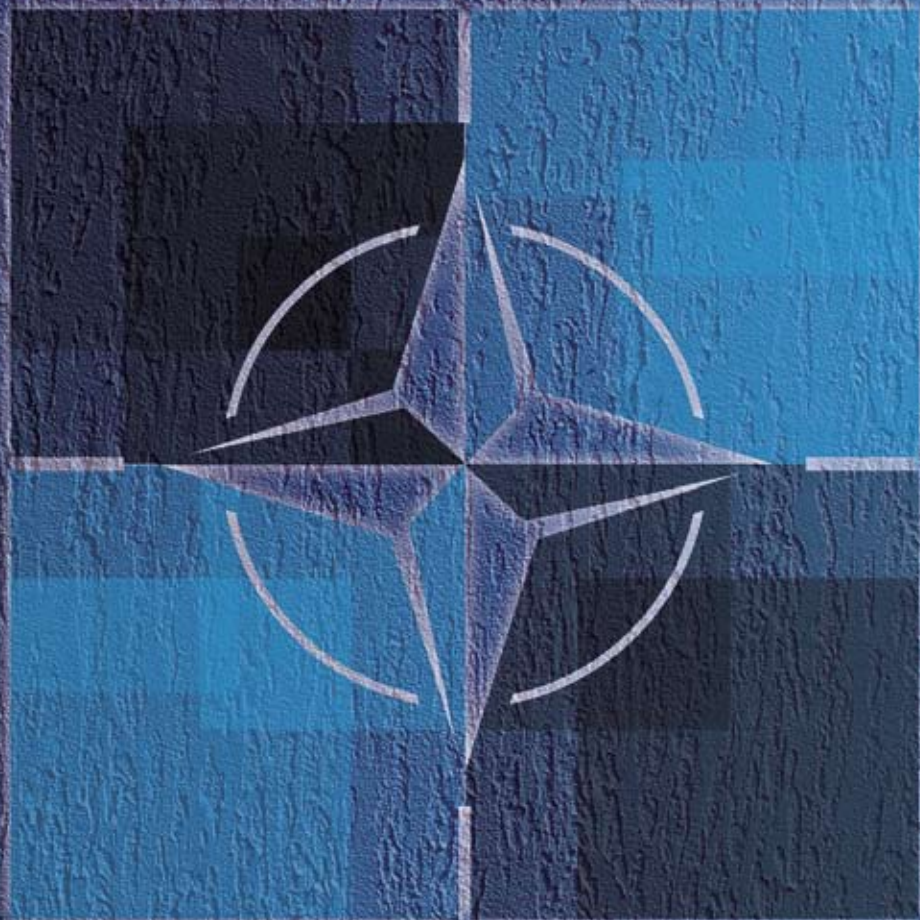




NATO Logistics Handbook

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INTRODUCTION

*“According to an old military adage
‘Amateurs talk about strategy, generals talk about logistics’.”*

- George J. Church, 1990 -

This Handbook, published under the auspices of the Senior NATO Logisticians' Conference (SNLC), is intended as a simple guide to logistics in NATO. It does not attempt to examine current issues or provide answers to the problems that logisticians will face, but it rather aims at introducing them to some of the basic principles, policies, concepts and organisations with which they will work.

This is the first update of the Handbook since 1997. Since then, NATO and the security environment in which it must operate have undergone profound changes. The logistic support concepts that are required to ensure the deployability and sustainability of NATO forces have changed as well, bearing little semblance to those extant in 1997. These new concepts have been reflected in this new edition. The Alliance is an organisation that continues to evolve to meet emerging security challenges and NATO logistic policies and concepts will need keep pace. Therefore, the continuing usefulness of the Handbook will depend on the regularity of its updating, which will be an ongoing process. If any reader has suggestions for its improvement or amendment, he is asked to forward them to the SNLC Secretariat.

The NATO Logistics Handbook is not a formally agreed document, and should not be quoted as a reference. It does not necessarily represent the official opinion or position of NATO, the nations, commands or agencies on all the policy issues discussed.

SNLC Secretariat
International Staff, Defence Policy and Planning Division, Logistics
NATO HQ, 1110 Brussels

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CHAPTER 1

FUNDAMENTALS OF NATO LOGISTICS

CHAPTER 1

FUNDAMENTALS OF NATO LOGISTICS

"I don't know what the hell this 'logistics' is ... but I want some of it!"

- Fleet Admiral Ernest J. King, 1942 -

INTRODUCTION

During the Cold War, NATO followed the principle that logistics was a national responsibility. Accordingly, its only focus at that time was the establishment of and compliance with overall logistics requirements. This principle governed NATO's plans and actions until the beginning of the 1990's, when it was understood and accepted that the strategic situation that had underpinned this principle had undergone a fundamental change.

As early as in January 1996, NATO logisticians recognised the new challenges facing the Alliance. In particular, the downsizing of military resources underscored the necessity of increased co-operation and multinationality in logistic support. These new challenges required the Alliance to be able to logistically sustain and operate in non-article 5 / Crisis Response Operations (CRO), possibly at a far distance from the supporting national logistic and industrial bases and on non NATO soil, where a supportive or functioning host nation was not existent. All of this needed to be performed under the legal conditions of peace, with no access to mobilisation and/or emergency legislation. Additionally, there was the need to integrate non-NATO military forces and their logistic support.

The Senior NATO Logisticians' Conference (SNLC), as the Alliance's senior body on logistics, then undertook to translate the Alliance's New Strategic Concept into responsive, flexible and interoperable logistic principles and policies. In this regard, it first developed a vision for NATO logistics aimed at addressing the challenge of developing collective responsibility in logistics between NATO and the nations. Such collective responsibility is attained through close co-ordination and co operation between national and NATO authorities during both planning and execution, and includes greater consideration of the efficient use of civil resources. As a result of their experiences in NATO led operations, nations have gained an appreciation of the value of a collective approach to logistic support and have lent their ardent support to the implementation of this vision.

While NATO is responsible for co-ordinating and prioritising the provision of logistic support to deployed NATO forces, each nation is responsible for ensuring, either individually or through co-operative arrangements, the provision of the logistic resources required to support its own forces. Co-ordinated logistic planning is therefore an essential aspect of the efficient and economical use of resources throughout their life cycle, from initial design to their ultimate disposal.

DEFINITIONS

Viewed from the life cycle perspective, logistics is the bridge between the deployed forces and the industrial base that produces the weapons and materiel that the forces need to accomplish their mission. NATO therefore defines logistics as:

«**Logistics:** The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, the aspects of military operations which deal with:

- design and development, acquisition, storage, transport, distribution, maintenance, evacuation and disposal of materiel¹;
- transport of personnel;
- acquisition or construction, maintenance, operation and disposition of facilities;
- acquisition or furnishing of services; and
- medical and health service support.»

This definition covers a wide range of responsibilities that include a number of different domains of work within NATO. If one considers that logistics comprises both the building up of stocks and capabilities and the sustainment of weapons and forces, then it is clear that a distinction can be made between three important aspects of logistics, spanning the life cycle of logistic resources: production, in service support and consumption. The following definitions of these aspects enjoy widespread acceptance within the NATO logistics community:

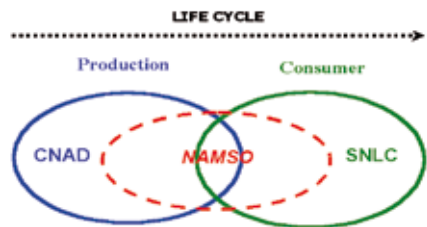
“**Production Logistics** (also known as: **acquisition logistics**): that part of logistics concerning research, design, development, manufacture and acceptance of materiel. In consequence, production logistics includes: standardisation and interoperability, contracting, quality assurance, procurement of spares, reliability and defence analysis, safety standards for equipment, specifications and production processes, trials and testing (including provision of necessary facilities), codification, equipment documentation, configuration control and modifications. At NATO Headquarters the lead authorities are the International Staff (IS) Defence Investment Division (DI) and the Armaments Branch of the Logistics and Resources Division (L&R) in the International Military Staff (IMS). The Conference of National Armaments Directors (CNAD) is the senior NATO committee that is principally responsible for the co-ordination of this aspect of logistics.”

“**In-Service Logistics:** that part of logistics that bridges production and consumer logistics and comprises those functions associated with procuring, receiving, storing, distributing and disposing of materiel that is required to maintain the equipment and supply the force. The NATO Maintenance and Supply Organisation (NAMSO) is the principal NATO organisation responsible for this area.”

1) *Materiel: equipment in its widest sense including vehicles, weapons, ammunition, fuel, etc.*

“Consumer Logistics (also known as: **operational logistics**): that part of logistics concerning reception of the initial product, storage, transport, maintenance (including repair and serviceability), operation and disposal of materiel. In consequence, consumer logistics includes stock control, provision or construction of facilities (excluding any material element and those facilities needed to support production logistic facilities), movement control, reliability and defect reporting, safety standards for storage, transport and handling and related training. At NATO Headquarters, the lead authorities are the Logistics Section in the IS Defence Policy and Planning Division (DPP) and the Logistics Branch in the IMS, L&R Division. The SNLC is the senior NATO committee that is primarily responsible for consumer logistics.”

The three life cycle domains and their lead bodies are portrayed at right. Whereas the three domains have to do with the relationship between the producer and the consumer, there are two additional aspects that have to do with the way in which logistics functions are performed.



Co-operative Logistics: there is no NATO definition yet, but co-operative logistics could be described as follows:

«NATO Co-operative Logistics is the totality of bilateral and multilateral consumer and production logistics arrangements to optimise in a co-ordinated and rationalised way, logistics support to NATO forces.»

Co-operation within logistics should be conducted within a comprehensive framework, based on agreed principles and implemented in accordance with a set of basic guidelines. Its aim is to achieve cost-savings through economies of scale, harmonised life cycle processes and increased efficiency in peacetime, crisis and wartime logistics support. Development of NATO Co-operative Logistics arrangements is largely facilitated by the use of NATO Production and Logistics Organisations (NPLOs), particularly the NATO Maintenance and Supply Agency (NAMSA) using modern techniques in the field of materiel management and procurement.

Multinational Logistics: for multinational operations, logistics must function as an effective force multiplier. With the risk now omnidirectional, the diminishing logistic support resources and the principle of shared logistic responsibilities, the use of multinational logistics as a tool to enhance efficiency and effectiveness becomes of utmost importance. Although there is not yet any agreed NATO definition of Multinational Logistics, this function can be meant as the provision of logistic support to operations through multinational means, such as lead nation, role specialisation and multinational integrated logistic support.»

LOGISTIC FUNCTIONS

It is important to recognise that the various logistic functions come together to form the totality of logistics support. A NATO logistician of one discipline will often work with a staff officer of another discipline and, as a very minimum, will have to appreciate the other's responsibilities and problems. For example, logistic planning originates in national or NATO policy guidance and has to be co-ordinated with all the staff branches concerned, whether they be operational, administrative or logistic, military or civil. A brief examination of the main functions of logistics shows this clearly.

Supply

Supply covers all materiel and items used in the equipment, support and maintenance of military forces (classes of supply are listed at Annex A). The supply function includes the determination of stock levels, provisioning, distribution and replenishment.

Materiel

Production or acquisition logistics covers materiel, from the first phase of the life cycle to its final disposal from the inventory. The first part of the cycle, from specification, design and production is clearly a function of production logistics. Reception of the equipment into service, its distribution and storage, repair, maintenance and disposal are clearly a consumer logistic task. However, the initial design of the equipment, which is part of production logistics, has to take account of the consumer aspects of repair and maintenance, and therefore involves both disciplines.

Services

The provision of manpower and skills in support of combat troops or logistic activities includes a wide range of services such as combat re-supply, map distribution, labour resources, postal and courier services, canteen, laundry and bathing facilities, burials, etc. These services may be provided either to one's own national forces or to those of another nation and their effectiveness depends on close co operation between operational, logistic and civil planning staffs.

Logistic Information Management

Logistic Information Management couples available information technology with logistic processes and practices to meet the NATO Commander's and nation's logistic information requirements. NATO and nations have numerous users requiring executive, managerial and operational logistic information. To be effective, logistic information systems must facilitate the delivery of the right information to the right people at the right time with the right information security protection. They should cover all logistic functions and interface between these functions and other functional areas as required. NATO logistic systems need to be interoperable with both existing and emerging national and NATO systems. Interfaces with industrial systems should also be considered where practical and cost effective.

Equipment Maintenance and Repair

Maintenance means all actions, including repair, to retain the materiel in or restore it to a specified condition. The operational effectiveness of land, naval and air forces will depend to a great extent on a high standard of preventive maintenance, in peacetime, of the equipment and associated materiel. Repair includes all measures taken to restore materiel to a serviceable condition in the shortest possible time.

Battle Damage Repair (BDR) is an important technique used to improve materiel availability during operations. It is designed to restore damaged materiel to a battle worthy condition, irrespective of the cause of the failure, as quickly as possible so that it can complete its mission. Damage assessment has to be done rapidly and must not always require the use of automated test equipment or sophisticated tools. The considerations are primarily aimed at limiting the damage, determining the cause of the damage, establishing a plan for damage repair, and minimising the risk to equipment and operators. Once the operational mission has been accomplished, BDR must be followed by specialised maintenance or repair to restore the equipment to fully serviceable condition.

Movement and Transportation (M&T)

It is a requirement that a flexible capability exists to move forces in a timely manner within and between theatres to undertake the full spectrum of the Alliance's roles and missions. It also applies to the logistic support necessary to mount and sustain operations.

Reception, Staging and Onward Movement (RSOM)

RSOM is the phase of the deployment process that transitions units, personnel, equipment and materiel from arrival at Ports of Debarkation (PODs) to their final destination. Although RSOM is an operational matter, it requires the provision of a significant degree of logistic support. RSOM planning and execution requires therefore considerable integration with logistic support, M&T, and Host Nation Support (HNS) planning.

Petroleum Logistics

The NATO Petroleum Supply Chain has to be able to respond to the full spectrum of the Alliance's operational requirements and to the deployment distances and dispersions envisaged, taking specifically into account increased co operation between NATO and Partner nations and their respective military and civil authorities. Financial considerations, economies of scale and the need for enhanced interoperability make it necessary to continuously seek new and innovative ways of delivering the fuels capability.

Explosive Ordnance Disposal (EOD)

EOD involves the investigation, detection, location, marking, initial identification and reporting of suspected unexploded ordnance, followed by the on site evaluation, rendering safe, recovery and final disposal of unexploded explosive ordnance. It may also include explosive ordnance that has become

hazardous by damage or deterioration. The NATO EOD Technical Information Centre (EODTIC) holds records of all past and present ammunition and explosives, and provides an immediate advisory service on EOD problems.

Infrastructure Engineering for Logistics (IEL)

Infrastructure Engineering for Logistics, while not exclusively a logistic function, will require close co-ordination with logistics as its mission is very closely aligned with logistics in terms of facilitating the logistic mission of opening lines of communication and constructing support facilities. The engineering mission bridges the gap from logistics to operations and is closely related to the ultimate success of both. The acquisition, construction and operation of facilities form the basis for the NATO Security Investment Programme (NSIP). This is the term generally used in NATO for installations and facilities for the support of military forces.

Medical Support

This function entails the provision of an efficient medical support system to treat and evacuate sick, injured and wounded personnel, minimise man days lost due to injury and illness, and return casualties to duty. An effective medical support system is thus considered a morale booster and a potential force multiplier. Though medical support is normally a national responsibility, planning must be flexible and consider co-ordinated multinational approaches to medical support. The degree of multinationality will vary depending on the circumstances of the mission, and be dependent upon the willingness of nations to participate in any aspect of integrated medical support. Medical care also plays a vital role in Force Protection.

Contracting

Contracting has become increasingly important to the conduct of operations, particularly when operating beyond NATO's area of responsibility. It is a significant tool that may be employed to gain fast access to in-country resources by procuring the supplies and services that the commander requires.

Host Nation Support (HNS)

The availability of HNS offsets requirements for general and organic military support and thereby affects the size and scope of the Combat Service Support (CSS) force that must be committed to an operation.

RELATED FUNCTIONS

Civil-Military Co-operation (CIMIC)

Civil-Military Co-operation, particularly in the area of deployments, has gained renewed impetus since the end of the cold war. The new situation has brought different requirements and, at present, CRO commanders have to deal with completely new tasks. The lessons learned from operations in the Balkans and within the International Security Assistance Force (ISAF) in Afghanistan reveal that NATO commanders have to deal with civil tasks aimed at facilitating

the accomplishment of the mission by making civil resources available to the military.

NATO Standardisation and Interoperability

Standardisation is a key tool for achieving interoperability. Interoperability is essential for logistic co-operation and has a direct impact on mission sustainability and combat effectiveness of forces. The minimum requirements for interoperability are commonality of concepts, doctrines and procedures, compatibility of equipment, and interchangeability of combat supplies. Civilian standards should be used whenever possible. Nations should strive to adopt the agreed NATO standards.

Environmental Protection

National and international legislation and agreements on environmental protection increasingly affects military operations, in particular non-Article 5 CRO. The implications of environmental protection for the execution of logistic functions have to be taken into account.

