, forced to focus on system integration and interoperability with our allies. The Norwegian Armed Forces have to go along with the technology developments taking place within

NATO if we are to be capable of operating jointly with our allies. This applies especially to the development of interoperable information and command and control systems where we have to be able to operate in networks.

0291. Fourthly, today's operational environments are complex and coordination with civil actors, both nationally and internationally, is very important. This complexity has made it necessary to develop command and control and surveillance systems which are, or can be made, interoperable with a broad spectrum of civil systems.

Norway and technology development

0292. The principle challenge facing the Armed Forces with regard to technology development is to maintain current operational capability at a sufficiently high level while at the same time developing future capability within the relevant budgetary constraints. Today the cost of technology development in the military sector is very high. One consequence is the increased use of civil technology for military purposes. Another consequence is that small and medium-sized states are to an increasing extent coordinating their research and development in this area, in the interests, of developing common technology which can then be applied in a range of platforms and sensors. It is clearly not possible for Norway to maintain a leading position across many different fields of technology. The Norwegian strategy is therefore to win a position at the forefront in a few chosen areas, to participate in international research and development in others and, where possible, to buy ready developed products on the market.



0293. The Norwegian Armed Forces' strategy with regard to keeping up with developments in technology is to maintain its own R&D environment; to engage in close cooperation with industry, including the defence industry; and, at the same time, to enter into collaboration arrangements for the procurement of defence equipment within NATO, in the Nordic area, and with other countries as appropriate.



3. Armed Forces' Operational Foundation

0301. This chapter describes the *Armed Forces' Operational Foundation*. It starts by outlining the ideas that form the foundation, then describes what the concept of *flexibility* means and concludes by identifying the Operational Foundations' three operational methods.

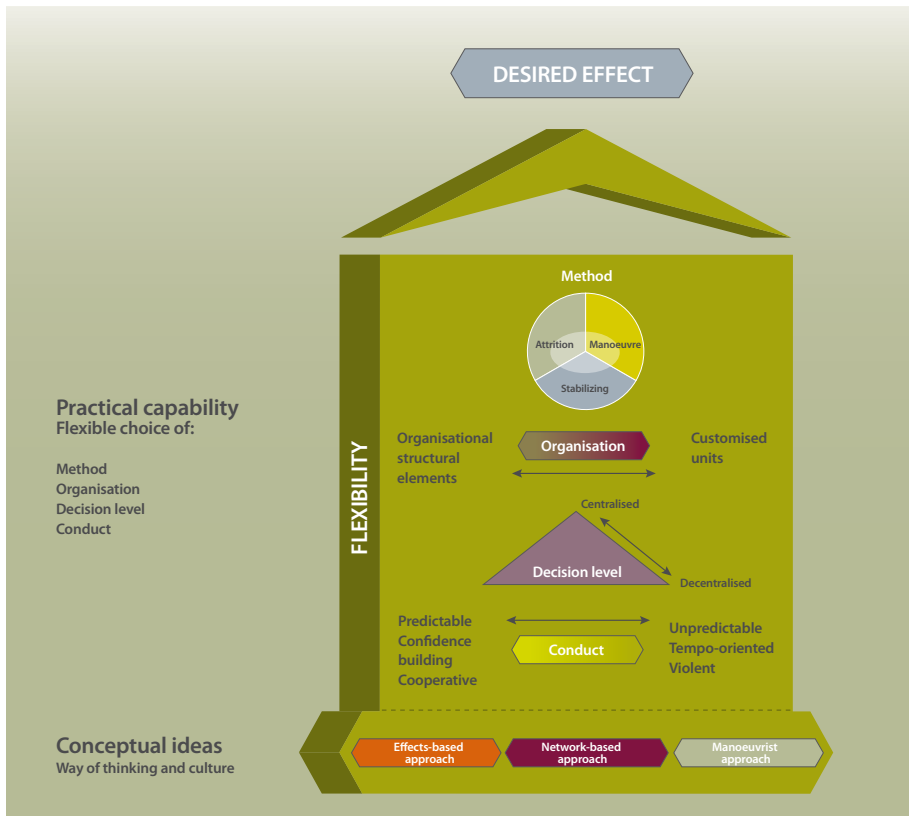


Figure 3.1, ARMED FORCES' OPERATIONAL FOUNDATION

0302. The ideas on which the Operational Foundation is based consist of the *effects-based*, *network-based* and the *manoeuvrist* approaches. These three approaches together constitute a culture which the Norwegian Armed Forces wants to develop both at the individual level and in the organisation as a whole. The *effects-based approach* is about focusing on the result, not the action in itself, and to see your own operation in a wider context. The *network-based approach* focuses on organising all resources in the most appropriate way in order to achieve the best possible situation awareness and system integration. The *manoeuvrist*

approach is about mastering the psychological dimension of combat by understanding combat as a battle of wills characterised by uncertainty, chaos and friction. The concept of *flexibility* means to be flexible in the choice of method, organisation, decision level and conduct. The *manoeuvre method*, *attrition method* and the *stabilizing method* are described as ideal types and the operational commander chooses how he or she combines them to produce the desired effect.

0303. The Operational Foundation is formulated to give a good overall description of how the Armed Forces' resources shall be used to achieve given tasks. Firstly it contributes to the efficient use of the Armed Forces' human and material resources. Secondly it ensures interoperability both internally within the Norwegian Armed Forces and with allies. Thirdly the Operational Foundation can be employed over the entire conflict spectrum and in all types of operational environments at home and abroad.

0304. The Operational Foundation applies primarily to the planning and execution of operations but also forms a basis for education and training, materiel procurement and the development of concepts at lower levels.

In this Chapter the various parts of the Armed Forces' Operational Foundation are described briefly – with the emphasis placed on conveying the overall picture. The underlying theories and concepts are discussed in more detail in Chapter 4.

Fundamental ideas

0305. The Armed Forces' Operational Foundation makes use of the concept of an *approach*. In this context the concept means implanting the essence of theoretical schools of thought as a culture – as a tool with which to approach problems – at an individual level. The theoretical schools of thought have been chosen because they supplementary describe the optimal use of our resources and are relevant to the achievement of a broad spectrum of tasks. They also harmonise with our allies' doctrines and concepts, enhancing interoperability without making it necessary for the Armed Forces to become locked to specific procedures and technical solutions. Common fundamental ideas also make it possible to develop specific concepts and systems at a tactical level which can then be integrated in joint operations.

Effects-based approach

0306. The effects-based approach is firstly to see the Armed Forces' operations in a wider context, where own actions are coordinated with other military and civil actions. Secondly it is about analysing oneself, the opponent and other actors

as complex systems in which many factors interact. Thirdly – and most importantly, an effects-based approach means focusing on the effects that are to be achieved amongst the opponent and other actors in order to succeed in the task and, in the final instance to fulfil the desired political and strategic aims. In the effects-based approach it is of fundamental importance to focus on the effects which are to be achieved, and not on the means one possesses.

0307. The effects-based approach requires that decision makers at all levels in the military organisation are in a position to:

- analyse which effects that must be achieved in order to accomplish the task, and to choose the means on the basis of this analysis,
- understand that all the actions, and the particular means chosen, will result in effects on the opponent, other parties in a conflict, allies, the civilian population in the operational area and on opinion generally both at home and abroad,
- integrate one's own contribution with the broader picture in which the effect of one's own actions are seen in context with other actions, both military and civil, and which are designed to achieve the desired effects on a political level.

0308. It is important to be clear that the need to analyse the effects of one's own actions becomes more pressing the more powerful the means at one's disposal and the higher one is placed in the organisation. The effects-based approach is certainly dependent on good access to information, and analysis of that information, but the effects-based approach must not lead to an exaggerated search for information about, and analysis of, all the conceivable effects of a course of action. Combat will always be chaotic, characterised by complexity and the fact that not all information can be available to all at any given time. An exaggerated focus on effects can lead to action paralysis.

Network-based approach

0309 The network-based approach is about developing people, organisation and technology. It is about organising one's resources as effectively as possible in order to achieve the highest possible degree of system integration, situation awareness and understanding of the commander's intentions. This doctrine makes use of the idea of a network-based approach to emphasise that the concept of *Network-Based Defence* (NBD) must not be regarded as the ultimate and "right" condition, but that basing the Defence Forces on networks should rather be seen as a continuous process of development which is progressed through mutual interaction between organisation and individual.

0310. The network-based approach requires that decision makers at all levels in the military organisation contribute to:

- the development of a common culture of information sharing based on the will and ability to find new solutions for the exchange of information,
- the development of systems for the transfer of information between weapon systems and service branches, and between the Armed Forces and relevant civil collaborative partners,
- the development of staffs and decision processes to ensure that use can be made of real time information,
- the development of flexible military units which can be modified and combined to form small, independent forces on an *ad hoc* basis,
- the development of networks which include both military and non-military actors, based on direct communication between the actors,
- the development of commanders who can make use of the possibilities offered by networks for the gathering and distribution of information and for the exchange of information between centralised and decentralised decision processes in a given situation.

0311. It is important to be clear that the developing trend towards network basing will require new equipment and new forms of organisation. At the same time, the development towards network basing can be progressed with existing materiel and organisational structures, possibly with minor modifications, through better and more rational utilisation and by using them in entirely new ways.

Manoeuvrist approach

0312. The manoeuvrist approach is to understand the psychological aspect of combat. Combat is a battle of wills, characterised by uncertainty, friction and chaos. By mastering these challenges more effectively than the opponent, we can actually turn them to our advantage.

0313. The manoeuvrist approach requires that decision makers at all levels in the military organisation:

- can live with uncertainty, friction and chaos and turn them to their own advantage,
- are focused on the opponent with an unyielding will to succeed,
- have the ability to analyse how the available means can be deployed to achieve as much as possible of the desired effect on the opponent – with the least use of one's own resources,
- have confidence that the right actions, taken at the right time, will force the opponent to yield to our own will, and that this can make it possible for a small force to overcome a larger one,
- take action in line with mission command with decentralised decision making, which is the fundamental philosophy of the Armed Forces for the command of operations.

0314. The manoeuvrist approach is on a general level and not to be confused with the *manoeuvre method*. The latter is an operational method encompassing a set of operational techniques. The manoeuvrist approach can be used at all levels and applies to all operational methods even if it has its most concrete expression during operations based on the manoeuvre method.

Flexibility

0315. Flexibility is the ability to adapt to changing circumstances. Flexibility is the most important, but at the same time the most difficult, capability to develop for the Armed Forces. Flexibility makes great demands on the individuals, the organisation and the materiel involved in an operation, and on those factors which together create combat capability.

0316. Flexibility comes partly from being trained and equipped for tasks across the whole of the conflict spectrum and partly from possessing the ability to adjust the operational methods when circumstances change during the course of an operation. The Armed Forces' Operational Foundation describes general flexibility as applying to ideas and a way of thinking, and specific flexibility as applying to the choice of *decision level, organisation, conduct and operational method*.

Flexible decision level

0317. A flexible decision level implies having the ability to make decisions at that level in the organisation which has the best situation awareness and is thus best placed to make the right decisions. But this can pose a dilemma. On the one hand the fundamental philosophy of the Armed Forces advocates mission command; that is to say a form of command in which responsibility and authority are distributed and decisions are taken at the lowest possible level. On the other hand it can be difficult to combine mission command with the wider view and longer term perspective which are necessary if an operation is to achieve the desired effects right up to the political level. In today's organisation it is mainly the strategic and operational level that possesses this capability. Situations can thus arise where the central level has the best awareness of the situation and where the tempo can best be maintained by centralised command.

0318. The Armed Forces face the challenge of developing commanders and technical systems in such a way that decisions can be made at different levels in the organisation. It is a particular challenge to develop commanders at all levels in such a way that they are routinely capable of taking the initiative and making decisions at their own level while at the same time be able to respond rapidly to direct orders from a higher level. Switching between centralised and decentralised command is one of the greatest challenges associated with Network Based Defence.

Flexible organisation

0319. Flexible organisation entails the ability to switch between large, permanent organisational units on the one side and task organisation on the other. This means that it must be possible for detachments and units right down to a single platform to be assembled to form customised units with the specific properties required in a given situation. It must also be possible to change the organisation rapidly during the course of an operation. This type of flexibility makes stringent demands on logistics, for example, because the various systems require different forms of logistic support. The ability to distribute materiel, and the competence required to support different systems, will often be decisive in determining how far down the organisation it is possible to practise task organising. The Armed Forces thus attach much weight to developing their capabilities in these areas.

0320. Development in the direction of a flexible organisation must be a gradual process which needs to be kept under continuous evaluation. Experience shows that a random assembly of units which is not adapted and trained for this situation is likely to perform a task less well than would be the case if the task was performed by the units individually.

Flexible conduct

0321. The broad spectrum of the Armed Forces' tasks, and the different methods described, make substantial demands on the Armed Forces as a whole and on individual members of the services. With the *manoeuvre method*, the force will strive to act unpredictably and at a high tempo and with the use of force. With the *stabilizing method* the same force will endeavour to act predictably and to build confidence. In stabilization operations, and in combat against irregular forces, this can be extremely challenging. Such operations will often take place in environments that make extreme demands on the individual. Success in these operations is dependent on broad support from the local population and in public opinion generally. This means, for example, that military personnel must on the



one hand act in a way that creates confidence and invites dialogue. On the other hand the same personnel must from time to time carry out pure combat operations in which the aim is to defeat the opponent. The conduct of such operations must then be characterised by decisiveness, the use of force and unpredictability.

0322. The ability to behave flexibly at an individual level can only be achieved by recruiting the right calibre of people and by providing them with thorough education and training as well as the appropriate equipment. This also means that the personal development of service personnel must place emphasis not only on the traditional skills associated with combat but also on knowledge in history and culture.

THE THREE BLOCK WAR

The concept of “The Three Block War” was devised in the late 1990s by General Charles C. Krulak (US Marine Corps). The concept describes the need for flexibility not only between different operations but also within a single operation. The Three Block War is a metaphor to describe the complexity of today’s operations in which soldiers may have to conduct high-intensity operations, stabilization operations and humanitarian operations all within three contiguous city blocks.

Flexible choice of method

0323. Flexibility in choice of method is about having the ability to combine principles from the *manoeuvre*, *attrition* and *stabilizing methods* in order to achieve the desired results in different types of operations. An operational force must also have the ability to adapt and adjust the chosen method continuously while carrying out the task.

Armed Forces' operational methods

0324. The Armed Forces' Operational Foundation covers the *manoeuvre method*, *attrition method* and the *stabilizing method*. These are ideal types and are seldom employed in their pure forms in the conduct of operations. The circle in Figure 3.2 shows how the methods can be combined and how emphasis on the various methods can be altered depending on the type of mission and the effects desired.

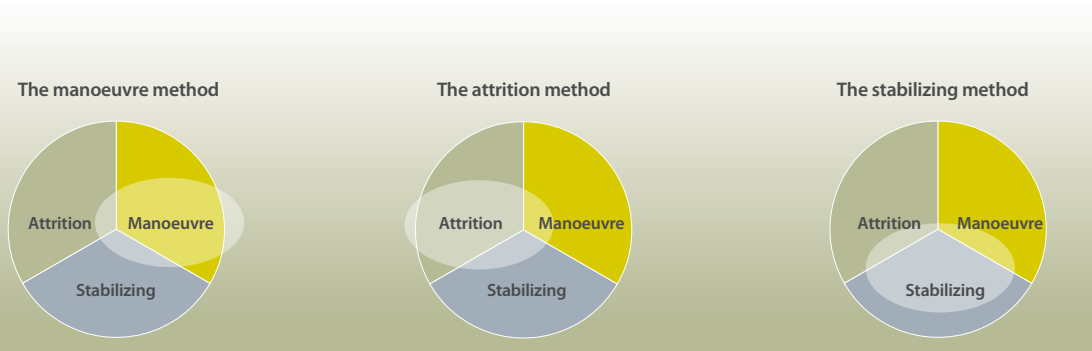


Figure 3.2, THE ARMED FORCES' OPERATIONAL METHODS

0325. The three operational methods can be applied to Armed Forces' operations both at home and abroad.

- The *manoeuvre method* covers mainly principles for crisis management at high conflict levels and armed conflict nationally, and combat against regular forces abroad.
- The *attrition method* covers predominantly principles for crisis management at relatively high conflict levels and armed conflict nationally, as well as combat against irregular and regular forces internationally.
- The *stabilizing method* covers mainly principles for crisis management at low conflict levels nationally and the conduct of stabilization operations.

0326. The choice of operational method can vary through the various phases of a conflict. Choice of method can also vary between the different levels within a particular operation. An operation which is first and foremost stabilizing in nature at a strategic level may require use of principles from the manoeuvre method or the attrition method at the operational and/or tactical level. Deterrence through operations according to the attrition method can be the right answer during an initial phase of a conflict, but if the deterrence does not yield the desired result it will be possible to switch to a form of action dominated by the manoeuvre method.

The manoeuvre method

0327. The manoeuvre method's objective is to influence the adversary's will to continue the combat. The manoeuvre method builds on the presumption that the adversary is a rational actor and that he has a command structure and organisation that causes him to give up when he experiences defeat and powerlessness. The method is thus mainly designed with combat against regular forces in mind. In using the manoeuvre method, emphasis is placed on the techniques of *surprise, initiative, indirect method, tempo* and *mission command*.

0328. An operation in accordance with the manoeuvre method is characterised by the prioritising of high tempo and willingness to take risks rather than numerical superiority and safety, and by achieving surprise through offensive operations at places and times least expected by the adversary. In such an operation one avoids the adversary's main force and directs action instead against his critical vulnerabilities, for example his command apparatus and logistics. A breakthrough in the adversary's defences is immediately exploited in depth in places and at times of our own choosing. Decisions are made at a decentralised level in order to give units at lower levels opportunities to take the initiative and thereby place the adversary under constant pressure.

0329. The manoeuvre method is a demanding operational method. It requires a generally high standard of training, forces capable of high tempo and mobility, and commanders with the will and ability to take calculated risks. An operation in accordance with the manoeuvre method will be suitable when the aim is to defeat an adversary. The emphasis placed on the use of force and the collapse of the adversary can, however, give rise to difficulties in the end phase and subsequent reconstruction in the area of operations. The manoeuvre method must therefore often be complemented with operations in accordance with the stabilizing method.

0330. History and experience have shown that the actors involved seldom react in line with the expectations held at the time when an operation in accordance with the manoeuvre method is launched. On the contrary, it has been shown on many occasions that the systematic defeat of the adversary's combat forces (*the attrition method*) has been an essential precondition in forcing the adversary to give up. In practice, therefore, operations against a regular or irregular adversary will often consist of a combination of the manoeuvre and attrition methods. Nevertheless, by mastering and utilising principles from the manoeuvre method, favourable situations can be created with a view both on destroying the adversary's capability and breaking down his will.

The attrition method

0331. The attrition method is intended, as its overall objective, to influence the adversary's ability to continue combat. The attrition method can be implemented in accordance with two principles. The first principle is *low intensity* and stresses the use of *time*, often by avoiding decisive battle, to wear down the adversary. The second principle is *high intensity* and makes use of numerical or technological superiority to destroy the adversary's ability to continue combat.

THE ATTRITION METHOD THEN AND NOW

During the Cold War, Norway and other western countries based their strategy largely on the threat of long-lasting operations in accordance with the attrition method. The rationale was that this threat would deter potential aggressors. Important elements of the strategy were the *Total defence concept*, defence forces based on extensive mobilisation and a relatively low degree of mechanisation and considerable depth. Simply equipped but numerically large conscript forces should ensure that an attack on Norway would be a long drawn out affair. Since the end of the Cold War, *attrition* has been used as the operational method several times. The war in Kosovo in 1999 is one example. In spring 1999 NATO carried out a bombing campaign over a period of more than two months which gradually wore down the adversary's forces and their will to continue fighting. It can be seen as something of a paradox that most western countries at that time either had removed the attrition method from their military doctrines in favour of concepts of operations based on the manoeuvre method alone, or were in the process of doing so.

0332. The *low intensity* principle harmonises with the principles the doctrine describes for combat against irregular forces. According to this principle, attrition is achieved by inflicting on the adversary a series of losses, often over a long period, so that he gradually comes to feel that the price of continuing combat will be too high. This principle has often been used by irregular forces and has then shown itself to be effective against coalition forces by causing opinion at home to move towards the view that the price of continuing combat will be too high when measured against what is at stake. Threats of this type of attrition warfare can also be used to deter a potential intervention or an aggressor.

0333. The second principle in the attrition method is that of *high intensity*. Here numerical and/or technological superiority is used to defeat an adversary. This numerical and/or technological superiority is used to overpower the adversary with a lesser degree of risk than there would be in the case of operations in accordance with the manoeuvre method. This is done by making use of technology to find the adversary and attack him with weapon systems against which he has little chance of defending himself, for example by using systems from outside the range of his capabilities.

The attrition method against irregular forces

0334. In combat against irregular forces one will often be facing attrition warfare of low intensity, something which calls for great patience and determination. This means that combat against such forces requires flexibility and an effects-based approach. Combat against irregular forces can be summarised in terms of five actions which will often take place in parallel. These are:

- Action which is taken directly against the irregular force. These are offensive actions to find and fix a force (limit its room for manoeuvre), cut its lines of communication and strike it.
- Actions undertaken for the purpose of protecting the civil population physically against the irregular forces and thereby isolating the adversary from the civil population.
- Actions which are directed against the irregular force's external support. The twin purposes are to cut off the irregular force physically from such support and to influence external actors so that they themselves cut off their support. This can be done through a combination of military and civil means.
- Actions to build trust among the local population, both in the lawful local authorities and in our forces, so that they switch their allegiance away from the irregular force (Hearts and Minds operations). This type of action is mainly about improving living conditions for the local inhabitants but can also take the form of pure information campaigns.
- Actions directed towards protecting our own operations or civil actors. The objective is to maintain freedom of movement in the area and to protect own personnel, bases and supply lines.

0335. It is important that all personnel who take part in operations against irregular forces should understand that the methods which are used will be of decisive importance from the point of view of winning acceptance among the local inhabitants. When making a choice of methods, therefore, it is necessary continually to weigh up what will be most effective in eliminating a threat against what will be accepted by the local inhabitants.

The attrition method against regular forces

0336. Emphasis will often be placed on the manoeuvre method in combat against regular forces. At the same time it is often necessary to achieve the comprehensive defeat of the adversary's forces in order to gain the desired effect. While the manoeuvre method implies a high degree of risk, use of the attrition method in high intensity conflicts will make use of a numerical and/or technological superiority to overpower the adversary with a lower degree of risk.

0337. When using the attrition method against regular forces, emphasis is placed on principles such as *force build-up, preparatory elimination of the adversary's*

most important systems and subsequent combat with a high degree of coordination. Less weight is placed on risk and tempo. Instead the accent is on *safety, force concentration and firepower.*

0338. During operations in accordance with the attrition method, the Armed Forces will systematically attack the adversary's systems so that the battle can be fought on one's own terms. Superior technology is used to locate and defeat the adversary while own forces remain outside the range of his weapon systems. In a joint operations context that implies gaining and maintaining air and sea superiority as well as control of key terrain. The adversary's systems and forces are defeated in order of priority based on the extent to which these pose a threat to own forces or to the success of the mission. Offensive operations are carried out with a high degree of safety and coordination. High tempo is not normally a priority and, when it is used, the purpose is to expose the enemy's systems in order to strike them physically rather than psychologically.

0339. Operations in accordance with the attrition method are demanding in terms of resources. Where Norway's armed forces are concerned this means that this method of operations will be difficult to employ unaided. It is probably only in alliance with other countries that Norway can achieve the force superiority that is necessary to be able to use this method to any great extent at the strategic and/or operational level.

The stabilizing method

0340. The stabilizing method is used mainly in operations where the Armed Forces' task is to lower the level of conflict between two or more parties. Operations in accordance with the stabilizing method can also be carried out in the end phase of operations based on the manoeuvre or attrition methods with the objective of stabilizing the situation so that the political aims can be achieved. Such operations can also be carried out to alleviate human suffering and to support humanitarian aid, either directly or indirectly, by limiting violence and criminality in the area.

0341. Operations in accordance with the stabilizing method are characterised by being of long duration and by the volatility of the level of violence which can shift rapidly from open combat with heavy weapons to apparent calm. In addition, the stabilizing force is often forced to operate while dispersed over large geographical areas. Experience shows that there are three key conditions for success in stabilization operations. The forces must have credibility and perseverance, and the authority with which the operation is conducted must be created, sustained and continuously developed. Authority stems from how the various actors perceive the legitimacy of the mandate on which the operation is being conducted and the degree to which the various actors in the area are cooperating with the forces carrying it out.

0342. In addition to these conditions, the stabilizing method embraces five principles: *impartiality, transparency, restraint in the use of force, built-in robustness and the ability to deter*, as well as *freedom of movement and area control*.

0343. It is very important that the parties perceive the stabilizing force as *impartial*. If it may appear that the stabilizing force has taken sides, the troops themselves become part of the conflict. Impartiality entails treating the parties in a conflict on the basis of how they adhere to any agreements reached. It does *not* mean treating all parties in the same way. It is important to be clear that various parties in a conflict may see it as being in their interest to accuse the stabilizing force for not being impartial. Being impartial is a very demanding challenge at both organisational and individual levels.

0344. *Transparency* means that the stabilization force's mandate, and the rules which apply, are known to all parties. Knowledge of agreements reached, and how the stabilization force will act if the agreements are broken, will have a calming and preventive effect. At the same time, this makes considerable demands on the stabilization force where knowledge of their own mandate, the rules that apply and predictable behaviour are concerned.

0345. *Restraint in the use of force*: A clear difference between the stabilizing method and the other two operational methods is that in the stabilizing method there must necessarily be much more restraint in the use of force. The use of weapons will, in the main, serve as a show of strength and have a deterrent effect.

0346. A stabilizing force must have *built-in robustness and the ability to deter*, so that it is able to deal with any escalation. An inadequately equipped force can invite escalation. A stabilizing force must therefore have the ability to switch rapidly from the *stabilizing method* to the *manoeuvre* or *attrition method*. The requirement for robustness is also important because it could be necessary for certain force elements on tactical level to carry out operations using the *manoeuvre* or *attrition method*.

0347. *Freedom of movement and area control*: One condition for carrying out operations in accordance with the stabilizing method is being able to move freely in the operational area while at the same time being able to control the movement of other parties. Area control can be exercised by grouping the stabilizing force over the whole, or most, of the area concerned. This is demanding in terms of personnel but will often be necessary in the initial phase of an operation using the stabilizing method. Another way to exercise area control is to combine permanent surveillance exercised by smaller units, mobile surveillance and a mobile reserve which can be inserted as the need arises. A range of technical surveillance solutions can also play an important role.



4. The doctrine's theoretical and conceptual framework

0401. This chapter provides an overview of theories, concepts and ideas which are central to the Armed Forces' Operational Foundation and joint operational activities. As an introduction the chapter starts by describing the concepts of *combat*, *combat capability*, *combat domains*, *combined actions* and *basic functions*. Attention is directed towards theories and concepts which underlie the Operational Foundation's basic ideas: the *manoeuvrist-*, *effects-based-* and the *network-based approach*.

Combat

0402. Combat is a clash between human beings where the objective is to impose one's will on one or more of the combatant parties. Combat has several dimensions. Intellectually it involves developing creative and sustainable concepts and to use these wisely. It also involves sustaining will and cohesion and it has, in addition, a tangible side – the systems that the Armed Forces develop in order to put combat into practice.

COMBAT – A BATTLE OF WILLS AND IDEAS

One hundred victories in one hundred battles is not the most skilful. Seizing the enemy without fighting is the most skilful.

Sun Tzu

The profoundest truth of war is that the issue of battle is usually decided in the minds of the opposing commanders, not in the bodies of their men.

Sir Basil Liddell Hart

The aim, through a combination of positive and negative actions on different planes, is to influence an adversary to make our aims his aims.

John A. Warden III

0403. The purpose of combat is to influence the adversary's will to continue to fight by, among other means, affecting his cohesion or physical capability. The ambition in combat is to influence the adversary and other actors in all the dimensions mentioned above. The *combat capability model* shows the relationship between the conceptual, moral and physical factors which affect combat, while the *domain model* allows for the combat's four domains.

Combat capability

0404. Combat capability is a military force's fighting capability and its ability to succeed in its operations. It consists of conceptual, moral and physical factors. These factors are overlapping and have a mutually reinforcing effect on each other. Flexibility, which is central to the Armed Forces' Operational Foundation has various implications for each of these factors.