REFERENCES

AAP-6 NATO Glossary of Terms and Definitions

ANNEXES

- A Classes of Supply
- B Acronyms used in this chapter

ANNEX A

CLASSES OF SUPPLY

NATO classes of supply are established in the five-class system of identification as follows:

Class I

Items of subsistence, e.g. food and forage, which are consumed by personnel or animals at an approximately uniform rate, irrespective of local changes in combat or terrain conditions.

Class II

Supplies for which allowances are established by tables of organisation and equipment, e.g. clothing, weapons, tools, spare parts, vehicles.

Class III

Petroleum, oil and lubricants (POL) for all purposes, except for operating aircraft or for use in weapons such as flame-throwers, e.g. gasoline, fuel oil, greases coal and coke.

(Class IIIa - aviation fuel and lubricants)

Class IV

Supplies for which initial issue allowances are not prescribed by approved issue tables. Normally includes fortification and construction materials, as well as additional quantities of items identical to those authorised for initial issue (Class II) such as additional vehicles.

Class V

Ammunition, explosives and chemical agents of all types.

ANNEX B

ACRONYMS USED IN THIS CHAPTER

BDR	Battle Damage Repair
CIMIC	Civil-Military Co-operation
CNAD	Conference of National Armaments Directors
CRO	Crisis Reponse Operations
CSS	Combat Service Support
DI	Defence Investment Division
EOD	Explosive Ordnance Disposal
EODTIC	NATO EOD Technical Information Centre
HNS	Host Nation Support
IEL	Infrastructure Engineering for Logistics
IMS	International Military Staff
IS	International Staff
ISAF	International Security Assistance Force (Afghanistan)
L&R	Logistics and Resources Division
M&T	Movement and Transportation
NAMSA	NATO Maintenance and Supply Agency
NAMSO	NATO Maintenance and Supply Organisation
NPLOs	NATO Production and Logistics Organisations
NSIP	NATO Security Investment Programme
PODs	Ports of Debarkation
POL	Petroleum, Oil and Lubricants
RSOM	Reception, Staging and Onward Movement
SNLC	Senior NATO Logisticians' Conference

CHAPTER 2

**NATO ORGANISATIONAL FRAMEWORK
FOR LOGISTICS**

CHAPTER 2

NATO ORGANISATIONAL FRAMEWORK FOR LOGISTICS

“Logisticians are a sad, embittered race of men, very much in demand in war who sink resentfully into obscurity in peace.”

- Dr. J.M.A.H. Luns, Secretary General of NATO, 1978 -

INTRODUCTION

NATO's Political Goals and Basic Tasks

The North Atlantic Alliance embodies the transatlantic partnership between Europe and North America. Its inception dates back 4 April 1949 with the signature of the North Atlantic Treaty, which falls within the framework of Article 51 of the United Nations Charter, reaffirming the inherent right of independent states to individual or collective defence.

NATO's essential purpose is to safeguard the freedom and security of its members by political and military means in accordance with the North Atlantic Treaty and the principles of the United Nations Charter. The objectives of the Alliance are primarily political, underpinned by shared defence planning and military co-operation and by co operation and consultation in economic, scientific, environmental and other relevant fields. The focus of the Alliance is the promotion of stability through co-operation and the development of collective crisis management and peacekeeping mechanisms.

Article 4 of the Treaty provides for consultations among the Allies whenever any of them believes that their territorial integrity, political independence or security is threatened. NATO member states are committed to the defence of one another by Article 5 of the North Atlantic Treaty. This stipulates that an armed attack against one or more of them in Europe or North America shall be considered as an attack against them all. Non Article 5 Crisis Response Operations (CRO) that could be approved by the North Atlantic Council, such as peace support operations, have been endorsed in the new Strategic Concept approved by the Allied Heads of State and/or Government at the Washington Summit in 1999.

Decision Making in NATO

NATO is an inter-governmental organisation, in which all member countries retain their full sovereignty and independence. NATO decisions are therefore taken on the basis of consensus, after discussion and consultation among the member nations. As an association of free and independent states, NATO has no supranational authority or policy making function independent of its members. Decisions taken by NATO are therefore decisions taken by all its member countries. By the same token, NATO can only implement a course of action if all the member countries are in agreement.

NATO POLITICAL/MILITARY STRUCTURE

The North Atlantic Council (NAC or Council)

The NAC, established by Article 9 of the Treaty, is the highest authority and the most important decision-making body in NATO. All member countries of NATO have an equal right to express their views and unanimous decisions are required, which is also valid for all other NATO committees and conferences. There is no voting or decision by majority.

The Council is composed of the Permanent Representatives of all 26 member countries¹. It meets weekly under the chairmanship of the Secretary General. Other meetings, either at Ministerial Level (Foreign Affairs and Defence) or at the level of Heads of State and/or Government also take place on a regular basis at NATO Headquarters in Brussels or in one of the NATO member states.

To assist it in its work, the Council has set up a number of committees that are responsible for implementing its decisions or carrying out the tasks it had ordered. All these committees, whether civil or military, act under the authority of the Council.

The Defence Planning Committee (DPC)

The DPC is composed of all NATO member states except from France and meets under the chairmanship of the Secretary General, either at Ambassadorial or Ministerial level. It deals with most defence matters and subjects related to collective defence planning. The DPC provides guidance to NATO's military authorities and within the area of its responsibilities, has the same functions and attributes and the same authority as the Council on matters within its competence.

The Military Committee (MC)²

The Military Committee is responsible for recommending to NATO political authorities those measures considered necessary for the common defence of the NATO area and for providing guidance on military matters to the Strategic Commanders (SCs). The MC is the highest military authority in the Alliance under the political authority of the NAC and DPC. It is composed of the Chiefs of Defence Staff of each member country. The Chiefs of Defence Staff meet at least twice a year. At other times member countries are represented by national Military Representatives appointed by their Chiefs of Defence Staff.

1) On 29 March 2004, seven new countries joined the Alliance: Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia, thus bringing the Alliance to 26 member states (other member nations are: Belgium, Canada, the Czech Republic, Denmark, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Turkey, the United Kingdom and the United States).

2) Iceland has no military forces but may be represented by a civilian.

The Euro-Atlantic Partnership Council (EAPC)³

The Partnership for Peace is a major initiative aimed at enhancing stability and security throughout Europe. The Partnership for Peace Invitation was addressed to all states participating in the North Atlantic Cooperation Council (NACC, later to become the EAPC) and other states participating in the Conference for Security and Co operation in Europe (later renamed the OSCE, Organisation for Security and Co operation in Europe) able and willing to contribute to the programme. The development and enhancement of dialogue and partnership with non-NATO member states forms an integral part of NATO's Strategic Concept. Allied and Co-operation Partner Foreign Ministers inaugurated the Euro-Atlantic Partnership Council (EAPC) at their meeting in Sintra, Portugal, on 30 May 1997, with a view to raising political and military co operation among their countries to a qualitatively new level. The EAPC provides the overarching framework for political and security-related consultations and for enhanced co-operation under the Partnership for Peace (PfP). The expanded political dimension of consultation and co-operation which the EAPC offers, allows Partners, if they wish, to develop a direct political relationship with the Alliance. In addition, the EAPC provides the framework for giving Partner countries increased decision-making opportunities relating to activities in which they participate.

The EAPC meets twice a year at both Foreign and Defence Ministers' level and, as a general rule, at Ambassadorial level in Brussels on a monthly basis. It may also meet at the level of Heads of State and/or Government, when appropriate.

The NATO-Russia Council (NRC)

The NRC was established at the NATO-Russia Summit on 28 May 2002 in Rome. The NRC brings together the 26 Allies and Russia to identify and pursue opportunities for joint action "at 27". The "Rome Declaration" builds on the goals and principles of the 1997 NATO-Russia Founding Act on Mutual Relations, Co-operation and Security. It establishes the NRC as a mechanism for consultation, consensus-building, co-operation, joint decision and joint action, in which the individual Allies and Russia will work as equal partners on a wide spectrum of Euro-Atlantic security issues of common interest.

Chaired by NATO's Secretary General, the NRC meets at least monthly at the level of ambassadors and military representatives; regularly every year at the level of Foreign and Defence Ministers and Chiefs of Staff; and occasionally at the level of Heads of State and/or Government, when appropriate.

The NATO-Ukraine Commission (NUC)

At the Madrid Summit on 9 July 1997, NATO Heads of State and/or Government, signed the «Charter for a Distinctive Partnership between NATO and Ukraine». In this Charter, the NATO Allies reaffirm their support for the

3) *As of end 2006, the EAPC consists of the NATO member states and Albania, Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Finland, Georgia, Kazakhstan, Kyrgyz Republic, Ireland, Moldova, Montenegro, Russia, Serbia, Sweden, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Turkmenistan, Ukraine, Uzbekistan. Note that Turkey recognizes the Republic of Macedonia with its constitutional name.*

sovereignty and independence of Ukraine, its territorial integrity, democratic development, economic prosperity and status as a non-nuclear weapons state, as well as the inviolability of its frontiers. Various areas for consultation and co-operation were developed. The political mandate for this initiative was given by Foreign Ministers at the meeting of the NUC in Reykjavik, Iceland, on 15 May 2002, when they underlined their desire to take the NATO-Ukraine relationship forward to a qualitatively new level, including through intensified consultations and co-operation on political, economic and defence issues.

The NUC is chaired by the Secretary General and meets as a rule not less than twice a year to assess the implementation of the relationship and consider its further development. It may also meet at the level of Foreign and Defence Ministers and Chiefs of Staff and occasionally at the level of Heads of State and/or Government, when appropriate.

The Mediterranean Dialogue (MD) and the Istanbul Co-operation Initiative (ICI)

Recognising that security in Europe is closely linked to security and stability in the Mediterranean region, the North Atlantic Council initiated the Mediterranean Dialogue in 1994. It is an integral part of NATO's adaptation to the post-cold war security environment, as well as an important component of the Alliance's policy of outreach and co-operation. The Mediterranean Dialogue's overall aim is to contribute to regional security and stability, achieve better mutual understanding and dispel any misconceptions about NATO among Dialogue countries.

At the Istanbul Summit, the Heads of State and Government decided to develop co-operation to the broader Middle East region by launching the ICI. This initiative is offered to those countries from the region that are interested in fostering mutually reinforcing bilateral relationships with NATO with a view to greater regional security and stability. It focuses on those areas of practical co-operation where NATO can provide an added value.

THE NATO HEADQUARTERS STAFF STRUCTURE

Secretary General (SG)

The SG is a senior international statesman nominated by the member nations both as Chairman of the NAC, DPC and of other committees, and as Secretary General of NATO. He also acts as principal spokesman for the Organisation both in its external relations and in communications and contacts between member governments. He is supported by the Private Office in all aspects of his work.

International Staff (IS)

The work of the Council and its committees is supported by the IS, consisting of personnel from member countries either recruited directly by the Organisation or seconded by their governments. The members of the IS are responsible to the Secretary General and owe their allegiance to the Organisation throughout the period of their appointment. The IS comprises the Office of the

Secretary General, six operational Divisions, and the NATO Office of Security. Each of the Divisions is headed by an Assistant Secretary General (ASG), who is normally the chairman of the main committee dealing with subjects in his field of responsibility. The Divisions support the work of the committees in the various fields of activity.

The six Divisions are:

- Political Affairs and Security Policy (PASP);
- Defence Policy and Planning (DPP);
- Operations (OPS);
- Defence Investment (DI);
- Public Diplomacy (PDD); and
- Executive Management (EM).

Two of them are of direct interest to logisticians. DI is mainly responsible for Production Logistics, whereas DPP with its Logistics Staff is taking care of Consumer Logistics matters.

The NATO HQ C3 Staff is an integrated civil/military staff element supporting the IS and the International Military Staff (IMS).

International Military Staff

The IMS supports the Military Committee. It is composed of military personnel seconded from national military establishments and of supporting civilian personnel. Members of the IMS come under the administrative authority of the Director of the IMS. The IMS is headed by a Director of three-star rank who is nominated by the member nations and is selected by the Military Committee. The Director is assisted by five Assistant Directors of flag or general officer rank and the Executive Co-ordinator of the IMS.

The IMS is organised in the following five divisions:

- Intelligence Division (INT)
- Plans & Policy Division (P&P)
- Co-operation & Regional Security Division (C&RS)
- Operations Division (OPS)
- Logistics & Resources Division (L&R)

The last Division mentioned is of direct interest to logisticians: it is responsible for both Production (Armaments Branch) and Consumer (Logistics Branch) Logistics.

NATO'S INTEGRATED MILITARY COMMAND STRUCTURE

The New NATO Command Structure

At their meeting on 12 June 2003, Allied Defence Ministers agreed to the design of a new streamlined military command structure, which reflects the Alliance's new missions and transition to smaller, flexible forces that can be rapidly deployed to crisis and conflict areas. The number of commands was thus reduced from 20 to 11, and responsibilities redefined.

The new NATO command structure is composed of two commands at the strategic level. On the one hand, Allied Command Operations (ACO), replacing former Allied Command Europe (ACE), continues to embrace all the NATO commands in Europe, and takes over the responsibility for those operational elements that formerly came under the Supreme Allied Command Atlantic (SACLANT)⁴. Furthermore, ACO focuses on the planning and executing of NATO operations. The Supreme Allied Commander Europe (SACEUR) retains his title and assumes strategic command for the preparation and conduct of all joint operations. Supreme Headquarters of Allied Powers Europe (SHAPE) stands as ACO headquarters situated in Mons, Belgium.

The levels beneath SHAPE were significantly streamlined, with a reduction in the number of headquarters. The operational level consists of two standing Joint Force Commands (JFCs), one in Brunssum (Netherlands) and the other in Naples (Italy), and a robust but more limited standing Joint Headquarters (JHQ) in Lisbon (Portugal), from which a deployable sea-based Combined Joint Task Force (CJTF) HQ capability can be drawn. At the component/tactical level, the structure consists of six Joint Force Component Commands (JFCCs), which provide service-specific – land, maritime, or air – expertise to the operational level.

On the other hand, Allied Command Transformation (ACT) was created to promote transformation and interoperability of Alliance militaries in order to ensure that NATO forces are trained and structured to meet the challenges of the new security environment. ACT HQ are co-located with the United States Joint Forces Command in Norfolk, Virginia (United States of America), although an ACT Staff Element has been established at SHAPE, primarily to deal with resource and defence planning issues. NATO research, education and training centres are subordinate to ACT.

NATO LOGISTIC COMMITTEES

The Senior NATO Logisticians' Conference (SNLC)

The principal committee dealing with logistics, the SNLC, meets under the Chairmanship of the Secretary General twice a year, in joint civil and military sessions. It has two permanent co-Chairmen, namely the Assistant Secretary General for Defence Policy and Planning, and the Deputy Chairman of the Military Committee. The Conference reports jointly to both the Council and the Military Committee, reflecting the dependence of logistics on both civil and military factors.

4) SACLANT ceases to exist in the new command structure.

Membership of the conference is drawn from senior national civil and military representatives of Ministries of Defence or equivalent bodies with responsibility for consumer aspects of logistics in member countries. Representatives of the Strategic Commands, the NATO Maintenance and Supply Agency (NAMSA), the NATO Standardisation Agency (NSA), the Committee of the Chiefs of Military Medical Services in NATO (COMEDS) and other sectors of the NATO Headquarters Staff also participate in the work of the conference. The overall mandate of the SNLC is to address consumer logistics matters with a view to enhancing the performance, efficiency, sustainability and combat effectiveness of the Alliance's forces and to exercise, on behalf of the Council, an overarching co-ordinating authority across the whole spectrum of logistics vis-à-vis the other logistic committees and bodies of NATO.

The SNLC carries out its work through four subordinate bodies. The principal subordinate body is the **Logistic Staff Meeting (LSM)**, which advises the SNLC on general civil and military logistic matters. Acting on behalf of the SNLC, the LSM monitors and co-ordinates the implementation of logistic policies, programmes and initiatives through consultation and co-operation among nations, the SCs, and with other NATO logistic and logistic-related bodies; it provides a forum for addressing logistic concerns; and it co-ordinates with the Movement and Transportation Group (M&TG) and other specialised subordinate bodies that may be created and harmonises their work with the SNLC's overall logistic policies and programmes when their work is part of a broader logistic effort. The LSM also develops logistic policies, programmes and initiatives for the SNLC's consideration. The LSM meets twice a year in the same format as the SNLC. LSM membership mirrors that of the SNLC and is co-chaired by a civil co Chairman, the Head, IS Logistics, and by a military co Chairman, the Deputy Assistant Director, IMS L&R Division.

The **Movement and Transportation Group (M&TG)** is the SNLC's subordinate body that deals with movement and transportation (M&T). The M&TG advises the SNLC on M&T matters; it monitors and co-ordinates the implementation of M&T policies, programmes and initiatives through consultation and co-operation among nations, the SCs and other NATO transportation and transportation-related groups and agencies. It is co chaired by a civil co Chairman, the Head, IS Logistics and a military co Chairman, the Deputy Assistant Director, IMS L&R Division, and meets twice a year, in March and September, in the same format as the SNLC. M&TG membership mirrors that of the SNLC. In addition, the three Transport Planning Boards and Committees (PB&Cs) of the Senior Civil Emergency Planning Committee (SCEPC) are represented on the M&TG.

The **Standing Group of Partner Logistic Experts (SG PLE)**, under the guidance of the LSM with Partners and the M&TG with Partners, identifies, develops and promotes the employment of Partner logistic forces and capabilities that Partners are willing to contribute to NATO-led operations. The SG PLE also makes recommendations concerning logistics pre-arrangements to the Strategic Commands (SCs). Furthermore, the group provides a forum for addressing logistic topics concerning PfP that any member of the LSM with Partners and the M&TG with Partners may wish to raise. The SG PLE meets twice a year under the

Chairmanship of a Partner nation; the chair is assumed for a two year term. SG PLE membership comprises senior staff officers from NATO and Partner nations, IS, IMS, the SCs and NAMSA.

The **Logistic Information Management Group (LOG IMG)** is NATO's overarching logistics information management body. Subordinate to the LSM, the group reviews, assesses and recommends NATO logistic information management requirements and develops logistic information management policy and guidance for consideration by the LSM. The LOG IMG is chaired by a nation, its membership comprises experts from NATO and Partner nations, IS, IMS, SCs and relevant NATO information management committees and bodies. It meets as often as necessary to carry out its work.

NATO Pipeline Committee (NPC)

The NPC, which is chaired by the Head, IS Logistics is the senior advisory body in NATO on consumer logistics relating to petroleum. It acts on behalf of the Council, in full consultation with the NATO Military Authorities (NMAs) and other bodies, on all matters of NATO wide concern in connection with military fuels, lubricants and associated products and equipment, the NATO Pipeline System (NPS) and other petroleum installations in support of ACO. Its duties are to:

- review, assess and evaluate, in conjunction with other NATO authorities, the overall Alliance military petroleum logistics organisation, policy, plans, procedures and capabilities with the aim to enhance performance, efficiency, safety, security and effectiveness of NATO facilities for the storage, handling, distribution and uplift of military fuels;
- develop standardisation of fuels, lubricants and associated products used by all naval, land and air assets in order to improve the effectiveness and interoperability of NATO and NATO-led forces;
- improve the effectiveness of NATO and NATO-led forces through the standardisation of the facilities, equipment and procedures for handling fuels and lubricants products;
- provide the focal point and forum for the consideration of military petroleum matters;
- exercise policy control for the operation and maintenance of the NPS; and
- develop, in close co-ordination with other relevant committees, guidelines for greater civil/military co-operation.

The NPC has three permanent Working Groups, which have the following responsibilities:

- **WorkingGroup No.1** - (AC/112(WG/1) Special Tasks), which takes on special tasks as directed by the NPC.
- **NATOFuels and Lubricants Working Group** - (AC/112(NF&LWG)), which

provides the focal point and forum to review and develop standardisation of fuels, oils, lubricants and associated products used by all naval, land and air assets in order to improve the effectiveness and interoperability of NATO and NATO-led forces. The NF&LWG is supported by three Working Parties:

- o Naval Fuels and Lubricants Working Party - AC/112(NAVAL F&LWP);
 - o Army Fuels and Lubricants Working Party - AC/112(ARMY F&LWP); and
 - o Aviation Fuels and Lubricants Working Party - AC/112(AVIATION F&LWP).
- **Petroleum Handling Equipment Working Group-** AC/112(PHEWG), which provides the focal point and forum to review and improve the effectiveness and interoperability of NATO and NATO-led forces through the standardisation of the facilities, equipment (including Deployable Fuels Handling Equipment (DFHE)) and procedures for handling fuels and lubricants products set out in NATO Standardisation Agreement (STANAG) 1135.

Committee of the Chiefs of Military Medical Services in NATO (COMEDS)

The COMEDS advises the Military Committee on military medical matters affecting NATO. The COMEDS also acts as the co-ordinating body for the Military Committee regarding all military medical policies, procedures and techniques within NATO. Its meetings are conducted bi-annually. The COMEDS is composed of:

- the Chiefs of the military medical services of all nations as represented in the Military Committee;
- the IMS medical staff officer;
- the ACO and ACT medical advisors; and
- the Chairman of the Joint Medical Committee (JMC) (observer).

COMEDS makes recommendations considered necessary concerning the development and assessment of NATO military medical policy and procedures for medical support. The Committee explores and develops ways to improve and expand existing arrangements between the member nations in the fields of co-ordination, standardisation and interoperability. It fosters and improves the exchange of information relating to the organisation, operational principles and procedures of the military medical services of NATO nations and the SCs, as well as information relating to the medical treatment, research and development between the NATO nations in order to ensure that advances made by one national are available to all. Lastly, COMEDS undertakes studies of general and particular interest such as: principles and policies of medical field management, medical training, preventive medicine, military pharmacy and medical material,

dental service, food hygiene and food technology, veterinary medicine, military psychiatry, military medical structures, operations and procedures, co-ordination and co-operation in military medical research.

NATO-Russia Ad Hoc Working Group on Logistics (NRC(LOG))

The NRC(LOG) is a joint civil/military group with the main aim to identify opportunities for joint action in all areas of logistics, including air transport and air-to-air refuelling and to initiate and implement civil and military logistic co-operation programmes and initiatives between NRC Member Nations. The annual Logistic Action Plan incorporates all NRC initiatives in logistic co-operation on both civilian and military sides. Through a mix of staff-level discussions, exchanges, workshops and seminars, it focuses in particular on promoting information sharing in areas such as logistic policies, doctrine, structures and lessons learned with a view to establishing a sound foundation of mutual understanding in the field of logistics. Its activities addresses such diverse topics as high level structures for the development of logistic policies, the logistic support of deployed peacekeeping operations, HNS, civil commerce, fuels interoperability, medical support and logistic training.

OTHER NATO LOGISTIC BODIES

NATO Maintenance and Supply Organisation (NAMSO)

NAMSO comprises the Board of Directors as the legislative body and the NATO Maintenance and Supply Agency (NAMSA) as its executive body. The Agency, with its main facilities located in Luxembourg, is NATO's principal logistic support management agency. NAMSO's mission is to provide logistics support to NATO or to its member states individually or collectively. The objective of the NAMSO mission is to maximise, both in peacetime and wartime, the effectiveness of logistics support to armed forces of NATO states and to minimise costs. As the NAC has recognised a collective responsibility between NATO and national authorities for logistic support in the context of multinational operations, NAMSO may provide logistics support to its member states and to groups of some or all of those states.

Twenty five member states participate in NAMSO activities⁵. The NAC has also authorised NAMSO to conclude Memoranda of Understanding (MOU) with PfP nations for co-operative logistic support.

To accomplish its mission, NAMSA carries out functions of logistics management, which can be performed more effectively by the Agency than by the nations themselves. This often means logistics functions common to several states. Inter alia, these include (common) procurement, supply, maintenance and repair, configuration management and technical support for equipment/weapon systems. NAMSA offers a wide range of logistics service activities which include codification, management of common line items (NATO Logistics Stock Exchange), contracting for transportation of personnel and materiel, managing demilitarisation activities such as projects for the disposal of weapons and mines,

5) *Iceland is not a member as it does not have any military forces that would require NAMSA's support.*

site remediation, production of electronic manuals and data etc. NAMSA logistic services also include support to the forces deployed in-theatre. This last area of support continues to expand to the benefit of NATO and troop contributing nations.

As NAMSA is a customer-funded entity, those requesting a service from the Agency are responsible for the full costs of the service requested.

The majority of NAMSA's workforce of around 950 is located in Capellen (Luxembourg). There is also the Southern Operational Centre, strategically located in Taranto (Italy) and the NATO's HAWK Logistics Management staff at Rueil-Malmaison, Paris (France).

NAMSA produces the NATO Ammunition Data Base on a CD-ROM, which constitutes an authoritative source of NATO ammunition interchangeability, technical and logistic information. It also provides a DVD with the NATO Master Catalogue of References for Logistics with NATO Stock Numbers (NSNs), part numbers and information about manufacturers and vendors and manages the NATO Mailbox System, which allows transfer of data among member states. Further details on this subject are provided in Chapter 14.

Central European Pipeline Management Organisation (CEPMO)

CEPMO is the management organisation for the Central Europe Pipeline System (CEPS) and is one of the NATO Production and Logistics Organisations (NPLO). CEPS is the largest element of the NATO Pipeline System (NPS) that encompasses NATO assets for the movement, storage and delivery of fuel in Belgium, France, Germany, Luxembourg and the Netherlands. These are known as the host nations, with the United States designated as a user nation. Collectively, the host and user nations comprise the Member Nations.

CEPS is designed and managed to meet operational requirements in central Europe in peace, crisis and conflict times, but is also used commercially under strict safeguards. The day to day operation of CEPS is the task of the Central Europe Pipeline Management Agency (CEPMA) located in Versailles (France).

The CEPMO Board of Directors (BOD) is the governing body acting with regard to the collective interests of all CEPMO Member Nations in accordance with its Charter⁶⁾. It is composed of a representative of each Member Nation of the CEPMO, who are the only voting members and represent their nation's political, military, economic, financial and technical interests. Representatives of the NMAs, the General Manager of the CEPMA and the designated Secretary General's Liaison Officer (SGLO) also participate in meetings of the BOD.

CEPMA is organised in such a way as to cover the core functions of marketing and economic development, as well as technical, financial and administrative support.

6) C-M(97)64

Bi-SC Logistic Co-ordination Board (Bi-SC LCB)

The Bi-SC LCB was established by the SCs in 1996 as their senior forum for co-ordinating Alliance wide concerns for logistic policy and planning between SCs, NATO Command Structure (NCS), NATO nations and designated agencies. The Bi-SC LCB is responsible to the SCs for advice and recommendations on logistics guidance and doctrine, concepts, structures, plans and procedures in support of NATO operations. It is responsible to the SNLC for the development of joint logistic doctrinal documents and the review of other logistic documents with the aim of achieving consistency and harmonisation of logistic doctrine and procedures throughout the range of NATO publications. Several bodies support the duties and functions of the Bi-SC LCB:

- the Bi-SC LCB Logistic Training Committee;
- the Bi-SC LCB Doctrine Committee;
- the Bi-SC LCB Stockpile Planning Committee; and
- the Bi-SC Logistic Planning Committee.

Bi-SC Movement and Transportation Forum (Bi-SC M&T Forum)

The Bi-SC M&T Forum was formed in 1996. It provides a forum for M&T issues between the SCs, the NCS and NATO nations and designated agencies. M&T matters are those issues that derive from the NATO Commander's M&T responsibilities and from NATO HQ developed concept and policies.

The Bi-SC M&T Forum is the senior forum for co-ordinating Alliance-wide concerns for M&T policy and planning between SCs, NATO nations and designated agencies. The Bi-SC M&T Forum is responsible to the SCs for advice and recommendations on M&T guidance and doctrine, concepts, structures, plans, and procedures in support of NATO operations. The Bi-SC M&T Forum meets twice a year either in NATO/PfP Plenary, NATO-only plenary or in Exceptional Plenary sessions. It is co-chaired by the two SCs, the Chief of the Allied Movement Co ordination Centre (AMCC), ACO and Head of the Movement and Transportation Branch at ACT. When required, the co-chair may invite participation from other bodies and organisation.

The Bi SC M&T Forum:

- recommends and/or gives advice on doctrine, concepts, structures, plans, and procedures in support of NATO operations;
- proposes solutions to M&T issues affecting more than one member nation;
- promotes M&T standardisation and interoperability in co-ordination with NATO Standardisation Programme;
- assesses NATO Commanders' M&T requirements to support operational plans and recommends changes, if required;
- forms committees and/or working groups to study and report on issues agreed by the Bi-SC M&T Forum; and

- submits reports to the SNLC and M&TG and to other bodies, as agreed or as directed.

Bi-SC Medical Advisory Group (Bi-SC MEDAG)

The Bi-SC MEDAG provides a forum for medical issues between the SCs. Medical matters are those issues that derive from the NATO Commander's medical responsibilities and from NATO HQ developed concept and policies.

REFERENCES

NATO Handbook

NATO Facts and Figures

MC 324/1 The NATO Military Command Structure

MC 389/1 MC Policy on NATO's Combined Joint Task Force (CJTF) Capability

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

ACE	Allied Command Europe
ACO	Allied Command Operations
ACT	Allied Command Transformation
AMCC	Allied Movement Co ordination Centre
ARMY F&LWP	Army Fuels and Lubricants Working Party
ASG	Assistant Secretary General
AVIATION F&LWP	Aviation Fuels and Lubricants Working Party
Bi-SC LCB	Bi-SC Logistic Co-ordination Board
Bi-SC MEDAG	Bi-SC Medical Advisory Group
Bi-SC M&T Forum	Bi-SC Movement and Transportation Forum
BOD	Board of Directors
CEPMA	Central European Pipeline Management Agency
CEPMO	Central European Pipeline Management Organisation
CEPS	Central Europe Pipeline System
CJTF	Combined Joint Task Force
COMEDS	Committee of the Chiefs of Military Medical Services in NATO
CRO	Crisis Response Operations
C&RS	Co-operation & Regional Security Division
CSCE	Conference for Security and Co operation in Europe
DFHE	Deployable Fuels Handling Equipment
DI	Defence Investment
DPC	Defence Planning Committee
DPP	Defence Policy and Planning
EAPC	Euro-Atlantic Partnership Council
EM	Executive Management

HQ	Headquarters
JFCs	Joint Force Commands
JFCCs	Joint Force Component Commands
JHQ	Joint Headquarters
JMC	Joint Medical Committee
ICI	Istanbul Co-operation Initiative
IMS	International Military Staff
INT	Intelligence Division
IS	International Staff
LOG IMG	Logistic Information Management Group
L&R	Logistics & Resources Division
LSM	Logistic Staff Meeting
MC	Military Committee
MD	Mediterranean Dialogue
MOU	Memorandum of Understanding
M&TG	Movement and Transportation Group
NAC	North Atlantic Council or Council
NACC	North Atlantic Co operation Council
NAMSA	NATO Maintenance and Supply Agency
NAMSO	NATO Maintenance and Supply Organisation
NAVAL F&LWP	Naval Fuels and Lubricants Working Party
NCS	NATO Command Structure
NF&LWG	NATO Fuels and Lubricants Working Group
NMAs	NATO Military Authorities
NPC	NATO Pipeline Committee
NPLO	NATO Production and Logistics Organisations
NPS	NATO Pipeline System
NRC	NATO-Russia Council
NSA	NATO Standardisation Agency
NSNs	NATO Stock Numbers
NUC	NATO-Ukraine Commission

OPS	Operations
OPS	Operations Division
PASP	Political Affairs and Security Policy
PB&Cs	Transport Planning Boards and Committees
PDD	Public Diplomacy
PfP	Partnership for Peace
PHEWG	Petroleum Handling Equipment Working Group
P&P	Plans & Policy Division
OSCE	Organisation for Security and Co operation in Europe
SACEUR	Supreme Allied Commander Europe
SACLANT	Supreme Allied Command Atlantic
SCs	Strategic Commanders
SCEPC	Senior Civil EPlanning Committee
SHAPE	Supreme Headquarters of Allied Powers Europe
SG	Secretary General
SGLO	Secretary General's Liaison Officer
SG PLE	Standing Group of Partner Logistic Experts
SNLC	Senior NATO Logisticians' Conference
STANAG	Standardisation Agreement

CHAPTER 3

THE ALLIANCE'S NEW STRATEGIC CONCEPT AND FORCE STRUCTURES



*Infrastructure Engineering for Logistics –
Italian troops maintaining a rail line in Kosovo*

CHAPTER 3

THE ALLIANCE'S NEW STRATEGIC CONCEPT AND FORCE STRUCTURES

“My logisticians are a humourless lot ... they know if my campaign fails they are the first I will slay.”

- Alexander the Great, date unknown -

THE ALLIANCE'S STRATEGIC CONCEPT

At the Washington Summit in April 1999, the Allies approved a new strategy to equip the Alliance for the security challenges and opportunities of the 21st century and to guide its future political and military development. The new Strategic Concept provides overall guidance for the development of detailed policies and military plans. The Concept sets out the Alliance's Approach to Security in the 21st Century, reaffirming the importance of the transatlantic link and of maintaining the Alliance's military capabilities.

The Concept confirms that the Alliance's essential and enduring purpose is to safeguard the freedom and security of its members by political and military means. It defines the Alliance's fundamental security tasks, both in terms of collective defence, which has been at the centre of NATO's preoccupations since its establishment, and in terms of new activities in the fields of crisis management and partnership that the Alliance is undertaking in order to enhance the security and stability of the Euro-Atlantic area. The new Strategic Concept comprises the following essential elements:

- the preservation of the transatlantic link.;
- the maintenance of effective military capabilities; and
- the development of the European Security and Defence Identity within the Alliance.

The final part of the Strategic Concept establishes guidelines for the Alliance's forces, translating the purposes and tasks of the preceding sections into practical instructions for NATO force and operational planners. The strategy calls for the continued development of the military capabilities needed for the full range of the Alliance's missions, from collective defence to peace support and other crisis response operations. Among the capabilities highlighted as particularly important are the ability to engage opposing forces effectively, deployability and mobility, survivability of forces and infrastructure, sustainability, and interoperability - including with the forces of Partner countries.