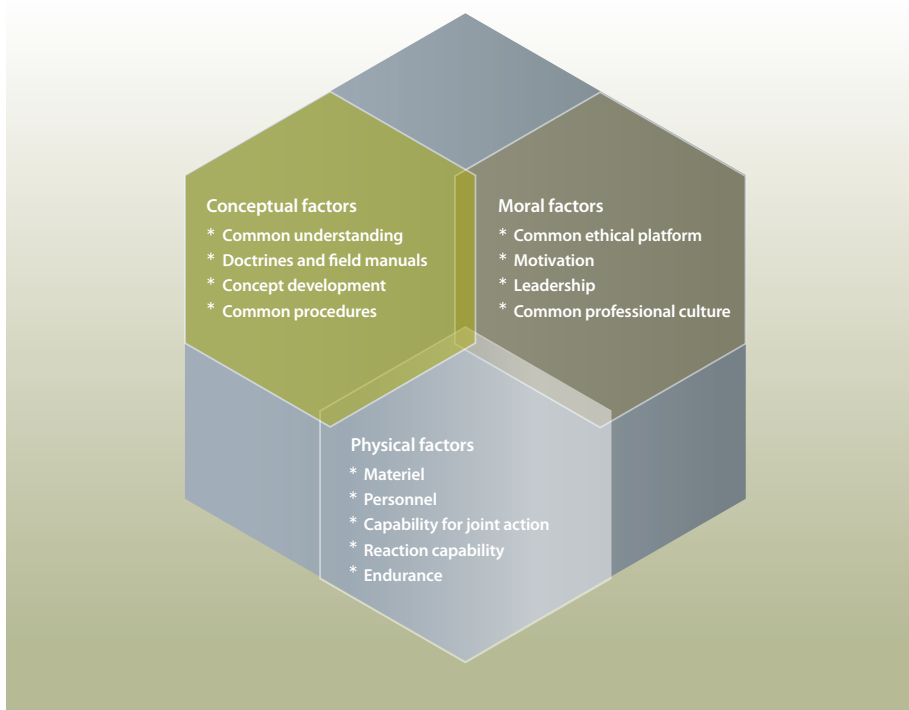


Figure 4.1, COMBAT CAPABILITY MODEL

0405. The *conceptual* factors are about how the Armed Forces can best utilise their own resources in order to achieve their objectives. They include experience and approaches to current and future operations, and are built on doctrines and concepts that underlie a common understanding of how combat is to be conducted. Flexibility in this area entails developing concepts of operations and organisations that pave the way for conduct and problem solving adapted to match the situation.

0406. The *moral* factors are to do with will and cohesion. Both aspects are vital to the ability to meet the challenges of combat. Combat morale and the will to win are built on team spirit, motivation, good leadership and a common ethical platform. It is on this plane that flexibility to develop personnel who are open to

new solutions and can act with determination without the safety of a set organisation, set routines or set procedures. The moral factors are closely linked with a common professional identity, as described in Chapter 6.

THE IMPORTANCE OF MORALE IN BATTLE

The moral is to the physical as three is to one.

Napoleon Bonaparte

Force effectiveness depends on people, ideas and hardware. In that order!

John Boyd

0407. The *physical* factors cover materiel systems, including the education and training needed to ensure that the systems can be used correctly and the reaction capability maintained. The physical factors also include the physical capability of the individuals and of the unit as a whole. In this area, flexibility entails the development of platforms and command and control systems which make it possible to combine different systems to meet the specific requirements of the situation.

Combat domains

0408. The *domain model* complements the combat capability model by showing in which domains combat is taking place and how the domains are connected. The concept of a domain is used here to describe abstract areas, in contrast to combat *arenas* (land, sea, air and space), which describe the concrete areas where the battle is being fought (the arenas all belong to the physical domain).

0409. The domain model describes the *cognitive domain*, the *information domain*, the *social domain* and the *physical domain* and how these are connected. This model was initially developed with Network Centric Warfare and Information Operations in mind, but can also be used to show that military operations and combat are conducted on a number of different planes apart from the purely physical.

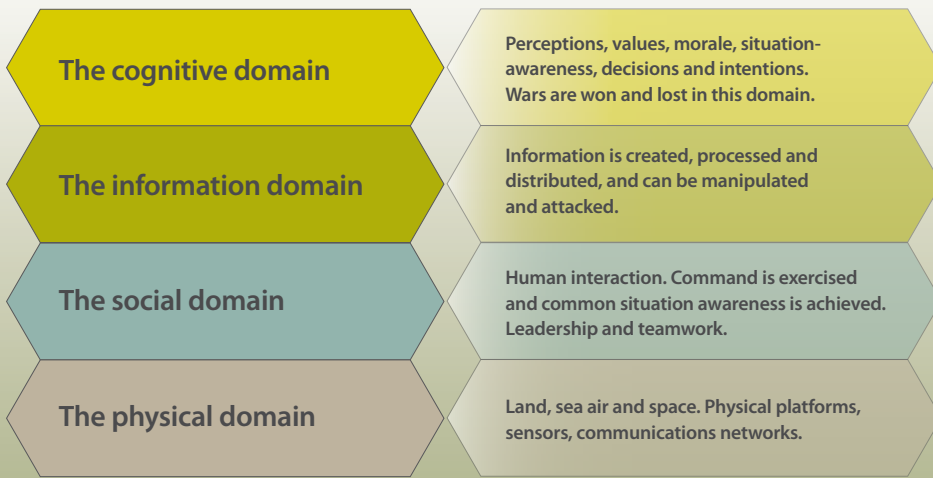


Figure 4.2, THE DOMAIN MODEL (See NBD below and *Information Operations* in Chapter 5)

0410. The *cognitive domain* covers combat's mental dimension, that is to say how the individual's thoughts, values and will are influenced. The domain includes the individual's perceptions, which in turn are governed by psychological factors, education, training and level of experience. Ultimately, the outcome of combat is decided in the cognitive domain.

0411. The *information domain* covers the information which forms the basis of our situation awareness. The domain spans the whole spectrum from data to information. (Data is regarded as consisting of the simplest of information-bearing units while information consists of data which has been assembled and processed to give it meaning). In the information domain information is created, processed and distributed. Combat in this domain is about limiting and distorting the adversary's information while protecting one's self against his actions in this domain.

0412. The *social domain* covers interaction between individuals and units. It is here that we find communication between individuals, team spirit, cohesion and leadership. The social domain is directly linked to the cognitive domain by virtue of the fact that communication at the individual level and cohesion within the Armed Forces is absolutely essential to the individual's will, and the unit's ability to continue combat. Combat in this domain is especially about breaking down the adversary's cohesion while at the same time reinforcing one's own.

0413. The *physical domain* covers the traditional arenas for military operations: land, sea, air and space. The physical platforms and sensors operate in this domain

and the communications network that links the platforms together is to be found here. Combat in the physical domain is about making use of human and materiel resources for the purpose of influencing the adversary's physical capability.

Combined actions

0414. Joint operations are founded on the theory that a combination of different means and actions brings the benefits of synergy and thereby the possibility of using limited resources in a more effective way. Force concentration and simultaneous action with multiple systems contribute to making the adversary feel inferior, which in turn influences his will to continue combat. Another argument is that different weapon systems can support one another and that the adversary's attempts to protect himself against one system will often expose him to another. Combined actions also cover the use of both lethal and non-lethal means. The concept of combined actions is thus somewhat broader than that of *Combined Arms* which basically relates to the use of different weapon systems.



0415. The ability to combine actions is absolutely central to the Armed Forces' Operational Foundation and finds expression in the emphasis placed on joint operations based on the *effects-based*, *network-based* and *manoeuvrist approaches* and on the need for *flexibility*. The significance of combining different actions is also dealt with in Chapter 5 which, in addition to describing traditional components, places relatively strong emphasis on special operations, information operations and civil-military cooperation.

COMBINED ARMS – A BRIEF HISTORY

Jonathan M. House (a US Army officer and professor of history) postulates in his book *Combined Arms Warfare in the Twentieth Century* that the strengths of one weapon system can compensate for weaknesses in other systems. He further asserts that the ability to combine different actions gives the commander greater freedom of action – and the adversary a more complicated threat picture to deal with. If one has at least two ways of fighting the enemy, it means that he can never be quite sure how he will be attacked.

Robert Leonhard (US Army officer and author) maintains that a theory about *Combined Arms* has three elements. First each individual weapon system will have its strengths and weaknesses. Armoured forces for example have the advantage vis-à-vis infantry in open terrain while the opposite is the case in more rugged terrain, but by combining the systems they will complement one another, thereby rendering the whole stronger than the sum of its parts. The infantry can protect the armour during combat in close terrain but the armoured forces can be used to achieve rapid breakthroughs in the enemy's lines. Second, Combined Arms can create difficult dilemmas for the adversary; in order to defend himself against one system he will have to leave himself vulnerable to another. If an armoured unit, for example, has to defend itself against air attack, the natural defence would be to spread out and construct physical defences. But if the air attack is combined with a massive ground attack using armour, the armoured unit will face a dilemma between on the one hand spreading out in positions which make easy targets for a tank attack or, on the other hand, concentrating the unit in order to counter the armoured attack but, in so doing, becoming more vulnerable to air attack. A third element in Combined Arms is to force the adversary into the type of terrain in which he is most vulnerable. Instead of engaging the enemy's tanks with ones own in open terrain, the intention is to lead them into terrain in which one's own force have a comparative advantage. For example the enemy's tanks could be led into rugged and constricted terrain to make them easily accessible for attack by infantry.

Combined actions are a well-known phenomenon in modern military history. Early examples of this approach can be seen in the way Gustav II Adolf (1594–1632) and Napoleon Bonaparte (1769–1821) organised their armies. They brought together infantry, cavalry and artillery in an entirely new way which increased the armies' overall striking power. During the Second World War both Germany and the Soviet Union developed theories for how air forces could be integrated in land operations. The United States' *AirLand Battle doctrine* (1982) was the result of increased emphasis on the combination of different weapon systems. Since the Cold War there has been a deeper integration of weapon systems at all levels in the military organisations. During the Iraq war in 2003 the United States forces integrated their weapon systems over the whole scale from operational to tactical levels. This they did by, for example, com-

binning, land sea and air systems with systems for special and information operations. The third element in Leonhard's theory is well-known from Norwegian defence thinking during the Cold War, where Soviet forces possibly attacking Norway were to be led into the narrow valleys of Troms in which Norwegian light infantry would have a considerable comparative advantage and would be able to delay the invasion until allied forces arrived to relieve them.

The concept of Combined Arms is often used in United States and British doctrines. The concept originated in connection with ground operations where different weapon systems were combined at team and squad level to increase striking power. Today the concept is also used in a joint operations context and includes weapons from all service branches. Combined Arms should not be confused with *Combined Operations* which are operations in which two or more countries participate.

Basic functions

0416. Military units are dependent on six basic functions: *command and control* for guidance and coordination, *means of action* in order to have an effect on the adversary, *mobility* in order to be able to move about, *protection* for the security of



Figure 4.3, THE BASIC FUNCTIONS

own forces, *intelligence* in order to create a picture of the situation, and *logistics* for enabling necessary resources. *Command and control*, *intelligence* and *logistics* are described in Chapter 5 while *protection*, *mobility* and *means of action* are described in Appendix A.

0417. The basic functions can be used for a discussion of how the Armed Forces should develop their capabilities within the different areas. The functions can also be assembled in a model which shows the connections between them. Figure 4.3 is an illustration of the fact that there is mutual dependence and interaction between the various functions and that they should be viewed as a whole. Command and control is placed in the centre because this function ties the other five together.

0418. The network-based approach in the Armed Forces' Operational Foundation is about organising the basic functions as flexibly and rationally as possible. The basic functions model (figure 4.3) and the decision cycle (figure 4.4) are intended as aids as to how we should think beyond organisational units. Such an approximation enables us to focus on how the various functions can be coordinated to achieve a higher operational tempo and the benefits of synergy.

The manoeuvrist approach and manoeuvre theory

It was to use mobility as a psychological weapon, not to kill but to move; to move not to kill but in order to terrify, to bewilder, to perplex, to cause consternation, doubt, and confusion in the rear of the enemy, which rumour would magnify until panic became monstrous. In short, its aim was to paralyse not only the enemy's command but also his government, and paralysation would be in direct proportion to velocity. (About Guderian's rapid advance to the English Channel during the campaign in France in 1940).

J. F. C. Fuller

0419. The manoeuvre theory emphasise the psychological dimension of combat and it regards combat as a battle between wills in which the aim is to break down the adversary's cohesion and will to fight. As a consequence the manoeuvre theory allows for an operational environment characterised by uncertainty, fear, chaos, friction and unpredictability. The manoeuvre theory emphasises the importance of turning these factors to one's own advantage by mastering them and, at the same time, exposing the adversary to them to the greatest extent possible.

THE NATURE OF ARMED CONFLICT

Even though the character of armed conflicts has changed through history, and in recent years, it is still human beings who fight, not machines and systems. The means and methods will change from conflict to conflict but, at the same time, it is possible to talk about the abiding nature of conflict, in which *friction, uncertainty and chaos, danger and stress* are factors that are always present.

Friction: Friction is what separates a plan on paper from the actual execution. There are three fundamental forms of friction: that which is present, or which arises, in one's own organisation, that which is created in the encounter with an adversary, and that which is due to the environment, for example as a consequence of weather conditions. Friction can arise as a combination of these forms and can have several sources: physical (tiredness, obstacles), psychological (fear, confusion) and technological (unfamiliar equipment, faults, shortages and accidents).

Uncertainty and chaos: Armed conflicts will always be characterised by uncertainty and chaos, often called the *fog of war*. This arises, for example because of incomplete, inaccurate and contradictory information, and contributes to limitation of situation awareness. The fog of war leads to confusion and degrades the ability to take the right decisions at the right time. Modern technology and forms of organisation can mitigate these challenges to a certain extent but they will never be able to eliminate the fog of war. Actors in a conflict will actively seek to conceal their intentions and to create as much uncertainty and chaos as possible for the adversary. A good knowledge of the adversary and of oneself will certainly help to reduce this uncertainty but chance will always make it difficult to predict the final outcome.

Danger and stress: The use of military force involves the use, or threat of using, physical violence. This engenders a feeling of danger, and most people react to danger with fear. In addition there will often be the effect of physical exhaustion, loneliness and the lack of food and sleep. Taken together these conditions can put the combatants under a substantial degree of stress. And stress will as a rule lead to reduced combat capability.

0420. The difference between the *manoeuvre theory* and *manoeuvre warfare* is not clear-cut, but *manoeuvre warfare* can be described as the practical embodiment of the *manoeuvre theory*, where a set of techniques is given for how military forces should operate in order to break down the adversary's cohesion and will to fight.

MANOEUVRE THEORY AND MANOEUVRE WARFARE

The concept of manoeuvre theory came into being in the 1900s but its underlying philosophy, with its emphasis on the *psychological aspects* of the art of war, is not new: as long ago as 500 BC this had been expounded by Sun Tzu. The theory derives its name from manoeuvring – physical movement – on the battlefield to get into position to attack or threaten an adversary. The art of war thus emphasised physical movement as a means of gaining a psychological advantage. Today the concept of manoeuvre has been extended to include more than purely physical movements.

The First World War, and particularly the static western front, was seen by many as an end point for the classical art of war. Warfare had apparently been reduced to gigantic material battles in which the nations' economic, demographic and political capacity was seen as being far more important than the decisions of the generals. In the inter-war years a desire to be able to again decide wars on the battlefield caused military theoreticians in many countries to seek new methods, other than a long war of attrition, of achieving victory. Theoreticians who wielded much influence included the Britons J. F. C. Fuller (1878–1966) and Sir Basil Liddell Hart (1895–1970), the German Heinz Guderian (1888–1954) and the Russians Vladimir Triandafillov (1894–1931) and Mikhail Tukhachevsky (1893–1937). Subsequently, following the Arab-Israeli wars of 1967 and 1973, the manoeuvrist theory experienced a renaissance – first in the United States and then in the NATO area. The central thinkers in the development of modern western manoeuvre theory were the Americans John Boyd (1927–1997), William Lind and Robert Leonhard.

Manoeuvre theory is today often used as an umbrella term for a number of different theories which have in common that they focus on the destruction of the adversary's cohesion and ability to operate more than on gradual and systematic destruction through the use of firepower. Some theoreticians have drawn attention to the methods while others have concentrated on attempts to describe the underlying psychological factors. This has meant that manoeuvre theory today is a concept that witnesses various interpretations. Wise commanders over the years have often focused on influencing the adversary's cohesion and will and have used a variety of means to achieve this. Thus we may perhaps say that manoeuvre warfare came first and that the manoeuvre theory was created in an attempt to harvest some wisdom from historical examples. The critics assert that the manoeuvre theoreticians make selective use of historical examples to underpin their theory and that there are many examples of the adversary's will being broken only by the use of massive firepower and by a long period of attrition to wear down his war-fighting capability.

0421. Both in manoeuvre theory and in manoeuvre warfare, emphasis is placed on the analysis of the various actors' strengths and weaknesses. In the Armed Forces' Operational Foundation this is embodied in the *manoeuvrist approach* and requires comprehensive knowledge of both our own and our adversary's organisation (political and military structures, objectives, operating patterns, capabilities and characteristics as well as culture, norms and sets of values. The

concepts of *centre of gravity* and *critical vulnerabilities* describe the connections between the different actors' strengths and weaknesses. Appendix C defines the concepts and describes how a *structural analysis* (a process for analysing the actors in a conflict) can be carried out.

The techniques of manoeuvre warfare

0422. Manoeuvre warfare has been described by many theoreticians (see text-box above) who have different views as how to gain the psychological advantage. There is, therefore, no unified view of what the most important techniques in this form of warfare actually are. The Armed Forces have chosen to emphasise *surprise, initiative, the indirect method, tempo* and *mission command*. These techniques are in line with the factors emphasised in our allies' doctrines.

0423. *Surprise* is important in manoeuvre warfare primarily because of the psychological effect of surprise. Unexpected events create fear and uncertainty in the adversary. Surprise also contributes towards making it easier to attack the adversary physically. Surprise is achieved by using unexpected methods in unexpected places at unexpected times. Unexpected in time and place minor actions can have a major effect.

0424. One of manoeuvre warfare's most important techniques is to seize, and continue to hold, the *initiative*. The side which has the initiative forces the adversary to react, so that the adversary is exposed to attack and thus placed under psychological pressure. The ability to take the initiative starts at the individual level and is a part of the Armed Forces' culture and one of the fundamentals of the military profession. Mission command, understanding of the commander's intentions and the ability to take calculated risks are essential conditions for seizing and maintaining the initiative.

0425. The *indirect approach*: Manoeuvre warfare places weight on avoiding the adversary's main forces while at the same time taking advantage of his weaknesses. The indirect approach is a well-proven technique for gaining and maintaining the psychological upper hand. By preventing the adversary from choosing the time and place of any confrontation, his progress is weakened and his weapon systems and organisation are degraded. This leads to doubts and redeployments on the part of the adversary.

THE INDIRECT APPROACH

In strategy the longest way round is often the shortest way there – a direct approach to the object exhausts the attacker and hardens the resistance by compression, whereas an indirect approach loosens the defender's hold by upsetting his balance.

Sir Basil Liddell Hart

0426. The indirect approach has both an abstract and a tangible dimension. The tangible dimension is about avoiding the adversary's physical forces and at the same time attacking their weaknesses. The abstract dimension is about avoiding the adversary's strong sides in the broadest sense while at the same time exploiting his vulnerabilities – for example by influencing the local population's support for a combatant group rather than by attacking the group itself, or by attacking their supply lines rather than their weapon systems.

0427. Tempo can be defined as relative speed of action over time compared with that of an adversary. The purpose of conducting combat at a high tempo is to render the adversary vulnerable, gain a psychological advantage and make the basis of his decisionmaking irrelevant. The ability to act at high tempo confers an advantage in that one can oneself choose the tempo which at any given time will produce the desired effect. High tempo will not, however, always be desirable

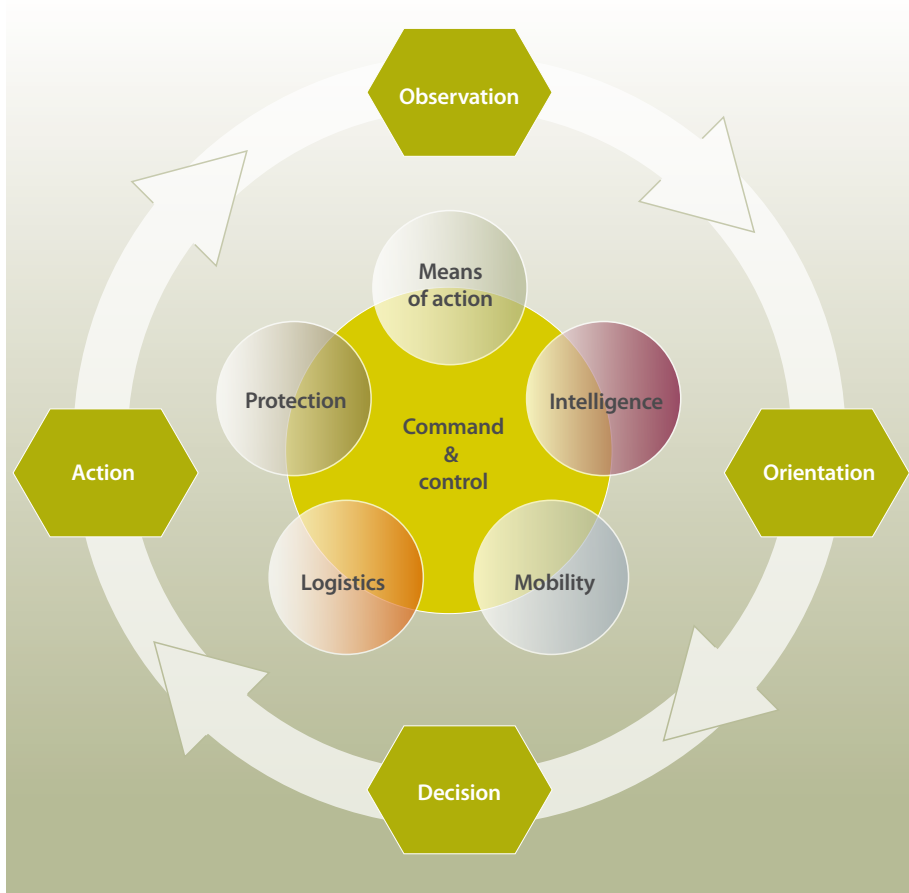


Figure 4.4, THE DECISION CYCLE, THE BASIC FUNCTIONS AND TEMPO

during an operation. In combat against irregular forces, in the context of the stabilizing method or the attrition method, patience will often be more important than high tempo.

0428. The decision cycle model describes how tempo can be achieved from the time at which an event occurs to the time at which action is initiated. The decision cycle consists of four elements which together form a continuous process: *observation, orientation, decision* and *action*. The decision cycle can also be understood as three sections, where the first concerns *information*: observation and orientation – what situation are we facing? The second concerns *decision*: decision as to what must or should be done to come to terms with the situation. The third concerns the conduct of the *action* itself: how and with what means? The ability to complete this process more rapidly and with better quality than the adversary is of decisive importance to achieving success.

0429. The aim is “to get inside the adversary’s decision cycle”: By completing the decision cycle more rapidly than the adversary, he will continually be forced onto the back foot. This will put own forces into favourable positions while the adversary will lag behind. The ability to take correct decisions rapidly is an essential condition for achieving high tempo. At the same time the basic functions must be developed and integrated to support this capability. Basic functions organised in networks and a command and control system which makes possible the rapid exchange of information between units will enhance the capability for high tempo combat.

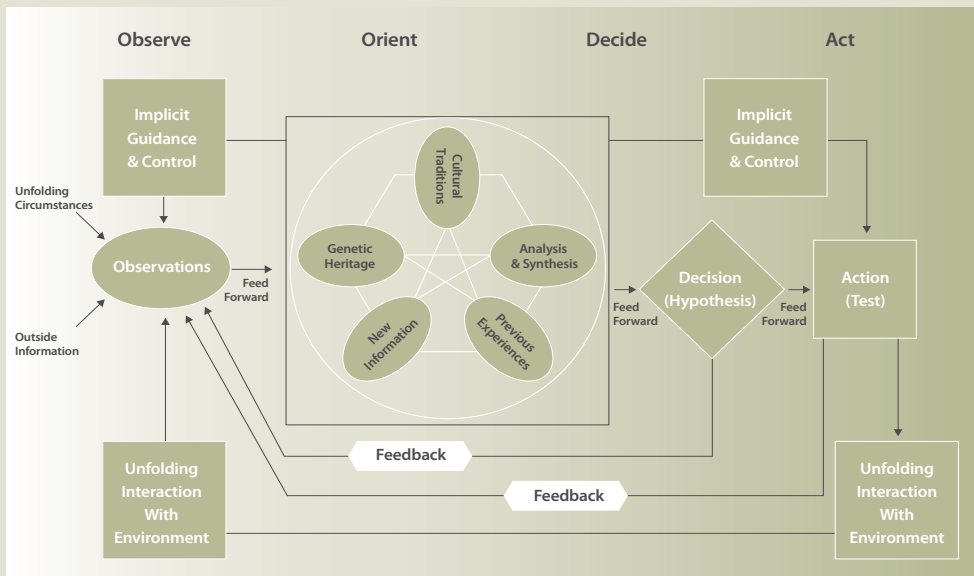
0430. The concept of *timing* is closely linked with tempo. Timing entails carrying out the actions when they will give the best results in the current situation. Correct timing can be initiating one’s actions when the adversary least expects it. In the context of the stabilizing method or the attrition method, correct timing can be initiating action against the irregular forces at the same time as initiating actions to win the hearts and minds of the local population. It should be stressed that these are simply two examples. What constitutes correct timing will vary depending of the specific situation.

0431. *Mission command* is essentially a culture associated with manoeuvre warfare and an essential condition for the ability to master friction and chaos while at the same time maintaining the initiative and tempo. Mission command is exercised through a technique involving stating the intention, allocating resources and giving the greatest possible freedom of action to whoever is to carry out the mission. Mission command is described further in Chapter 6.

JOHN BOYD AND THE OODA LOOP

The decision cycle is a simplification of the OODA loop and can lead the reader into believing that the loop is a mechanical and sequential process which can be solved by technical means. John Boyd held quite a different view. According to Boyd the OODA loop is not one loop but a description of several possible loops. The most important part is *orientation* which covers perceptions and the ability to take intuitive decisions. Experienced decision-takers raise the tempo through their ability to take *correct* decisions *rapidly*. Boyd attached great weight on the psychological aspects of combat, and the importance of understanding how the adversary thinks, in order to be able to influence his understanding of his surroundings and, in that way, to “get inside his decision cycle”. Boyd himself preferred to call his model the O-O-D-A Loop in order to bring out the differences between *Observe*, *Orient*, *Decide* and *Act*.

John Boyd (1927–1997) was a colonel in the United States Air Force and developed the OODA loop against the background of his experience as a fighter pilot during the Korean War (1950–1953). With the OODA loop as his point of departure he wanted to describe how the American F-86 fighter pilots won more than 90 % of their aerial combat engagements with Chinese and Korean MiG-15 aircraft. Despite their inferiority in a number of respects, the F-86 Sabre aircraft had two decisive advantages: the ability of their pilots, with a better field of vision, to visualise the situation far more rapidly than their opponents, and the F-86 Sabre’s more responsive flight control system which enabled the American pilots to switch between different types of manoeuvre much more rapidly than was possible for the MiG-15 pilots. The American pilots quickly learned to exploit this advantage, and used it to force their opponents into a series of manoeuvres in which, in their efforts to react, the MiG pilots either exposed themselves to attack or made fatal mistakes. Boyd stressed that these effects were not primarily technological in nature but that they were mainly psychological. The American pilots were sure that they would be successful and therefore took the initiative, while their opponents were unsure and therefore made fatal mistakes. Boyd continued his studies, focusing on successful campaigns from history, with a view to making his observations universally applicable.



Figur 4.5, The OODA Loop

From “manoeuvre theory and manoeuvre warfare” to “manoeuvrist approach and manoeuvre method”

0432. Manoeuvre theory has been NATO's most important theoretical basis since the 1980s. The Alliance's ambition has been to be capable of waging manoeuvre warfare against a mechanised adversary within the framework of a large-scale war. The theory has thus been associated with high-intensity warfare against a mechanised adversary. In recent years, however, the Armed Forces have been engaged mainly in operations during conflicts of lower intensity. Against this background it has been asserted that manoeuvre warfare is of little relevance to the greater part of the Armed Forces' operational activities, and that the manoeuvre theory as such is no longer valid. The view of the Armed Forces is that the manoeuvre theory is still of relevance but that it needs to be nuanced for use today.

0433. With the concepts of the *manoeuvrist approach* and the *manoeuvre method*, the Armed Forces are carrying forward the manoeuvre theory's psychological point of departure and manoeuvre warfare's techniques in a contemporary context. The ambition is that the manoeuvrist approach should become part of the Armed Forces' culture and thus form the basis for all types of operations, while it is still acknowledged that the manoeuvre method today often must be combined with other methods in order to achieve the desired effect. The manoeuvrist approach advocates an approach at an individual level which stresses the psychological dimension of combat, while the manoeuvre method is one of three operational methods in the Armed Forces' Operational Foundation, designed to break down the adversary's will and coherence based on the techniques of manoeuvre warfare.

The effects based-approach to operations

0434. The effects based approach forms the basis of a number of concepts including *Effects Based Operations* and *Effects Based Approach to Operations*. As already mentioned, the Armed Forces do not wish to tie themselves too closely to particular concepts, technological solutions or procedures. The following sections therefore give attention rather to the fundamentals of the approach and to the central concepts.

0435. The effects based approach has been actualised in today's complex conflicts involving several parties, which may often have unclear alliance and conflict relationships between themselves, together with a number of external actors having differing interests in the conflict. In such conflicts it is difficult to direct *one* action against *one* specific party. On the contrary, it may be necessary to initiate a spectrum of actions, including both civil and military means, directed against a number of actors in order to achieve results which are desirable in the longer term.

EFFECTS BASED OPERATIONS CONCEPTS

The concept of *Effects Based Operations* (EBO) originated in the US Air Force (USAF) in the 1990s. This approach arose as a reaction to the fact that, as the USAF saw it, more weight was given in military operations to the actions themselves, attacking the targets, than to the results. Developments in *Effects Based Operations* have thus been driven largely by the USAF and are slanted strongly towards the use of air power. In practice the emphasis has been on technology and what can be achieved by air power alone.

The *Effects Based Approach to Operations* (EBAO) is a further development of the original EBO concept. In NATO there is a general focus on EBAO and the United Kingdom has been the principal driver of further developments in this area. The European variant embodies a broader and more generally based approach than the original American model and places less weight on technology and what air power alone can achieve. The British have gradually gone over to the concept of *Comprehensive Approach* in which attention is focused more on the coordination of civil and military actions than on the relationship between military actions and their effects.

The *US Joint Forces Command* (USJFCOM) has in recent years also moved towards an EBAO approach which is not unlike the NATO approach but which has a greater focus on effects based planning tools and actual implementation of these tools.

Effects-based approach cornerstones

0436. The effects based approach has three cornerstones. The first is to see all means as parts of a *larger whole* in which military and civil means are coordinated. The second cornerstone is to see the adversary and other actors as a *system of*

systems in which many different actors and factors interact with one another. That means that all actions carried out, and the particular means used, must be assessed on the basis of what effects they may have on the various parties. The third and most important cornerstone is that all actions carried out must be justifiable on the basis of their contribution to the achievement of the *desired effect*.

Integrated use of means

0437. Military means represent one of a number of means that states have at their disposal, and military means must thus be seen as part of a larger whole. It is important to include other states and the various international organisations in this whole since such actors will often play a part in conflict management together with military forces. It is also necessary to understand the levels of command at which decisions are taken concerning the use of the various means, including the military, and how these levels together form a whole.

System of systems

0438. The focus on system is the second cornerstone of the effects-based approach. System thinking is seeing all parties in a conflict, together with other actors who might conceivably influence the conflict, as a system of systems. The components of a system are also known as nodes. State actors will have more fully developed systems than non-state actors but in most cases the systems will have the same basic functions. Such systems will also have several points of contact with other systems locally, regionally and globally. It is important to understand the whole of an actor's system and how it functions, both in itself and in interaction with other systems.

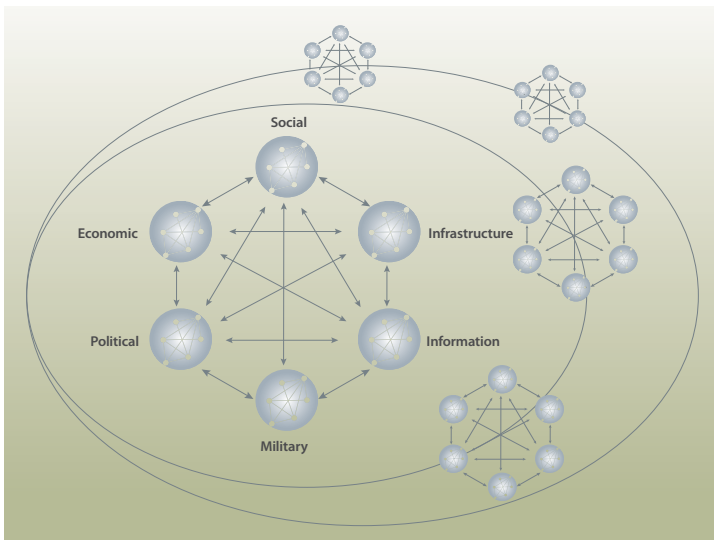


Figure 4.6, THE ACTORS' SYSTEMS

0439. In the effects-based approach to operations (EBAO), both state and non-state actors are viewed as systems each with six subsystems, commonly denoted by the acronym PMESII:

- *the political system* covers the decision and command functions,
- *the military system* covers the means of physical force and the associated means of command and control,
- *the economic system* covers the resource base and its financing,
- the social system consists of the people, including possible ethnic and religious dimensions,
- *the infrastructure system* consists of communications in the widest sense, including electricity, the transport network, water supplies and sanitation,
- *the information system* consists of the information infrastructure, command systems and media.

SYSTEMS AND THE SYSTEM THINKING

A system is a collection of elements connected together in such a way that they create an organised whole. A system is built up of mutually dependent components and processes. The units in a system will share a common purpose and the collective results of the units in the system will be greater than the sum of the parts in isolation. This is known as *synergy*. The more units and processes that the system contains, the more difficult it is to analyse the system as such and the significance of the individual elements to the system as a whole.

All systems which include humans are complex, since the human factor makes it very difficult to predict with certainty the results that can be achieved by affecting the system. *Dynamic systems* are systems in a constant state of change and interaction with other systems. *Open systems* are systems which interact with other systems. *Adaptive systems* are systems with an ability to develop and alter to meet changing requirements in their environment and thus improving their effectiveness. Adaptive systems have redundancy, which means that elements in the system are capable of taking over from other elements that have failed or been destroyed.

System thinking is interdisciplinary. It is employed, for example, in meteorology, geology, sociology and political science. System thinking is an approach used to understand how complex phenomena affect each other. System thinking entails looking for connections between different phenomena and can be viewed as an alternative to cause and effect thinking. System thinking is seeing the whole by understanding the qualities of, and the connections between, the various parts.

0440. Analysis, including analysis in a military context, has usually focused on breaking a system down into its components and then studying each component individually. An analysis based on system thinking not only evaluates the indivi-

dual parts but also places emphasis on how the individual parts work together within the system and with other systems, and how the systems working together function as a whole.

0441. The point of the effects-based approach is to coordinate and integrate all the means of influencing the systems. Diplomatic, information-based, economic and military measures are directed against each of the subsystems with the aim of achieving effects in the system as a whole or in parts of it. In this perspective, system thinking is necessary to understand where and how the actions can best be implemented in order to achieve the desired effects while avoiding those that are undesirable.

Desired effect

0442. The third and most important cornerstone of the effects-based approach is to concentrate on the overall result, *the effect*, that is desired, and not on the individual means in themselves. The point of departure of the effects-based approach is to focus on which forms of behaviour change are desired and to combine the actions and individual means which are necessary to achieve this.

0443. The aim in an armed conflict is to force the adversary to change his behaviour so that one's own objectives prevail. In a *stabilization operation* or in *combat against irregular forces*, it is often a question of causing a number of parties to change their behaviour in order to put an end to the violence and the conflict. Different actions may be necessary to achieve this. The use of force is often necessary against warring parties, while measures of a protective and socially developmental nature will be important in relation to the local population. For the groups in conflict, the desired behavioural change is that they should give up and stop the violence and the fighting. Where the local population is concerned, the behavioural change desired is that they should stop their support for the warring parties.

The effects based approach and humanitarian aid

0444. Acute humanitarian aid in order to reduce human suffering will often be necessary and this can be rendered by both international organisations and military forces. It is often difficult to identify the boundary between humanitarian aid and actions designed to promote social development in the longer term. The effects-based approach, with its emphasis on the integration of civil and military means, can lead to humanitarian aid being interpreted as a way of coercing a party to do one thing or another. This is not the case. Humanitarian aid is never an instrument of coercion. However actions which support humanitarian aid can be a positive influence and help to achieve the effect desired.



Action, result and effect

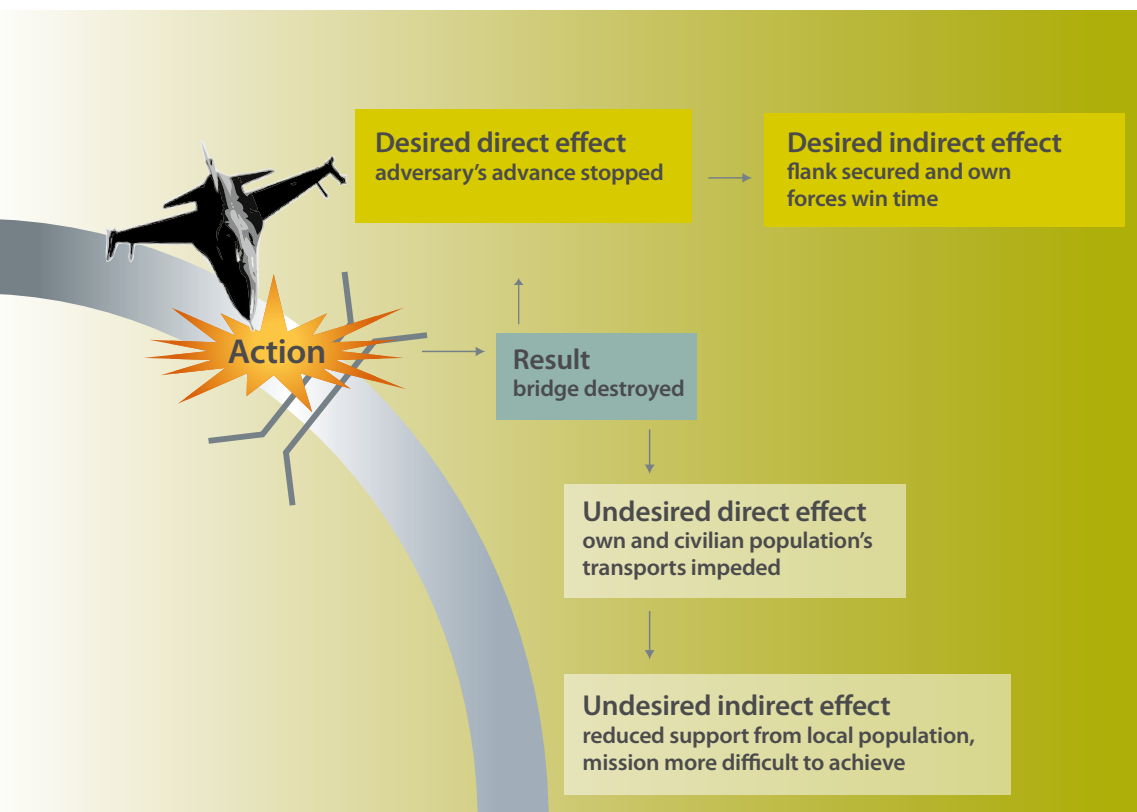


Figure 4.7, ACTION, RESULT AND EFFECT

0445. In a given situation the desired *effect* is defined as stopping the adversary's advance and protecting a flank. In Figure 4.7 the *action* will consist of the collective means deployed against the bridge, for example aerial bombing. The action has the immediate *result* that the bridge is destroyed. This result is objective and absolute and will appear the same regardless of standpoint. However, the *effect* of the bridge being destroyed is relative. The direct effects are the immediate effects which the destruction of the bridge has on the adversary, own forces or on other parties. The indirect effects may be either desired or undesired and they must all, or at least those one can reasonably know about, be considered during the planning of the operation. In this example, for instance, the destruction of the bridge might have the indirect effect of weakening the local populations support for our mission and swaying them towards the adversary.

0446. In the example of the bridge above, the desired effect could be achieved by actions other than aerial bombing. An alternative action could be to mine the bridge and defend it. This requires resources but would at the same time make

it possible to use the bridge later. Another alternative might be to attack the adversary in another sector, so forcing him to regroup and delaying his advance. The effects based approach is about selecting those methods and means which achieve the desired effects to the greatest extent and with as few undesired effects as possible.

DEVELOPMENT OF EBAO CONCEPTS IN NATO

NATO continuously develops methods for the preparation and execution of operations in accordance with the principles of the effects based approach. The development process covers both theoretical concept development and practical experiments. The four concepts which in 2007 underlie NATO's effects based approach to operations are *Knowledge Based Development (KBD)*, *Effects Based Planning (EBP)*, *Effects Based Execution (EBE)* and *Effects Based Assessment (EBA)*.

Knowledge Based Development is about developing tools to aid system understanding. Two important aids in this process are *Operational Net Assessment* and *Collaborative Information Environment* which are respectively a computer based analysis tool and a web based information tool.

Effects Based Planning (EBP) has as its point of departure procedures which are laid down in the Alliance's existing planning tools, Guidelines for Operational Planning (GOP) and AJP 5. The planning sequence in effects based planning covers effects, nodes, actions and resources (ENAR), and its purpose is to define the desired effect; analyse which nodes must be influenced in order to achieve this; analyse which actions against these nodes will give the desired outcome and avoid undesired outcomes; and analyse which resources are required to execute the operation. In the execution of the operation itself the elements occur in the reverse order: resources, actions, nodes and effects (RANE).

Effects Based Execution (EBE) focuses on acts and actions which are intended to achieve the desired and planned effects. Central concepts here are synergy effects and synchronised effects. The ability to measure and assess effects, and the ability to adapt rapidly to changes, will be central to the execution of operations.

Effects Based Assessment (EBA) is to observe the results of all relevant events and to assess these against the desired and undesired effects. Traditional Battle Damage Assessment (BDA) has often directed attention to the direct results of the action rather than to effects.

Effects-based campaigns

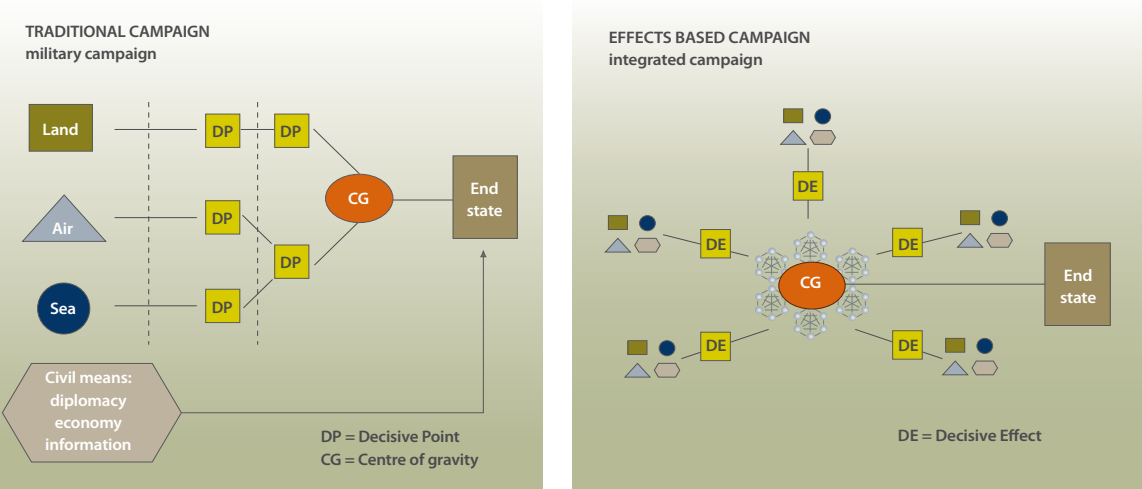


Figure 4.8, TRADITIONAL CAMPAIGNS AND THE EFFECTS BASED APPROACH

0447. The figure to the left above gives a schematic overview of a traditional campaign. The desired end state is achieved by influencing the adversary's *centre of gravity* (CoG). The centre of gravity is influenced through the achievement of a number of *decisive points* (DP). The decisive points are formulated as objectives in the operational plan and the military campaign is divided into phases in which these decisive points are to be achieved. The campaign is designed to bring about the military part of the end state. Civil actions are separated from the military campaign and follows particular lines relating to the political objectives. This distinction between military and civil actions was originally made with high intensity conflicts in mind and has been shown by experience to work well when the aim has been to defeat a military adversary. It is important to note that the figure on the left is an extreme simplification and that developments today are oriented towards the increased integration of civil and military actions. Note also that the military forces are not necessarily divided into single-service elements but rather into integrated components in which each particular operational line is linked to an overall objective.

0448. The figure to the right gives a schematic overview of the intentions for an effects-based campaign. The basic idea is to integrate the civil and the military means. The desired end state is still to be achieved by influencing the adversary's centre of gravity. The actual centre(s) of gravity are to a greater extent identified by means of system thinking. The centre of gravity is influenced by the achievement of a number of decisive effects (DE). The decisive effects will largely concern producing the desired behaviour on the part of the adversary and other actors involved. The campaign is not sequential to the same extent as in the traditional campaign

but it is conducted along a number of lines in parallel in order to achieve the decisive effects. The desired end state is formulated so that political and military objectives are integrated.

0449. The effects-based approach to operations is relatively simple in theory. The practical execution, however, is complicated. One of the major challenges arises from the fact that today there is relatively little experience of the integration of civil and military means and the procedures that this involves. Such an integration will necessarily extend across a number of different command levels and involve different sectors and agencies. There is an obvious risk of lack of clarity regarding authority and responsibility as well as less than ideal resource concentration. There may at the same time be great advantages to be gained through successful integration, and a substantial degree of integration may well be achieved naturally.

The Effects-based approach and Network Based Defence

0450. The purpose of Network Based Defence (NBD) is to obtain and share information while the purpose of the effects-based approach to operations (EBTO) is to make use of the information. For both the planning and execution of operations, EBTO will benefit greatly from the information sharing that is being planned for NBD. EBTO requires large amounts of information for the analysis of effects, the establishment of knowledge bases and the coordination of civil and military means.

0451. The effects-based approach at the level outlined in the doctrine will benefit from increased network-basing but is not dependent on the advent of full NBD. The effects-based approach is primarily about developing a culture in the Armed Forces, with individuals who understand and use this way of thinking.

The network-based approach and Network Based Defence

0452. Forces organised in networks are already in use today, to a greater or lesser degree, when the Norwegian Armed Forces carry out day-to-day operations or are involved in the handling of episodes. The Armed Forces will continue to develop in the direction of network-basing. The network-based approach is about creating a culture in which there is a shared responsibility to contribute towards this continuing development. The doctrine describes the most important parts of the concept and provides an overview of the conceptual framework as well as various degrees of maturity on the way towards network-basing.

THE NETWORK CONCEPTS

Many concepts have been developed for the purpose of linking military resources in networks with the use of modern information technology.

Network Centric Warfare (NCW) was developed in the United States. This concept was inspired by the global integrated production, distribution and sales systems of international conglomerates. It involves highly ambitious levels of technology and organisational development.

Network Enabling Capacities (NEC) is the term used for the United Kingdom's development work in this field. In relation to Network Centric Warfare it focuses to a greater extent on improving existing technology and organisation, and developing these in the direction of network organisation. In general, the level of ambition in NEC is not as high as in NCW.

NATO Network Enabling Capacities (NNEC) applies to NATO's development work in the area of network organisation. The level of ambition and the basic ideas are very similar to that involved in the United Kingdom's NEC work. The development work must however have due regard to all member countries in line with the principle of consensus. A large part of the work on NNEC is devoted to arriving at a common basis for further development.

The Norwegian work on Network Based Defence (NBD) is directed towards achieving increased network organisation. The level of ambition and the basic ideas are largely coincident with those of NATO's NNEC and the United Kingdom's NEC. One important reason why the Norwegian defence community itself is engaged in development work in this area is that the Norwegian Armed Forces want to influence the development of NNEC.

What is Network Based Defence?

0453. NBD is a concept for working together in a network for the purpose of using the Armed Forces' resources in ways which make use of the possibilities which

the information age offers, and for the purpose of achieving increased flexibility and effectiveness. NBD is a concept envisaged for use in all types of conflict and at all levels of conflict both at home and abroad. NBD is about seeing technology, competence, organisation and current processes in a common context, and it covers human, organisational and technical dimensions as well as conceptual, moral and physical factors as described in the combat capability model.

0454. NBD implies a shift of focus from what *each individual platform* (for example aircraft or naval vessels) can do on its own, to what a *network of platforms* can do. Such a shift of focus will make it possible to link different military functions in a flexible way and so increase the collective combat capability. The key to this lies in the use of modern technology and the flexible use of human resources.

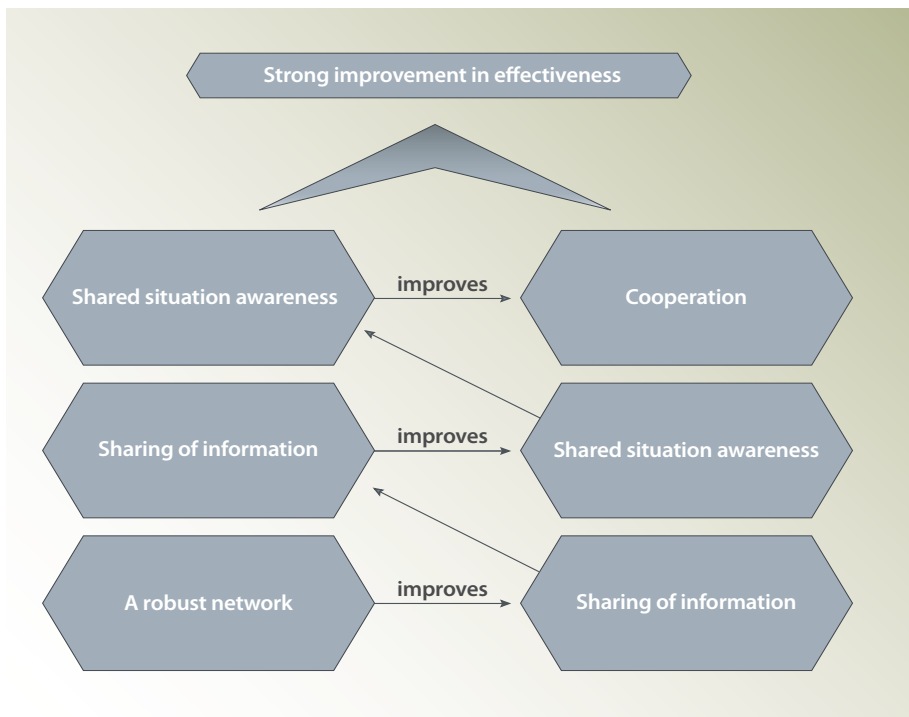


Figure 4.9, ADVANTAGES OF NBD

0455. Decision makers, sensors and action systems are linked together in a network of networks in a robust information structure in which information is continuously being gathered and made available or distributed. Increased information awareness makes it simpler for commanders at all levels to take correct decisions rapidly. This also contributes to improving cooperation and coordination between different units and systems. The information infrastructure in a network also makes it easier for the commander to impart his intention.

0456. Network organisation makes forces less dependent on physical proximity to each other and on geographical position in general. Such organisation also increases robustness in that information can be stored in different places and distributed by a variety of channels.

Network-basing and the domain model

0457. Network-basing is about linking together processes which take place within the different domains. Such an interlinking will increase speed, precision and robustness. At the same time, the meaning of NBD will vary between the domains:

- In the *cognitive domain*, network-basing is about creating a precise basis for decision making.
- In the *information domain*, network-basing is about making information available to the right user at the right time and making information from the whole network accessible to the decision takers when they require it. It is also about developing robustness and protecting information by means of decentralised storage and a set of alternative distribution channels for information.
- In the *social domain*, network-basing is about improving the ability of information to create a shared overall picture of the situation, awareness of what the mission is and what the desired effects are.
- In the *physical domain*, network-basing is about the gathering of information, assembling combat units and linking different weapons systems with speed and precision in order to achieve effect.

NEW INFORMATION TECHNOLOGY AND REVOLUTION IN MILITARY AFFAIRS

New information technology has revolutionised many areas of both business and military activities, hence the advent of such concepts as *Revolution in Business Affairs* and *Revolution in Military Affairs*.

The concept of a revolution applied to the military use of the new information technology originated in the Soviet Union. In the 1970s and '80s studies were carried out of a number of wars, for example those in Vietnam, the Middle East and the Falklands. A general trend was identified in which information technology had opened up new possibilities. This applied particularly to new combat systems which were able, with great precision and almost in real time, to identify and engage targets at very great distances. It was assumed that technology would in future make it possible to achieve information superiority on the battlefield.

The United States has come far in this field and now has an overarching vision of how the country's armed forces should be developed and utilised. *Joint Vision 2010*, dating from 1996, later developed into *Joint Vision 2020*, stresses that the United States' technological superiority must be used to change the whole of the Armed Forces and the way in which war is waged. The ambition is to deal with a broad spectrum of peacetime operations, the deterrence and prevention of conflicts and large scale war-fighting. The traditional basic military functions have been developed to so-called operational concepts such as *Dominant Manoeuvre*, *Precision Engagement* and *Focused Logistics*.

Information superiority is, according to the Americans, the key to realisation of the new operational concepts. It means a superior ability to gather, process and distribute information in an uninterrupted stream. At the same time the adversary's ability to do the same must be destroyed or turned to one's own advantage. *Decision superiority*, the ability to convert information into action, is given strong emphasis. In *Joint Vision*, great importance is attached to the continuous development of organisation, doctrines and concepts and on relevant training and experience.

From platform to system

0458. A military organisation in the NBD can be described as a set of components (nodes) with connections between them. The components can be divided into three main categories:

- *Sensor components* have the gathering of data as their main function. Sensors include all components which contribute to situational awareness and may be anything from space-based sensors to people.
- *Decision components* have the taking of decisions as their main function. During an operation these will be able to take decisions about organisational changes and the allocation of resources, allotting tasks and the engagement of targets.

- *Action components* are to achieve results and effects. Action components include both lethal and non-lethal means. In NATO Network Enabling Capabilities these are called *effect components*. The Norwegian term used, equivalent to ‘action components’ was chosen to keep in line with the concept of action-result-effect (Figure 4.7).

0459. In addition to the main categories of components, there are *decision support components* (staff functions) and *coordination components*. The purpose of the latter is to contribute to the coordination of the various components and systems. One example of a coordination component is a *Forward Air Controller* (FAC) who conducts coordination between aircraft and other combat forces. The coordination components have a particularly important role in a network based defence which is as yet at an initial stage.



0460. The information infrastructure (INI) includes all information systems responsible for communication between the components in the system. It consists of technical equipment for the processing, storage, distribution and presentation of information. This means, for example, computers and their software, satellite communications, radio and telephone systems. The information infrastructure also includes the people who operate and support the systems as well as the associated standards and procedures.

0461. Separating sensors and weapons does not mean that all weapon platforms are without sensors but receive information only from sensors that are physically positioned elsewhere. A weapon system must be capable of being used as an autonomous system, as a sensor and as an action component. Platforms which are so dimensioned can be decision components provided that the responsibility and authority conditions have been defined. Amongst other things this means that sensors which are co-located with the weapons (as they will be in an aircraft or a warship) must be able to transmit information to other action components or to the decision components.

0462. Army units, frigates, fighter aircraft and special forces are examples of elements which can be both sensor and action components in all types of networks. Frigates are an example of platforms which have sufficient information infrastructure to function as decision components in large networks while the others can do so in smaller networks. Within the network, the various units can carry out tasks or missions individually. At the same time, the constant transfer of target information and own position can contribute to facilitating the coordination of these individual actions if required.



Figure 4.10, SENSOR, WEAPON AND DECISION PLATFORMS

SITUATION AWARENESS

Situation awareness is an essential precondition for the ability to synchronise actions without there necessarily being a detailed plan. Situation awareness occupies a central position in NBD thinking. The concept itself has three elements differing mutually in quality:

- *Situation consciousness* is the lowest degree of situation awareness and entails being conscious that something is happening.
- *Situation comprehension* is the next level and means being aware of the significance of what is happening.
- *Situation prediction* is the highest degree of situation awareness and entails the ability to recognise previous patterns and, on that basis, to predict how the situation is likely to develop.

NBD as a continuous process

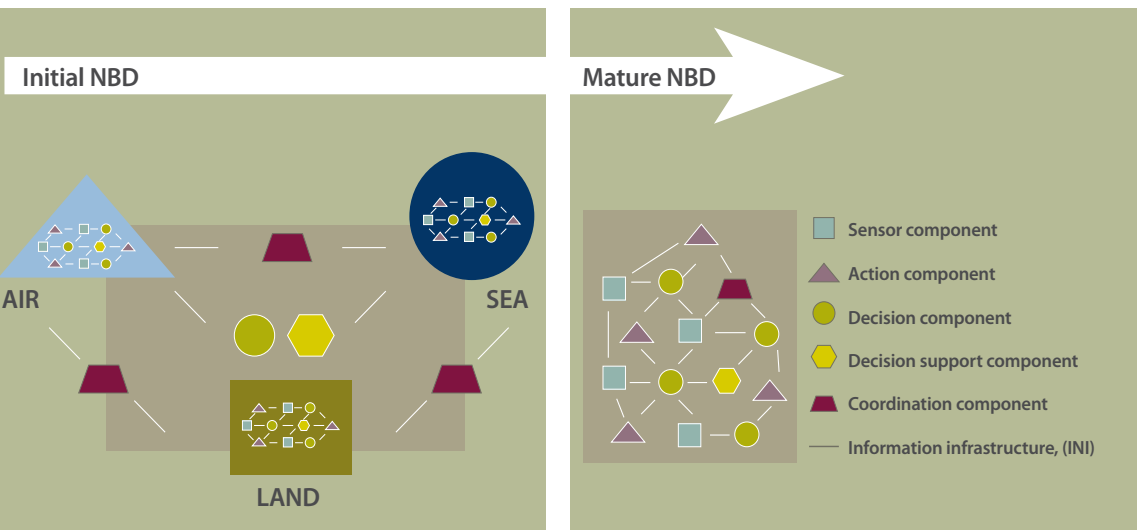


Figure 4.11, NETWORK BASED DEFENCE – DIFFERING DEGREES OF MATURITY

0463. The *left hand side* of Figure 4.11 shows an initial form of the Network Based Defence. The single-service components have a dominant role. The information and component structure is based on existing equipment and materiel and is being developed within the separate service branches. The single-service components are built up round the traditional platforms. There has at the same time been a marked increase in the ability to share information between these components and to use the platforms in different roles. The command and control structure is common. There is active use of coordination components for coordination between the service branches and in relation to other actors.