The direction set by the Strategic Concept has been intensified by subsequent initiatives. The Prague Capabilities Commitment (PCC) was launched to ensure that NATO would have deployable and sustainable capabilities for expeditionary operations. The concept of Combined Joint Task Forces (CJTF), designed to make NATO's joint military assets available for wider operations by NATO nations or by the European Union, was further refined. The concept for

a NATO Response Force (NRF) was introduced in 2002 and the first NRF was fielded in October 2003. NATO's military command structure has been further streamlined and the Alliance's defence and operational planning arrangements have been adapted in order to take into account future requirements for expeditionary Crisis Response Operations (CROs).

NATO MILITARY STRUCTURES

The Alliance's military structures encompass the NATO Command Structure and the NATO Forces Structure.

The NATO Command Structure (NCS)

The NCS is composed of permanent multinational headquarters at the strategic, joint, and component levels of command. It also includes the Canada-United States Regional Planning Group. These are common funded.

The NATO Force Structure (NFS)

The NFS is composed of Allied national and multinational forces, as well as their associated operational headquarters, put at the Alliance's disposal on a permanent or temporary basis under specified readiness criteria. National contributions are made available to the Alliance by agreed mechanisms for the Transfer of Authority (TOA), and by co ordination and co operation agreements, supplemented in some cases by common funded assets for specific capabilities and scenarios.

MC 400/2 is the Military Committee guidance for the military implementation of the Alliance's strategy which provides the guidance and principles that shape the NFS. The NFS is built on the basis of potential NATO missions following the principles ruling the Alliance's military structures (cohesion, jointness and multinationality, affordability, forces of graduated readiness and interaction with the NCS) and includes Graduated Readiness Forces (GRF), the CJTF and the NATO Response Force (NRF).

Graduated Readiness Forces (GRF)

Readiness levels of NATO command and force elements reflect the requirements of the full mission spectrum. The GRF approach to readiness addresses the warning times associated with crisis response, deployability requirements, the need to sustain and/or reinforce forces and headquarters and the longer term capability for force build-up (reconstitution, mobilisation, and reinforcement) in the event of the worst case large scale Article 5 contingency.

Within the GRF structure, High Readiness Forces (HRF) are designed to react quickly and deploy for operations within the Alliance's full range of missions. The readiness of these forces is graduated to take account of operational planning constraints. In addition, Forces of Lower Readiness (FLR) are required to rotate or reinforce forces to sustain Article 5 operations and non-Article 5 CRO. HRFs and FLRs can be placed under NATO command for Article 5 operations and non Article 5 CROs, within agreed TOA arrangements, following a decision by the NAC. Nations will need to develop an augmentation capability with Long Term

Build-up Forces (LTBF) in the case of an emergence of a large scale threat to NATO.

Combined Joint Task Force (CJTF)

The Alliance Strategic Concept established a requirement for the CJTF as a deployable and flexible C2 capability at the joint level for the full range of the Alliance's missions. A CJTF is a combined, joint, fully deployable task force, tailored to the mission and formed for the full range of the Alliance's military missions. A CJTF consists of three layers: the CJTF HQ, subordinated Component Command HQs, and forces assigned for the operation. The CJTF concept takes into account and can build upon the Deployable Joint Task Force (DJTF) HQ required for commanding the NRF, and addresses the possible transition from an NRF operation to a larger CJTF operation. The concept satisfies the requirement to conduct two concurrent CJTF operations, one commanded by a sea based CJTF HQ for the initial stage of a Major Joint Operation (MJO), and one commanded by a land-based CJTF HQ for the initial and sustainment stages. This is known as the CJTF Tailored Capability.

The CJTF HQ is a deployable, non-permanent combined and joint HQ of variable size, tailored to a mission. It assists the Commander CJTF (COMCJTF) in exercising command and control over the entire CJTF and can be either sea or land based. The purpose of a CJTF HQ is to command and control the full range of Alliance military operations up to the size of a MJO that require deployable C2 capabilities, including assuming command and control over the NRF.

Joint Force Component Command (JFCC) HQs are subordinated to the CJTF HQ and used to exercise command and control over assigned forces. Depending on the mission and available resources, the following considerations apply: a CJTF can include Joint Force Land, Maritime, Air, Rear Area, Special Operations and Psychological Operations Component Commands. JFCC HQs deploy when required.

Mission tailored forces are assigned to COMCJTF or CJTF Component Commanders. They are provided by NATO Nations and, on a case-by-case basis and subject to the Council's approval, by Partner and other non-NATO contributing nations. The activation and deployment of assigned forces follow procedures as laid down in the Operational Planning Process (OPP). To successfully accomplish the full range of CJTF missions, forces made available must possess appropriate operational capabilities. Interoperability, flexibility and deployability are essential overarching objectives.

NATO Response Force (NRF)

At the Prague Summit in 2002, Allied Heads of State and/or Government decided to develop the NRF as a technologically advanced, flexible, deployable, interoperable and sustainable force, including land, sea and air elements, ready to move quickly to wherever needed. The NRF is also intended to act as a catalyst for focusing and promoting improvements in the Alliance's military capabilities.

The NRF concept is intended to generate a coherent, joint and combined, trained and certified force package, held at very high readiness, capable of performing assigned missions on its own, as well as participating in an operation as part of a larger force, or serving as an initial entry force that prepares the theatre for follow-on forces. The missions of the NRF mirror primarily the requirements of rapid response in the initial phase of a crisis situation.

The NRF is rotational by nature, relying on periodic commitments by nations against the Combined Joint Statement of Requirement (CJSOR) and on joint training for each rotation. The NRF is held at 5 – 30 days readiness and, when directed to prepare for deployment, it will be tailored to a specific operation. The NRF is able to operate as a stand-alone force for up to 30 days using embedded logistics capabilities, or longer if re supplied. Forces participating in the NRF are deployable HRFs drawn from the entire NCS, as well as from other forces offered by NATO nations, on the basis that they meet high readiness criteria set by the strategic commander for operations.

IMPLICATIONS FOR DEPLOYABILITY AND SUSTAINABILITY

Deployability and mobility are required for both Article 5 operations and non Article 5 CROs. NATO must have the capability to project forces into a non permissive environment and/or areas without appropriate infrastructure and without any Host Nation Support (HNS). Deployability therefore aims at enabling NATO to concentrate its forces and engagement capability from permanent locations to a Joint Operation Area (JOA) for the conduct of the Alliance's missions. Regarding mobility, all NFS headquarters/forces, once deployed within a JOA, must possess tactical mobility. Manoeuvre forces and their C2, Combat Support and Combat Service Support (CS/CSS)¹ elements must be capable of being moved within the JOA as required.

These requirements are normally addressed as part of the force planning process. However, special initiatives by Heads of State and/or Government were required to speed up consideration of a number of logistic and other shortcomings.

Defence Capabilities Initiative (DCI)

The DCI was launched at the Washington Summit and was the first initiative aimed at improving the Alliance's capabilities. The DCI focused on improving interoperability among Alliance forces to ensure the effectiveness of multinational operations across the full spectrum of Alliance missions. Fifty-eight decisions were endorsed, covering the areas of Deployability and Mobility (DM), Sustainability and Logistics (SL), effective engagement, survivability of forces and infrastructure, and NATO consultation, command and control (C3) systems. The SNLC had lead responsibility for 10 of them, all in the areas of DM and SL. The DCI initiatives under the lead of the SNLC dealt with:

1) CS is defined as fire support and operational assistance provided to combat forces. CSS is defined as the support provided to combat forces, primarily in the fields of administration and logistics.

- improving military access to commercial lift assets;
- exploring options for multinationally owned or leased lift assets;
- developing arrangements for co-operative or shared use of lift;
- putting in place measures to enhance co-operation in multinational logistics;
- improving co-operative logistics planning and management structures and procedures;
- examining the co-operative acquisition and management of logistic stocks, including shared industrial contracts for sustainment; and
- developing logistics information systems architecture and enablers.

Many of the DM and SL measures achieved modest success. Overall, however, DCI fell short of expectations because the various initiatives were led by senior NATO committees largely lacking the authority to commit the resources necessary to secure the required capabilities.

Prague Capabilities Commitment (PCC)

Based on the DCI experience, Defence Ministers recognised that real progress could be made only when initiatives were taken forward by nations rather than by NATO committees. Therefore, in June 2002, Defence Ministers agreed that new initiatives focusing on key operational capability areas should be prepared for agreement at the November 2002 Prague Summit and that these should be based on national commitments. This initiative was named the Prague Capabilities Commitment (PCC). The following four action areas were identified as part of the PCC:

- defence against Chemical, Biological, Radiological and Nuclear (CBRN) attacks;
- command, communications and information superiority;
- improved interoperability of deployed forces and key aspects of combat effectiveness; and
- rapid deployment and sustainment of combat forces.

The PCC initiatives that are of particular interest to logistics are strategic airlift under the lead of Germany, strategic sealift under the lead of Norway, air to air refuelling (AAR) under the lead of Spain and Combat Support/Combat Service Support (CS/CSS), which has no lead nation.

REFERENCE

MC 317/1 The NATO Force Structure

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

AAR	Air-to-Air Refuelling
C2	Command and Control
C3	Consultation, Command and Control
CBRN	Chemical, Biological, Radiological and Nuclear
CJTF	Combined Joint Task Forces
CJSOR	Combined Joint Statement of Requirement
COMCJTF	Commander CJTF
CS	Combat Support
CSS	Combat Service Support
DCI	Defence Capabilities Initiative
DJTF	Deployable Task Force
DM	Deployability and Mobility
FLR	Forces of Lower Readiness
GRF	Graduated Readiness Forces
HNS	Host Nation Support
HRF	High Readiness Forces
JFCC	Joint Force Component Command
JOA	Joint Operation Area
MJO	Major Joint Operation
NAC	North Atlantic Council or Council
NCS	NATO Command Structure
NFS	NATO Force Structure
NRF	NATO Response Force
OPP	Operational Planning Process
PCC	Prague Capabilities Commitment
SL	Sustainability and Logistics
TOA	Transfer of Authority

CHAPTER 4

DETERMINATION OF LOGISTIC REQUIREMENTS AND LOGISTIC PLANNING

CHAPTER 4

DETERMINATION OF LOGISTIC REQUIREMENTS AND LOGISTIC PLANNING

“In modern warfare no success is possible unless military units are adequately supplied with fuel, ammunition and food and their weapons and equipment are maintained.

Modern battle is characterized by resolute and dynamic actions and by abrupt changes in the situation which call for greater quantity of supplies than was the case during the Second World War. Hence the increasingly important role of logistic continuity aimed at supplying each soldier in good time with everything he needs for fulfilling his combat mission.”

- Colonel General Golushko, Chief of Logistic Staff,
Soviet Armed Forces, 1984 -

INTRODUCTION

This chapter describes the methods by which the Alliance operational objectives are decided and their achievement are measured. Committing national capabilities to ensure collectively that the Alliance has sufficient capacity and that current operations have robust support is an obligation of membership and affirms a common purpose. Every logistician in NATO will find himself taking part in this process. The method by which NATO goals are agreed through the Defence Planning Process with respect to logistics, logistic planning and the NATO Logistics Vision and Objectives Process are set out in details below.

DEFENCE PLANNING PROCESS

The 1999 NATO Strategic Concept sets out the purpose and tasks of the Alliance, the organisation's approach to security in the 21st Century, and general guidelines for NATO forces. The Comprehensive Political Guidance (CPG) and subsequent Summit or Ministerial statements have served to provide additional guidance, definition and clarification as required. Taken together, these documents help to define the types of forces, assets and capabilities that the Alliance requires to undertake the full range of its missions. The role of defence planning is to plan for sufficient total capability in nations of the required forces, assets and capabilities.

Defence planning in the Alliance is a fundamental element which enable its member countries to enjoy the crucial political, military and resource advantages of collective defence and other common military efforts to enhance security and stability. It prevents the renationalisation of defence policies, while recognising national sovereignty. The aim of defence planning is to provide a framework within which national and NATO defence planning can be harmonised so as to meet the Alliance's agreed requirements in the most effective and efficient way.

In accordance with paragraph 10.d. of the Washington Summit Communiqué, NATO defence planning must also aim at incorporating more comprehensively the availability of forces for European Union (EU)-led operations. Hence, any reference in this document to the «forces and capabilities needed to conduct the full range of the Alliance's missions», «Alliance requirements» or equivalents, implicitly includes the requirements for EU-led operations. The document entitled «EU and NATO: Coherent and Mutually Reinforcing Capability Requirements» has been approved by the Council and sets out the basic arrangements to enable the EU and NATO as well as their member states to ensure the coherent, transparent and mutually reinforcing development of the capability requirements common to both organisations. These arrangements (including, inter alia, the EU/NATO Capability Group, contacts between EU and NATO secretariats and military staffs at all levels, and cross-participation of international and military staffs at relevant meetings in both organisations) will be employed throughout the NATO defence planning process such as force planning, where appropriate. Thus, reference in this document to «taking account of inputs from other appropriate bodies and staffs» implicitly includes inputs from the EU/NATO Capability Group as well as EU international and military staffs, as appropriate.

Defence planning is a comprehensive endeavour and has several planning disciplines, including armaments, civil emergency, C3 (consultation, command and control), force, logistics, nuclear and resource planning. Each of these disciplines, however, is managed by a different NATO body that contributes to the overall aim differently and applies special procedures. They operate under the direction of the North Atlantic Council (NAC) or the Defence Planning Committee (DPC), or both, or the Nuclear Planning Group (NPG). There is, therefore, a critical requirement to co ordinate and harmonise the activities between the disciplines to the maximum extent possible to ensure that the overall aim of defence planning is achieved efficiently. In 2006, the CPG was agreed in order to improve the co ordination and harmonisation of the planning effort. Similarly, there is also a need to co ordinate and harmonise activities, as applicable, of other inter-related disciplines such as standardisation and air defence, as well as strengthening the two-way linkages between force planning and operational planning. force planning provides an essential basis for this coordination and harmonisation, by identifying both the required and available capabilities and forces over a ten year planning period.

NATO LOGISTICS VISION AND OBJECTIVES (V&O)

Introduction

The NATO Logistics V&O originated from an Autumn 1999 SNLC decision to be more involved in defence and operational planning. In consequence, the SNLC developed the NATO Logistic V&O to facilitate a coherent NATO approach on logistic issues by providing the SNLC with a mechanism to co ordinate and harmonise, on behalf of the NAC and the Military Committee (MC), the development and implementation of logistic policies and initiatives within NATO. The V&O also ensures that NATO's broader logistic concerns are taken into account in defence planning.

The NATO Logistic V&O consists of three elements:

- the overarching vision for NATO logistics for the next ten years;
- broad objectives that are closely aligned with the CPG and other higher level guidance; and
- detailed requirements that identify the required actions, agents, and timeframe for completion.

The NATO Logistics V&O Process

The NATO Logistics V&O process consists of three phases. Phase 1 develops and approves of the vision and objectives. Phase 2 develops and approves the individual requirements. Finally, Phase 3 monitors and manages the achievement of the requirements.

The NATO Defence Planning period covers ten years, while the Force Planning cycle covers four years with possible updates to the Defence Ministerial Guidance and force goals taking place after two years if required. The NATO Logistics V&O also covers a ten year period, and is updated every four years, with a review taking place after two years, if required.

Drawing its overarching guidance from the latest CPG, the NATO Logistic V&O is approved by the SNLC prior to the development and approval of the Defence MG so that the Logistic Planning staff can take it into account in their input to the Defence MG and the development and issue of the Defence Planning Questionnaire (DPQ).

Logistic and logistic-related committees are invited to co-operate with the SNLC in the completion of the NATO Logistics V&O.

V&O Reporting

Progress on objectives is reported to the SNLC through its Annual Logistic Report, which is also sent to Defence Ministers for notation. In addition with complying with the SNLC's Terms of Reference requirement to report annually to Defence Ministers, the practice of focusing the report on the accomplishment of the V&O eliminates the need for additional reports. Additionally, Ministerial reaction to the Annual Logistic Report should provide valuable direction to the start of each NATO Logistic V&O cycle.

FORCE PLANNING

The aim of force planning is to ensure the availability of national forces and capabilities for the full range of the Alliance's missions by setting targets for implementation and assessing the degree to which these targets are being met. The process is based on three sequential main elements, each of which has its own development cycle:

- Political Guidance;
- Planning Targets; and

- Defence Reviews.

These elements form the basis for all major activities in the force planning process.

Political Guidance provides general guidance relevant to all defence planning fields as well as specific guidance applicable to the individual defence planning disciplines, albeit with a particular focus on force planning. Taking into account the current and projected strategic environment, including potential risks and challenges, it addresses the political, economic, technological and military factors that could affect the development of Allies' forces and capabilities and sets out the priorities, timelines and areas of concern to be addressed by the NATO Military Authorities (NMAs) and by nations in their planning. It deals with planning for forces and capabilities required for the full range of the Alliance's missions, including high-intensity operations and operations far from NATO's territory. It also provides guidance, where appropriate, on co operation with and/or support to other organisations.