0464. The *right hand side* of the figure shows a NBD with a high degree of maturity. To a great extent the individual service branches have been replaced by a fully integrated network of nodes with different properties which can be customised to meet the needs of each specific operation, and in which all information is accessible to the whole network. Decisions can be taken at different levels in the organisation and the human competence will be fully oriented towards working in a network environment. The coordination components are not equally essential but have a role where the interface with other actors is concerned.

0465. Both right and left sides of Figure 4.11 describe the Network Based Defence and that NBD should be seen as a process rather than an end state. It is by no means a certainty that the picture of the ideal NBD that we have today will be realised, and the picture we have of NBD may alter at a later stage. The Network Based Defence is a journey rather than a destination.

NBD AND ITS VARIOUS DEGREES OF MATURITY

The course of development towards network based defence will be a continuous process which must be managed and in which all members of the Armed Forces must participate. In order to achieve this it must be possible to assess whether development is proceeding in the desired direction. This can be done by defining a series of state descriptions for network based defence, or so-called degrees of maturity: *initial*, *integrating* and *comprehensive*. The degrees are not exact states to be aimed at with specific measures and deadlines, but are intended to give a picture of the phases that a network based defence has to go through.

Initial NBD will be within reach during the course of the next few years. A defence at this stage of maturity will have an organisation with a good knowledge and understanding of NBD, and NBD will form an integral part of the Armed Forces' education and training. A common network for selected components will be established and all those with connections to this network will have access to common information for shared situation awareness. Interoperability will be given priority to components involved in the same operation. The personnel in the organisation will be a combination of generalists and specialists. At the same time there will be a dividing line between the day-to-day running of the Armed Forces on the one side and operations, education, training and exercising on the other. NBD will be at its clearest in the latter area. The organisation will be relatively static with a large proportion of sequential processes. The technical infrastructure will consist mainly of today's equipment but with certain improvements and local system variants where appropriate. Emphasis will be placed on vertical management and control based on rules and procedures but the organisation will assume an increasing degree of horizontal coordination. The use of information and communication technology (ICT) is mainly motivated by aspects of rationalisation rather by considerations of what is possible.

Integrating NBD will be characterised by strong network consciousness. Day-to-day running, concepts and doctrines will to a large extent be network based. The organisation will have a flatter structure compared to the initial NBD. There will be an increased degree of horizontal coordination as compared with rules and procedures. There will be highly dynamic forms of organisation and processes in given situations. Both old and new equipment will be capable of use in networks. A common communications network will exist together with a developed information management in which all information in the network can be made accessible to everyone who has a need for it. Internally there will be a generally high degree of interoperability and the Armed Forces will also have begun to develop their interoperability capabilities vis-à-vis non-military actors and agencies. Personnel will consist more of specialists than generalists. The use of ICT will have shifted from being primarily a rationalisation tool towards being a source of innovation. The organisation will still be static with the focus on military

interoperability. Integrating NBD will be characterised by greater uncertainty than earlier stages since major investment in technology will be replacing the current legacy, and the innovative use of ICT allied to experimentation in many areas may result in setbacks or lower cost-effectiveness.

Comprehensive NBD will be network-based in all its activities. There will be little distinction between day-to-day running, education, training exercising and the development of concepts and doctrines. The organisation will be dynamic, adaptable to the situation and capable of engaging in parallel processes. Emphasis will be placed on horizontal coordination. There will be an integrated information infrastructure which will be accessible to all. Comprehensive information management will mean that information in the network is accessible, intelligible and usable by all who have a need for it. Interoperability will be universal in all relevant areas internally technologically, organisationally and procedurally. A capability for interoperability vis-à-vis relevant and prioritised external actors and agencies will also have been developed. The people in the organisation will be specialised and possess a high degree of self-reliance and will be skilled in working as a team. The decision as to who will carry out a specific task will be taken on the basis of who is most competent. ICT will be used both for rationalisation and for enabling new capabilities. Comprehensive NBD will improve on integrating NBD in terms of cost-effectiveness.

Information management in NBD

0466. A network based defence does not consist of *one* common network which covers all levels and which has the same properties at all levels. On the contrary, it is about different networks which to a greater or lesser degree can be linked together.

0467. The different levels have different requirements for information and information must be processed at each individual level. Information management is the process to ensure that the best quality information reaches and is finally used for decision making by the right users. Information management covers the routines, processes and systems for the production, storage and management of information which support the activity and which ensure that the organisation is able to make use of it.

0468. Information management can take place according to the push or the pull principles. The push principle means that the information is transferred from the source to the user, for example from superior to subordinate during a mission. The pull principle means that the user fetches the information that is considered to be needed, for example by searching a database. Both principles have advantages and disadvantages when precision and time consumption are concerned.

0469. Efficient information management is a key to realising the potential increase in efficiency that network basing offers. There are, however, many unanswered questions surrounding this area and further research and development is needed. Nevertheless the doctrine highlights the following fundamental requirements for efficient information management:

- the combination of human and machine processing of information,
- the possibility of using both push and pull principles at all levels,
- the possibility of protecting and selecting information with the aid of crypto systems,
- the possibility of connecting to civil systems, for example the Internet or the Search and Rescue co-ordination centres.
- interoperability with NATO.

The challenges of network basing

0470. There are many challenges associated with the development of NBD. Information management has been mentioned above. *Bandwidth and transmission speed; power supply; team spirit;* and then *people and procedures which can alternate between centralised and decentralised command*, are other examples of problem areas which will need further action. Discussion of NBD and its further development requires insight and understanding of all these aspects.

0471. *Bandwidth and transmission speed:* Network basing is dependent on large amounts of information being transferred rapidly. Military units use different media for the transfer of information. Fibre optics offers large bandwidth and high transmission speed (measured in gigabits per second) but requires that all elements of the network are interconnected with physical cables. Such a method of transfer can thus be used within staffs or by units which are permanently grouped together. Satellite channels and radio links offer medium bandwidth and transmission speed (measured in megabits per second). Satellite and radio links can be used by mobile units but require a free line of sight between transmitter and receiver. This means that such equipment cannot be used in all types of terrain or under all conditions. Broadcast radio and mobile telephone offer relatively low bandwidth and low transmission speed (measured in kilobits per second). These media, however, do not require a free line of sight between transmitter and receiver. For the Army's mobile units, which use mainly broadcast radio in the HF and VHF bands, transfer rate is often limited.

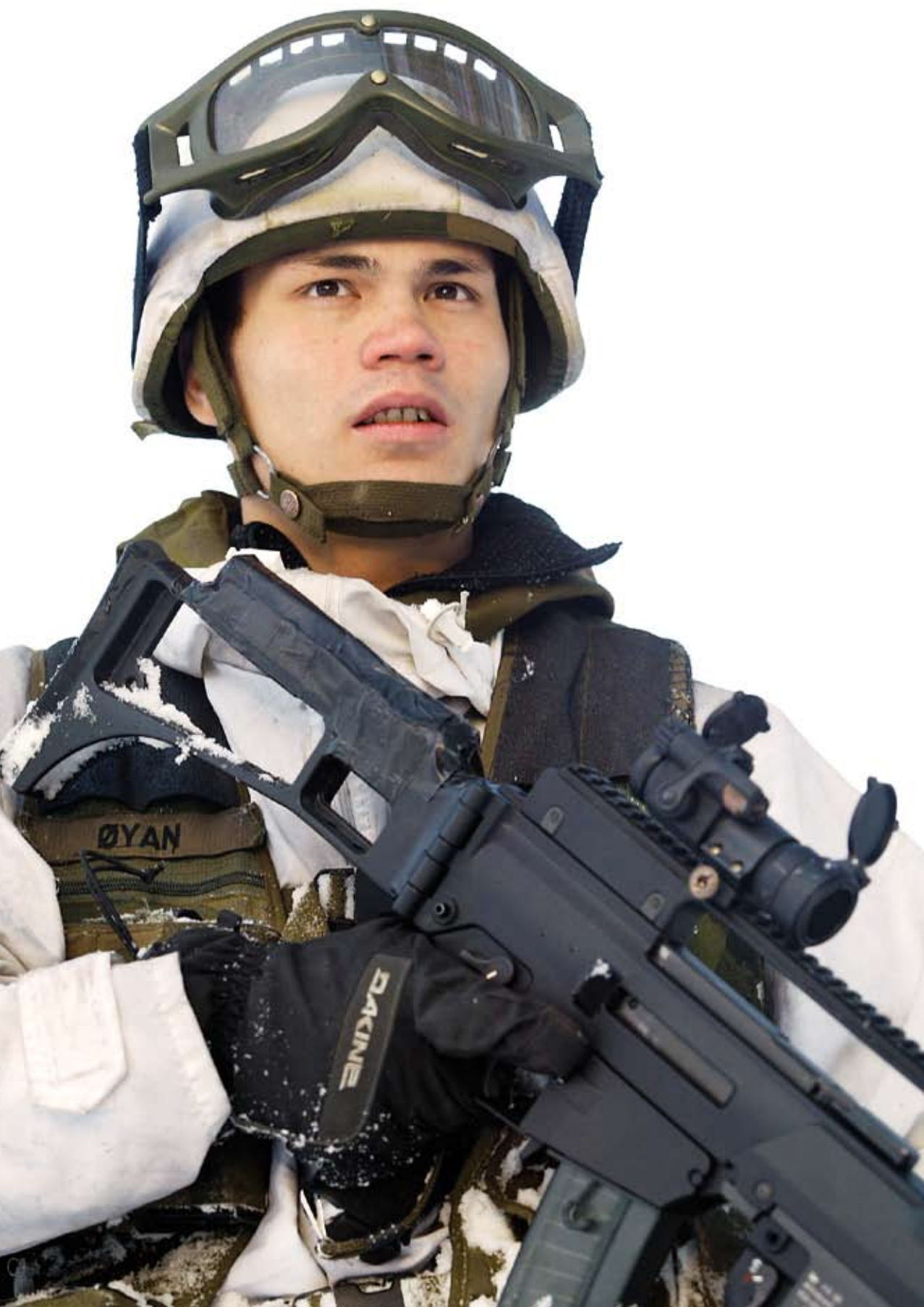
SHANNON'S LAW

The American mathematician Claude Shannon (1916-2001) was a pioneer in the field of information technology. In 1948 he formulated a mathematical law to aid the understanding of telecommunication including radio and data communication (*A Mathematical Theory of Communication*). Put briefly, the essence of Shannon's Law is that the higher the frequency used by the transfer medium, the greater the transmission speed will be. The problem for an army unit using broadcast radio is that the higher the frequency, the shorter the effective range will be.

0472. *Power supply* presents another technical challenge for NBD. The challenge is a serious one for mobile units. During the Iraq war in 2003 the availability of batteries was a limiting factor where night operations were concerned. And then most of the batteries were used for night vision equipment and *not* for mobile terminals for network based warfare. Research in the field of power supplies for NBD is now a high priority internationally.

0473. *Team spirit*: NBD places emphasis on the need for a flat organisation with flexible units that can be tailored to the needs of different missions. Today's organisation has a personnel structure that fosters a sense of belonging, with commanders and subordinates in a relationship which promotes togetherness and a team spirit. To maintain this sense of belonging and team spirit, so essential in combat, in a network based organisation is a major challenge.

0474. *People and procedures which can alternate between centralised and decentralised command*: A fundamental part of the thinking associated with NBD is that it must be possible to make decisions either centrally or at local level depending on the given situation. Developing procedures that make it possible for authority to be moved rapidly around the organisation poses a formidable challenge. A challenge at least as formidable is also posed by development of individuals capable of switching between taking the initiative and leading in one situation, and yet able to subordinate themselves rapidly to received orders in another. These human and organisational challenges can be met if the Armed Forces place the emphasis on mission command and decentralised decision making in our everyday activities and shape the training and exercising of personnel with this in view. At the same time, we must be able to exercise centralised command when it is necessary.



5. Joint operations – components and functions

0501. This chapter deals with joint operations and those components and key functions that play a part in such operations. The chapter first explains the concepts *operation*, *joint operation* and *operational art*. This is followed by a description of the components *land forces*, *sea forces*, *air forces* and *special forces* and how these can contribute in a joint operation. The chapter concludes with a description of the functions *command and control*, *information operations*, *civil-military cooperation (CIMIC)*, *intelligence* and *logistics*.

Military operations

0502. An *operation* is a series of combat activities, movements and other actions which are intended to achieve an overall aim. An operation can be carried out both with and without armed action. A simple operation can be carried out to achieve a strategic objective or it can form part of a series of operations. Such a series is called a *campaign*.



0503. A military operation is characterised by four properties. Firstly an operation is carried out to achieve a defined objective, either by itself or as part of a series to achieve political objectives. Secondly it has a mandate for the use of military force and is carried out in circumstances in which other agencies are not able to act effectively. Thirdly a military operation has a clearly defined framework of command and responsibility. Finally, the authority assigning the task and the person responsible for carrying it out should be in agreement as to the resources that can be made available.

0504. An operation can be categorised as *military strategic, operational or tactical* depending on its objectives. In other words it is not primarily the size of the forces involved that determine how the operation can be described. Operations with special forces and air forces are examples of operations which are often carried out with small units which can be deployed directly against military strategic targets. Operations can also be characterised on the basis of *which forces* are involved, such as “joint operations”; or according to the *type of operation*, such as “search and rescue operations” and “anti-terror operations”; or depending on the *arena* in which the operation will be conducted, such as “land, air and sea operations”.

0505. A *joint operation* is an operation in which contributions from several service



branches are integrated and coordinated to realise the benefits of synergy at military strategic, operational or tactical levels, often within a multinational framework and often in close cooperation with civilian resources and agencies. The aspiration behind a joint operation thus extends beyond the coordination of separate tactical single service operations under joint command, and is about making use of the attributes of the various components and support functions in order to achieve the benefits of synergy.

0506. A conceptual framework for joint operations can encompass three forms of operations: *Deep operations* are about attacking the adversary’s will, cohesion and capability for continued combat, including attacks on his headquarters, other infrastructure, logistics and reserve forces. *Close operations* imply direct attack on the adversary’s military forces. *Rear operations* are carried out to protect our own vital functions, including morale, command and control, lines of communication and reserve forces.

0507. Such a framework can constitute a tool for linking the specific *function* of individual operations, that is to say the effects that they are intended to achieve, to *place*, or where that effect is to be achieved, and to the *time* at which a given effect should ideally be achieved. The *commander’s intent* – what is desired to be achieved through the joint operation as a whole – is the essential point, and even if the three forms of operations mentioned above can take place in parallel, the emphasis placed on each of them will vary according to the desired effects.

0508. Most often a joint operation or campaign will, in its entirety, consist of eight phases:

- completion of a *Joint Estimate* and development of a joint operational plan,
- preparation of the force itself by force build-up and training,
- building up logistic support, host nation support and multinational support,
- deployment to the operational area, possibly reinforcing forces already deployed there,
- carrying out the operation(s) itself/themselves,
- securing the post-operation phase through conflict resolution and military post-conflict activities,
- redeployment of the forces,
- post-operative reporting, including the identification of lessons learned.

0509. Operations today are increasingly complex and unpredictable. There is therefore little point in defining normative principles for how the Armed Forces' joint operations should be conducted. In every individual operation it is the joint operational commander's responsibility to combine the components and support functions in such a way that the desired effects are achieved and the political objectives fulfilled. The Armed Forces' Operational Foundation does, however, provide a common general basis for the preparation and execution of operations.

Operational art

0510. Operational art is a military commander's use of the means at his disposal to achieve the desired effects and fulfil the overall objectives. The operational art is referred to as an "art" because it entails linking together and realising, often abstract, strategic aims by means of physical activities. The term "art" is used because it is about managing combat in a range of different temporal and spatial dimensions in the physical, social, information and cognitive domains where there are few quantifiable values or set answers. Operational art is also the art of the possible, that is to say making use of the resources that one actually has in order to achieve the best possible result.

0511. Good operational art requires creativity and imagination. Talent is therefore an important factor in determining who is best qualified to command military joint operations. However, talent alone is not sufficient. Good operational art is also to a great extent about experience and training. Furthermore, a factor absolutely essential to good operational art is the ability to see a particular activity in the wider context of security policy, in which particular actions, or the absence of them, can have far-reaching political and economic consequences. This insight is of major significance both in national operations and in international operations abroad.

Command and organisation of a joint operational force

0512. A joint operational force can be organised on the basis of independent *components* with their own *Component Commanders*. These would then be subordinate to the Joint Operational Force Commander. A component is traditionally contributed from a single service branch but can also consist of elements and units from more than one service branch brought together to form a functional element. The special forces component is an example of such an element. All components, whether single-service or functional, are combined in such a way that their combat effectiveness in their respective arenas (land, sea and air) is maximised. A joint operational force can also be organised with directly subordinate units in which the different elements and units are directly subordinate to the Joint Operational Force Commander. With this form of organisation there is thus no need for individual Component Commanders at the level below the Joint Operational Force Commander.

0513. In a NATO context it is usual for a joint operational force to be organised with a combination of components and directly subordinate units. Where the emphasis between these two principles is placed depends on the competence and capacity of the headquarters, the total number of subordinate units and the magnitude and complexity of the operation concerned. The component solution will normally be preferred if the joint operational commander and his staff have limited resources, there are a large number of subordinate units and the operation is extensive and complex. A form of organisation with directly subordinate units is often preferred in operations with a small number of subordinate units or in other situations where the joint operational headquarters is in the best position to coordinate the actions.

0514. The preparation and execution of joint operations is dependent on a range



of supporting *functions* which are organised by the joint operational headquarters. Examples of such functions include *civil-military cooperation, information operations, intelligence, operational security, logistics, targeting, political and legal advice, financing, press and information services and personnel administration*. Individual functions will normally be associated with a particular staff element or be taken care of by a particular process within the joint operational headquarters.

ORGANISATION OF JOINT OPERATIONAL HEADQUARTERS

A joint operational headquarters is organised with a view to achieving the desired synergies between components and supporting functions. Traditionally headquarters have been organised on the basis of either a so-called “J-structure” (joint structure) or a so-called “commander structure”.

J-structure stands for joint structure and means that the headquarters’ activities are grouped functionally, across single-service boundaries. NATO operates with 9 functions: J1 = *administration and personnel*, J2 = *intelligence*, J3 = *operations*, J4 = *logistics*, J5 = *plans and policy*, J6 = *communication and command systems*, J7 = *doctrine and training*, J8 = *budget and finance*, and J9 = *CIMIC* (civil-military cooperation). The nine functions are normally located in branches which together constitute the basis of the joint operational commander’s decision-making and serve to execute the commander’s decisions.

Commander structure is also a joint structure but one in which the headquarters organisation is based more on single-service lines than the J-structure. The commander structure normally means that there will be an overall joint operational commander with three subordinate single-service commanders. This in turn means that the particular specialised capabilities of the individual service branches are represented directly to the joint operational commander when decisions are to be made since the overall commander must be in close liaison with the commanders of the land, sea and air forces.

In 1971 Norway introduced *commander structure* in its joint operational headquarters in North and South Norway. This was a structure which differed from corresponding structures in other NATO countries in that there was very close integration between the individual service branches. With the introduction of the commander structure – the Norwegian model – a substantial degree of authority and responsibility was transferred from the single-service commanders to the overall commander (the Joint Operational Commander). This is illustrated by the fact that the single-service operational commanders, referred to as “Commanders” in Norwegian, were known as “Chiefs” in other NATO countries – with the implications for authority and responsibility that this title suggests. In Norway the term “Chief” was reserved for the Chief of Defence, the officer in overall operational command. Following the end of the Cold War, there was a stronger emphasis on integration due to increased recognition of the importance of joint situation awareness, joint planning and the joint coordination of operations across single-service boundaries. In 2006 the Norwegian Armed Forces abandoned the commander structure and introduced the J-structure throughout.

The land component and land operations

0515. The land component consists primarily of land forces but can also be regarded as a functional element in which land forces, amphibious forces, special forces, CIMIC elements, air forces and supporting sea forces also feature.

The characteristics of land combat

0516. The world's inhabitants live on land and on land, too, is the infrastructure and production capacity that supports this population. It is on land that society develops and has its most important interaction. Conflicts unfold and are most often decided on land. And so the greater part of classical military theory relates to land combat.



0517. Land operations are conducted in complex environments. The combat is characterised by the terrain and often by a multiplicity of actors. The large number of actors increases the likelihood of friction and the risk of misunderstandings. The terrain with its natural obstacles and infrastructure will also contribute significantly to friction, for example due to difficulty in making headway and often restricted visibility.

0518. The core tasks of the land forces are to *find*, *fix* and *strike* the adversary and to *exploit* the gains that are achieved. These are the core tasks in all types of operation, even though the execution will vary depending on whether it is a *stabilization operation* or *combat against regular or irregular forces*. Find, fix, strike and exploit are not static or sequential tasks but will take place in parallel and continuously throughout an operation.



0519. The aim with the task *find* is in the broadest sense to obtain an overall view of the situation in the operational area. Human information collection through presence and interaction with all the actors in the operational area is one of the land component's most important contributions in joint operations. Important elements of this are determining where the adversary and other actors are located, what capabilities they have at their disposal and what their intentions are.

0520. The aim with the task *fix* implies reducing the adversary's freedom of action while at the same time increasing one's own. The methods of fixing vary and range from information operations, military presence and patrolling to combat operations. Combat operations with the intention of fixing can be conducted both as offensive and defensive operations.

The Norwegian Armed Forces' Doctrine for Land Operations (FDLO) was issued in 2004. The doctrine includes a comprehensive review of the Norwegian Army and relevant aspects of land operations. FDLO is not identical with NATO's doctrine for land operations, AJP 3.2 *Land Operations*, but harmonises with it.

0521. The aim with the task *strike* implies initiating various actions on the adversary to create an effect. In the widest sense this covers a broad spectrum of actions which are determined by the category of the operation. Methods of striking include all actions which are directed against the adversary, thus covering both lethal and non-lethal means.

0522. Exploitation (*exploit*) of progress made in a land operation should be viewed in the light of the manoeuvre method and is about continuing to maintain initiative and to exert pressure on the adversary by exploiting successes achieved. In a joint operation land forces can be committed to exploit the situation arising as a result of action by another component, for example by taking control of an area which has been under attack by sea or air forces.

The command and organisation of land forces

0523. *Task organisation* and the principle of *combined actions* is central to the organisation of land forces. Task organisation is about seeking to optimise the composition of a grouping on the basis of the task that is to be carried out in the given situation. A *battlegroup* is a unit which is organised on the basis of the tasks to be carried out in a given situation. A fundamental precondition for effective land combat is the ability to combine different weapon systems (*combined arms*) at the lowest combat level.

ORGANISATION OF MILITARY LAND FORCES

During the 18th century a system of land force organisation was developed which, around 1800, was adopted by Napoleon Bonaparte to administer and organise the mass armies he mobilised. The system was based on dividing the land forces into a clear hierarchical structure consisting of *corps*, *brigade*, *battalion*, *company*, *platoon* and *section*. The brigade represented the lowest level at which all the army's different arms (infantry, cavalry and so on) were represented.

0524. The brigade is composed of different arms and services, which in turn will include different weapon systems. Traditionally the brigade has been divided into *manoeuvre units* (infantry and armour), *tactical support units* (artillery, air defence and combat engineer), *logistic units* (medical and supply) and *command and control units* (communications, military police and reconnaissance units). Another way of subdividing the brigade, which may have advantages from the point of view of a *network-based approach* and *flexibility*, is to view the brigade as a command superstructure for different functions. The brigade then encompasses *combat*, *tactical*



support, other support and command. The brigade can operate independently as a separate entity, in a role subordinate to a higher level (division), or as part of a component structure. Which types of units the brigade consists of – and the size of the brigade itself – may vary, and in Norway the size has consistently been somewhat less than the international average of about 5,000 soldiers.

0525. Staffs and command posts at brigade level and above will, during operations, be configured and equipped to command and control actions involving different systems across single-service boundaries. At battalion and below, however, *command support components* or *coordination components* can be added to coordinate the different systems in combat. Developments in the direction of network based defence opens the way for such coordination to be employed to an increasing extent at lower levels.

The land component's contribution to joint operations

0526. The purpose of land operations is to hold and control areas of land, or to seize and defend these with the aim of combating an adversary, stabilising the situation between conflicting parties or protecting the civilian population, infrastructure and own forces. Control of territory is also a precondition for humanitarian aid and other measures which over time can improve conditions in the conflict area.

0527. The land component's contribution in a joint operation is territorial control over time and close interaction with the actors in the conflict area. It can contribute information about the parties in a conflict and other factors that affect the operation. To have soldiers in the operational area itself is important for access to first hand information. The component also has an effect, direct or indirect, on the adversary. The component's lethal and non-lethal means contribute towards reducing the adversary's freedom of action and affecting his will and capability.

0528. The land component also contributes through securing own forces, bases for sea and air forces, general infrastructure and supply lines on land. In addition to regular guard and security duties, the land forces can contribute to air defence, electronic warfare, CBRN (protection against chemical, biological, radiological and nuclear weapons) as well as combat engineering tasks.

0529. The land component looks after logistics on land for all the joint resources in the operational area. Land forces are often resource-intensive in terms of both personnel and equipment and will themselves require substantial logistic support and secure supply lines. At the same time, both maritime and air forces are often dependent on bases and support points on land to enable them to operate in their own elements.



The sea component and maritime operations

0530. The sea component consists primarily of maritime forces but can also be seen as a functional element consisting of maritime forces, amphibious forces, air forces and supporting land forces (for example base elements).



The characteristics of naval combat

0531. Two thirds of the world's surface is covered by sea and two thirds of the world's population lives less than 20 km from the coast. The sea thus provides strategic access to many of the world's most important political, economic and most densely populated centres. The oceans are themselves rich in resources (for example petroleum and fish), and they represent one of the main arteries of international trade. The sea is an arena for the projection of military power, something that can be used in connection with deterrence, diplomacy and other forms of political influence in peacetime. It is also an arena for the use of military force in times of crisis or armed conflict, and in many instances gives direct access to the theatre of war on land.

0532. Maritime forces have a number of important characteristics such as availability, mobility, versatility, autonomy and endurance, and they provide support for operating range, lifting capacity, a forward presence, balance of power and influence. Maritime forces can, with their capacity for flexible and strategic deployment, be easily inserted or withdrawn.

0533. The operating area for maritime forces can be divided into the open sea and coastal waters or *littoral areas*. The concept of a littoral area has assumed

greater importance in recent years and can be defined in a military context as a sea area which extends from the open sea in to the coast and which must be controlled in order to support operations on land. It also covers the land area immediately inland from the coast which can be supported and defended directly from seaward. The extent of the area will depend on various factors including the nature of the operation concerned and the capabilities being employed.

The Norwegian Armed Forces' Doctrine for Maritime Operations (FDMO) is the Norwegian maritime doctrine which gives an overall perspective of Norway's maritime capabilities and the areas in which these capabilities can be used. FDMO is not identical with NATO's doctrine for maritime operations, AJP 3.1 *Allied Joint Maritime Operations*, but harmonises with it.

0534. Maritime forces have a range of tasks which can be divided into three main groups.

- *Military*: Maritime forces are used as a means of armed combat or as a threat.
- *Law and order*: Maritime forces are used nationally and internationally in order to uphold sovereignty and the rule of law.
- *Aid*: Maritime forces can also contribute specialised resources to many peace operations in which the use of force is not appropriate.

These tasks can be further categorised into *anti-air warfare*, *anti-surface warfare*, *anti-submarine warfare*, *mine operations* and *amphibious operations*.

0535. *Anti-air warfare* has as its purpose the removal of the threat of air or missile attack, or to reduce it to an acceptable level. The need for anti-air warfare capabilities varies according to the nature of the task, the threat assessment and where the operation is taking place. Vessels may be equipped with air defence systems for self-defence and the defence of own assets and other units in a force group. In littoral areas, land-based aircraft will strengthen and extend the defence of the operational area. The availability of such support will often be an essential precondition for a successful operation.