NATO planning targets in total are allocated to nations based on their fair share allocation. Each national target is translated into a force proposal and subsequently to a force goal, for each nation. The determination of requirements is limited to the identification of the minimum military requirement, in terms of the capabilities needed to meet NATO's Level of Ambition in the predicted security environment out to ten years. To do so, it draws on extant political and military guidance, the latest NATO strategic intelligence estimate, the results of past analyses, lessons learned from operations as well as concept development and experimentation and any other relevant factors. NATO Force Goals form collectively agreed targets for individual nations, seeking the forces and capabilities needed to conduct the full range of the Alliance's missions. NATO force goals are prioritised and may employ a step by step approach, as appropriate.

The NATO defence review is the collective scrutiny and assessment of each nation's force and financial plans against the background of the assigned NATO Force Goals for a ten-year planning period. The plans for the first two years of the planning period constitute a firm commitment to NATO by each country, with respect to their contribution to collective defence and an indication of the availability of forces and capabilities for other NATO missions. Not only does the defence review of an individual nation provide the mechanism to assess the degree to which the targets for that nation are being met, but when the results of the reviews of all nations are compiled, the defence review cycle also presents a comprehensive assessment of the Alliance's military capabilities¹, including any shortfalls, and provides an indication of the Alliance's ability to meet its requirements, including its Level of Ambition.

The force planning process is essentially cyclical in nature, but includes some non cyclical elements as well. The agreement of both the CPG and the Defence MG sets the stage for the elaboration of planning targets which, when

1) *Excluding those of France which does not participate in collective force planning. Also other references in this paper to NATO or the Alliance may, for that reason, apply only to the Allies participating in force planning.*

complete, provide the benchmark upon which the NATO Defence Review is conducted. In turn, the results of the Defence Review feed into the development of the next political guidance, thereby beginning the next cycle. There is, however, flexibility to ensure that the process remains responsive to changing circumstances of the Alliance or of Allies. Looking forward to cover a ten-year planning period, NATO force planning is conducted in a four-year cycle in which biennial and quadrennial elements constitute a continuous and seamless process with work being carried out at various levels simultaneously in different phases of process.

While the previous paragraph indicates the cyclical nature of the force planning process and its main elements in general terms, any of the constituent elements can be conducted on an ad-hoc basis should it be deemed necessary. For example, a major, unexpected change in the security environment could result in an out-of-cycle review of the extant political guidance or in the promulgation of adapted NATO Force Goals. Furthermore, the identification of critical operational requirements/shortfalls could, if judged appropriate, also result in the promulgation of out-of-cycle force goals developed by means of an abbreviated staffing procedure which may, but need not necessarily, be based on Defence Requirements Review-type analysis. To this end, the Defence Review Committee (DRC) will monitor developments closely². Finally, while not necessitating an out-of-cycle review, nations are expected to update their Allies as soon as possible on any major changes to their defence structures and plans, especially if they affect their commitment in the next two years.

Combat Support/ Combat Service Support (CS/CSS)

In May 2003 the Reinforced North Atlantic Council (NAC(R)) endorsed the need for additional initiatives to overcome the shortage in joint CS and CSS units. The NAC(R) tasked the International Staff (IS) and the NMAs to develop concrete proposals for consideration on possible ways to improve capabilities in these areas by exploiting role sharing and role specialisation. The subsequent work of the IS and the NMAs was influenced by the fact that for the first time the majority of CS and CSS requirements at corps and theatre levels were addressed to the nations concerned. Parallel work on the development of concrete proposals to improve CS and CSS was therefore delayed until an initial assessment could be made on the degree to which these CS and CSS requirements were likely to be accepted and implemented by nations.

Based on the military assessment of the acceptance by nations of the CS/CSS requirements concrete proposals were developed to improve this situation. The scope of the problem indicates that solutions need to take a broader approach, including increased commitment by individual nations, role sharing, role specialisation, the use of contractors and the formation of standing multinational logistics units. This broad approach must also provide the opportunity for nations willing to specialise in niche support capabilities, to do so without necessarily committing combat forces.

2) *The need for developing out-of-cycle force goals may also be a consequence of work done by the Executive Working Group or other bodies.*

MANAGEMENT OF LOGISTIC INFORMATION

NATO Logistics Policy³ states that Nations and NATO authorities have a collective responsibility for logistic support between NATO and Nations. Nations must ensure that adequate logistic support is provided to their forces allocated to NATO during peace, crisis, and conflict times, both within NATO boundaries and in support of out of area operations. However, to comply with the agreed principle of collective responsibility for logistics, nations are expected to put in place measures or enablers to enhance co-operation and multinationality in logistics. The Alliance's New Strategic Concept requires timely and accurate logistic information for efficient management and co-ordination of support to NATO forces. This has resulted in the need for close co-ordination and co-operation during NATO multinational operations. NATO has taken a proactive approach to meet current and future information requirements.

Regulatory Framework for a Logistics Information System Architecture (LOGIS)

The Regulatory Framework⁴ provides a management environment for information and communication systems and services that gives the principles for a logistic information system architecture. It is the means to develop an information system architecture to guide development and harmonisation of existing and future Alliance logistic related systems.

This document describes the key requirements and guiding principles for the development and implementation of a NATO LOGIS architecture. Thus, the architecture should provide easy access to “the right information, at the right time, by the right people”.

The Regulatory Framework calls for participation on a case-by-case basis from any or all NATO nations, NATO organisations, NATO agencies, non-NATO-nations, organisations or industry. Its management, harmonisation and co ordination should be part of the responsibility of an Information Technology (IT) management body, which has to be built up by future participants in a LOGIS environment.

Logistics Information Management Group (LOG IMG)

The LOG IMG is NATO's senior logistic information management body. The group was established to review, assess and then recommend NATO's logistics information requirements to the SNLC. The LOG IMG is responsible to develop and maintain NATO's Logistic high level business process model which is used to map current and emerging NATO information systems to the model. Gap analysis is used to determine missing functionality. The LOG IMG works with national military authorities, NATO bodies, nations and industry when applicable, to leverage existing efforts. The LOG IMG maintains close liaison with NATO agencies.

3) MC 319/2

4) EAPC(SNLC)D(2002)21, 23 August 2002, SNLC Regulatory Framework for a Logistics Information System Architecture

Logistic Functional Services (LOGFS) Information Management Working Group (LOGFS IM WG)

The LOGFS IM WG is the Strategic Commands principle information systems and technical group. The LOGFS IM WG is led by HQ SACT and supported by ACO and others NATO Regional Command dealing with Doctrinal/Operational and Technical aspects of the LOGFS. The group is responsible for managing the LOGFS Capabilities Package (CP), co-ordinating information technology aspects of the Scientific Program of Work (SPOW), co ordination of logistics IT experiments, maintaining relations with and providing direction to NC3A and NCSA, and providing oversight for LOGFS related Training at Latina (Italy).

The group also serves as the SCs forum to discuss and prioritise all LOGFS issues from the various components of the LOGFS suite to include current problems and future developments. Besides, it administrates the relationship of the LOGFS user community with NC3A and NCSA.

LOGISTIC READINESS AND SUSTAINABILITY

Logistic Readiness

Readiness is a key principle of the NATO Force Structure (NFS) to ensure the availability of the NFS HQs and forces assigned to the Alliance on a permanent or temporary basis for the full range of the Alliance's missions. The readiness assigned to an HQ or unit is defined in MC 317/1 as "the period of time measured from an initiation order to the moment when the HQ or unit is ready to perform its task from its peacetime location or when it is ready for deployment". NATO's readiness definition does not include the time to move to and within the Joint Operation Area (JOA) and the time to be ready to perform its mission once deployed. Regardless of its readiness category, being "ready" means, for a unit, that it is fully manned, trained, equipped and provided with the required supplies, and is at organisational strength at its peacetime permanent location or forward deployed location, or ready for deployment.

National and NATO logistic plans must ensure that sufficient quantity and quality of logistic resources are available at the same readiness and deployability levels to support forces until such time as a stable, robust re-supply system has been established. Logistic planning must also take into account the activities undertaken by a force up to the point when Transfer of Authority (TOA) occurs. Nations and NATO should apply the same logistic criteria to in-place forces. Logistic units may be deployed early as enabling forces to activate the lines of communication and therefore may need to belong to a higher readiness category than the units they support. The quantity and quality of logistic resources required to provide support to a force must cover the entire mission spectrum that these forces could be expected to perform. The readiness of logistic resources is achieved through establishing the capability to provide the required support, including the full provision of stocks and assets, within the specified readiness time, either by stockpiling or by other arrangements. Nations must pay particular attention to Long Lead Time Items (LLTI) which cannot otherwise be obtained

within the readiness preparation time to ensure that sufficient stockpiles of these items are held to meet the logistic availability and subsequent sustainability requirements of their forces.

Logistic Sustainability

Logistic sustainability must meet NATO's level of ambition defined in the Defence Planning Committee Ministerial Guidance. In line with the parameters of the new NFS, the logistic systems, structures and resources must provide the capability to project and to sustain combat power for the foreseen duration of operations, with increased emphasis on Crisis Response Operations (CRO)s. Logistic sustainability requires sufficient deployable and in-place logistic support for all elements of the force structure. This will include medical support, equipment maintenance, stocks, and logistic infrastructure. Logistic sustainment starts when force generation activities are initiated and aims at maintaining the combat power of the forces throughout the duration of the operation. A key aspect is sustaining the required stockpile level stated in the specific Operation Plan (OPLAN) or by national authorities. The overall sustainability requirement will be derived from the most logistically demanding combination of scales of effort, concurrency, endurance and readiness, tempered by an agreed level of operational risk and the required readiness and preparation time. Overall logistic sustainability requirements will take into account the availability of readiness stocks.

As stated in MC 55/4, nations should maintain appropriate sufficient supplies, available within the readiness categories, to sustain their forces committed to NATO for the full range of potential missions, as identified in the Defence Requirement Review (DRR). Nations must ensure that, within the preparation time of individual readiness categories, the readiness stockpile requirements for forces in those categories, and the sustainability requirements are met by a mix of:

- maintaining adequate stocks;
- assured access to industrial capabilities with adequate surge capacity;
- bi-/multilateral agreements;
- contingency contracts; and
- other means, including contractor support to operations.

Nations relying on industrial surge to address requirements must ensure that industry has the capacity to respond in the timescales required and over the duration necessary, particularly where suppliers may be asked to respond to the needs of more than one nation and/or to the civil sector.

NATO STOCKPILE PLANNING

Stockpile Requirements

Nations may use a combination of methods to achieve stockpile

requirements for readiness during the warning and preparation time for units. These include routine stockpiling of materiel that cannot be obtained during the preparation time of individual readiness categories, acquisition in total or part by assured access to industrial capabilities with adequate surge capacity, bi- or multilateral arrangements and contingency contracts. The methods selected will need to take into account industrial and commercial market considerations, procurement lead times, strategic transportation availability and wider security considerations in respect of access to strategic materiel. To determine the necessary stocks to achieve force readiness, the key factor is the time required to establish robust re-supply arrangements, including the availability of strategic lift for logistic sustainability, and the ability of industry and commerce to respond within the preparation period of individual readiness categories. Through analysis of demanding DRR planning situations, a unit basic load, the re-supply cycle time and pre TOA requirements, the SCs have calculated the requirement to be in principle 30 Standard Days of Supply (SDOS). Therefore, for defence planning purposes, units require 30 SDOS available to be operationally ready for deployment within the unit readiness time. Where a nation is unable to meet the full 30 SDOS readiness requirement, the nation should consult the SCs to determine the options.

To support national generic and long term stockpile planning within the overall Defence Planning Process, the SCs are responsible for developing stockpile requirements in consultation with nations and publishing them in the Stockpile Planning Guidance (SPG) to nations. The SPG is harmonised with the NATO Force Planning Process and should provide adequate guidance for all classes of supply. However, where no such guidance can be given, national planning factors should apply. In these cases, requirements should be established at levels consistent with these items covered by guidance.

NATO Stockpile Planning Guidance

Although Ministerial Guidance and the Force Planning process can be considered as the primary process for NATO capabilities planning, additional detail is often required to permit logistics planning across its functional disciplines. Statements like “nations should hold a minimum stock level of ammunition” or “nations should provide sufficient logistic units to support their combat forces” mean little by themselves. Some standard of measurement is necessary to clarify what the statement means. This is achieved by:

- MC 55/4, Readiness and Sustainability Policy, which addresses readiness criteria and sustainability parameters to be used in force, operational and logistic planning. All Classes of Supply (COS), including medical supplies, are covered by MC 55/4; and
- the NATO Stockpile Planning Guidance (SPG) uses computer modeling to compute battle decisive munitions for Land, Air, Air Defence, and Maritime Forces. These requirements are based on a target oriented approach and modeled in the Allied Command Resource Optimisation Software System (ACROSS). The requirements for all other classes

of supply are calculated using the Sustainment Planning Module II (SPM II), which is based on the level of effort methodology (30 SDOS) and is being refined to estimate daily consumption across a variety of operational conditions. The SPG is issued to nations every two years and the results are reported in the DPQ.

The SPG is the expression of the NATO requirement for all classes of supply. It is produced by ACT, with the input from ACO, by nations attending the Stockpile Planning Committee. Once received, nations compute the optimal munitions effectiveness based on current inventories and planned procurement, and then report the results in the DPQ. Shortfalls in meeting the agreed munitions or other stockpile levels are discussed at the SPC and during force planning consultations with nations.

NATO MILITARY COMMON FUNDED RESOURCES

Introduction

Military common-funded programmes have always been and must remain an important aspect of the co operation amongst Allies⁵. NATO's military common resources consist of the NATO Security Investment Programme (NSIP), the Military Budget and International Manpower. The NSIP, formerly known as the NATO Infrastructure Programme, funds common investment projects in support of the Alliance's capabilities. The Military Budget funds essentially the common operation and maintenance costs of NATO's integrated military structure. International Manpower provides the necessary manning of that structure.

Senior Resource Board (SRB)

The SRB is a subsidiary body of the Council with overall responsibility for common-funded military resource management. It is chaired by a national chairman and composed of senior national representatives from member countries, representatives from the Military Committee (MC), ACO, ACT, Military Budget Committee (MBC), Infrastructure Committee (IC) and the NATO Defence Manpower Committee (NDMC). The main objectives of the SRB are:

- to provide coordinated advice to the Council/Defence Planning Committee (DPC) on the availability, management and allocation of resources;
- to provide a forum for considering the resource implications of new initiatives of common concern;
- to optimize mid- and longer term military common-funded resource management and to provide maximum flexibility in the resource allocation process; and
- to consider and endorse capability packages for Council/DPC approval, primarily from a resource allocation point of view.

5) *Ministerial Guidance 1997*

Infrastructure Committee

The IC is chaired by the Assistant Secretary General for Defence Investment, (ASG/DI), with the Director of the Security Investment Directorate serving as the Permanent Chairman. It is responsible, within the broad policy guidance provided by the SRB, for the implementation of the NSIP, as approved by the Council/DPC. In this respect, the IC:

- screens projects included in the NSIP, primarily from the technical and financial point of view, also taking into account economical and political aspects, agreeing their detailed eligibility for common funding in accordance with approved guidelines;
- grants authorizations to Host Nations to commit funds for such projects;
- decides on procurement issues, including disputes;
- formally accepts implemented projects;
- manages the programme from a financial point of view within the overall limits set by the SRB and approved by the Council; and
- calls forward payments from contributing nations in accordance with approved expenditure forecasts.

Military Budget Committee (MBC)

The MBC is responsible for managing the International Military Budget. To this end, the MBC:

- issues policy and guidance to the NATO Military Authorities (NMAs) for the preparation and submission of medium term financial plans; reviews these plans and formulates recommendations to the SRB concerning resource allocation and future planning parameters;
- issues policy and guidance to the NMAs for the preparation and submission, within approved resource allocations, of annual budget estimates; reviews these estimates and formulates recommendations to the Council for their approval;
- monitors the execution of the approved budgets and authorises adjustments to the authorised budgets which exceed the powers of the Financial Controllers; and
- provides advice to the Council on a range of international military budget matters, such as the granting of international status to military bodies, modifications to international civilian personnel establishments and reports by the International Board of Auditors.

NATO Defence Manpower Committee (NDMC)

The NDMC is an MC sub-committee with overall international manpower management responsibility, taking into account broad resource policy guidance of the SRB. In this respect, the NDMC's main tasks are:

- to advise the MC on manpower policies and ceilings, current and forecast;
- to screen the NATO Defence Manpower Plan with a view to inviting the approval of the MC to the proposals for the first year, and its approval in principle to those for subsequent years for manpower and financial planning purposes;
- to consider proposals for variations in military establishments submitted by the NMAs;
- to conduct reviews as necessary of international manpower posts; and
- to advise the MC on NATO personnel policy.

The Medium-Term Resource Plan (MTRP)

The MTRP covers resource planning for the following budget year and the four subsequent planning years. It is forwarded by the SRB to the Council for decision at the beginning of each year. It is essentially a resource planning document, expressing resource requirements in broad quantitative terms. By expressing budgetary requirements within the Capability Package framework, the MTRP establishes the link between NATO's military common resources and the Alliance's strategic objectives.

The MTRP provides an overview of the medium term feasibility and affordability of previously endorsed and future programmes, including manpower. The MTRP addresses issues which are of particular relevance to each of the military common resources of NSIP, military budget and international manpower. Specifically, the MTRP sets resource allocation ceilings for the NSIP and the military budget for the next budget year and provides planning ceilings for the following four planning years.

Capability Packages (CPs)

The Capability Package process links military common funding with the broader Alliance defence planning process. It identifies the assets needed, both common-funded and national, for the Alliance to have the capabilities to perform its missions. It specifically integrates the investment, operation and maintenance and international manpower aspects. There are four distinct phases in the CP process: CP definition, CP development and submission, CP approval and CP implementation.

CP Definition

MC Guidance for Defence Planning amplifies the Principal Military Requirements (PMR) and identifies the required military functions. This forms the basis for the development by the NMAs of their required capabilities. The SCs, in consultation with Host Nations, Agencies and user nations, develop the CPs that support the required capabilities within their area of responsibility. There are no fixed guidelines as to what constitutes a properly sized CP. However, it is clear

that a CP must be manageable in terms of scope, cost and implementability. The cost and complexity must be such as to allow package execution within a reasonable timeframe, normally five to seven years from the time of approval.

CP Development and Submission

At this stage, the SCs identify additional requirements by comparing required assets to available assets. The following steps can be identified:

- the identification of those minimum resources (forces, armaments, logistics, and infrastructure assets) that must be available to accomplish the required capability;
- the determination of those installations which currently exist to satisfy the required capability identified in the step described above; and
- the selection of those installations available to support the required capability together with the related common-funded Operation and Maintenance costs and NATO Manpower. If existing NATO or national infrastructure assets are not adequate to support the required capability, this step must identify either common funded or nationally funded additional investment requirements, either for new installation(s) or to satisfy shortfalls in existing installations, including the relation to common-funded Operation and Maintenance costs and NATO Manpower.

CP Approval

CPs are submitted to NATO HQ for approval. The IS, together with the International Military Staff (IMS), prepares a joint screening report to be considered by both the SRB and the MC. This report will address the feasibility, implementability, eligibility for common-funding and affordability within the agreed MTRP planning framework. The SRB's primary focus is on affordability. The MC considers CPs from a military requirement point of view, assigning the military priority on which basis CPs will compete for funding.

Council/DPC approval of the CP constitutes a commitment that the necessary resources, including international manpower, will be made available.

CP Implementation

Implementation of CPs is the responsibility of the implementation committees and the host nations. For those CPs for which additional investment is necessary, the Infrastructure Committee is responsible for managing the implementation of the common-funded investments. Both the MBC and the NDMC are involved in managing the provision of sufficient operation and maintenance support and international manpower.

NATO Security Investment Programme

The IC has overall management responsibility over the NSIP. New investment requirements will be agreed on the basis of the security needs of the Alliance and, consequently, eligibility for common-funding will not constitute

any entitlement. Particular emphasis will be placed upon the facilities needed to meet crisis management requirements: communications, command and control, information gathering, mobility, flexibility of employment, reinforcement activities and re supply. The basic principle of eligibility for common-funding under the NSIP is that requirements should be over and above those that could reasonably be expected to be made available from national resources.

The current NSIP is based upon NATO's overall requirements. Priority objectives include:

- support to ongoing and planned CROs;
- flexible and deployable command and control of land, air and maritime forces;
- air defence, surveillance, reconnaissance and intelligence;
- logistic support and re-supply;
- control of lines of communication;
- training support and exercise facilities;
- nuclear capabilities; and
- consultation.

The Military Budget

The MBC has overall management responsibility over the military budget. The International Military Budget provides for the operating and maintenance costs (including personnel and operating costs, mission operating expenses and capital expenditures) of the network of NATO international military headquarters, programmes and agencies. Six major budgetary groups can be determined:

- Crisis Response Operations, providing for the operation of the theatre headquarters of NATO's deployed missions;
- NATO Airborne Early Warning (NAEW) System, providing for the operation and control of the NAEW fleet of aircraft;
- Allied Command Operations, including its network of subsidiary Commands, Programmes and Agencies;
- Allied Command Transformation, including its network of subsidiary Commands, Programmes and Agencies;
- the IMS Groups, which also includes the budgets such as those for the NATO Defence College, the Advisory Group for Aerospace Research and Development (AGARD) and the NATO Air, Command and Control System Management Agency (NACMA); and
- the NATO Consultation, Command and Control Agency (NC3A).

STANDARDISATION AND INTEROPERABILITY

Introduction

Through NATO Standardisation, the Allies will enhance their capability to perform the whole range of NATO tasks and missions. NATO standardisation also adds a political value as an outward demonstration of co operation and solidarity. Therefore, NATO policy is to encourage nations and NATO authorities to develop, agree and implement common concepts, doctrines, procedures, criteria and designs to enhance the Alliance's operational effectiveness and improve the efficiency in use of available military resources.

The increasing need for Alliance co operation in the development and maintenance of multinational forces for all missions demands more flexibility to meet broader and less predictable risks, and to ensure a variety of military crisis measures. Given the current emphasis placed on co operation in Peace Support Operations (PSOs), combined efforts, including with Partners, should be made in the field of standardisation. For multinational formations, the overall mutual co operation between all forces and units is essential. This requires a significant level of standardisation.

Major changes in the Alliance, involving new and more delicate missions, Partnership for Peace (PfP) and NATO's enlargement will necessitate clearly defined standardisation parameters and will require an appropriate level of standardisation to allow collaborative operations, training and exercises in NATO led non-Article 5 operations (including PSOs, search and rescue, humanitarian operations and crisis management). In particular, the identification and implementation of interoperability objectives for PfP nations will become increasingly important, as will their involvement and integration in the standardisation process.

The production and maintenance of NATO Standardisation Agreements (STANAGs) and Allied Publications (APs) is largely the responsibility of the NATO Standardisation Agency (NSA) supported by the Tasking Authorities (TAs). The TAs consist of the MC, the Conference of National Armament Directors (CNAD), the NATO Air Defence Committee (NADC), the NATO Consultation Command and Control Board (NC3B), the NATO Pipeline Committee (NPC), the Senior Civil Emergency Planning Committee (SCEPC), the SNLC and others as required. The NSA maintains the NATO Standardisation Programme (NSP), which is an automated tool containing key Alliance Standardization R(ASRs) requirements and selected objectives for Alliance standardisation objectives.

Definition

Within NATO, standardisation is the process of developing and implementing concepts, doctrines, procedures and designs to achieve and maintain the compatibility, interchangeability or commonality which are necessary to attain the required level of interoperability or to optimise the use of resources, in the fields of operations, materiel and administration. The levels of standardisation are, in ascending order, compatibility, interoperability, interchangeability and commonality.

Aim

The aim of NATO standardisation is to enhance the Alliance's operational effectiveness through the attainment of interoperability among NATO forces, and additionally between NATO forces and forces of Partners and other nations, improving thereby efficiency in the use of available resources.

Industry's capability to satisfy military requirements belongs entirely to the economic system of the member nations; consequently, the achievement of NATO standardisation is highly dependent on the political will of the Allies to commit themselves to the necessary efforts.

Principles of NATO Standardisation

The following principles guide the application of NATO Standardisation:

- **General Alliance Objectives.** Standardisation is not an end in itself. The need for standardisation is derived from the overall political objectives of the North Atlantic Treaty, and specifically from the Alliance Strategic Concept and the Ministerial Guidance for defence planning activities in NATO.
- **Harmonisation of standardisation with NATO defence planning.** Co ordination among NATO defence planning disciplines is essential for harmonisation and achievement of interoperability. For nations concerned, force planning is a key focus for the standardisation process through the force goals and defence review cycles. Partnership Goals address standardisation requirements to Nations participating in the PfP Planning and Review Process (PARP). Implementation is then reviewed in PARP Assessment.
- **Unity of effort.** Unity of effort is enhanced by harmonisation and co ordination of standardisation activities with Nations, SCs and Senior NATO Committees through the NATO Standardisation Organisation.
- **Use of civil standards.** The Alliance will use suitable civil standards to the maximum practicable extent. Only when no applicable civil standard is available, will a NATO standard be developed.
- **Attainment of standardisation level.** Nations should achieve the levels of standardisation indicated in the Standardisation Requirement. The levels of standardisation are, in ascending order, compatibility, interoperability, interchangeability and commonality.
- **Feedback.** Feedback on fulfilment of Standardisation Requirements and implementation of Standardisation Agreements is an essential part of the standardisation process.
- **National commitment.** In principle standardisation is voluntary for nations that shall implement standards as applicable and to the maximum possible extent. In some instances, nations may agree to the mandatory implementation of specific standards. Full compliance with the force goals for nations participating in force planning is a key

aspect of national commitment to improve standardisation.

- **Terminology.** NATO documents must use NATO agreed terminology.

The NATO Standardisation Process

The NATO Standardisation Process involves proposing, developing, agreeing, ratifying, promulgating, implementing and updating NATO standards. It comprises two complementary elements: the so called «bottom-up» and «top-down» standardisation.

Bottom-up standardisation is initiated by reporting standardisation needs and/or deficiencies. This is followed by Standardisation Proposals, formulated by NATO Working Groups, which are validated by the appropriate Tasking Authority to confirm the requirement before the development of a STANAG starts.

Top-down standardisation is initiated when the SCs identify military standardisation requirements as part of force proposals for nations participating in the force planning process. It requires a clear formulation of these requirements and the allocation of priority scores based on the Bi-SCs agreed basic priority list. These military standardisation requirements, together with other requirements for standardisation from NATO nations and from TAs, constitute the Alliance's Standardisation Requirements. Top-down standardisation comprises 4 phases:

Phase 1: Identification, formulation and approval of Standardisation Requirements;

Phase 2: Identification, formulation and agreement of Standardisation Objectives based on these requirements;

Phase 3: Execution of tasks by the TAs, resulting from the approved Standardisation Objectives;

Phase 4: Implementation of top-down Standardisation and feedback. Top-down Alliance Standardisation Requirements, complemented by appropriate bottom-up Standardisation Proposals, lead to the development and implementation of the NATO Standardisation Programme (NSP). The NSP is the Alliance's management tool for standardisation activities.

Steps within the process. The general steps in the standardisation process which fall under the direct responsibility of the TAs are defined in AAP-3, Procedures for the Development, Preparation, Production and the Updating of NATO Standardisation Agreements and Allied Publications. Such responsibility includes the management and updating of all existing STANAGS and APs, the identification, validation and agreement on new standardisation requirements, the achievement of nations' ratification and the promulgation of the agreed documents.

- **Identifying standardisation requirements/deficiencies.** Standardisation requirements are derived from either the top-down or the bottom-up approaches as described earlier. They identify the capability to be achieved and the required level of standardisation.

Those that form part of the NATO Standardisation Programme are referred to as Alliance Standardisation Requirements.

- **Formulating and agreeing priority standardisation objectives.** Based on the agreed requirement, priority standardisation needs are identified and the standardisation objectives (referred to SOs within the NSP) are formulated.
- **Formulating or updating of NATO standards.** The formulating or updating of NATO standards is inherently international in character and hence must be co-ordinated internationally in the appropriate NATO bodies. In view of the wide range of the Alliance's activities for which standards are desirable, the formulation of proposed NATO standards will normally be decentralised. Formulation of NATO standards can best be accomplished by multinational bodies of national experts.
- **Ratifying NATO standards by Nations individually.** Specific proposed standards may not be relevant to all Alliance nations. A proposed standard may be ratified and designated a NATO Standard if several (not necessarily all) Allies agree that it is acceptable as a goal for implementation. Likewise, Partner nations can adopt NATO standards as a goal for implementation.
- **Promulgating NATO standards.** After sufficient nations have ratified the proposed standard it will be promulgated by the Director of the NSA.
- **Implementing agreed NATO standards as a matter of national policy.** Implementation of agreed NATO standards is a national responsibility. NATO strongly encourages implementation of ratified STANAGs, by observing, monitoring and reporting results on a nation-by-nation and case by case basis.
- **Verifying and validating the implementation of agreed NATO standards.** Verification of standardisation may be carried out in PSOs, exercises and other operations. The verification should be carried out on the basis of a verification plan. Validation of verification information may result in the adaptation and/or deletion of certain STANAGs.

NATO Standards

NATO Standardisation is a broad process that may be applied to any NATO activity. NATO standards are normally classified into one of three main areas as follows, although some standards may apply to more than one area:

- **Operational standards** are those standards which affect future and/or current military practice, procedures or formats. They may apply to such matters as concepts, doctrine, tactics, techniques, logistics, training, organisations, reports, forms, maps and charts, among other things.

- **Materiel standards** are those standards that affect the characteristics of future and/or current materiel to include telecommunications, data processing and distribution. They may cover production codes of practice as well as materiel specifications. Materiel includes complete systems, including command, control and communications systems, weapons systems, sub systems, assemblies, components, spare parts and materials and consumables (including ammunition, fuel, supplies, stores and consumable spares).
- **Administrative standards** primarily concern terminology - which apply to both the «operational» and the «materiel» fields - but this category also includes standards which facilitate Alliance administration in fields without direct military application (e.g. reporting of economic statistics).

In general, operational standardisation falls into the area of responsibility of the NSA while materiel standardisation falls into the area of responsibility of the CNAD. Other NATO bodies such as the NATO C3 Board, the SNLC, the NPC, the Research & Technology Board and the IMS Divisions also deal with standardisation.

Standardisation of terminology is essential for a collective understanding of all documentation related to standardisation activities. The NATO Glossary of Terms and Definitions (AAP-6) is the key NATO reference document that provides official terms and definitions to be used. Additionally, NATO specialist Glossary of Terms and Definitions provide NATO approved terminology for specialised fields.

Standardisation must not hinder research and development for new armaments and/or communications equipment nor the pursuit of more efficient/appropriate processes and procedures. On the contrary, by considering standardisation implications in the very early state of development, collaboration in equipment programmes will be considerably enhanced.

Operational and materiel standardisation are interdependent. Standardisation in key operational areas such as concepts, doctrine, procedures and mission needs, will greatly enhance prospects for standardisation of materiel. In turn, new technology will often require the reformulation of doctrine and will almost always result in changes to operational procedures. The full benefits of increased materiel standardisation may not be achieved unless there is extensive harmonisation of operational aspects.

Operational standardisation strives for the use of common concepts, doctrines, procedures, practices or formats to enhance operational interoperability of NATO and PfP forces. Objectives for materiel standardisation strive for the development and procurement of compatible, interoperable, interchangeable or common materiel for NATO and PfP forces, as required.

The NATO Standardisation Organisation (NSO)

NATO Committee for Standardisation – Senior NATO Committee, reporting to the Council, with full authority and management responsibility for Alliance Standardisation co ordination on policy and decision taking. The NCS is assisted by the Group of NCS representatives with delegated authority (NCSREPs) to achieve its mission. The NCSREPs will address the NSO objectives, promote the interaction between national organisations and NATO and prepare NCS decisions or act on its behalf. The NCS is the Board of Directors for the NATO Standardisation Agency.

NATO Standardisation Staff Group (NSSG) – Staff group subordinate to the NCS, responsible for staff liaison, for the staffing of projects assigned to the NSA by the NCS and for preparation of documentation contributing, inter alia, to the formulation of Military Standardisation Requirements by the SCs and drafting of Standardisation Objectives. The NSSG will be supported by NSSG Working Groups to undertake specific standardisation tasks.

Tasking Authorities Working Groups – Working Groups responsible for producing and maintaining the standards as directed by their parent TA.

NATO Standardisation Agency (NSA) - A single, integrated body, composed of military and civilian staff, subordinate to the Council through the NCS, with the authority to co ordinate issues between all fields of standardisation. The Joint and Single Service Boards, supported by the NSA, will each act as a TA, delegated by the MC, for operational standardisation, including doctrine. The NSA will set out procedures, planning and execution functions related to standardisation for application throughout the Alliance. It is responsible for the preparation of the work for the NCS, NCSREPs and NSSG meetings and will ensure, with its experts in the different fields, centralised co ordination, liaison with and, if required, support to TAs' Working Groups that develop standards.

The Director of the NSA is responsible for the day to day work of the Policy and Requirements, Joint, Naval, Army, and Air and Admin & Support Branches. The Service Branches provide staff support to their related Boards and are responsible for monitoring and harmonising standardisation activities in their area of responsibility.

The NSA supports the Joint and the Single Service Boards, each of which acts as a Tasking Authority for Operational Standardisation, including doctrine, as delegated by the Military Committee. The Service Boards are responsible for developing operational and procedural standardisation among member nations. Like other Tasking Authorities, they do this by developing applicable STANAGs and Allied Publications with the member nations and NATO Military Commands.

The Boards, with one member per nation, are in permanent session and meet formally once a month. Decisions are normally reached on the basis of unanimity. However, as standardisation is a voluntary process, agreements may also be based on majority decisions of the nations that are participating in any particular Standardisation Agreement. The SCs have a staff representative on each Board.

Service Boards

The three Single Service Boards consist of members of the appropriate Services of the NATO nations and the NATO Strategic Commands; Belgium represents Luxembourg. While most Board Members are on the staff of their Military Representative at NATO HQ, those from Belgium, Denmark, the Netherlands and the United Kingdom are based at their respective Ministries of Defence. The United States have a separate NSA delegation at NATO HQ. Decisions are normally reached on the basis of unanimity. However, as standardisation is a voluntary process, agreements may also be based on majority decisions.