0536. *Anti-surface warfare* can be either offensive or defensive. It can embrace means of combat in all dimensions, that is to say below, above or on the sea surface, as well as from land. Important capabilities which are available from different platforms include anti-surface missiles, torpedoes and gunfire directed against sea or land targets. Land-based combat aircraft or other aerial platforms equipped with stand-off air-to-surface missiles will be able to strengthen the concentration of firepower and increase the operational commander's room for manoeuvre. The warships' weapon systems can also be used against targets on

land in order to contribute to the flexible use of limited capabilities in operations carried out in littoral areas.

0537. *Anti-submarine warfare* embraces all means of detecting, classifying, locating, scaring off, avoiding or destroying an adversary's underwater vessels. Combatting such vessels is a challenging task because of the characteristics of the underwater environment and because the underwater topography can afford protection against discovery. It is thus important to be able to use a variety of means such as active and passive listening systems, light and heavy weapons which can be delivered by surface vessels, helicopters, maritime aircraft and submarines.



0538. *Mine operations* cover both measures against mines and maritime mining operations in which mines can be laid from all types of vessels, including submarines, and from aircraft. Developments in sea mine technology, including smart mines and self-propelled automated mines, make mines an effective weapon against both surface ships and submarines. A thorough reconnaissance of the local waters in advance of an operation is essential for effective mining operations.

0539. *Amphibious operations* are joint operations in which land forces are landed, or threaten to land, with support from seaward. Amphibious operations can be conducted across the whole spectrum from unopposed landing to land in the face of armed resistance. As a consequence, the requirements for force composition and capabilities will vary. An amphibious operation will involve different types of vessels, landing forces, weapons and aircraft.

Command and organisation of maritime forces

0540. The joint operational commander or maritime component commander organises the sea component on the basis of the functions or tasks that it is to fulfil (task organisation). There are normally four levels in such an organisation: *Task Forces (TF)*, *Task Groups (TG)*, *Task Units (TU)* and *Task Elements (TE)*. Task Groups are normally the lowest level of self-sufficient combat force in a task organisation. Forces, groups, units and elements are all led by their own commanders.

The sea component's contribution to joint operations

0541. The sea component is able to move on the open sea and in littoral areas and to carry out operations right across the conflict spectrum. It is able to act as a door-opener in a joint operation in which the sea axis is used as a line of communication or advance. This can be of particular importance when the emphasis

is on the use of smaller, high firepower expeditionary forces and special forces in connection with crisis management. Lift capacity leased from the merchant fleet will often be of decisive importance in bringing in forces and materiel during major operations, so increasing endurance.

0542. The sea component can be used against targets on land by making use of the sea as a central axis of advance. In some cases, land forces will only be in a position to advance if inserted by landing craft in an amphibious operation. Land forces can be prevented from achieving their objectives if maritime forces fail to secure the sea front or supply from seaward. The sea component will also be able to contribute to control of the airspace. In addition the sea component contributes to joint operations by establishing and maintaining *sea control*, *sea denial* and *maritime power projection*, supported by a maritime capability for command and control and sea-based logistics. It is important that these contributions are seen in context and not as being mutually exclusive; all can feature in one and the same operation.



SEA CONTROL, SEA DENIAL AND MARITIME POWER PROJECTION

Sea Control denotes a level of ambition which involves securing a sea area for own operations or own activities but which is limited in time and space. It implies control of the sea surface, the underwater environment and the airspace over the operational area. The latter dictates that the air component must be seen as a contributor in achieving sea control and there needs to be dynamic interaction between the two components. The minimum requirement for control of the airspace is that it should bring about and maintain a favourable air situation. Air superiority (a higher level of ambition) will be a requirement where a robust degree of sea control is necessary and the adversary is very likely to be capable of mounting a challenge via airspace.

The achievement of sea control and its affirmation at various levels are often important in joint operations. The extent of sea control must strike a balance between regard for own freedom of action on the one side and what constitutes an acceptable risk on the other. The level of ambition can vary between establishing absolute sea control and accepting limited local contention. If one party is unable to exercise sea control, it does not necessarily mean that the other party can do so.

Sea Denial denotes a level of ambition which involves preventing the adversary from using a sea area for his operations. Sea denial has something in common with sea control in that denying the adversary freedom of action can also be one aspect of sea control. Sea denial is, however, a usable method when for various reasons it may not be possible or desirable to achieve sea control. A zone in which sea denial is exercised can form part of the outer operational area, that is to say an area which is of less significance than the inner (where sea control can be exercised).

Maritime Power Projection is the strategic use of, or threat of use of, maritime forces in order to influence events on land. Sea control is often a precondition for maritime power projection, especially in order to gain access to the coastal zone, so furthering the ability to project power on land. The projection can take the form of an amphibious attack by making use of aircraft and helicopters, by using weapons against targets on land or by using special forces. Power projection can be used throughout the whole of the conflict spectrum, from peace, via crisis to armed conflict. It can be used with a view to gaining access to areas which land forces cannot reach, to open up new directions for operations or to secure forward bases. In general the presence of maritime forces is politically acceptable. This can be used to demonstrate political will and cohesion in an alliance. It represents a form of military presence which is possible without having to enter another state's territorial waters or airspace.

The air component and air operations

0543. The air component consists primarily of air forces, but can also be seen as a functional element consisting of all those forces which support the air forces or which make primary use of the airspace to affect the land-, sea- and air arenas.



The characteristics of air combat

0544. Air forces operate in and make use of the third dimension – the air. This extends from ground level and upwards into the atmosphere, covering 100 % of the earth's surface with no natural boundaries or obstacles. This makes it possible for platforms to cover large distances in a short time and the air's transparency enables objects to be detected at long ranges, either visually or with the aid of a spectrum of different sensors.

The Norwegian Armed Forces' Doctrine for Air Operations (FDLO) was issued in 2002. The doctrine includes a comprehensive review of the Norwegian Air Force and relevant aspects of air operations. The Norwegian Armed Forces' doctrine for air operations is not identical with NATO's doctrine for air operations, AJP 3.3 Joint Air and Space Operations, but harmonises with it.

0545. The fundamental properties of air forces are *height, speed* and *reach*. Height, combined with advanced sensor systems provides a unique overview. Speed and

reach gives the capability to move over large distances to almost any location in the course of just minutes or hours. Air forces can create results at long distances in a short time, or can swiftly provide a presence to observe a particular area.



0546. Air forces' flexibility and versatility mean that they can be rapidly adapted to changing conditions and requirements. They can rapidly switch from defensive to offensive operations, from tactical to strategic operations, from one task to another, from one target to another, from concentrated to distributed force, from high to low tempo, from humanitarian aid to precision fire against a particular target, and from being a sensor component to being an action component.

AIR POWER

The concept of air power arose from the development of the aircraft, and subsequently missiles and space systems, as means of combat. The concept of air power is defined somewhat differently from one country to another. NATO uses the following definition: Air power is the military use of systems which operate in or pass through the airspace. This includes surface-to-air weapons, manned and unmanned aircraft, satellites and space platforms which provide support for military operations.

The Norwegian Air Force operates with seven air power functions: *counter-air operations*, *anti-surface operations*, *surveillance and reconnaissance*, *air transport*, *electronic warfare*, *search and rescue* and *air-to-air refuelling*. In order to be able to carry out operations, air power is dependent on command and control and ground-based support



The command and organisation of air forces

0547. Air forces should generally be placed under centralised command in order to ensure concentration of force, economy and the benefits of synergy with other components. At the same time, decentralised execution is necessary in order to achieve effective control, reaction capability and tactical flexibility. Centralised command and decentralised execution is dependent on a shared situation awareness and understanding of the commander's intent as to which effects are to be achieved.

0548. The air component prepares and carries out joint air operations as well as coordinating air forces which are included in the land and sea components. Optimal utilisation of air forces in joint operations is dependent on all components being familiar with the air command and control process and how own components' requirements for air power can best be served in this process.

0549. The air command and control process must ensure that the air forces are prioritised, coordinated and synchronised for execution of the joint operational tasks. The planning cycle must allow for a high degree of flexibility and the dynamic use of the air forces so that it is possible to manage a continuously developing situation. It is true that the distribution of resources between predefined tasks and flexible tasking will vary from operation to operation, but it is very important that other forces identifies and puts forward any requirements for air power contributions as early as possible

The air component's contribution to joint operations

0550. The air component's contribution to joint operations can be divided into *air control, information gathering, precision targeting* and *air mobility*.

0551. *Air control*: Joint operations are very often dependent on air control, and this is the air component's most important contribution. Air control is an essential precondition for ensuring freedom of action for own land, sea and air forces. Air control is achieved through *surveillance* and *interception*. Surveillance is about building up the necessary picture of the situation so that any irregular or undesired activity can be detected. Surveillance of the airspace is carried out using ground, sea and air-based sensors which are connected together in a network for the production and distribution of a common air picture. *Interception* is a reaction to undesired activity in the airspace. It can range from identification to physical destruction depending on the circumstances. Interception



is effected through offensive or defensive counter-air operations. Air control is a relative condition which can be divided into the various levels: *favourable air situation*, *air superiority* or *air supremacy*. A favourable air situation exists when the adversary's action and his use of the means of air combat will not affect the outcome of our land, sea and air operations to any significant extent. Air superiority is a degree of dominance of the airspace, at a given time and place, which makes our land, sea and air operations possible without prohibitive disruption by the adversary. *Air supremacy* further strengthens the condition provided by air superiority, giving a situation in which the adversary's air combat forces are unable to achieve effective interference of our forces' operations.

0552. *Information gathering*: Aerial platforms equipped with advanced sensors and command and control systems have an important function in getting the right information to the right decision-maker at the right time. A combination of manned and unmanned aerial platforms with a varied range of sensors (active and passive) will be able to collect and deliver relevant information about the activity in the air, on the surface and under water, and on land, to a common network. It is important to understand that air forces are both important providers and major consumers of information. A capability for air control and precision engagement from aerial platforms is very demanding in terms of intelligence, an accurate and up-to-date situation picture and the ability to make immediate use of information so that the shortest possible reaction time between detection and action is achieved.

0553. *Precision targeting*: Precision weapons delivered from aerial platforms are able in principle to reach all targets of tactical, operational and strategic significance and results can be achieved against land, sea and air targets. Precision weapons also enable force concentration to be achieved with fewer aerial platforms than in the past. Precision weapons delivered from aerial platforms make it possible to achieve direct effects while at the same time reducing the risk of

undesired indirect effects in the form of collateral damage, the sending of negative signals and the risk to own forces. The demonstration of capability and the will to engage with precision weapons, through rapidly making their presence felt, can in itself have a significant effect on an adversary.

0554. *Air mobility*: Aerial platforms have inherent high mobility and are able to create effects over large distances in a short time. The capacity for strategic and operational transport can be of decisive importance in the deployment of rapid reaction forces. Tactical air transport is often necessary to ensure the reaction capability, operating range and effectiveness of other forces. High air mobility is important to being able to deliver humanitarian support internationally or to carry out search and rescue missions. High air mobility can, moreover, create positive political effects through timely surveillance and the rapid establishment of a presence to demonstrate the will and capability to use force.



The special forces component and special operations

0555. In recent years the Norwegian Armed Forces have placed increased emphasis on the further development of the Norwegian special forces while special operations at the same time have assumed greater importance in the execution of joint operations both nationally and abroad. Special forces can contribute to the creation of major effects using resources that are relatively limited in time and space. Special operations can be either overt or covert and can be carried out either independently or within a joint operational framework.



0556. In NATO it is usual to define special operations as military activities conducted by specially designated, organised, trained and equipped forces using operational techniques and methods not standard to conventional forces. These operations are carried out in peacetime, in times of crisis and in armed conflict independently of, or coordinated with, conventional forces. Political or military considerations may dictate the use of undercover, covert or discreet methods and may require acceptance of a degree of military or political risk that is not usual in conventional operations.

0557. Special operations are carried out by specially selected personnel who are provided with special equipment and thorough training in advanced tactics and techniques. Special forces have a short reaction time and can be inserted over large distances on land, by air or by surface craft or submarines.

THE USE OF SPECIAL FORCES – A BRIEF HISTORY

Historically, special forces have played a variety of roles in warfare. They have often been used to infiltrate the enemy and obtain valuable information which is difficult to acquire and not obtainable through the use of other sensors. At the same time special forces have been used to carry out other missions, especially to attack operational/strategic targets. The advantage of special forces is that they have the capacity to operate covertly in small independent units which are thus difficult to detect.

The Second World War saw the emergence of special units trained and equipped for operations behind enemy lines. Shortly after the outbreak of war the British established the *Special Air Service* (SAS), the purpose of which was to operate with undercover groups of agents in an occupied Europe. In Norway, following the outbreak of war, Kompani Linge was established with the aim of operating on Norwegian territory. The Vemork action is a classic example of a British/Norwegian special operation which, using specially tailored means and methods, achieved results that had a strategic effect. The special forces operated independently and outside the conventional chains of command. Short, unambiguous chains of command with the fewest possible links are also a characteristic of today's special forces. The reason for this lies in the sensitive nature of the missions where the need for direct political or military strategic direction is often great.

After the Second World War, unconventional military operational methods were given lower priority or were viewed with scepticism by many military leaders. Many of the special units in Western Europe and the United States were disbanded. This was also the case with the Norwegian groups which for five years had operated on occupied soil.

However, subsequent crises and wars have on a number of occasions resulted in the acceptance and establishment of military units with unconventional capabilities. In the United Kingdom the need once more arose for special forces capabilities since these units showed themselves to be effective force multipliers in the wars which followed the granting of independence to former colonies. The same happened in the United States where the aim was to prepare for unconventional operations behind the Iron Curtain in the event of the Cold War escalating into open war. Today's Norwegian special forces were established in the 1950s and 1960s with a similar intention and with special regard to operations behind enemy lines in the event of an attack on Norway.

The terrorist action in Munich in 1972 contributed to the establishment of new special units in Europe since there were scarcely any existing units capable of rescuing hostages and combating terrorists. Since then special forces have been used in actions of this type on a number of occasions, for example the rescuing of hostages at Entebbe airport in Uganda by Israeli special forces in 1976. The SAS was used in a similar way in rescuing hostages held in the Iranian embassy in London in 1980. In 1982 the Norwegian Armed Forces established the Special Forces Command (FSK) as a military capability in support of the police, primarily with a view to defending the offshore installations in the North Sea.

The first Gulf War (1990-91) revitalised interest in special forces both in the United States and in the United Kingdom. During the conflicts in the Balkans in the 1990s and in the wars in Afghanistan (from 2001) and Iraq (from 2003) such forces have proved to be extremely useful. In particular they have engaged in liaison, surveillance and the gathering of information relating to the warring parties, the training of guerrilla forces as well as offensive operations against war criminals and terrorists. The traditional tasks remain but new ones include, for example, operations to prevent the proliferation of weapons of mass destruction and support for computer network operations (CNO). Another trend is towards more integrated operations between conventional units and special forces.

Tasks for special forces

0558. Special forces can be used effectively across the whole conflict spectrum from peace to armed conflict. In addition to traditional military tasks this includes support for the civil community and tasks associated with stabilization operations. The special forces are able to carry out operations which have to be tailor-made due to special requirements or strategic objectives. Norwegian special forces undertake five main types of operation: *special reconnaissance and surveillance, offensive operations, military assistance, special air operations and counter-terror operations.*

0559. *Special reconnaissance and surveillance* has the aim of gathering information of strategic or operational significance. Special reconnaissance can be used where other methods of information gathering are made difficult due to weather, geography, an adversary's countermeasures or other limitations, and should be initiated early enough to allow the information to be used in the decision process.

0560. Special reconnaissance and surveillance can include *area reconnaissance and surveillance* in support of decision processes; *reconnaissance and area assessment* prior to operations carried out by conventional forces or in preparation for own offensive missions; *target acquisition*, including the adversary's command and control systems and particularly important targets or personnel; *surveillance* in order to gain insight into the adversary's operational plans and intentions; and *assessment of results and effects achieved* by lethal and non-lethal means.

0561. *Offensive operations* can include raids, live fire attack, hostage rescue or independent sabotage actions. Such operations can also take the form of fire-control and target-illumination for stand-off weapons delivered from land, sea or aerial platforms. Offensive operations with special forces will most often have limited objectives and duration, and will usually include a planned withdrawal from the operational area.



The operations can be carried out either independently or in support of conventional operations. Offensive operations will often be adapted to achieve effects of strategic or operational significance. This can involve the attack, destruction, neutralisation and possible interdiction of critical targets (materiel or personnel targets) including the localisation and capture of key persons or materiel, rescue missions and the rescuing of hostages.

0562. Special operations can include *military assistance* to allies or other friendly forces in time of peace, crisis or armed conflict. This includes the exercising, setting up, supporting and possible leading of resistance or guerrilla forces; the exercising, setting up and possible supporting of networks to hide persons and help them to escape (*Evasion and Escape*); contributing to stabilization operations, including helping to ensure the security and liaison function of own forces, or providing other assistance to support communication between the parties involved.

0563. *Special air operations* are operations with air units which are equipped, organised and trained to operate independently or together with special forces/ conventional forces.

0564. *Counter-terror operations* are offensive measures to reduce the vulnerability of national or allied interests, their forces, personnel and property to terrorist attacks. This covers measures and operations, including hostage rescue involving agencies other than the Armed Forces.

Command and organisation of special forces

0565. The special forces component is commanded and organised on lines similar to those with other Armed Forces components. The special forces component commander organises the component according to the tasks that they are to fulfil – task organisation. This organisation can be multinational and functionally subdivided with special units from land, sea and air forces.

0566. Special operations require clear and unambiguous command arrangements. Allied special operations are normally commanded and controlled from a special forces component headquarters in the operational area (*Combined Joint Force Special Operations Component Command – CJFSOCC*). The special forces commander is responsible for providing the operational commander with recommendations for the use of special forces in the operational area and for the coordination and preparation of the operations. In Norway the special forces are commanded from a Joint Operational Headquarters through the *Special Operations Centre*.

Principles for the use of special forces

0567. *Selective use*: Special operations should be used to achieve aims of high or critical importance at a strategic or operational level. This can entail high risk but

also great effect if the operation is successful; something that often necessitates political approval for the use of special forces. Such forces are limited in number and cannot easily be replaced, and they should therefore not be used as a substitute for regular forces. This does not exclude, however, the possibility of special forces being used at a tactical level for a limited period.

0568. *Early use:* The use of special forces must be assessed at the initial phase of operational planning. Special forces can operate independently without established infrastructure and can be used early in a planning phase for purposes including the obtaining of information which will strengthen the planning basis.

0569: *Own and inter-acting planning:* Special operations require a comprehensive planning basis and close dialogue concerning the task between the tasking authority and the unit carrying out the task. Against the background of a given task, the force works out an operational concept. This must contain information about insertion, infiltration, target phases, exfiltration and extraction, logistics, command and control. The operational concept is submitted to the tasking authority for approval and the order to execute.

0570. *Integration with other components:* At the joint operational level the special forces' operational concept and support requirements (resources from other components for insertion, extraction and logistic support) must be coordinated with the overall joint operational plan and other operational plans in order to ensure mutual support and the full utilisation of resources. Integration with other components and collaborating agencies is ensured by the placing of liaison and coordination components from the special forces in relevant positions.



0571. *Operational security:* Special operations must be covered by a high degree of operational security because of their often strategic importance and political sensitivity, and the need to protect own personnel.

0572. *Intelligence:* Special operations require comprehensive information about the adversary, the geography and the weather conditions. The special forces will often need the most thorough and detailed intelligence that it is possible to obtain. Such intelligence can be of decisive importance in choosing the way in which a particular task should be carried out. The forces may themselves gather

this information, coordinated with or supported by national or allied intelligence resources, either as preparation for, or as a part of, the operation itself.

0573. *Logistics*: Re-supply and other support for special forces is planned and coordinated at the operational level. Special forces themselves plan their own re-supply in the field on the basis of their specific needs and implement this using their own resources, supported if necessary by conventional logistic elements. Special forces will always seek to be self-supplied for the duration of the mission. When deployed on operations abroad, special forces will be linked into conventional logistic arrangements where it is natural to do so.



Operational functions

Command and control – C2

0574. Command and control is the military concept for controlling the conduct of operations and it forms the basis for all operational activity. C2 consists of the organisation, the processes, the systems and the leadership that ensure that military commanders are in a position to command and control their forces. The purpose of our command and control is to manage the planning and execution of all types of operations in a way that is both quicker and better in terms of quality than an adversary can achieve.



COMMAND AND CONTROL – A KEY THEME OF THE DOCTRINE

Command and control is the foundation stone of all operational activity – and hence a theme which runs throughout this doctrine. This means that theory and concepts which are directly related to C2 are described in different places in the doctrine – integrated with the chapters where they belong: *Chapter 2* describes the levels of command and interaction with other actors. *Chapters 3 and 4* describe the *Armed Forces’ Operational Foundation* and its theoretical and conceptual basis, which in turn has an important bearing on the Armed Forces’ view as to how C2 should be exercised. *Chapter 6* describes the professional qualities and the command philosophy – mission command – which constitutes C2’s human dimension. *Appendix B* describes central concepts of command and control.

0575. *Command* is the authority that a military commander has to lead, coordinate and control military forces. *Control* is the authority that a military commander exercises over parts of the activity of subordinate forces, or of other forces not normally under his or her command. This authority includes responsibility for implementing orders and directives. Control is not only an expression of authority as defined above and considered in more detail in Appendix B, but is also an expression of the process which the commander uses, or acts in accordance with, when he or she organises, leads and coordinates the activities of subordinate forces. In short, command is the process by which the commander expresses his or her intent, while control is the process by which he or she coordinates and controls the activities so that they coincide with the intent.

PLANNING

Planning is a part of command and control. Planning normally follows detailed procedures and is not described in this doctrine. For guideline for the planning of operations, reference should be made to *AJP 05, GOP, Norwegian Armed Forces Staff Handbook, and the Norwegian Army's FR 3-1, Staff Handbook for the Army, the planning and decision process.*

0576. The fundamental basis of all command is the authority that a commander has vis-à-vis his subordinates. Authority has a formal side based on rank and position, and an informal side which is a function of leadership qualities and professional ability. Formal authority confers executive powers but the commander is also dependent on a personal authority in order to exercise effective command and control. Responsibility for the achievement of results is a natural consequence of authority. In the same way, commanders who are given responsibility must also be given the necessary authority.

COMMANDARE

Command is derived from the Latin *commandare*, which means “to assign tasks” and is primarily understood to mean a verbal order to be obeyed immediately. However, there is hardly an aspect of military activity that over the centuries has changed as much as the concept of command. From having been an attribute of the strongest and most charismatic warrior, command is now associated with a bureaucracy characterised by a formal hierarchy with clear regulations for the distribution of responsibility and authority. One need look no further back than the Napoleonic wars to find examples of how the authority to command was assigned to individuals rather than to a systematic bureaucracy.

Command and control in relation to the Armed Forces' Operational Foundation

0577. Command and control in relation to the Armed Forces' Operational Foundation places emphasis on *dynamic interaction, commander's intent, delegation of authority, choice of command position and view of technology.*

0578. *Dynamic interaction:* The complexity and dynamic of military operations mean that effective command and control depends on an ability to adapt to rapidly changing situations. The traditional view of command and control is one in which superiors exercise control of their subordinates. Mission command implies a more dynamic approach and represents an acknowledgement that attempts to establish full control will have an adverse effect on tempo and the initiatives expected of subordinates. Command and control is less about "controlling" something, but more about bringing all elements together in support of a common aim. Command and control is an interactive process which involves all the parts of a system and acts in all directions. One of the most important sides of control is the continuous flow of information about the operation in progress that is fed back to commanders and enables them to adapt to changing conditions and to make use of new possibilities as they arise. Information can come from different sources and in different forms, for example intelligence as to how the adversary is reacting, information about the status of subordinate or other units, or as adjusted directives or orders from higher levels. This underlines the point that command and control should not be seen as "pure control" of subordinates by their superiors, but rather as keeping the operation "under control" based on information on how the situation is developing.

0579. *The Commander's Intent* is his or her vision of how a mission is to be accomplished. The commander's intent provides a basis enabling subordinates to take initiatives and to ensure continuity in the operation and effective adaptation of the plan even in the face of friction, chaos and uncertainty. The commander's intent continues to apply to the operation even if the situation dictates that the tasks assigned to subordinate units are no longer applicable. The intent should be formulated in a few short sentences which say clearly:

- *why* the operation is being carried out (the purpose),
- *what* is to be achieved (the objectives), and
- *what* the desired end state is.

0580. As a general rule of thumb, the mission and the commander's intent must be understood two levels down in the organisation. The commander's intent is formulated by the commander himself/herself and should reflect his/her personality and style of leadership, and it should serve to provide both motivation and guidance. A commander, therefore, should not be afraid to be inspiring and to speak from the heart and he/she must choose the way in which the intent is communicated. Communication is often just as important as the actual formulation, and in

any form of communication the commander must express himself/herself *simply*. Only in this way will he/she be able to ensure that the intent will be followed.

0581. *Delegation of authority*: The Armed Forces' Operational Foundation is based on authority to plan and command operations being delegated to the greatest possible extent. Such an aim presupposes clear and unambiguous imparting of the commander's intent, clear overall objectives and a well developed professional identity (Chapter 6) at all levels. Delegation implies that:

- commanders can delegate the whole or part of their authority, and decide how much authority their staff and subordinate commanders may exercise on their behalf,
- authority which is delegated can at any time be taken back or adjusted,
- the transferring of authority and the assignment of responsibility for functions or tasks within the force or unit will under no circumstances absolve commanders of their own superior responsibility.

0582. *The commander's choice of command position*: As a general rule, commanders at all levels should choose a command position on the basis of where they will exert the greatest influence on combat. Technically, at the combat level, this should always be "in the front line". The joint operational commander will however have a number of factors to consider, for example it will be necessary to have a presence in different places in order to exert influence. Examples of this are contact with political leaders, the forces of other nations and civil actors. The choice of a command position will often entail striking a difficult balance between the need for an overview of the situation and access to good communications systems on the one hand, and the need to exercise leadership and to gain first-hand knowledge of the combat situation by being "at the front" on the other. The need for commanders at the operational level is to *see* and *be seen*.



0583. New technology in the field of command and control offers possibilities which only a few years ago were unthinkable. But it would be wrong to conclude that the technology can solve all command and control problems. The technology associated with command and control itself poses some challenges, for example:

- The increased possibility of detailed surveillance in real time can lead to commanders becoming involved in so-called "micro-management".
- Unsystematic gathering and storage of large amounts of information – and the undisciplined imparting of such information – can have a seriously inhibiting effect on the ability to take decisions.
- Increased dependence on technology and information also increases vulnerability, especially where the command and control function is concerned.

0584. Today's challenges associated with command and control can be met by the Armed Forces further developing mission command to produce a culture in which commanders only assume detailed control when absolutely necessary. Also required are well-developed systems and procedures as well as robust command and control systems with a high degree of redundancy. An intent that is clearly imparted makes it easier to carry out the tasks, even with limited means of communication. Such an intent is also of outmost importance in making it possible to live with overwhelming amounts of information: Only when we know what we want to do, can we define what we need to know.

WAR IS THE PROVINCE OF UNCERTAINTY

War is the province of uncertainty. Three-fourths of those things on which action in war is based lie hidden more or less in the fog of uncertainty. A keen and penetrating mind, and the most skilful judgment, is necessary to search out the true situation.

Carl von Clausewitz

The command and control system in the Armed Forces' Operational Foundation

0585. The command and control system (C2S) consists of the structures and processes established to transform intent into action. The command and control system is an integrated system comprising *doctrine*, including leadership philosophy, *information*, *personnel* (staffs) and a *support structure*. A command and control system in the Armed Forces' conceptual framework for operations must have a range of properties, but it is particularly important that the men and women who form part of this system share a *common doctrinal understanding* and that the system in itself *supports situation awareness* and possesses the characteristics of *interoperability*, *robustness* and *flexibility*.

0586. *Common doctrinal understanding*: The point of departure for effective command and control is a shared understanding of the Armed Forces' Operational Foundation. This creates a common foundation for the way in which we relate to the command and control process and different military problems. The doctrine also contributes to the creation of a common language which makes it easier to conduct discussions about, and to develop further, our ability to prepare and carry out operations, including the command and control process.

0587. *Support situation awareness*: Supporting the situation awareness of the user is a key property of a command and control system. Situation awareness is affected by, for example, the amount of information, the quality of the information and the management of information in the system. The value of information is closely linked to time because the significance of specific information often declines rapidly.

Effective command and control is all about the relevant information being available at the right time and in a usable form.

0588. It is people who constitute the core of the command and control system, and the other parts of the system are there to allow people to function in the best possible way. Even though the human brain has a capacity to understand and assess which far exceeds that of any other system, a command and control system has to take account of human limitations while at the same time still being able to make use of humans' unique capabilities. Today traditional information transfer by radio, telephone and writing is supplemented by technical systems which make it possible to access real time information and to transfer information in graphical form. The technology continues to develop but it is important to underline the fact that the face to face meeting will continue to play a fundamental part in creating situation awareness.



0589. *The capacity for interoperability* depends to a large degree on the will and capacity for information exchange within the system, something which in turn is linked with the choice of technology standard. Interoperability, however, also has its organisational and procedural aspects and the capacity for interoperability is dependent on how the command and control activity is organised and how command is exercised. The joint command structure is one of the pillars of NATO's military cooperation and the command and control system used by the Norwegian Armed Forces must be capable of being made compatible with NATO's choices in this area.