The **Joint Service Board (JSB)** deals with joint and overarching operational standardisation policy matters, affecting two or more Services. It manages working groups dealing with allied joint operations doctrine, information exchange requirement/message text format harmonization, joint intelligence issues and environmental protection.

The **Naval Board** manages working groups dealing with maritime operations, amphibious operations, helicopter operations from ships other than aircraft carriers, mine warfare, naval ammunition interchangeability, maritime logistics, naval control of shipping, radio and radar radiation hazards, replenishment at sea, submarine escape and rescue, underwater diving and very shallow water mine countermeasure operations.

The **Army Board** manages working groups dealing with land operations, artillery, combat engineering, explosive ordnance disposal, medical standardisation, helicopter operations, ammunition interchangeability, logistics doctrine, asset tracking, materials handling/distribution, movements and transport, range safety, nbc defence operations and nbc medical operations.

The **Air Board** manages working groups dealing with air operations and all aspects of operational doctrine, air transport, air armaments, aircraft/aircrew integration, aeromedical, air reconnaissance, aircraft servicing and standard equipment, airfield services, avionics systems, flight safety, aircraft gaseous systems, interservice geographic, search and rescue, crash fire-fighting and rescue and, air electrical and electromagnetic considerations.

REFERENCES.

C-M(2000)54 NATO Policy for Standardisation

AAP-3 Procedures for the Development, Preparation, Production and the Upgrading of NATO Standardisation Agreements (STANAGs) and Allied Publications (APs)

AAP-4 NATO Standardisation Agreements and Allied Publications

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

ACCS	Air, Command and Control System
ACO	Allied Command Operations
ACROSS	Allied Command Resource Optimisation Software System
ACT	Allied Command Transformation
AGARD	Advisory Group for Aerospace Research and Development
APs	Allied Publications
C3	Consultation, command and control
CNAD	Conference of National Armament Directors
CP	Capabilities Package
CPs	Capability Packages
CPG	Comprehensive Political Guidance
CRO	Crisis Response Operation
CS	Combat Support
CSS	Combat Service Support
DPC	Defence Planning Committee
DPQ	Defence Planning Questionnaire
DRC	Defence Review Committee
DRR	Defence Requirement Review
EU	European Union
HQs	Headquarters
IC	Infrastructure Committee
IMS	International Military Staff
IS	International Staff
IT	Information Technology
JOA	Joint Operation Area

JSB	Joint Service Board
LLTI	Long Lead Time Items
LOGFS	Logistic Functional Services
LOGFS IM WG	Logistic Functional Services Information Management Working Group
LOG IMG	Logistics Information Management Group
LOGIS	Logistics Information System
MBC	Military Budget Committee
MC	Military Committee
MG	Ministerial Guidance
MTRP	The Medium-Term Resource Plan
NAC	North Atlantic Council (or Council)
NACMA	NATO ACCS Management Agency
NAC(R)	Reinforced North Atlantic Council
NADC	NATO Air Defence Committee
NAEW	NATO Airborne Early Warning System
NAMs	NATO Military Authorities
NC3A	NATO C3 Agency
NC3B	NATO Consultation Command and Control Board
NCS	NATO Committee for Standardisation
NCSA	NATO Communication and Information Systems Services Agency
NDMC	NATO Defence Manpower Committee
NFS	NATO Force Structure
NPC	NATO Pipeline Committee
NPG	Nuclear Planning Group
NSA	NATO Standardisation Agency
NSIP	NATO Security Investment Programme
NSO	NATO Standardisation Organisation
NSP	NATO Standardisation Programme
NSSG	NATO Standardisation Staff Group
OPLAN	Operation Plan

PARP	PfP Planning and Review Process
PfP	Partnership for Peace
PMR	Principal Military Requirements
PSOs	Peace Support Operations
SCEPC	Senior Civil Emergency Planning Committee
SDOS	Standard Days of Supply
SNLC	Senior NATO Logisticians' Conference
SPG	Stockpile Planning Guidance
SPM II	Sustainment Planning Module II
SPOW	Scientific Program of Work
SRB	Senior Resource Board
STANAGs	NATO Standardisation Agreements
TAs	Tasking Authorities
TOA	Transfer of Authority
V&O	NATO Logistics Vision and Objectives

CHAPTER 5

OPERATIONAL LOGISTIC PLANNING



*Maintenance Afloat – A frigate and an oiler taking advantage
of a tender's maintenance capabilities*

CHAPTER 5

OPERATIONAL LOGISTIC PLANNING

“Every unit that is not supported is a defeated unit.”

- Maurice de Saxe: Mes Rêveries XIII, 1732 -

INTRODUCTION

The logistic operational planning for potential or specific operations is part of the overall NATO operational planning process. This process is outlined in MC 133/3, explained in general in AJP-1 and described in detailed Bi-SC Guidelines for Operational Planning (GOP). The GOP is available on CRONOS at “<http://www.shape.nato.int/ops-global/Documents/GOP/GOPTOC.html>”. The Operational Logistics Planning Course at the NATO School (Oberammergau) provides useful training on the planning process. Figure 5-1 outlines this planning process.

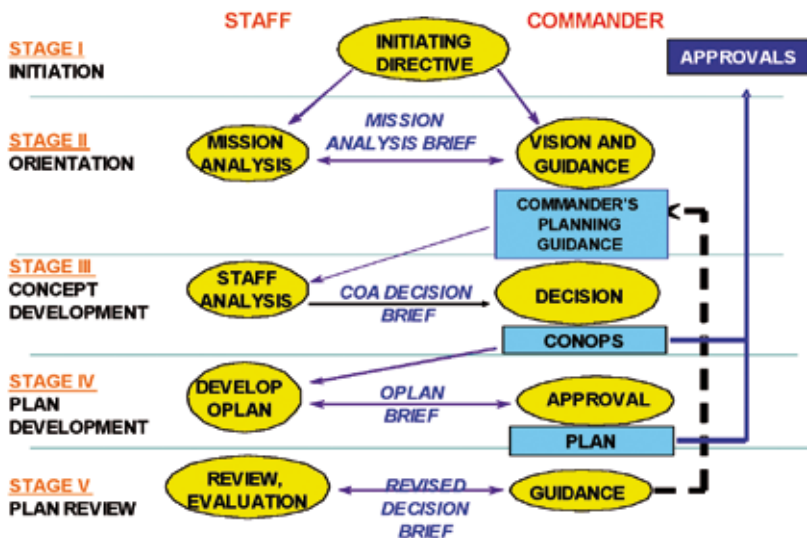


Figure 5-1 – Operational Planning Process

KEY PLANNING DOCUMENTS

The key documents produced during operational planning are the Concept of Operations (CONOPS), the Operation Plan (OPLAN) and the Contingency Plan (COP). The J4¹ staff must work closely with the other J Staff throughout the entire operational planning process to ensure that the main plan and the J4 portions are realistic and properly coordinated. The participating nations must be involved in the planning process as soon as permission is given. An OPLAN will contain

1) J4 is the Joint Staff dealing with Logistics. The list of Joint Staffs is attached at Annex B.

a Logistic Annex R with Medical Appendix, Movements Annex S, and Engineer Annex EE.

LOGISTIC SUPPORT GUIDELINES

At all planning levels, it is necessary to study the situation, especially the political and military situation and the geography of the theatre, and then combine this with operations guidance in order to define the logistic support concept. This general concept, usually contained in paragraph 4 of the CONOPS and OPLAN, is developed by the J4 and promulgates the Commander's intent of the way in which to provide logistic support. This concept may include:

- the major peculiarities of the theatre and how they can affect logistics;
- the approximate logistic forces and capabilities required;
- the likelihood of Host Nation Support (HNS);
- the likely nations to participate and possibility of multinational and joint logistics; and
- the general requirement for LLN, LRSN, MILUs/MIMUs, or contractor support.

LOGISTIC PLANNING CONSIDERATIONS

Multinational Logistics

Early use of multinational logistics can save the cost of deploying and maintaining personnel and equipment.

Multinational Joint Logistic Centre (MJLC)

If a MJLC is established, this entity will be the focal point for identification, deconfliction, and co-ordination of major logistics requirements for both NATO Joint Force Headquarters (HQs) and participating nations.

Movement Planning

The deployment into theatre will place a heavy initial workload on Movement and Transportation (M&T) staff that must be kept fully informed during the operational planning process.

Medical Planning

Medical support is critical to all nations and must be coordinated to avoid duplication of expensive equipment and highly trained personnel. The preservation of combat strength by emergency medical and surgical services is crucial.

Supply and Maintenance Planning

The Sustainability Statement includes the Days of Supply (DOS) to be held in theatre.

Role of Host Nation Support (HNS) in Logistic Support Planning

Guidance on HNS planning is contained in MC 334/2 and AJP-4.5(A). The availability of HNS is a key factor in Logistic Support Planning. It will determine the size and scope of support required and will contribute significantly to the overall planning process. HNS planning should be conducted concurrently with the preparation of operational plans. The availability of existing HNS arrangement, Memorandum of Understanding (MOU) and bilateral agreements will need to be considered in the development of plans. NAC or MC tasking to SCs may include full authorisation for ACO to negotiate HNS arrangements. All negotiations should be conducted by an experienced team of personnel covering all disciplines including CIMIC, infrastructure, finance, purchasing and contracting, engineering, medical, transportation and real estate, as required.

Infrastructure Planning

Part of the engineers' task will be to establish base camps and to facilitate Reception, Staging and Onward Movement (RSOM).

Contracting and Funding

J4 will need to work closely with J8 to arrange contracts for required services not provided by military means.

Participation of Non-NATO Nations

The participation of non-NATO nations in NATO led operations is likely to continue. A high level of co-operation and co-ordination is required to ensure that those nations unfamiliar with NATO procedures are integrated as quickly and as fully as prevailing circumstances permit. This must start with the planning process. The certification of non-NATO participants in any operation will be completed as early as possible and non-NATO nations may require special assistance to arrange logistic support.

Concluding the Operation/Exercise

Re-deployment may involve environmental issues, real estate management, repackaging of ammunition, stocks and equipment, accounting for and disposal of NATO owned equipment.

Co-ordination with National Support Elements (NSEs)

Most nations will have a NSEs and/or a National Command Element (NCE) providing specific national logistics support. It will be necessary for the NATO logistic commander to have oversight of these organisations, partly through LOGREP and may involve logistic evaluation and assessment prior to deployment. NATO must encourage nations to minimise the size of the logistic footprint caused by large NSEs through sharing logistic capabilities and multinational logistic arrangements.

Co-ordination with International Organisations (IOs) and Non-Governmental Organisations (NGOs)

With the help of J9, it may be necessary to work with IOs such as the UN, OSCE or the Red Cross and various NGOs such as Médecins sans Frontières.

Phases of the Operation

There are different logistic requirements during each phase of an operation, which must each be carefully planned.

Reception, Staging and Onward Movement

RSOM is the phase of the deployment process that transitions units, personnel, equipment and materiel from arrival at Ports of Debarkation (PODs) to their final destination. Although RSOM is an operational matter, it requires the provision of a significant degree of logistic support. RSOM planning and execution requires therefore considerable integration with logistic support, M&T, and HNS planning. The NATO Commander will consider the availability of Host Nation Support (HNS), which can provide infrastructure and services to facilitate RSOM. Where a HN does not exist or cannot provide the required RSOM support, the NATO Commander, in order to ensure that requirements are met, should seek logistic support units for RSOM support through the force planning and generation processes, or request one or several nations to assume responsibility as Logistic Lead Nation on behalf of deploying NATO forces.

FORCE GENERATION PROCESS

Combined Joint Statement of Requirements (CJSOR)

While the OPLAN is being developed, there is a parallel force generation process to provide the required forces from NATO and non-NATO countries. The CJSOR provides a list of the troops and key equipment/capability required and the nation(s) offering to fill each serial. Contributing nations are responsible for funding and arranging logistic support for their CJSOR units. J4 staff may become involved in helping to arrange multinational logistic support, particularly for small or non-NATO force contributions.

Crisis Establishment (CE)

The CE provides the organisation and the list of positions required in the deployed HQ. Part of the CE costs is supported by the NATO common funding system. The Alliance provides logistic support for the CE.

LOGISTIC REPORTING (LOGREP)

The requirement for SCs to call for logistics reports is outlined in MC 53/2. To that end, the SCs have introduced a logistic reporting system to provide and ensure logistic information and accurate data in time, including reports prior to Transfer of Authority (TOA).

The Bi-SC Reporting Directive Volume V, Logistics Reports (BI-SCD 80-3 Vol V), gives the necessary guidance at the level of the SCs. Its procedures and formats are applicable to all services - Air, Army and Maritime - in peace, crisis,

war and operations other than war, and also allow easy adoption by non-NATO nations, when required. The majority of the logistic reports in this directive helps a NATO Commander provide an assessment of logistic capabilities and concerns or exchange information with nations for logistic management purposes. Subordinate headquarters are authorised to supplement the BI-SCD 80-3 Vol V for their operational needs. For current operations, the logistic reporting requirements will usually be stated in the ANNEX CC (Documentation, Records and Reports) to the OPLAN or in a supplement to the OPLAN using the Bi-SCD 80-3 Vol V as the basis.

The LOGUPDATE is a key logistic report in Bi-SCD 80-3 Vol V which, in general, replaces all former statistical reports. The purpose of the LOGUPDATE is to provide NATO Commanders with a dynamic update of changes to core database information on stockpiles of specific equipment and consumable materiel held by national forces declared to NATO, as well as specified equipment and materiel held by nations in support of such forces.

CIVIL SUPPORT TO THE MILITARY

Lessons learned from operations in the Balkans and Afghanistan reveal that NATO Commanders have to be prepared to utilise civilian capabilities to support the mission. HNS, contractor support and the civil support capabilities provided by NATO Agencies such as NAMSA, form the basis of the civil logistic support capabilities from which the NATO Commander can draw. Additionally, useful expertise can be drawn from the Senior Civil Emergency Planning Committee's (SCEPC) Planning Boards and Committees (PB&Cs). At its Autumn 2003 Plenary session, the SCEPC examined the possibility of civil support for non-Article 5 CROs and, in consequence, developed a Civil Capabilities Catalogue in 2004 to inform the NMAs of the civil expertise that can be made available to Commanders through the SCEPC.

Examples of Potential PB&C Support to Military

The **Civil Aviation Planning Committee (CAPC)** provides information on commercial air transport capabilities that could be used in the deployment of NATO forces, and suggests options offering an efficient and cost effective approach. The CAPC can also evaluate complex aviation issues against the backdrop of national and international laws and regulations.

The **Planning Board for Inland Surface Transport (PBIST)** can make available information on rail transport capabilities that could be used in the deployment of NATO forces. The PBIST can also initiate studies to examine potential surface transport Lines of Communication (LOCs) to support NATO operating forces.

The **Planning Board for Ocean Shipping (PBOS)** serves as the NATO focal point for advice and assistance on the protection of civilian maritime assets against acts of terrorism. PBOS also supports the NATO Shipping Centre, which was activated in October 2001 to support the NATO Naval forces deployed in the Eastern Mediterranean by monitoring the marine traffic in the Suez Canal.

Moreover, PBOS initiated the development of a study in support of Operation ACTIVE ENDEAVOUR, setting out arrangements and sources to obtain information on ship movements in the Mediterranean and Straits of Gibraltar.

REFERENCES

MC 133/3 NATO's Operations Planning System

MC 327/2 NATO Military Policy for non Article 5 Crisis Response Operations

AJP 4 Allied Joint Logistics Doctrine

FPG(Log) Functional Planning Guide Logistics

RPG(Log) Regional Planning Guide Logistics

ANNEXES

A Acronyms used in this chapter

B Joint Staff Structure

ANNEX A

ACRONYMS USED IN THIS CHAPTER

CAPC	Civil Aviation Planning Committee
CE	Crisis Establishment
CIMIC	Civil-Military Co operation
CJSOR	Combined Joint Statement Of Requirements
CONOPS	Concept of Operations
COP	Contingency Plan
CRO	Crisis Response Operation
DOS	Days of Supply
GOP	Guidelines for Operational Planning
HNS	Host Nation Support
HQs	Headquarters
IOs	International Organisations
LLN	Logistics Lead Nation
LOGREP	Logistic Reporting
LRSN	Logistics Role Specialist Nation
MCE	Multinational Command Element
MILUs	Multinational Integrated Logistics Units
MIMUs	Multinational Integrated Medical Units
MJLC	Multinational Joint Logistic Centre
MOU	Memorandum of Understanding
M&T	Movement and Transportation
NGOs	Non-Governmental Organisations
NMAs	NATO Military Authorities
NSE	National Support Element
OPLAN	Operation Plan
PB&Cs	Planning Boards and Committees

PBIST	Planning Board for Inland Surface Transport
PBOS	Planning Board for Ocean Shipping
PODs	Ports of Debarkation
RSOM	Reception, Staging and Onward Movement
SCEPC	Senior Civil Emergency Planning Committee's

ANNEX B

JOINT STAFF STRUCTURE

J1	Personnel
J2	Intelligence
J3	Operations
J4	Logistics
J5	Plans & Policy
J6	CIS
J7	Exercises
J8	BUDFIN
J9	CIMIC

CHAPTER 6

NATO LOGISTIC POLICIES AND CONCEPTS

CHAPTER 6

NATO LOGISTIC POLICIES AND CONCEPTS

“The only thing harder than getting a new idea into the military mind is to get an old one out.”