0590. The command and control system must have substantial *robustness*, including adequate endurance and redundancy. It must be capable of maintaining its functionality over long periods and under conditions of stress, including direct attack by an adversary. The system must be made secure against a broad spectrum of weapons, including electronic attack. It must be able to retain the whole, or parts, of its capacity even if subjected to stress for long periods and even if parts of the system are knocked out. The command and control system must be protected against all unauthorised forms of use or misuse.

0591. The command and control system must have great *flexibility*. The Armed Forces often operate under conditions of great uncertainty, both nationally and abroad. It is difficult to predict where the next operation will take place, what types of missions will be involved and what command arrangements will be required. Experience in recent years has shown that the Armed Forces must be able to exercise command and control in widely differing operational areas, often far from the central headquarters and staffs in Norway.

Information operations

0592. Ambitions to influence the adversary's situation awareness and will have existed for as long as armed conflict itself. The battle for the information domain is today more important than ever because of the huge information consumption of society and military forces, the breakthrough of the Internet and the increase in media coverage. Information operations are an important part of all military operations. Their purpose is to protect own forces and influence the adversary or other actors in the area of operations.

0593. Information operations are coordinated activities which are implemented to achieve desired effects on the understanding, will and capability of adversaries, potential adversaries and other target groups. Information operations support the strategic objectives by influencing other parties' information, information-based processes and systems, while at the same time making use of and protecting own information, information-based processes and systems.

Principles of information operations are described in AJP 3.10 *NATO Information Operations Doctrine*.

0594. Information operations differ from other military operations in that they are not directed first and foremost against the physical domain. Instead the ambi-

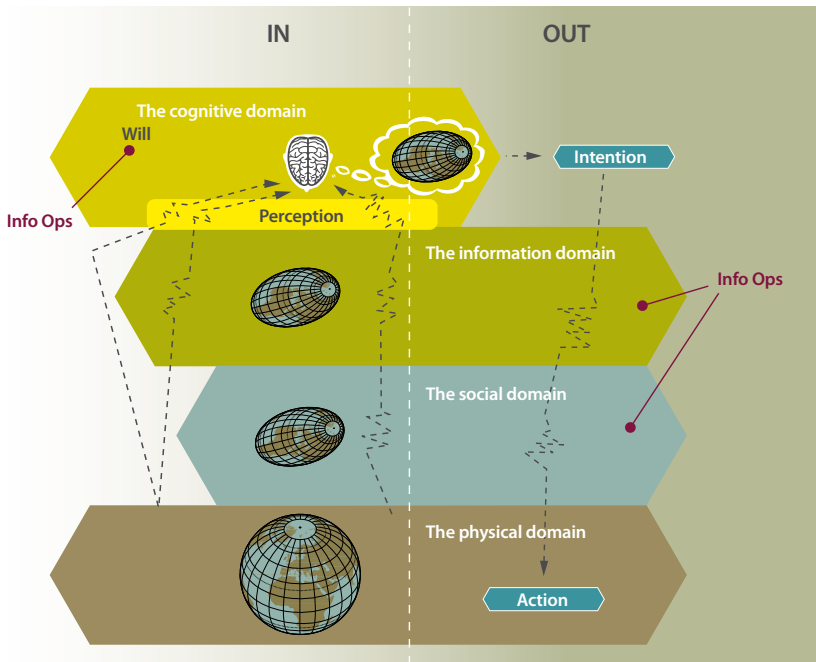


Figure 5.1, THE RELATIONSHIP BETWEEN THE DOMAINS AND INFORMATION OPERATIONS

tion is to achieve a more direct effect in the cognitive domain, including the thought processes underlying the adversary's situation awareness and decision-making, by influencing information. By combining information operations with actions in the physical domain, both can be mutually reinforcing.

Figure 5.1 describes how the reality, as it appears in the physical domain, can be distorted in the social domain and the information domain (IN) before, through human perception, it forms the basis of decision-making. When these decisions are to be translated into actions in the physical domain, the information will again be distorted (OUT). The point of information operations is to influence the adversary's will, cohesion and information transfer processes, as well as protecting ourselves in these areas.

In the *physical domain* there are tangible things and events, what we call reality, which can be measured and weighed with the aid of sensors. Information about conditions in the physical domain can be imparted to a decision-maker mainly in three ways: a) by the decision-maker experiencing them at first hand, b) by passing information by means of technical sensors, or c) by other people reporting through the information domain.

Here it is important to be clear that the picture of reality will already be incomplete or distorted in the *information domain* because not everything that happens in the physical domain can be recorded by sensors, and because it is impossible to transmit all information. In addition, all events will be coloured by human perception and when these are communicated between people in the *social domain* they will be coloured still further.

In the *cognitive domain* information is processed which will form the basis of decision-making. The information is filtered through the individuals' perceptions which are influenced by factors including experience, knowledge, skills and cultural conditions. Reality will thus be further distorted before it is used as a basis for decisions.

When decisions are then formulated as an intention, which in turn is to be translated into action, they are in reality being imparted from the cognitive domain, via the information domain to the social domain, that is to say to those who will in the final instance carry out the actions. The intention may already be exposed to distortion in the cognitive domain. This will happen when thoughts and ideas are to be formulated as words and pictures. In the information domain there may be further distortion due to limitations in the possibilities for information transfer. In the social domain distortion will occur when information is communicated and interpreted between the individuals concerned.

Information operations are directed against the cognitive domain in order to influence perceptions and will, against the social domain in order to influence the cohesion between individuals, and against the information domain in order to influence information and information transfer.

Target groups and objectives for information operations

0595. Information operations are directed against an adversary or a third party. The concept of a “third party” is a broad one and covers the civil population and other actors in the area of operations. The different actors require different types of information operations. The objectives of information operations are to:

- influence the adversary at command level; that is to say influence the leaders’ perceptions, plans, actions and will to continue combat,
- influence the adversary’s decision processes, that is to say destroy, degrade, interrupt, deny, mislead and exploit weaknesses in the adversary’s decision processes, information and information systems,
- develop and maintain a correct awareness of the situation, protect own and allied decision processes, information and information systems,
- influence any third parties and others so that they support our operations,
- keep non-combatants and neutral organisations informed so that they can cooperate more easily.

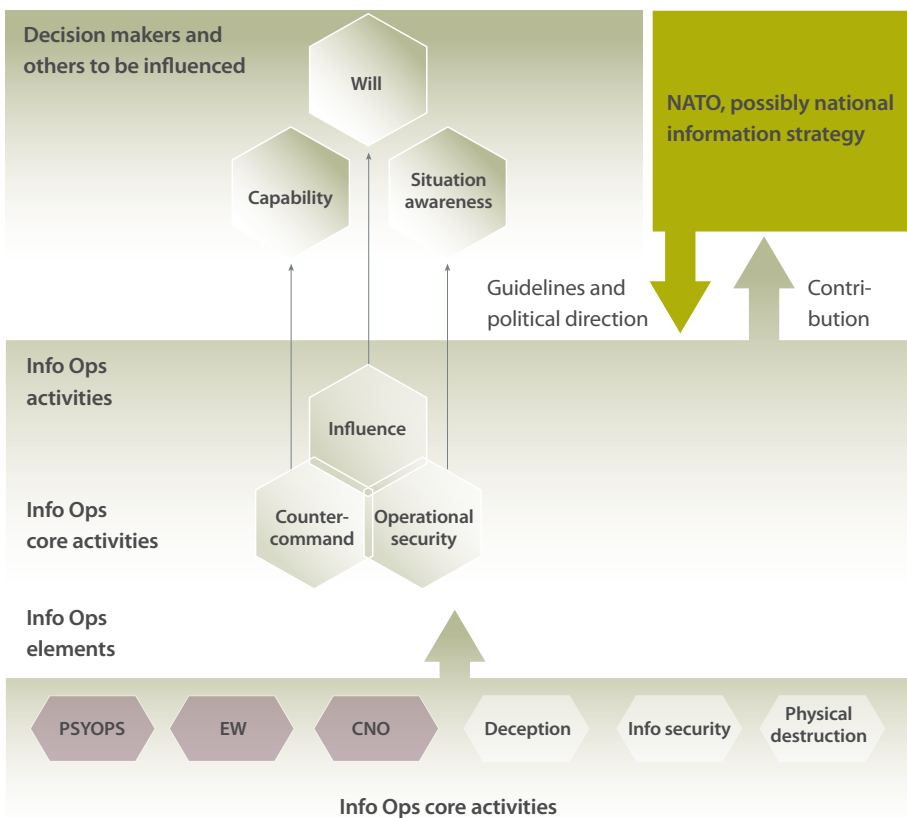


Figure 5.2, INFORMATION OPERATIONS, CATEGORIES, TARGET GROUPS AND OBJECTIVES

Central elements in information operations

0596. The core activities in information operations can be divided into those which are intended to influence the will and capability (for example the command function) of the adversary and those intended to protect own information. Central elements in such operations are *information security, psychological operations (PSYOPS), deception, electronic warfare (EW), data network operations (DNO) and physical destruction of the information infrastructure.*

0597. *Information security* is an important part of operational security (OPSEC). Operational security is intended to prevent an adversary from obtaining information about our operations, objects, capabilities and intentions. Information security covers specific measures such as Information Communication Technology (ICT), security, personnel security and object security. It is intended to ensure confidentiality, integrity and availability and it includes measures for the protection of own information and information systems against manipulation, compromise and loss. This includes, for example, computer network defence (CND), communications security (COMSEC), monitoring of own systems and searching for listening devices or other equipment for the tapping of information.

0598. *Psychological operations (PSYOPS)* has the objective of influencing perceptions, attitudes and conduct and in this way achieving desired political and military effects. Influence can be actively exerted both clandestinely and openly – in times of peace, crisis and armed conflict. In NATO the political leadership (North Atlantic Council – NAC) lays down guidelines for psychological operations and approves which target groups such operations are to be directed against. In order to carry out an effective psychological operation it is necessary to have a thorough knowledge and understanding of the target groups. It is often necessary to possess competence in such fields as psychology, sociology, anthropology, linguistics, graphic design, printing and publishing, and to have the capability for broadcasting or mass distribution in some other way. PSYOPS messages can be disseminated using all forms of printed matter, radio, TV, loudspeakers directed at the adversary, direct conversations, the Internet, fax and mobile phones.

0599. *Deception* has the objective of misleading an adversary through the manipulation, distortion or falsification of information. Deception involves influencing the adversary's decisionmakers in order to give them a false understanding of the actual situation, or a false understanding of the kind of intentions one has. For example a deception operation can mislead the adversary into taking measures against what he believes (wrongly) is coming. By taking such measures the adversary will in the first place either disperse or gather his resources on an incorrect basis. Next the adversary will have to acknowledge his mistake, and this can contribute to the negative effect on his morale and will to fight on. Deception is a complex instrument. It requires considerable effort and resources as well as a

high degree of secrecy. It also requires an insight into how an adversary thinks. Deception is coordinated by the operational commander but the use of deception may also be governed by mandate and by other political guidelines.

05100. *Electronic Warfare (EW)* is an umbrella term covering a variety of different methods for utilising the electromagnetic spectrum for military purposes. This requires comprehensive planning and coordination through a *Joint Electronic Warfare Co-ordination Cell (JEWCC)*. It is usual to distinguish between three forms of EW: *Electronic Attack (EA)*, which is a disruptive transmission (jamming) or the transmission of false signatures; *Electronic Protection (EP)*, which includes, among other things, the physical securing of own equipment to prevent unintended or excessive transmissions (so called *compromising emanations* or *tempest*), signals discipline and frequency-hopping radio equipment and *Electronic Support (ES)*, which covers passive signal interception in its various forms.

05101. *Computer Network Operations* are measures to influence the adversary's computer network and to protect own networks. In the NATO context, the terms used are *attack, exploit and defence*. Such operations can be used both as strategic and as operational tools, and in recent years have gained increased significance as a contribution to joint operations. *Computer Network Attack (CNA)* involves attacking the adversary's computer system for the purpose of disruption or manipulation. The attack may include infiltration of the adversary's computer system with incorrect or infectious code, so-called "viruses" and "Trojan horses". The impact of this type of operation has increased due to the widespread use of civil standards and civil software for military purposes. *Computer Network Exploitation* consists of measures to gain access to the adversary's computer system, tap it for information and then make use of the information without the adversary being aware of it. *Computer Network Defence (CND)*, consists of measures for the active protection of information by monitoring, analysing and implementing countermeasures to defeat attacks on own information systems. Increased use of information infrastructure brings increased complexity and thereby a greater risk that foreign CNA will disrupt the Armed Forces' operations and so prevent achievement of the desired effects. It is essential that one should have one's own CND in order to counter foreign CNA.

05102. Physical destruction of information infrastructure is considered to be a part of information operations and has two purposes: Physical destruction of the adversary's command and control systems will have a direct effect on the adversary's situation awareness and thus his ability to take decisions and exercise control. Physical destruction also sends a very strong signal and will play an important role purely psychologically. Cohesion and the will to fight on will also be strongly affected if the adversary sees his information infrastructure put out of action and that he is losing control of his forces.

Activities related to information operations

05103. Personnel in the Press and Information service (P&I) and those involved in civil-military cooperation (CIMIC) should be informed of any ongoing information operations. Responsibility for this rests with the operational staff, possibly in consultation with a higher level. These two activities are, however, *not* to be defined as information operations, or as a part of such operations, because it is very important to safeguard the integrity and credibility of P&I and CIMIC. Information seen as propaganda could very well prove counterproductive and questions could be raised regarding the legitimacy of the military activities and the credibility of P&I.

Principles for the execution of information operations

05104. NATO has seven principles for the conduct of information operations: the *personal involvement of the operational commander, close coordination, good intelligence, effects-based targeting process, centralised planning and decentralised execution, early and correctly phased implementation, and the monitoring and assessment of effects.*

05105. *Operational commander's personal involvement:* The operational commander should use information operations as a central element of his campaign if such operations really can be effective. The use of information operations should be described in the commander's intent and the commander should personally follow up the associated activities.

05106. *Close coordination* is of decisive importance in information operations. The complexity, number of actors and possible consequences of such operations mean that they should be controlled and coordinated from the operational (often strategic) level and downwards. Above all the information operations should be coordinated with the overarching information strategy which in NATO will normally have been approved by the *North Atlantic Council (NAC)*.

05107. *Good intelligence* is important in order to be able to carry out effective information operations. The information operation section of the staff works closely with the intelligence branch (J2) to define requirements and receive and share information. *Intelligence Preparation of the Battlefield (IPB)* should, from an information operation perspective, include information on such areas as culture, religion and language as well as decision processes, information infrastructure and vulnerability of the networks.

05108. *Effects-based targeting:* In order for the information operations to be effective, they should be coordinated with other actions. Such coordination will include the targeting process. The information operation section will suggest activities which will support the overall plan and these activities must be included as tar-



gets in the joint target list. The actual effects of the actions must be continuously analysed.

05109. *Centralised planning and decentralised execution*: Information operations should be planned centrally, at the operational or strategic level, in order to ensure synchronisation and coordination with other operations. As in other operations, decentralised execution should be the aim unless conditions are such that centralised execution is necessary.

05110. *Early and correctly phased implementation*: The planning and implementation of information operations should start early in an operation or campaign because of the complexity associated with these operations, and it can be a long time before effects are achieved. It is also important to undertake a thorough analysis of *when* it will be most favourable to launch an information operation. Both psychological operations and destruction of the information infrastructure if implemented at the wrong time, can be counterproductive.

05111. Information operations should be monitored especially closely and continuously during the whole of the implementation phase, so that the effects produced underway can be assessed and the course adjusted as necessary. It is important that the significance of close and continuous follow-up in such operations is not underestimated at the operational level.

Civil-Military Cooperation – CIMIC

05112. CIMIC is the coordination and cooperation, in support of the mission, between the military forces and civil actors, including national populations, local authorities, national and international organisations and agencies. The trend within NATO when carrying out operations is that increasing importance is attached to CIMIC and that CIMIC is conducted with a view to closer integration between military and civil activities and the adoption of common long-term aims. The significance of civil-military cooperation has also grown due to the increasing number of civil actors in the operational areas. CIMIC is today regarded as a highly important function in all operations.

The organisation of the CIMIC work

05113. The CIMIC work is run by the *CIMIC Section* in the operational headquarters. The size of this section will vary according to the need for civil military cooperation in the particular operational area. The CIMIC section includes liaison officers who can be located with the relevant civil actors. A number of *CIMIC teams* will be attached to the operational force. Such CIMIC teams, or parts of them, may be attached to units at a tactical level. In NATO operations, CIMIC teams can be national or multinational and they can include personnel with special competence in logistics and infrastructure building, or from other relevant specialist areas.

05114. *CIMIC centres* will be set up, if possible, outside the military bases. Such centres are intended to contribute to ensuring favourable conditions for the civil-military cooperation. They must, as far as possible, be neutral in acting as arenas and forums for the exchange of information and contacts.



NATO's principles for CIMIC are described in AJP 9 *Civil-Military Cooperation* (CIMIC) Doctrine.

05115. The CIMIC section and CIMIC teams will seek to promote:

- liaison with civil actors at different levels,
- participation in joint planning with civil actors at operational and strategic levels, both before and during an operation,
- continuous assessment of the civil situation in the operational area,
- instruction of, and support for, all military units involved in the civil-military cooperation,
- a gradual transfer of responsibility to relevant civil actors in the operational area,
- cooperation and coordination in relation to other relevant parts of the operational staff.

Principles for CIMIC

05116. In carrying out CIMIC activities, both command arrangements and mutual relations are important. The command of CIMIC is based on three principles: *Putting the mission first, the commander's personal involvement and the coordination of CIMIC actions*, and *the prioritisation of resources*. In addition, six principles apply to the civil-military relations themselves: *cultural understanding, a common aim, shared responsibility, consensus, transparency and communication*.

Military command of CIMIC

05117. The principle of *mission first* is based on the primacy of the military mission. This is especially important in the light of the desire for increased integration between military and civil means. The aim of creating good relations with the various civil actors must not be allowed to endanger the mission through resources being spread too widely and excessive time being taken. Weighing the short-term and long-term needs forms an important part of an operational commander's assessments.

05118. Effective CIMIC depends on the operational commander *being personally involved* and coordinating CIMIC actions with other actions. CIMIC should be made an integral part of the planning and should be followed up continuously. The desired effects are achieved by coordinating the CIMIC actions with other actions, both upwards and downwards in the organisation.

05119. The principle of the *prioritisation of resources* means that all use of military resources for civil purposes must be carefully assessed. It is important that the

military resources which would be tied up for civil purposes should be weighed against possible future requirements. Experience shows that the removal of military support for the civil population without anyone else taking over this obligation can have a very damaging effect on relations between the military force and the civil population. The resources devoted to CIMIC are often of best use when they are concentrated in a few high priority areas. Such concentration indicates decisiveness and has a clear effect. Rapid changes for the better can have both physical and psychological results and can accelerate the process of enabling the affected areas to begin to function without help. CIMIC is demanding in terms of personnel, something which means that the work should be concentrated on actors who are regarded as being especially important. It is also necessary to be clear that some actors will need close follow-up for a very considerable time.

Civil-military relations

05120. The principle of *cultural understanding* is all about insight into, and respect for, the history, traditions and way of life of the civil population. The same applies to an understanding and an appreciation of other civil actors in the operational area. The CIMIC section and the CIMIC teams must help to educate other units in relevant aspects of local conditions.

05121. The principle of a *common aim* is about the need for political and military authorities to share a common aim with the local civil population. It is true that the short-term aims may vary but it is nevertheless important to assess on a continuing basis whether the short-term objectives can be made to coincide. Such a continuous assessment of objectives requires a close dialogue.

05122. The principle of *shared responsibility* means that responsibility must be shared between the military force and the civil organisations. Sharing of responsibility can be linked with the regular assessment of the objectives. The CIMIC staff is responsible for the preparations that have to be made for the progressive transfer of responsibility to civil actors as the operation proceeds.

05123. The principle of *consensus* is about confidence and mutual respect between the military force and other parties. The military force will often have the capacity and means to force their will through, while other actors possess such means to a degree which is far less. It is important to be clear that pressure and the use of force in such situations will seldom serve the interests of the operation in the longer term. Instead it is essential to take steps to create and maintain good relations with other actors.

05124. The principle of *transparency* means that the dialogue and relations between the civil and the military actors must be as open as possible. This can pose a challenge for military organisations which traditionally have a closed culture

and which, because of operational security, cannot share all information with others. CIMIC personnel represent a valuable resource for the gathering of information. Information which comes via these personnel must, however, be regarded as a by-product of the CIMIC work. CIMIC personnel, perceived as intelligence personnel by the civil actors, will rapidly lose the built up trust that is essential for effective civil-military cooperation.



05125. The seventh and last principle for civil-military relations is *communication*. Cultural differences, especially where history, language and organisation are concerned, can hinder effective communication. Experience shows that it can be a good investment to devote resources to overcoming obstacles of this kind. On the military side, the CIMIC Staff has responsibility for making suitable arrangements in this area.

Intelligence

05126. The objective with *intelligence* is to contribute to the best possible knowledge of the parties in the operational area, and of the area itself. The concept of intelligence is broad and covers *product, process and activity*. It is used to refer to the product which is the result of the processing of information and data about other nations, hostile or potentially hostile forces or other actors as well as about areas for actual or potential operations. The concept is also used to refer to the actual processing of the information as well as to the activity involved and the organisations that engage in it.

Strategic intelligence

05127. Strategic intelligence is information which has consequences for the overall military situation of the country or alliance concerned, or which could bring about a significant change in the conditions for an ongoing military operation. In peacetime the main object of strategic intelligence is to carry out area studies of Norway's neighbouring areas and other areas which can significantly affect Norwegian security policy. Such strategic area studies can also make a significant contribution to intelligence work at the operational level. In times of crisis or armed conflict the significance of surveillance and the gathering of information will increase and a strategic warning capability will be of particular importance.

The principles of intelligence within NATO are described in AJP 2.0 *Allied Joint Intelligence, Counter Intelligence and Security Doctrine*, as well as in the underlying publications AJP 2.1-2.6.



Operational intelligence

05128. Operational intelligence is primarily linked to ongoing military operations, and will often be focused on information which has consequences for military operations within a defined operational area. On this level intelligence will have the important task of identifying the various possibilities, so that the operational commander can react and deploy his resources in the best way possible. Another important intelligence task at the operational level is to supply the tactical level and its units with intelligence so that they too have the opportunity to react and make their dispositions in good time.

05129. During *stabilization operations* one of the most important products from the intelligence service at the operational level are threat assessments. In addition, the operational level in the theatre will also draw on the intelligence services of the various nations concerned. These will contribute jointly to the build-up of an intelligence picture of adversaries and other actors as well as assessing the extent to which these have the capability and the will to strike at forces involved in the operation. Primarily, the threat assessments will describe the threat posed by the adversary's most dangerous and most likely course of action. This will give the operational commander the opportunity to set in motion measures to meet or defeat a particular threat or, if the risk (the consequence of meeting the threat) is considered to be high, to avoid the threat (remove the likelihood of meeting the threat), or, in an extreme case, to cancel an operation.

05130. The operational level must have access to a broad spectrum of capabilities for the gathering and processing of information. Even if parts of this information are based on strategic and tactical intelligence, the operational level will need to have access to particular capabilities to supplement and create robustness in the intelligence arrangements. The Norwegian Intelligence Service (Etterretningstjenesten) supports Norwegian forces operating abroad. The Intelligence Service can organise this support in various ways ranging from a simple liaison arrangement to the deployment of a complete "all source" intelligence team (*NIST – National Intelligence Support Team*).

Tactical intelligence

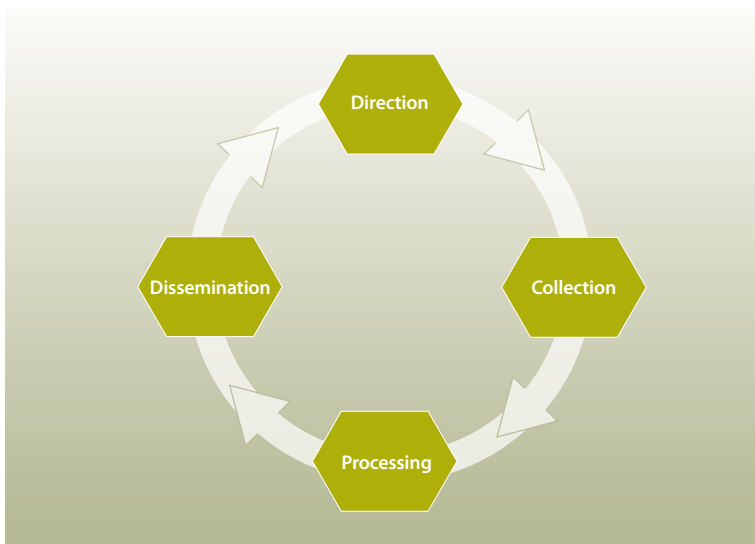
05131. Tactical intelligence provides a basis for how the tactical commander uses and deploys his units in order to accomplish the mission. The tactical level is normally responsible for intelligence within a defined area and will have its own organs for gathering information to supplement the intelligence picture provided by a higher level and to pass on information from a lower level.

INTELLIGENCE PREPARATION OF THE BATTLEFIELD (IPB)

Within NATO the intelligence process is often referred to as *Intelligence Preparation of the Battlefield*, or the *IPB process*. This is a systematic and continuous process for analysing the threat and the environment in a specific geographical area. The IPB process complements, and forms an integral part of, the operational planning and decision process. The purpose of the IPB process is to gain an understanding of adversaries and other parties and to analyse factors as weather, ground conditions, light levels, terrain and the like. The process provides the basis on which to develop particular operational plans. It should also form a point of departure for how particular reconnaissance, surveillance and target acquisition resources (ISTAR) should be used.

The intelligence cycle

05132. Intelligence activity can be described as a process consisting of four elements: *direction*, *collection*, *processing* and *dissemination*. The ability to perform this process more rapidly and with greater precision than the adversary is of decisive importance in being able to maintain a higher operational tempo. Both the NBD and ISTAR concepts aim to link together different sensors in order to be able to disseminate information more efficiently. In an intelligence organisation or operation, several parts of the cycle, or several cycles, will be in progress simultaneously.



Figur 5.3, THE INTELLIGENCE CYCLE

05133. *Direction* covers both to prioritise the intelligence information required in order to support own operational planning, and the planning of how to use the various intelligence collection resources. *Collection* covers the gathering of infor-

mation with a combination of technical sensors and human sources (Human Intelligence – HUMINT). *Processing* takes place mainly at the strategic or operational level. By means of analysis, information from new sources is collated with information already known. This analysis forms the basis on which effects that have been achieved are assessed, targets are selected and forecasts made regarding possible developments. Finally the analysis provides a basis for the development of own plans. *Dissemination* is about providing the right user with the right information at the right time.

ISTAR

Intelligence, Surveillance, Target Acquisition and Reconnaissance – ISTAR is a NATO concept which covers the integration and synchronised use of sensors and information/intelligence. ISTAR activities are conducted in many military units and at various levels.

Intelligence means mainly operational and tactical intelligence. Surveillance is the systematic observation of land areas including places, objects and persons, airspace and sea areas both surface and underwater. Target Acquisition covers detection, identification and localisation of a target with such precision and detail that weapons can be used effectively to engage the target. Reconnaissance is a limited mission which is initiated in order to obtain information about an adversary's activities or resources. Reconnaissance also includes obtaining meteorological, hydrographical or geographical information for a particular area.

ISTAR will contribute to the linking of intelligence, surveillance, target acquisition and reconnaissance with the combat units so as to gain access to critical combat intelligence or target information at the time it is required. ISTAR means in practice that sensors and systems, including those not normally used for intelligence purposes, are put to optimum use in order to create the best possible situation picture.

ISTAR at operational level should be focused on the joint operational area. The special feature of the operational ISTAR activity is the breadth and accessibility of its collection capabilities. Operational ISTAR activities will normally have access to capabilities such as air-to-ground surveillance (AGS), satellite surveillance, long-range unmanned aerial vehicles (UAV) and interaction with intelligence organs at the strategic level. The operational ISTAR activity will have a perspective that also covers areas outside the theatre of operations itself.

Intelligence principles

05134. Six important principles which should form the basis of the intelligence work are: *integration, early initiation and processing, relevance, central coordination, source protection and tempo and flexibility.*

05135. The principle of *integration with the overall operational plan* means that the planning and conduct of intelligence should harmonise with the operations as they develop. The military commander should define what is needed by way of information about the adversary and the operational area in all phases of the operation. Further, the commander should prioritise and specify his information requirements as far as it is possible to do so. There should be a clear and unambiguous statement of the intelligence requirements for a given operation.

05136. The *initiation and processing* of intelligence can be time-consuming. It is therefore important that the intelligence requirements should be defined as *early* as possible so that this work can be initiated at the right time. The requirement should then be passed to the intelligence collection organs.

05137. The principle of *relevance* is that the intelligence should contain relevant and accurate material which is made available at the right time. This calls for coordination capability and unified direction.

05138. *Central coordination* means that the intelligence activities in the operational area should be coordinated by a central body. This is of decisive importance in ensuring that scarce intelligence resources are put to optimum use to match the intelligence needs of the commander and other decision makers. Duplication of tasks should be avoided while at the same time ensuring the coordination of all intelligence capabilities in order to develop a unified intelligence picture. The central body should be in continuous close contact with other operational activity.

05139. *Source protection* means that all sources, intelligence collection organs and methods used in the production of intelligence must be protected against possible compromise. This is essential in order to prevent the adversary from eliminating sources or mounting countermeasures before we have taken advantage of the knowledge acquired. The compromising of sources and collection organs can also make it possible for the adversary to use these to put out misleading information.

05140. The sixth and final principle for the intelligence service is *tempo and flexibility*. This is a precondition for achieving the best possible degree of situation awareness. The right information must reach the right user at the right time. A difficult challenge is posed in balancing the need for central direction (the big picture) against the need to disseminate intelligence at a tactical level (direct action). A network-based approach, in which sensors, analysis resources and units at different levels are linked together in contributing to the collection of information, increases flexibility and thereby tempo. The ISTAR concept is an important tool in this respect

Logistics

05141. Logistics is the activity which includes the planning and execution of the movement, support and maintenance of military forces. Logistics at the operational level is about supplies, services and other support which contributes to endurance in the execution of joint operations. It is an essential precondition for a successful operation that the logistics runs smoothly. Logistic planning must therefore be an integrated part of the operational planning.



05142. Logistics covers the planning and development, acquisition, storage, distribution, maintenance and issue of materiel and supplies; the procurement, construction, maintenance and operation of buildings and installations; the procurement or delivery of services; entering into contracts with suppliers; medical and veterinary services, including the evacuation and transport of personnel.

05143. During the Cold War the central focus was on national defence. The main principle throughout the NATO region was to set up extensive national stockpiles. Today, however, logistic arrangements are quite different. This is due to three factors:

- More emphasis is placed on international tasks and operations in which large national stockpiles are less relevant.
- In the public sector, stockpiles and the like are no longer considered to make economic sense.
- Civil actors now play a larger part on the supply side than in the past, partly as one facet of the trend towards *public private partnerships*.

These conditions mean that the logistic resources must be acquired on a commercial basis in competition with other users in the community. The Armed Forces therefore place greater emphasis on the need for logistics and supply arrangements to function even when emergency measures legislation has not been brought into force.

05144. Today logistics are more about linking together a network of suppliers and making sure that supplies are delivered to the users at the right time. As a part of this development, systems and other technical means are being developed to calculate consumption and load capacity, to track goods and to aid the development of common standards. Even with the new logistics principles, the Armed Forces consider it essential to maintain a certain level of stockpiling, if only to underpin their reaction capability and potential endurance and to ensure access to critical materiel.



05145. *NATO's Logistic Concept*, (2003), is based on the premise that logistics are a national responsibility but, in order to avoid overlap and duplication of logistics capabilities in the operational area, NATO attaches greater importance to the coordination of logistics across national boundaries than was the case previously. Multinational logistics departments are being established for both operational and economic reasons. For the same reasons, division of responsibility between nations is taking place and there has been a trend towards a force commander being given authority to redistribute logistic resources between forces within given frameworks and guidelines.

05146. The different branches of the Armed Forces share many characteristics where logistics are concerned, but at the same time their individual needs can vary somewhat. The differences will be especially marked on the distribution side. The land forces are often personnel intensive and 'equipment heavy'. This means

a heavy demand for supplies irrespective of whether units are in combat or not. Naval forces, for their part, often have an inbuilt logistic safety buffer in some of their vessels. Resupply can take place when visiting a naval base or through the use of supply ships. Where air forces are concerned, the intention is that each air base should have its own independent logistic safety buffer. The supply or redistribution of critical materiel, such as missiles, can be carried out using air transport. The supply of commodities involving large volumes, for example aviation fuel, necessitates the use of transport over land or by sea.

Principles for logistics in joint operations

05147. Even though the individual armed services have varying logistic requirements, it is nevertheless possible to identify six principles for logistics in a joint operational context: *integrated planning and joint situation awareness, unified command, push and pull, correct timing, simplicity* and *resource economising*.

NATO's principles for logistics are described in MC 319/2 *NATO Principles and Policies for Logistics* and in AJP 4 *Allied Joint Logistics Doctrine*.

05148. The principle of *integrated planning and joint situation awareness* must form the basis of all logistics planning in order to ensure effective operational support. This can be done by making logistics planning an integral part of the operational planning and force generation processes and by keeping the logisticians continuously updated with regard to the joint situation picture.

05149. *Unified command* means that it is the operational commander who deploys the logistic resources and ensures that they are used in line with his/her intentions and priorities. The commander's ability to concentrate the effect of the resources at his/her disposal depends largely on he/she having the freedom of action, and the practical possibility, of redeploying logistic resources as required by the situation at the time. Tactical units will not normally have a full organisational logistics capability but can be provided with logistic support on an *ad hoc* basis in order to fulfil tasks allocated to them.

05150. The principles of *push and pull* need to be seen in context. *Push* implies that supplies are brought forward to the combat units on the basis of previous experience. How much equipment of a given type does a unit require for a given type of task? The aim is to bring the supplies, as far as is possible, right forward to the user. The advantage of this method is that standard supplies are always sent out to the user. An obvious disadvantage is that the actual usage may differ



from estimates based on previous experience, something that can result in either unnecessary surpluses or serious shortages. *Pull* implies that the units themselves order the supplies they need. The advantage of this is that the user can order exactly what is needed based on the given situation. The disadvantage is the time it takes. In practice a combination of *push* and *pull* is used. The Armed Forces' philosophy is that the logistic support should be so arranged as to allow the user to concentrate primarily on the main task in hand, and that the logistics organisation will provide for the necessary supplies while at the same time keeping supplementary ordering as a possibility.

05151. The principle of *correct timing* is about planning and the ability to look ahead. The right supplies at the right time help to ensure that a high tempo can be maintained. If the reverse is the case, and supplies are absent or inadequate, it will be difficult to maintain the tempo of the operations. This in turn may mean that own forces are obliged to fight on the adversary's terms.

05152. The *simplicity principle* is of key importance to the reliability of support for operations where the Armed Forces' Operational Foundation emphasises the need for flexibility, with rapid organisational changes and frequent changes in the make-up of combat units and groups. The necessary logistic support should be planned and prepared at the lowest possible level, in line with the principle of unified command and decentralised control of logistic resources. The switching of supplies between units should be kept to a minimum and there should not be too many conditions attached to the logistic planning and execution. This will help to ensure that the logistic planning is as predictable as possible and as immune as possible to external effects and friction.

05153. The principle of *resource economising* is based on the fact that logistic resources will often be scarce compared with the operational needs. The use of these resources therefore has to be kept to what is absolutely necessary, and to set priorities to match the central aspects of the operation in accordance with the commander's intent. There is also a need to exercise foresight in the logistic planning in order to avoid the logistic arrangements collapsing as a result of constant changes during execution.

Medical support

05154. Medical support covers all activities designed to maintain or restore the health of the forces so that combat capability can be sustained. In this doctrine, medical support is described as a part of logistics, but it is important to be clear that the tasks implicit in medical support are mainly operationally oriented and that the supply aspects represent a limited part of this support. Medical support consists of medical force protection, primary health services, secondary health services (specialists) and evacuation.

NATO's strategy for medical support in joint operations is described in MC 326/2, and NATO's medical support doctrine is contained in AJP 4-10, ratified by Norway as STANAG 2228.

05155. Medical force protection has gained renewed topicality as a result of the Armed Forces' increased involvement in remote regions. Sickness and non-combat related conditions represent a considerable threat to the combat capability of military forces. Preventive health services, veterinary services, medical intelligence and accessible primary health services are important preconditions for the maintenance of health and combat capability. During both the preparation and the execution of operations it is necessary to have a detailed policy for medical force protection.

05156. The Medical Service differs from other military support functions in that it is regulated by international and national legislation. The Geneva Conventions lay down clear guidelines for the protection of patients, the medical services and the personnel who provide these services. Medical personnel are described in the Conventions as non-combatants and cannot therefore be used in combat roles or in any way that may affect the conflict. The Medical Service is dependent on having a well-functioning organisation consisting of a command and control system (including medical intelligence), an integrated system for medical treatment, an integrated system for patient evacuation and a system for medical supplies.



MEDICAL SERVICES – RAPID AND COMPETENT TREATMENT AT DIFFERENT LEVELS

The time it takes from initial injury to first aid and medical treatment has a major effect on the injured person's ability to survive or regain their health. Military medical resources should therefore be available in all units at all times. Immediate trauma treatment at the front give seriously injured patients an increased chance of survival in that they are receiving the right treatment at the right time. NATO aims to ensure that it will be possible for advanced trauma treatment to be given within one hour. Rapid evacuation to a location where there are good intensive care facilities, including surgery if needed, is often a key factor affecting survival and quality of life following treatment.

Medical units are categorised as *Role 1-4* based on their treatment capability (medical care capabilities).

Role 1 medical support provides for routine primary health care, specialized first aid, triage, resuscitation and stabilization. Role 1 is integrated into all military units so that they are able to cover their own needs for primary care.

Role 2 provides for patient reception, triage of casualties, resuscitation and acute treatment to a higher technical level than Role 1. It can include specialist treatment in dentistry, psychiatry and veterinary services. Role 2 will routinely include damage control surgery to make patients better able to withstand subsequent transportation. Role 2 includes the short-term care of patients who are expected either to be returned to duty or evacuated to the next role once their condition is stabilized. Role 2 is deployable.

Role 3 entails the ability to carry out secondary surgery and, to some extent, final treatment. It can thus provide support for an entire operational area. It includes specialists and its composition will depend on the needs of the operational area. In a national context, the Armed Forces will mainly use existing civilian hospitals to provide these services and will only have deployable Role 3 capabilities to a limited extent.

Role 4 can provide all specialist services as well as final treatment such as reconstructive surgery and rehabilitation. Nationally this capability will be met by civilian hospitals.

05157. It is a commander's responsibility to ensure that medical services are available, so that health should not be a concern that diverts attention from the military task. Planning of medical services must form an integral part of operational planning. Military commanders must always assess the effect that injuries and losses will have on the units' ability to fulfil their tasks, and how the wounded are to be looked after. Detailed medical intelligence, medical plans and a high degree of readiness are essential if effective medical services should be available from the earliest phases of an operation.



6. The military profession

0601. The personnel of the Armed Forces constitute the factor most vital to the success of our operations. A shared professional identity strengthens our cohesion and our ability to overcome the challenges we face, both as individuals and as an organisation. This chapter concludes the doctrine by describing the professional culture and the fundamental values that the Norwegian Armed Forces wants to develop in order to meet our challenges, achieve our missions and take care of our personnel in a proper and responsible way

PROFESSION AND MILITARY PROFESSION

The military profession is comparable with other professions such as the legal or the medical professions. The members of a profession are entrusted with the responsibility for carrying out a specialised task for the good of society. The exercise of a profession is based on comprehensive theory and practical training. Those who follow that profession identify with that calling and with each other. One *is*, one does not simply *work as* a lawyer, doctor or an officer. In addition to this strong identification, members of a profession are linked by a common set of values.

The concept of a profession can be expanded by reference to four attributes which together define the nature of a profession, that is to say what constitutes its soul – its *ethos*. *Responsibility* is about the obligation of that profession to society and to its own members. *Identity* is about the members' identification with that profession and their exclusive status in society. *Expertise* is about the members' special knowledge and skills which are used to perform the work of that profession. *The fundamental values* consist of the values and the codex which govern the exercise of that profession and the attitudes of its members. The fundamental values reflect the values and norms of society but will be developed specifically in relation to the requirements of that profession.

Rationale and dimensions of the military profession

0602. The rationale of the military profession is to defend Norway and Norwegian interests. We therefore have a common responsibility towards society and each other to develop the Armed Forces in such a way that we are in the best possible position to fulfil this task. The level of responsibility increases with the degree of influence an individual has in the organisation. At the same time everyone, irrespective of their position, is under an obligation to learn and to train themselves to be able to perform their roles to the best of their ability.

0603. The core business of the military profession is the conduct of operations. This means that the values and attitudes required in the conduct of operations must also characterise our day-to-day activities.

0604. The military profession has an *intellectual*, a *physical* and a *moral* dimension. The intellectual dimension is associated with the special knowledge and skills which are required to carry out our tasks and conduct our operations. At a strategic level this covers the ability to put own actions into a wider context, including the integration of military and other means to achieve desired effects and political objectives. At operational and tactical levels the intellectual dimension requires comprehensive knowledge in many different areas if success is to be achieved in complex operations both at home and abroad. The intellectual dimension has two cultural aspects: the first is internal and relates to respect for the values and requirements of the profession, while the second is outward-looking and relates to an understanding of how different cultures and views on life affect our operations. Theoretical studies, analytical ability and cultural understanding are all preconditions for the ability to adapt to changing operational environments.



0605. The *physical dimension* is associated with the fact that combat is conducted mainly through physical actions and that the ability to perform these actions effectively is a precondition for success. The physical dimension concerns the combat skills that are needed for us to be able to achieve success in our tasks. It also covers physically demanding environments involving stress in the form of a lack of water, food and sleep. The physical dimension explains why we place such emphasis on skills training and why being in good physical shape is an essential part of our identity.

0606. The *moral dimension* is associated with the fact that combat is a battle of wills, a battle in which the side which best succeeds in maintaining its will and cohesion will prevail. The moral dimension covers the values and actions that reinforce this will to succeed and the ethical foundations which pave the way for acting correctly in demanding situations. This dimension is essential and it means that the will to succeed, strong cohesion and firm ethical foundations occupy an absolutely central place in our professional identity.

Professional identity and core values

0607. The military profession has a long tradition and our mission has consisted of being the nation's ultimate instrument of power. Tradition forms an important part of our professional identity and we carry ourselves with a pride that reflects the achievements of the Armed Forces past and present, both under the personal stress of combat and in the demanding work of developing our defence forces.

0608. All who wear the uniform are a part of our profession. They cover a wide range of roles, or combinations of roles, be they grenadiers, officers, engineers, technicians, seamen or pilots. Our common profession is none the weaker if individuals identify mainly with their primary role. The most important thing is that we share a common identity which unites us and strengthens the Armed Forces as a whole.

0609. The Armed Forces' professional identity is founded on:

- the common responsibility we have to society to prepare ourselves intellectually, physically and morally to defend Norway and Norwegian interests both nationally and abroad,
- confidence in each other's judgement, skills and will to fulfil our allotted tasks,
- acknowledgement that the core business of the profession is the conduct of operations,
- the will to overcome obstacles and fulfil tasks in the best way possible,
- acknowledgement that our profession is collective and that attitudes and actions that serve to strengthen our cohesion are all important,
- acknowledgement that, in some situations, we are given the mandate to risk and to take life, and that this makes great demands on discipline and requires a highly developed sense of morality and ethics,
- the core values of *respect*, *responsibility* and *courage*, which unite us and characterise our actions.

0610. Society expects that those who have chosen the military profession will fulfil the Armed Forces' tasks despite the personal cost that this can entail. Being



a part of our professional community means accepting all tasks assigned to the Armed Forces, both nationally and internationally.

0611. National and allied confidence in Norwegian defence is essential to our ability to fulfil our tasks. Such confidence depends on our ability to perform these tasks and on the values and attitudes we stand for. Our attitude towards these tasks will be judged on the way in which every individual in uniform goes about his or her business, which means that we all must act, when all is said and done, as if we represent the whole of the Armed Forces.

0612. In contrast to many other professions, we cannot fulfil our tasks in isolation – our efforts only make sense when we work together. This means that values and attitudes which strengthen our cohesion, such as *comradeship*, *loyalty* and *self-sacrifice*, are of vital importance, and that those values and attitudes that weaken our cohesion are unacceptable.

“... the military virtues – fortitude, endurance, loyalty, courage, and so on – these are good qualities in any collection of men, and enrich the society in which they’re prominent. But in the military society, they are functional necessities, which is something quite, quite different. I mean, a man can be false, fleeting, perjured, in every way corrupt, and be a brilliant mathematician, or one of the world’s greatest painters. But there’s one thing he can’t be, and that is a good soldier, sailor, or airman.”

General Sir John W. Hackett

0613. It is central to our professional identity that we should use all justifiable means to fulfil the tasks assigned to the Armed Forces. The stress of combat can

be extreme. In our profession the will to succeed, and to strive to achieve results that exceed what might be expected, will make the difference between success and failure.

0614. Of fundamental importance to our profession is the judgement of the individual, and our trust both in our own and in each others' judgement. Today's complex operations can never be fully covered by manuals and rules of engagement. Our ability to fulfil our tasks depends rather on individuals whose judgement is well developed and mature. The Armed Forces recruit individuals with good psychological characteristics and their judgement capabilities are further developed through education, training and experience. It is the responsibility of a commander to develop these personal qualities and to ensure that tasks assigned are matched to the degree of maturity of the individual concerned. Trust in each others' judgement is also of fundamental importance to the philosophy of *mission command*.

0615. The military profession is alone in that its members can order others, and themselves be ordered, into harms way. This means that our profession makes extreme demands on discipline and requires a highly developed moral and ethical code. The ethical basis of the Armed Forces is set out in *Core Values of the Norwegian Defence (Forsvarets verdigrunnlag)*, but to anchor it firmly in the psyche requires extensive education, training, experience and reflection. Developing the ethical basis of a unit is a commander's responsibility, but how to act is the personal responsibility of each individual.

0616. The Armed Forces is a value-driven organisation: We defend values and we are governed by values. Our shared values help us to withstand stress and strain and serve as a guide in complex situations. The Armed Forces represent, and consist of, individuals from all walks of life in Norwegian society. That means that values that are central to our society, such as the *equality of the individual* and *belief in democratic principles*, are also central to the Armed Forces.

0617. The Armed Forces' core values, *respect*, *responsibility* and *courage*, are given deeper consideration in the *Core Values of the Norwegian Defence* and they also form the core of our ethical principles. Our core values mean that:

- We must show *respect* for the society we represent, for each other, for the actors we meet in the course of operations and for the traditions and reputation of our profession.
- We must show *responsibility* for doing our best to develop the Armed Forces' ability to fulfil the tasks entrusted to us by society, responsibility towards each other, and responsibility for our actions.
- We must show *courage* when it comes to fulfilling our tasks, taking difficult decisions, and taking a stand when our conscience tells us that it is necessary.

Military leadership

0618. All who wear uniform are covered by the requirement to identify himself or herself with the military profession and to act in accordance with the profession's values and attitudes. This requirement, however, applies even more strongly to those who lead. It is the *leaders* who, through their values and actions, inspire everyone else to live up to the Armed Forces' ideals.

0619. Leadership involves influencing individuals and groups to work towards common goals. This is done by giving them purpose, resources, the necessary direction and motivation while at the same time developing the organisation. Credible leadership involves *values, knowledge* and *skills*, and is exercised through *actions*. What it takes to be a leader in the military profession can be summed up in the words *to be – to know – to act*.

0620. *Being* an officer, whether commissioned or non-commissioned, in the Armed Forces means having the military profession engrained as part of one's personality and exercising leadership in one's actions based on the values described earlier in this chapter. Example is everything: credible leadership can only be achieved if the leader shows by his or her own conduct the values that he or she stands for.

0621. *Knowledge* of interpersonal relations, social conditions, military theory, history, technology, tactics, procedures and regulations are examples of what a military leader must possess in order to exercise effective leadership today. In this context, knowledge does not mean that a leader has to be an expert in all these fields, but simply that good leadership is firmly built on theoretical foundations which themselves are the subject of continuous professional development.



0622. A military leader exercises leadership through *action*. Leaders in our profession have drive and initiative. Drive and initiative means seeing possibilities, taking responsibility and showing initiative. This quality is also exhibited by inspiring others, taking care of subordinate personnel and by an ability to work with others to find good solutions.

Mission command – our command philosophy

0623. The fundamental command philosophy of the Armed Forces is mission command. This means that commanders at different levels give direction by stating what is to be achieved and why it is to be achieved. Within this framework, subordinates are basically then given freedom to fulfil the task as they think best. This philosophy is chosen for the reason that it allows room for *initiative* to be exercised at all levels. Because its effect is inclusive and stimulates participation at all levels in the organisation, it also provides the greatest *robustness* against the frictions of combat. Mission command is a philosophy which goes beyond the assignment of tasks and the allocation of resources. The philosophy is about having a culture of professionalism and mutual trust as described earlier in this chapter.

0624. The Armed Forces can develop a pervasive culture for mission command by:

- decentralising authority as far as is possible and sensible,
- all commanders allocating to their subordinates those resources that they require to fulfil their tasks,
- allowing subordinates as far as possible to decide for themselves how best to carry out their tasks,
- attaching importance to ongoing training in taking responsibility and developing powers of judgement.

0625. The Armed Forces' fundamental philosophy does not impair a military commander's right to exercise direct command when this is considered to give the best results, for example when time is of the essence or because the commander has the best situational awareness. The Armed Forces strive for a degree of flexibility that requires us to master both forms of command, even though decentralised command is the basis of our philosophy.

Armed Forces' responsibility for our personnel

0626. This concluding chapter has shown that the Armed Forces make great demands on our personnel. This means that the Armed Forces also have an absolute responsibility to take care of our personnel, a responsibility incumbent on commanders at all levels. The Armed Forces have a particular responsibility to prepare the individual by giving him or her both the competence and the equipment needed for any operations, to provide a career pattern which can be combined with family life, to support the family as well as possible when a close family member is out on operational duty, and to take proper care of personnel in the aftermath of an operation.

APPENDIX A: CENTRAL CONCEPTS

Appendix A explains concepts which are often used in the Armed Forces and in the ongoing defence debate, as well as how they are used in this doctrine. The use of concepts in this doctrine accords as far as possible with the NATO definitions in AAP-6. In some cases, however, the national – or international – interpretation of the content of the concepts has developed since AAP-6 was written and in such cases the doctrine’s use of the concept will reflect this development.

Action

That activity and those means, civil and military, lethal and non-lethal, which are used to bring about an effect on the adversary or other actors – see also *result* and *effect*. (0445).

Air Power

Air Power is the military use of systems which operate in or pass through the airspace. This includes surface-to-air weapons, manned and unmanned aircraft, satellites and space platforms which provide support for military operations. (0546 Text Box).

Armed Conflict

A violent clash between states or between groups in society, associated with mutual differences in interests, ideas, feelings, resources or territories, for the purpose of disturbing the equilibrium between the parties. In terms of international law, a distinction is not drawn between peace, crisis and war, but is drawn rather between peace and armed conflict. In the context of international law the concept of armed conflict applies when one party resorts to armed force against another – see also *war*. (0221 Text Box).

Asymmetry and asymmetric warfare

A state of dissimilarity or imbalance between two or more actors. Asymmetry can entail differences in a number of areas including, for example, capabilities, technology, structure, organisation and methods. Asymmetric warfare can denote a form of warfare in which one party makes use of the weaknesses of an otherwise superior adversary, often through the use of untraditional methods or means.

Attrition Method

One of three methods in the *Armed Forces’ Operational Foundation* (the *manoeuvre*, *attrition* and *stabilization methods*). The method is mainly directed against an adversary’s capability and describes two principles. The first principle is *low intense* and means inflicting successive losses on the adversary over a lengthy period so that he gradually realises that the cost of continuing the combat will be too high.

The second principle is *high intense* and means to make use of numerical or technological superiority to overcome the adversary. (0331 ff).

Basic Functions

Basic Functions are functions which are necessary if a military system is to function, irrespective of the type of operation. The Basic Functions are *command and control* (for direction and coordination), *means of action* (to strike the adversary), *mobility* (to be able to move), *protection* (to ensure the safety of own forces), *intelligence* (to create a picture of what is happening) and *logistics* (for endurance and transport). (0416 ff, 0428).

Campaign

A campaign is a series of military operations designed to achieve strategic objectives within a given time and in a given geographical area. (0502 ff).

Centre of Gravity (CoG)

That which gives an actor the overall power and strength that is essential to his ability to achieve his own objectives or to prevent others from achieving theirs. The centre of gravity is normally formulated as a substantive. (Appendix C).

Civil-Military Cooperation (CIMIC)

CIMIC is the coordination and cooperation between the military forces and civil actors in support of the mission. The civil actors include local populations, local authorities, national and international organisations and agencies. The trend within NATO when carrying out operations is that increasing importance is attached to CIMIC and that CIMIC is conducted with a view to closer integration between military and civil activities and the adoption of common long-term aims. (05113 ff).

Cognitive

Cognitive denotes intellectual functions such as perception, thinking and memory.

Combat Capability/Combat Capability Model

Combat capability depends on *conceptual factors*, *moral factors* and *physical factors*. Together these factors make up the combat capability model. The *Armed Forces' Operational Foundation* has been developed with a view to developing, utilising and protecting one's own capabilities in these three areas, but also with a view to influencing the capability of the adversary in these same areas. (0404 ff).

Combined Actions

The principle that a combination of different systems (lethal and non-lethal) and functions brings the benefits of synergy. Joint operations are built on this principle. (0414 ff).

Command and Control

Command and control is one of the basic functions and is fundamental to the planning and execution of operations. It consists of the organisation, the processes, the procedures and the systems that ensure that military commanders are in a position to command and control their forces. (0574 ff).

Command and Control System

The integrated system comprising doctrine, procedures, organisation, personnel, equipment, installations and communications which give authorities at all levels sufficient data at the right time to allow them to plan, command and control their activities. (0585 ff).

Concept of Operations (CONOPS)

A brief and clear exposition of how a military commander has envisaged carrying out his mission.

Crisis

A national crisis is an unforeseen event which puts national resources to the test. Examples of such situations range from unpredictable events such as natural or environmental disasters, through mass movements of refugees, major accidents and pandemics to deliberate acts in the form of episodes in Norwegian sea areas, terrorist action against the population, industry or the infrastructure of society, up to and including armed attack at levels below that of open war. In a *security policy context*, a crisis is a conflict with tensions at a high level. This will be characterised by a surprise event, or a gradual escalation on the part of an actor, which is seen as being threatening to the extent that there appears to be a limited time in which to take decisions and react, and where there is a fear that an inadequate response, or a lack of action, could have catastrophic consequences. (0213 ff).

Culmination Point

An expression for a qualitative turning point at which an upward going curve (progress) suddenly begins to flatten out or turn downwards (regression). Usually used to denote the point in time at which an operation loses its momentum or forward thrust.

Decision Cycle

The Decision Cycle consists of four elements which together form a continuous process: *observation, orientation, decision* and *action*. The ability to complete this process more rapidly than the adversary is in many cases of decisive importance in achieving success in a conflict. (0428 ff, Figure 4.4).

Decisive Effects, DE

Decisive Effects are used in the planning of effects-based operations. The concept describes decisive effects, most often a change in the behaviour of the adversary, or that of other actors, which must be brought about in order to achieve the desired end state. (0448).

Decisive Points, DP

Used in the planning of operations. AAP-6 defines a Decisive Point as a point from which a hostile or friendly centre of gravity can be threatened. This point may exist in all domains, i.e. the physical, social, information and the cognitive domains. Today the concept is used to describe the events in which we have to be successful on the way to eliminating, destroying or neutralising the adversary's centre of gravity, something which can be compared to the milestones in a project plan. Decisive Points are identified by means of *structural analysis* and are determined mainly by considering the adversary's *critical requirements* and *critical vulnerabilities*. It is important to be selective in the choice of Decisive Points. A Decisive Point must be of *decisive significance* for the adversary's centre of gravity. (Appendix C).

Delegation

The transfer of authority from a higher level of authority to a lower. (0581).

Deterrence

A political/military strategy which is intended to convince an adversary that the costs of taking aggressive action would outweigh the potential gains.

Direct Method/Direct Approach

Direct action against the adversary's centre of gravity in order to affect his capability. This often means confronting the strength of an adversary's forces and overpowering them to the point when they cannot continue to fight – see also the *indirect method / indirect approach*.

Domain Model

The Domain Model describes the different dimensions in which war can be waged and the interaction between them. The model has been developed primarily to describe the significance of information. The Norwegian *Armed Forces' Operational Foundation* has been developed with a view to combat in all the domains – physical, social, information and cognitive. (0408 ff, 0457, Figures 4.2 and 5.1).

Effect

Result or change, often in the form of changed behaviour on the part of the adversary or other actors. A *direct effect* is the result in the short term – a direct result of the action taken. An *indirect effect* is the result in the longer term. A distinction is drawn between *desired* and *undesired effects*. (0442 ff).

Effects based approach

One of the three approaches which together form the *Armed Forces' Operational Foundation* (*effects based approach, network-based approach, manoeuvrist approach*). The effects based approach is to see own operations in a wider context in which own actions have to harmonise with civil and other military actions, and in which focus is maintained on which effects must to be brought about in the adversary or other actors in order to achieve the political and strategic objectives. It is also about analysing oneself, the adversary and other actors as complex systems in which there are many mutually interacting factors and, through so doing, being able to coordinate and integrate all the means that can affect these systems, with a view to bringing about effects in the whole, or parts of, the system. Ultimately it is about concentrating on the effects that it is desired to achieve, and not about *actions* and *results* in themselves. (0306 ff, 0434 ff).

End State

A description of the political and or military situation that is desired when an operation has been completed.

Escalation

Escalation means raising the level of a conflict. This can take place either horizontally, for example through a geographical widening of the conflict, or vertically, for example through the increased use of force in terms of weapons and/or methods.

Flexibility

Flexibility is the mental and physical ability of units/sections to switch between different approaches and operational methods in response to changing circumstances. The *Armed Forces' Operational Foundation* is based on a general flexibility with regard to thinking and ideas and it further elaborates flexibility in relation to four areas: *decision level, organisation, conduct* and *operational method*. (0315 ff).

Force production

Those processes and activities which contribute to the production of forces that are ready for action and which include education and exercising, personnel administration, the development of tactics, the organisation of forces and the acquisition of materiel. The force producer is responsible for recruiting, education, training and activity management.

Force Projection

The presence of military forces, most often in a deterrent role.

Friction

Friction corresponds to the factors that distinguish an operation as planned on paper from the operation as it turns out in reality. There are three fundamental forms of friction: that which exists or arises in one's own organisation, that which is created in an encounter with an adversary, and that which arises due to circumstances.

Indirect Method/Indirect Approach

An operation which seeks to avoid confrontation with the adversary's main combat forces. The indirect method has both an abstract and a concrete dimension. The concrete dimension is about avoiding the adversary's physical forces and at the same time attacking his weaknesses. The abstract dimension is about avoiding the adversary's strong sides in the broadest sense while at the same time exploiting his weaker sides – see also *direct method / direct approach*. (0425).

Information Operations

Information Operations are coordinated activities intended to influence other parties' decision-makers, or third parties, in support of own objectives. The operations are designed to influence other parties' information, information-based processes and systems, while at the same time making use of and protecting own information, information-based processes and systems. (0592 ff).

Integrated Missions

This is a concept used by UN and the EU and it denotes operations in which both civil and military means must be coordinated. The UN lists the purposes of such operations as being the re-establishment of law and order, protection of the civil population and laying the foundations for positive development in the longer term. Such a unified view of conflict management falls within the scope of the *effects based approach* in the *Armed Forces' Operational Foundation*. (0235 ff).

Intelligence

One of the Basic Functions. Intelligence is intended to contribute to the best possible knowledge of the parties in the operational area and of the area itself. The concept of intelligence is a wide one which covers *product, process* and *activity*. The term is used to describe the product which is the result of the processing of information and data about other nations, hostile or potentially hostile forces or other actors, or about areas for actual or potential operations. The term is also used to denote the information processing itself and as a description of the whole activity itself and the organisations concerned in this activity. (05126 ff).

Intent

The intent expresses the commander's overall vision of *how* a mission is to be accomplished and it includes *why* the operation is being carried out (the purpose),

what is to be achieved (the objectives) and *what* the desired end state is. This should be formulated as clearly as possible. (0579).

International Law

International law is the law which governs relations between states and other international legal entities. (0241 ff).

Interoperability

Interoperability is the ability to operate effectively together, for example between different service branches of the Armed Forces, with the military forces of other countries or with relevant parts of the civil sector.

Irregular forces

Irregular forces can cover a spectrum ranging from *well-organised insurgencies, local warlords and their followers* to *criminal groups*. A common feature of irregular forces is that they want power and influence in the conflict area. Irregular forces are seldom in uniform and are therefore difficult to distinguish from the local inhabitants. Their organisation is often based on a cell structure and a network with decentralised leadership. They like to use elements of the local infrastructure such as mobile phones and the Internet for communication. They often employ unconventional methods and can pose a serious threat to a stabilization force. (0228 ff, 0268 ff).

ISTAR

Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) is a NATO concept which is intended to contribute to the linking of intelligence, surveillance, target acquisition and reconnaissance with the combat units so as to gain access to critical combat intelligence or target information at the time it is needed. (05133 Text Box).

Joint Force Commander, JFC

The commander who has the authority to exercise operational command or operational control of a joint force.

Joint operation area, JOA

That area of land, sea and air which is defined at a strategic level and in which a joint commander plans and executes military operations in order to carry out a clearly defined mission.

Joint operations

Operations in which contributions from several service branches are integrated and coordinated in order to realise the benefits of synergy at strategic, operational or tactical level, often within a multinational framework and usually in close cooperation with civil resources and agencies. (0505 ff).

Land Power

Military forces whose primary task is to engage in or support the land battle. This includes the Home Guard.

Lines of Operations

A concept employed in the shaping of operations. Originally the term was used for movements in the physical domain: To operate on *inner lines* means manoeuvring with one's forces in the centre to keep the adversary split. To operate on *outer lines* means manoeuvring with one's forces round the adversary, who then occupies the central position, and attacking this adversary with coordinated actions. Today the term is primarily used to denote the *abstract lines* which form connections in time and space between *decisive points* with the *centre of gravity* of an *operational plan*.

Logistics

Logistics is a Basic Function which spans the planning and execution of the movement, support and maintenance of military forces. Logistics covers the acquisition and provision of services, materiel and supplies in support of military operations. (05141 ff).

Management

The process which is carried out in order to steer an activity towards given objectives. This encompasses planning, execution and follow-up. Management of the day-to-day running of the Armed Forces is known as *direction (ledelse)* and the leading of military operations is known as *command and control*. In both cases it is of vital importance that the leader has the ability to inspire and control her or his colleagues and subordinates in pursuing the common objectives. This is called *leadership*.

Manoeuvre Method

One of three methods in the *Armed Forces' Operational Foundation* (the *manoeuvre method*, *attrition method* and *stabilization method*). The manoeuvre method describes a set of techniques designed to influence the adversary's cohesion and will to continue the combat: *surprise*, *initiative*, *the indirect method*, *tempo* and *mission command*. The ultimate purpose is to bring about the adversary's physical and psychological collapse. (0327 ff, 0419 ff).

Manoeuvrist Approach

One of three approaches which together forms the *Armed Forces' Operational Foundation* (*effects based approach*, *network-based approach*, *manoeuvrist approach*). The manoeuvrist approach is to comprehend the psychological aspect of combat and acknowledge combat as a battle of wills characterised by uncertainty and chaos. By training and exercising to master these factors better than one's

adversary, these challenges can actually be turned to our own advantage. The manoeuvrist approach is to strive to take the initiative and, through analysis, to see *where* the means of action should be brought to bear in order to achieve the greatest possible effect on the adversary – with the least possible use of own resources. The manoeuvrist approach can be used at all levels and entails confidence that, through the application of the right means at the right time and with the initiative retained and constant pressure on the adversary maintained, it is possible for a smaller force to overcome a larger one (0312 ff, 0418 ff).

Means of Action

One of the basic functions. The term describes all the actions using lethal and non-lethal means by which an effect on the adversary is achieved. This basic function was formerly termed *firepower*. The concept of means of action serves to emphasise the fact that the Norwegian Armed Forces develops and makes use of means other than pure firepower in order to achieve desired effects. The Armed Forces' most important means remains firepower, which can be used both directly in combat or as means for deterrence.

Lethal means include conventional weapon systems such as small arms, artillery, missiles and mines. Also among the lethal means are such non-conventional weapons as nuclear, chemical, biological and radiation weapons with lethal effects. Non-conventional weapons are not developed or used by the Norwegian Armed Forces although importance is attached to the development of a protection capability against such weapons.

Non-lethal means include all means that in themselves are not lethal. These range from baton rounds and non-lethal ammunition used in riot control, for example, through weapons based on directed sound or non-lethal radiation, to means of conducting information operations including psychological operations (PSYOPS) and electronic warfare.

Mission Command

The fundamental command philosophy of the Armed Forces in which commanders at the various levels give direction by stating what is to be achieved and why it is to be achieved. Within this framework, subordinates are basically then given freedom to fulfil the task as they think best. Mission command is dependent on a culture which is characterised by a well-developed professionalism in which there is mutual trust between commander and subordinate and where all master their respective tasks and there is a willingness to take responsibility at all levels. (0623 ff).

Mobility

One of the Basic Functions. The capability of military forces or platforms that enables them to move from place to place while retaining the ability to fulfil their primary mission. Mobility is a quality or capability possessed by a military force.

Strategic mobility is the ability to move between different operational areas, often over long distances, sometimes even between continents. A platform with good strategic mobility has a large operating range. For a unit, good strategic mobility means essentially that it can be loaded on board an aircraft or ship. For a state, or an organisation such as NATO, strategic mobility means possessing this total capability in the relevant forces and transport resources.

Operational mobility is the ability to move within an operational area by means of one's own platforms or other transport resources. Good operational mobility for a platform or unit depends on its ability to move itself rapidly within an operational area. Combat aircraft, warships and airborne units are examples of units with good operational mobility.

Tactical mobility is the ability to move within a tactical operational area. Good tactical mobility means that a platform or unit can itself move within its operational environment, given the nature of the terrain and the relevant need for protection.

The requirement for good mobility differs, and may often be contradictory, between the various levels. In force generation and the composition of units, the priority to be given to the different forms of mobility can involve difficult decisions.

Network-Based Approach

One of three approaches which together forms the *Armed Forces' Operational Foundation* (*effects based approach, network-based approach, manoeuvrist approach*). The network-based approach means organising one's resources as effectively as possible in order to achieve the highest degree of system integration, situation awareness and understanding of the commander's intent, and it covers the development of personnel, organisation and technology. (0309 ff).

Non-lethal Weapons

Weapons which can put personnel or systems out of action for shorter or longer periods of time without killing. It is important to be clear, however, that many weapons which are non-lethal in themselves can have lethal effects if used incorrectly. (See Means of Action).

Operation

A military operation is a series of combat activities, movements and other actions which are intended to achieve an overall aim. An operation can be carried out both with and without armed action. An operation can be carried out to achieve a strategic objective or it can form part of a series of operations. Such a series is called a *campaign*. (0502 ff).

Operational Activity

Operational activity covers planning and management of military operations in times of peace, crisis and armed conflict. This includes the supervision of preparations for mobilisation and the planning and management of exercises in cooperation with those who are responsible for force production.

Operational Art

Operational art is a military commander's use of the means at his disposal to achieve the desired effects and achieve the overall objectives. The operational art is referred to as an "art" because it entails linking together and realising, often abstract, strategic aims, by means of physical activities. The term "art" is used because it is about managing combat in a range of different temporal and spatial dimensions in the physical, social, information and cognitive domains where there are few quantifiable values or set answers. Operational art is also the art of the possible, that is to say making use of the resources that one actually has in order to achieve the best possible result. (0510 ff).

Peace Support Operations

Peace support operations relate to the management of crises and armed conflict situations in accordance with Chapters VI and VII of the UN Charter. The UN and NATO use the following categorisation of peace support operations: *Preventive diplomacy, peacekeeping, peace building, peacemaking and peace enforcement*. (0225 Text box).

Protection

One of the Basic Functions. This encompasses the measures that are intended to safeguard and protect the combat capability of own forces and units so that these can be used when and where necessary. The ability to protect is dependent on *moral, conceptual* and *physical* factors (see *combat capability*). On a moral plane there is the importance of leadership which creates cohesion and motivation so that the units develop robustness in the face of action by the adversary. On a conceptual plane, a common understanding of operational methods, a high standard of training and common procedures will all contribute to increased robustness. On a physical plane, protection can be divided into preventive and consequence-reducing measures. Preventive measures cover actions to reduce the chance of detection and resultant action. If own forces are nevertheless detec-

ted and attacked, consequence-reducing measures are implemented to reduce the consequential effects.

Result

The objective result of an action, part of the conceptual chain: *action, result and effect*. (0445).

Sea Power

Sea power is the ability to control the sea and its resources, the ability to pursue and defend one's interests at sea and the ability to influence events on land from seaward.

Security Policy Means

The means by which a state can safeguard its national interests include, for example, quiet diplomacy, military and economic assistance, information, international law and international organisations, trade policy, economic sanctions and military power. The acronym *DIME* (Diplomatic, Information, Military and Economic) is used internationally.

Situation Awareness

The term situation awareness describes the condition in which a person is both aware of and understands a situation. Situation awareness includes the ability and the possibility of appreciating the situation, understanding it, making use of it and possibly predicting its future development. (0462 Text Box).

Sovereignty

The right of self-rule within given borders. This includes the right to govern internally and freedom of action in dealing with other states. It also covers sovereign rights, sanctioned under international law, in areas outside the boundaries of a nation's territory, airspace and territorial waters.

Special Operations

Military activities conducted by specially designated, organised, trained and equipped forces using operational techniques and modes of employment not standard to conventional forces. These operations can be carried out in peacetime, in times of crisis and in armed conflict independently of, or coordinated with, conventional forces in order to achieve military, political, economic or psychological objectives. (0555 ff).

Stabilization Operation

A stabilization operation is intended to lower the level of conflict between two or more parties in order to preserve or re-establish peace. Such an operation is often concerned with ensuring that existing agreements are observed and with

the creation of a secure environment for non-military activities. This can involve surveillance and policing tasks as described in the section on the stabilizing method. (0226 ff).

Stabilizing Method

One of three methods in the *Armed Forces' Operational Foundation* (the *manoeuvre, attrition* and *stabilization methods*). The method is used, for example, where the Armed Forces' task is to lower the level of conflict between two or more parties, and it embraces the principles of *impartiality, transparency, restraint in the use of force, built-in robustness* and the *ability to deter*, as well as *freedom of movement* and *area control*. (0340 ff).

Strategy

The word strategy comes from the Greek *stratos* (army) and *agein* (to lead). *Strategos* remains today the Greek word for general. The concept is thus military in origin although it is now used more generally. At the national strategic level it refers to the use of all the state's means, civil as well as military, in order to achieve political objectives. *Strategy* can be summarised as the determination of *what* the aims are to be, with *which* means they can be achieved, and *how* these means can be used to achieve them. A strategy must be dynamic and must allow for the existence of other relevant actors.

Structural Analysis

A tool in the planning and decision-making process with which to identify strengths, weaknesses and critical vulnerabilities in all relevant actors, including one's own. Within NATO a structural analysis tool developed by Dr Joseph Strange, (US Marine Corps), is often used. This method is a tool for the analysis of what the various actors' *centres of gravity* are, and for deconstructing these centres of gravity so that their critical vulnerabilities can be identified. (Appendix C).

War

The organised use of armed force, first and foremost between states but also between groups of people within a state or a territory. The concept can have different meanings depending on the context and who is using it – see also *armed conflict* which is the concept of war as defined under international law. (0221 Text Box).

APPENDIX B: COMMAND AND CONTROL CONCEPTS

B1. Command and Control concepts describe the authority that a commander has over the forces that he or she has at his or her disposal for the accomplishment of the mission concerned. Definitions of command concepts often differ from one nation to another and from organisation to organisation. In addition, the command and control concepts will often be constrained by national reservations or restrictions, so-called *caveats*. It is necessary, therefore, that commanders and staffs should be familiar with what different organisations and cooperating nations subscribe to the different concepts, both in general terms and for each operation in particular. This Appendix contains explanations of some of the central Command and Control concepts used in NATO. The Norwegian Armed Forces' approach to the same concepts is also described.

COMMAND

Full Command

B2. Full command is the military authority and responsibility of a commander to issue orders to subordinates. It covers every aspect of military operations and administration and exists only within national services. When members of the Alliance assign forces to NATO, nations will delegate only operational command or operational control. As a consequence of this, no NATO commander will exercise full command over assigned forces.

B3. National use of full command entails authority for a commander to direct military activities within that commander's area of authority, including administration and logistics, unless otherwise stated. The concept is used in connection with command of an organisational unit, for example a brigade, an air squadron or a group of warships. Every commander in principle exercises full command over subordinate commanders in the same unit/formation, including their subordinate personnel, provided that operational command has not been excepted or delegated.

Operational Command (OPCOM)

B4. Operational command is the authority delegated to a commander to assign missions or tasks to subordinate commanders, to deploy units, to reassign forces, and to retain or delegate operational and/or tactical control as may be deemed necessary. Operational command does not automatically include responsibility for administration. Nationally, operational command entails authority to delegate operational control, tactical command and/or tactical control.

Tactical Command (TACOM)

B5. Tactical command is the authority delegated to a commander to assign tasks to forces under his or her command in order to accomplish missions assigned to him or her by higher authority. National tactical command means that a commander who has this authority can divide up the force subject to approval by higher authority. Tactical command does not include authority for administration or logistics unless this is specifically stated. A commander who has tactical command may delegate tactical control subject to approval by higher authority.

CONTROL

Operational Control (OPCON)

B6. Operational control is the authority delegated to a commander to direct assigned forces so that the commander may accomplish specific missions or tasks which are usually limited by function, time, or location. This means authority to deploy units and to retain or delegate control of those units. Operational control does not entail authority to divide up assigned units, nor does it, of itself, include administrative or logistic control. Nationally, operational control entails authority to delegate operational control, tactical command and/or tactical control. A commander with this authority can give both missions and tasks to assigned forces within his or her own mission and area of responsibility.

B7. Operational control entails a limited access to the use of assigned forces. As a part of the transfer of command for the force in question, it must be made clear which limitations apply. The commander who has operational control may delegate tactical control. The limitations imposed when delegating operational control to the operational level must follow the force if this level chooses to delegate the authority further.

Tactical Control (TACON)

B8. Tactical control is the detailed and usually local direction and control which is necessary in carrying out assigned missions or tasks. Nationally, tactical control entails a temporary and limited authority in connection with the accomplishment of a definite task.

Administrative Control

B9. Administrative control entails exercising authority over subordinate or other organisations (or other activities) in areas such as personnel administration, finance, logistics and other areas not included in the operational missions of subordinate or other relevant units.

Coordinating Authority

B10. Coordinating authority is the authority granted to a commander or individual assigned responsibility for coordinating specific functions or tasks involving for-

ces of two or more countries or commands, or two or more services or two or more forces of the same service. This means the authority to require consultation between the agencies involved, or their representatives, but does not automatically mean the authority to compel agreement. In case of disagreement between the agencies involved, attempts should be made to obtain essential agreement by discussion. In the event that essential agreement is not to be obtained this should be referred to to the appropriate authority.

OTHER COMMAND AND CONTROL RELATED CONCEPTS

Chain of command

B11. The chain of command is the chain (succession) of commanders from superior to subordinate through which command is exercised. There are three principal types of chain of command which can be defined depending on the area of responsibility concerned:

- *Chain of Command* in which *full command* is exercised. Full command covers all operational and administrative military activity.
- *Operational Chain of Command* is a chain of command established for a particular operation or series of successive operations. The degree of authority is graded in more detail as *operational command*, *operational control*, *tactical command* and *tactical control*. These concepts define the authority that a commander has in relation to subordinate links rather than the extent of the commander's responsibility to his or her superior.
- *Administrative Chain of Command*. This covers the management and execution of all military matters not included in tactics and strategy, primarily in the fields of logistics and personnel management.

Superior – Subordinate

B12. Normally a person holding a higher rank than another person is that person's superior.

Superior

B13. A person who is entitled to issue an order which is to be obeyed by another person (the subordinate) is that person's superior. In this context there is a command relationship between superior and subordinate.

Subordinate

B14. Denotes that a unit or person is placed under the relatively permanent command of another, and/or where a unit or person has been given their primary organisational attachment.

Attached

B15. Denotes that a unit or person is placed under the temporary command of another, and/or where a unit or person has been given a secondary organisational attachment. Subject to the limitations contained in the attachment order, the receiving commander will exercise the same command authority over an attached formation as over a subordinate formation. However, the responsibility for the assigning and promoting of personnel will normally remain with the parent organisation.

Best Suited Commander

B16. The commander who, by virtue of qualifications, equipment, location, situation awareness or other possible considerations, is best suited to prepare and execute an operation. This may be at either tactical or operational level.

Support

B17. The action of a force, or part thereof, which aids, protects, or complements other forces.

Supported Commander

B18. The commander having primary responsibility for all aspects of a task or mission assigned by a higher authority and who receives forces or other support from one or more supporting commanders. He or she is responsible for overall planning, including the objectives/effects for the support and the incorporation of the support from others into the plan. The superior commander is responsible for limiting the support in terms of extent, time, location, duration and the priority of that support mission in relation to the supporting commander's other missions.

Supporting Commander

B19. The commander who provides a supported commander with forces or other support. He or she develops a supporting plan as necessary within the framework of the guidelines or mission received from his or her superior, and of the overall plan developed by the supported commander. The supporting commander must ensure that the supported commander is at all times kept updated as to which capabilities are available.

B20. The concepts of "supported" and "supporting" commanders are linked to a NATO concept for *Supported-Supporting Interrelationship (SSI)*. SSI is not a command relationship in itself but applies to preparations for mutual reinforcement, flexible coordination and force concentration in the different phases of an operation or campaign. The concept is normally used between, and possibly within, regional command links irrespective of level. The SSI concept prepares the way for prioritisation between units between which there is no command or control

authority. The supported and supporting commanders are appointed by their respective superiors in order to describe the interrelationship between these commanders. These commanders will often be at the same level in the chain of command. There can be several supporting commanders but only one supported commander.

B21. It will also be possible to use the concept during national operations, for example in collaboration between Home Guard district commanders and the commander of an army formation. It should be possible to resolve the question of supported/supporting commanders using the principle of the *best suited commander*.

Transfer of Authority (TOA)

B22. This is a measure by which a nation transfers operational command or operational control to a NATO Command, or the corresponding transfer from one NATO Command to another. Such a process is also employed when Norway assigns forces to coalition operations or to the UN. Nationally, the concept of Transfer of Command is used. This includes the transfer of both command and control.

APPENDIX C: STRUCTURAL ANALYSIS

If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle.

Sun Tzu

C1. Structural analysis forms part of the planning and decision process as a tool for the identification of strengths, weaknesses and critical vulnerabilities in all relevant actors including ourselves.

C2. Within NATO use is often made of a method of structural analysis developed by Dr Joseph Strange (US Marine Corps). The method takes as its point of departure the actors' objectives and what capabilities and characteristics they possess that may eventually enable them to achieve their objectives. The method is a tool for analysing what constitutes the various actors' *centres of gravity* and for deconstructing these centres of gravity so that their strengths and weaknesses can be identified. Structural analysis has a significant role to play in the shaping of operations because it contributes to the process of defining the decisive points (DP) on which the concept of the operation itself will be built up.

The sequence of events in a structural analysis

C3. A structural analysis is performed in the following sequence:

- identification of the actors' *objectives* and *desired end state*,
- identification of the actors' *critical capabilities*, i.e. those capabilities and characteristics that are essential to the achievement of their objectives,
- identification of *centres of gravity*, i.e. who or what is in possession of these capabilities and characteristics,
- identification of *critical requirements*, i.e. what each individual critical capability and characteristic is dependent on in order to be able to function,
- identification of *critical vulnerabilities*, i.e. what deficiencies or weaknesses would lead to a decisive loss of critical capabilities and characteristics.

Centre of Gravity (CoG)

C4. The centre of gravity is defined in NATO as those capabilities, characteristics, or localities from which a nation, an alliance, a military force or other grouping derives its freedom of action, physical strength or will to fight. This definition is somewhat imprecise and difficult to use in practice since it states that a centre

of gravity can be either a capability, a characteristic or a locality. Experience in recent years, moreover, has shown that certain individuals (for example Saddam Hussein) and certain military formations (for example the Republican Guard in Iraq) can be centres of gravity in that they possess precisely those capabilities and characteristics which are of decisive importance to the achievement of the aim.

C5. Joseph Strange and others have elaborated on the concept of a centre of gravity by pointing out that it can be understood as *the principal source of the ability to achieve one's own objectives*. Such an understanding contributes to making the centre of gravity more usable in that it is situation dependent and associated with the achievement of objectives. This leads to the following definition:

C6. The centre of gravity is that which gives an actor the overall power and strength that is essential to his ability to achieve his own objectives or to prevent others from achieving theirs. The centre of gravity is normally formulated as a substantive.

The dynamic character of the centre of gravity

C7. The fact that the actors in a conflict have different objectives normally means that they will also have different centres of gravity, each of which will require a specific effect. The traditional understanding, which is essentially that the centre of gravity must be neutralised or destroyed, may therefore be applicable to some actors while, with regard to other actors, it may be necessary to take the opposite approach, namely to protect or support the centre of gravity.

C8. In operations with many actors, there may be little point in identifying *one* centre of gravity per actor since that can result in a basis for analysis that is complex and difficult to handle. Keeping the need for a clear overview and a manageable number of centres of gravity in mind, it may be necessary to group the actors prior to analysis in order to arrive at what constitutes a common source of strength. In other words, to see whether there is a common denominator which is of decisive importance to the ability of the actors to achieve their objectives or to prevent others from achieving theirs.

C9. The hunt for a common source of strength can, however, often lead to the identification of centres of gravity that are more abstract than is desirable. It is then of the utmost importance to thoroughly analyse the critical capabilities in order to be able to identify critical requirements with their associated critical vulnerabilities which are then more manageable in the sense that they can be made the subject of influence or utilisation.

C10. The transition from one phase to another in a campaign, for example from *offensive operations* to *stabilization* or *reconstruction*, may entail the introduction of new or other actors with new capabilities. Such cases could result in the establishment of new centres of gravity with their associated critical requirements and vulnerabilities.

C11. Protecting, or inducing effects on centres of gravity, always calls for careful planning with regard to the achievement of effect and the use of resources. Such planning is therefore an important part of the shaping of an operation. The dynamic of today's complex conflicts, and the centre of gravity's own dynamic, makes structural analysis a continuous process. The purpose of the process is to ensure that own actions are constantly adapted in such a way that they contribute to the achievement of the desired effect.

Critical capabilities

C12. Critical capabilities are those aspects of the centre of gravity that are of *decisive importance* to the significance of that centre of gravity. Critical capabilities is thus an expression often used for the action dimension of a centre of gravity. If, for example, a military force is defined as a centre of gravity, the primary capabilities of the force could be the exercise of command and control, intelligence, logistics, protection, mobility and means of action (cf. the basic functions). Critical capabilities will thus normally be formulated as a verb (e.g. *to command and control, to supply, to protect*).

Critical requirements

C13. Critical requirements are those conditions, resources or means which are essential to the realisation of critical capabilities. The military force mentioned in the preceding paragraph will, for example, be dependent on communications systems in order to exercise command and control, access to supplies in order to take care of logistics, as well as infrastructure for mobility, such as airfields, harbours and road systems. A critical requirement will normally be formulated as a substantive (*a communications system, fuel, a bridge*).

Critical vulnerabilities

C14. Critical vulnerabilities are those *critical requirements*, or components of these, that are deficient or have weaknesses in a way that means that they are vulnerable to effects that can be achieved using modest resources, which can thus have a major effect. If the military force is defined as the centre of gravity, the capability for command and control as one of the *critical capabilities*, and the communications system as one of the *critical requirements*, the communications system or components of it (for example transmitters and receivers) can be a *critical vulnerability*. If such a critical vulnerability is neutralised, the centre of gravity will be weakened or will cease to function.

C15. A central element of the operational art is utilising ones own strengths against the critical vulnerabilities of other actors while at the same time protecting one's own vulnerabilities. Critical vulnerabilities, together with critical requirements, constitute some of the decisive points (DP) and will provide a basis for targeting.

Use of the centre of gravity concept and structural analysis

C16. The centre of gravity has often been regarded as something in the nature of a metaphysical phenomenon. The ambition to describe how own resources should be used in the most effective way possible with the aim of breaking the adversary's will to continue combat has led to a multiplicity of abstract definitions of a centre of gravity.

C17. FFOD 07 gives the following guidance for the use of the centre of gravity concept and structural analysis with the intention that it should provide a practical tool during the planning and execution of operations:

- Analysis of the centres of gravity for the various actors in a conflict is a part of the structural analysis. The analysis process itself is more important than arriving at an optimally formulated centre of gravity.
- The adversary's military centre of gravity is often his most powerful forces and weapon systems. A structural analysis finds the weaknesses and vulnerabilities of the forces and the systems and says something about how effects on these can be achieved.
- Centre of gravity analysis must be linked with our own and the adversary's objectives: *What* is the source of the adversary's strength and ability to achieve his own objectives or to prevent others achieving theirs? This question can be used at all levels – strategic, operational and tactical.
- The adversary can have one or more centres of gravity. It is important to reduce the number of centres of gravity to a few as possible. Few centres of gravity, preferably one, makes it easier to concentrate our actions. It can, however, be difficult to define one aspect as being more important than everything else in the complex systems that comprise today's actors. It may therefore be necessary to work with several centres of gravity.

C18. The adversary's systems are dynamic and will change over time for reasons which include the effects of other actors and the surroundings. The temporal dimension is therefore of central importance in structural analysis. An actor can be forced into rapid operations and to seek rapid conclusions, for example for political or logistic reasons. It may be in the interests of another actor to prolong a conflict for as long as possible without having decisive confrontations. At the operational and tactical levels, the temporal dimension is often about when an adversary can have freedom of action to induce an effect on his own adversaries. An analysis with the emphasis on the temporal dimension can make it easier to plan operations so that the advantages and disadvantages linked to time can be used to best advantage.

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