- B.H. Liddell Hart, date unknown -

INTRODUCTION

The Alliance's new Strategic Concept and emerging concepts such as the Combined Joint Task Force (CJTF), NATO's involvement in CROs and an ever-expanding range of activities bringing Allied and Partner nations into closer co-operation, demand responsive, flexible and interoperable logistic support. The Senior NATO Logisticians' Conference (SNLC) has developed a vision for NATO logistics designed to meet the challenge: the principle of collective responsibility in logistics between NATO and the nations. NATO's Policy for Co operation in Logistics (C M(2001)44) establishes a common vision across the whole spectrum of logistics to enhance co-operation and the overall logistic posture of the Alliance. NATO Principles and Policies for Logistics (C M(2003)101)¹ is the keystone policy document that establishes the principle of collective responsibility for logistic support between nations and NATO and gives the NATO Commander the necessary authority for the execution of his new responsibilities in logistics. Based upon these overarching policy documents, specific policies have been developed by the SNLC in the areas of readiness and sustainability², Host Nation Support (HNS)³, infrastructure engineering for logistics⁴ and Movement and Transportation (M&T)⁵, while the Committee of the Chiefs of the Military Medical Services (COMEDS) has developed policies for medical support⁶.

On the basis of policies for multinationality in Alliance logistics, the SCs turned their attention to their implementation by developing joint logistic doctrine. The Bi-SC Doctrine Committee has developed AJP-4(A) as the keystone logistic doctrinal publication and, together with the Bi-SC M&T Forum and the Bi-SC Medical Advisory Group, it has elaborated a series of subordinate level documents covering specific areas of logistics. The MC service boards have developed single service logistic doctrine and a broad range of logistic tactics, techniques and procedures. The SCs then develop implementing directives and planning guidance. The figure presented hereafter illustrates the structure of logistic policy and guidance within NATO.

This chapter describes the hierarchy of logistic policies, doctrine, techniques and procedures. It also summarises the important points to be drawn from overarching logistic policy and doctrine.

1) *Within the NATO military structure, designated as MC 319/2*

2) *DPC-D(2002)2 [MC 0055/4]*

3) *C-M(2000)56-REV1 [MC 0334/2]*

4) *C-M(2005)0100 [MC 534]*

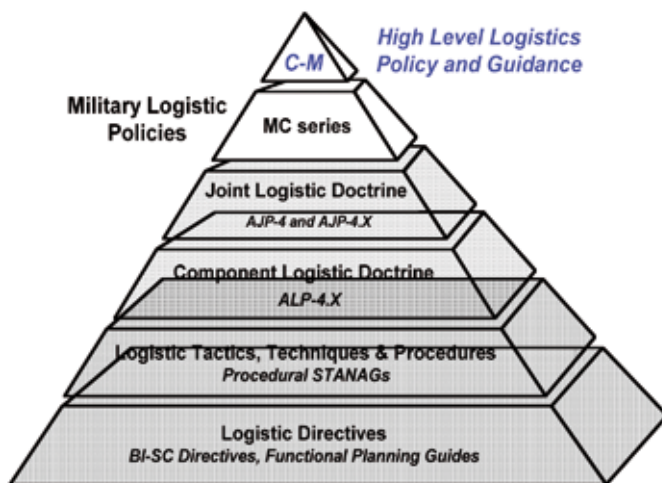
5) *C-M(2002)10 [MC 0336/2]*

6) *MC 0326/2*

HIERARCHY OF LOGISTIC POLICIES AND DOCTRINE

The structure of logistics policies and doctrines is displayed below:

Structure of Logistic Policy and Guidance



NATO Logistic Policy documents are developed at the highest NATO levels. NATO Committees, such as the SNLC, submit recommendations for approval to the Military Committee (MC) followed by notation or approval by the North Atlantic Council (NAC), as appropriate. Generally, logistic policies are approved by both the MC and the NAC.

Strategic level logistic policies are then published as Council Memoranda (C M) and MC documents, and include:

- C-M(2001)44 NATO Policy for Cooperation in Logistics
- MC 055/4 NATO Logistic Readiness and Sustainability Policy⁷;
- MC 319/2 NATO Principles and Policies for Logistics⁸;
- MC 326/2 Medical Support Precepts and Guidance for NATO;
- MC 334/2 NATO Principles and Policies for Host Nation Support (HNS)⁹;
- MC 336/2 NATO Principles and Policies for Movement and Transportation¹⁰;

7) DPC-D(2002)2

8) C-M(2003)101

9) C-M(2000)56-REV1

10) C-M(2002)10

- MC 343/1¹¹ NATO Military Assistance to International Disaster Relief Operations
- MC 526¹² Logistics Support concept for NATO Response Force Operations
- MC 533¹³ NATO Principles and Policies for the Maintenance of Equipment

NATO Doctrine is developed under the authority of the Tasking Authorities (TAs). The SNLC is the TA for Joint Logistics Doctrine. The Standardisation Service Boards are the TAs on behalf of the MC for single-service logistics doctrine. The Tasking Authorities task the LCB (Logistics Co ordination Board), the Movement and Transportation Forum (M&TF), the Medical Advisory Group (MEDAG) and appropriate Standardisation Service Board Working Groups to develop their respective doctrine. HQ SACT is the lead SC for developing and maintaining joint logistics doctrine and SHAPE will support the development. Support is also required from NATO HQ, Regional Commands HQs, their Component Commands HQs and the nations to properly perform this function. The support required of NATO HQs and Nations specifically includes their participation in working groups, doctrine co-ordination meetings and the drafting of assigned doctrines.

Allied Joint Logistic Doctrine documents are distributed as **Allied Joint Publications (AJPs)**. The AJPs provide foundational logistic doctrine, under which more detailed logistic techniques and procedures are established. The following AJPs are presently developed and promulgated:

- AJP-4(A) Allied Joint Logistics Doctrine
- AJP-4.4 Allied Joint Movement & Transportation Doctrine
- AJP-4.5 Allied Joint Host Nation Support Doctrine & Procedures
- AJP-4.6 Multinational Joint Logistic Centre
- AJP-4.7 POL Doctrine
- AJP-4.9 Modes of Multinational Logistic Support
- AJP-4.10 Allied Joint Medical Support Doctrine

Allied Logistic Publications (ALP) are supporting component/service to Multinational Logistics Doctrine. Within the AJP-4 hierarchy of documents the following series of Logistic Doctrinal publications have been developed or initiated for development as listed below:

- ALP-4.1 Multinational Maritime Logistic Doctrine
- ALP-4.2 Land Forces Logistic Doctrine
- ALP-4.3 Air Forces Doctrine & Procedures, Air Logistics

11) C-M(2002)35

12) SG(2005)0478

13) C-M(2005)100

Logistic Tactics, Techniques and Procedures (TTPs) constitute detailed procedural documents that are published primarily as Strategic Command Directives and NATO Standardisation Agreements (STANAGs). Logistic related STANAGs can be found on the NATO Standardisation Agency website.

NATO Logistic Planning Guidance is generally developed at SC's level and below and include the logistic elements of General Operational Plans (GOP) and other logistic functional planning.

NATO POLICY FOR CO-OPERATION IN LOGISTICS

The 2001 NATO Policy for Co-operation in Logistics provides the basis for enhanced multinational co-operation in logistics in NATO. The framework for the implementation of this policy, while respecting the responsibilities of the different NATO logistic and logistic related bodies, is the Concept for Co-operation in Logistics. The mechanisms used to implement co-operation with other bodies have been integrated in the NATO Logistics Vision and Objectives process that is described in details in Chapter 4.

NATO Concept for Co-Operation in Logistics

The NATO Concept for Co-operation in Logistics provides the framework for managing co-operation in logistics and establishes the link between: the nations, the different NATO logistics and logistic related bodies; and the planning processes used by the different NATO logistics and logistic related bodies.

The three basic elements of the concept are its consolidated conceptual basis¹⁴, which consists of:

- the Alliance's policy and guidance documents that direct and influence NATO logistics in their own domains;
- the Co-operation Enablers which are the tools (policy, doctrine, activities, systems, standards, procedures and capabilities) that facilitate and promote co operation in logistics; and
- Harmonisation, Co-ordination and Control Mechanism (HCCM) which is the formal mechanism through which co-operation objectives and enablers are continuously identified and managed, enablers are put in place and objectives are achieved.

NATO PRINCIPLES AND POLICIES FOR LOGISTICS

All of the logistic policy documents listed above promulgate principles and policies for logistics. While most focus on a functional area of logistics, such as medical support or movement and transportation, only MC 0319/2 promulgates broad principles and policies applicable to all of logistics. In consequence, the remainder of this chapter will focus on these.

¹⁴ *The enablers have the requirements in the NATO logistic Vision and Objectives (V&O) process.*

LOGISTIC PRINCIPLES

Collective Responsibility. Nations and NATO authorities have a collective responsibility for the logistic support of the Alliance's multinational operations. This collective responsibility encourages nations and NATO to co-operatively share the provision and use of logistic capabilities and resources to support the force effectively and efficiently. Standardisation, co-operation and multinationality in logistics build together the basis for flexible and efficient use of logistic support, thereby contributing to the operational success.

Authority. There is an essential interdependence between responsibility and authority. The responsibility assigned to any NATO Commander must be matched with the delegation of authority by nations and NATO to allow the adequate discharge of responsibilities. The NATO Commander at the appropriate level must be given sufficient authority over the logistic resources necessary to enable him to receive, employ, sustain and re-deploy forces assigned to him by nations in the most effective manner. The same should apply for non-NATO Commanders of multinational forces participating in a NATO led operation.

Primacy of Operational Requirements. All logistic support efforts, from both military and civil sectors, should be focused to satisfy the operational requirements necessary to guarantee the success of the mission.

Co operation. Co-operation amongst the nations and NATO is essential. Co-operation across the full spectrum of logistics, including between the civilian and military sector within and among nations, will contribute to the best use of limited resources. For non-Article 5 CRO, this co-operation must be extended to non-NATO nations, and other relevant organisations, as required.

Co ordination. Logistics support must be co-ordinated amongst nations and between NATO and nations at all levels. It must also be carried out with non-NATO nations and other relevant organisations, as required. Generic and standing pre-arranged agreements are the tools to facilitate logistic co-ordination and co-operation. The overall responsibility for co-ordination lies with NATO and should be conducted as a matter of routine.

Assured Provision. Nations and NATO must ensure, individually or collectively, the provision of logistic resources to support forces allocated to NATO during peace, crisis and conflict.

Sufficiency. Logistic support must be available in the appropriate quantity and quality, at the appropriate notice, when and where it is required throughout the full spectrum of the Alliance's possible missions. It must be ensured for any NATO-led operation continuously and for the duration required to accomplish the mission.

Efficiency. Logistic resources must be used as efficiently and economically as possible. Needs must be identified in a timely manner to optimise the efficient provision and effective use of such resources.

Flexibility. Logistic support must be proactive, adaptable and responsive to achieve the objective. Adequate planning, which considers potentially changing circumstances, enhances flexibility.

Visibility and Transparency. Visibility and transparency¹⁵ of logistic resources are essential for effective logistic support. NATO Commanders require a timely and accurate exchange of information¹⁶ among nations and NATO to prioritise consignment movement into and within the JOA to allow for redirection in accordance with agreements between the Commander and National Support Elements (NSEs), and to effectively employ logistic assets within the Joint Operations Area (JOA).

LOGISTICS POLICIES

General

Logistic support should be provided by balancing the peacetime provision and locations of logistic assets and conflict consumables with the ability to re supply and reinforce to ensure timely and continuous support. This must include appropriate arrangements for non-Article 5 CRO.

Responsibility

NATO and nations have a collective responsibility for logistics. Within this context, nations have the ultimate responsibility for equipping their forces and for ensuring, individually or by co-operative arrangements, the provision of required logistic resources to support the forces assigned to NATO during peace, crisis and conflict. Nations are responsible for ensuring that those units and formations assigned to NATO are properly supported by an effective and efficient mission tailored logistic structure. Lastly, nations retain control over their own resources, until such time as they are released to NATO by agreed mechanisms for the Transfer of Authority (TOA). The NATO Commander assumes control of commonly provided resources as directed and is responsible for their logistic support.

The NATO Commander is responsible for establishing the logistic requirements for all phases of an operation, and for the co-ordination of logistic planning and support within his area of responsibility. The NATO Commander is responsible for the development and promulgation of a logistic support plan that sustains the operational plan. This plan must identify the structures and procedures required to reduce competition for scarce resources by nations and NATO HQs and include, in close co-operation with nations, the implementation of the different modes of logistic support. The NATO Commander must ensure that the logistic force structure and the appropriate Command and Control (C2) arrangements have been established and are capable of supporting the operation. The NATO Commander also co-ordinates support among contributing nations and with the host nation and retains the responsibility for co ordinating the overall logistic effort, even when participating nations rely solely on national logistics.

15) *Regarding preliminary inspection and control ("certification"), French formations retained as part of the NRF or High Readiness Forces are submitted to the normal process of certification. Specific "technical agreements" are normally established between ACO and CHOD FR on the hand-over conditions of these units to NATO. Broader authority is not accepted unless special arrangements are in-place.*

16) *With respect to logistic or resources reporting, FR will report on the situation of units within the multinational chain of command or performing multinational general support (e.g. LLN/LRSN). NSEs will not provide reports unless specific arrangements have been established.*

Appropriate responsibilities should also be granted to a non-NATO Commander of a multinational force within a NATO-led operation. Vice versa, the NATO Commanders' responsibilities will also apply for non-NATO nations' troop contingents within NATO-led operations.

Authority

MC 319/2 grants the NATO Commander the key authority enabling him to ensure that his force is properly supported, and to establish a support organisation to meet the operational requirement. Logistic command structures must provide the NATO Commander at the appropriate level with the authority to support the force by using in-JOA logistic resources, with the prior concurrence of nations. His key authorities allow him to:

- command common funded logistic resources and assume operational control of Multinational Integrated Logistic Units (MILUs) and other assigned logistic assets, as directed;
- redistribute the logistic assets of nations for the support of the forces in accordance with pre-agreed terms and conditions; and
- inspect¹⁷ and require reports on the quantity and quality of specified logistic assets designated to support the forces that will be under his command. For non-NATO nations, this will include the certification of logistic units prior to the deployment and inspection as required of specified logistic assets.

These key authorities also apply to non-NATO Commanders of a multinational force participating in a NATO led operation.

Logistic Planning in Defence Planning

Logistic planning is an integral part of defence planning¹⁸ through the force planning process and Partnership Planning and Review Process (PARP). It is the level at which the civil and military logistic capabilities required to deploy, sustain and re deploy Alliance forces is identified by the SCs in consultation with nations. The resulting logistic support concepts, structure and procedures must be tailored to the respective forces and their related employment options.

The SCs must ensure timely and proper inclusion of requirements for logistic forces and capabilities in the force planning process so that nations, including PARP nations, can agree to acquire and provide them to the Alliance for its use during NATO-led operations. The authority, responsibility and funding for multinational logistic arrangements are to be established during the operational planning process.

To support nations' generic and long term stockpile planning within the overall Defence Planning Process, the SCs are responsible for developing stockpile requirements in consultation with nations and publishing them in the

17) See footnote 2.

18) *France is not part of NATO defence planning.*

Bi-SC Stockpile Planning Guidance (SPG). The Bi-SC SPG is harmonised with the NATO force planning process and should provide adequate guidance for all classes of supply. However, where no such guidance can be given, national planning factors should apply.

Logistic Planning in Operational Planning

Logistic operational planning is embedded in MC 133/3, NATO's Operational Planning System. The level of detail is related to the planning category and the level of responsibility. Logistic support concepts and structures must be tailored to the respective forces and their missions. All logistic functions, described later in this document, are vital and indispensable parts of the planning process. To achieve the desired level of multinationality, national and NATO logistic planning must be harmonised from the start of the operational planning process. The force generation process must take into consideration the different levels of standardisation. Logistic operational planning should consider the contributions of non-NATO nations and other organisations.

Logistic Command and Control (C2)

Logistic support to NATO forces must be as effective and efficient as possible. Therefore, nations must provide NATO Commanders with the logistic C2 authority and capabilities they require assuming their responsibilities throughout all the phases of an operation. It includes co-ordination, prioritisation and deconfliction of logistics and Operational Control (OPCON) over logistic units that are allocated in the JOA, such as MILUs and specific logistic support units identified and provided by nations through the force generation process. This will ensure that effective logistics to support the operation can be planned for and executed. The assets belonging to the national support chain, which includes the units performing Logistic Lead Nation (LLN) and Logistic Role Specialist Nation (LRSN) missions, normally remain under national command unless there is a specific disposition in the TOA message or special arrangement related to funding.

Logistic Readiness and Sustainability

Logistic sustainability must support NATO's Level of Ambition as defined in the Defence Planning Ministerial Guidance. National and NATO logistic plans must ensure that sufficient quantity and quality of logistic resources are available at or above the readiness and deployability level of the forces they support. These logistic resources must cover the entire mission spectrum.

Co operation in Logistics

Co operation in logistics should be considered as the most efficient means to meet logistic resource requirements. Measures that enhance the overall efficiency of logistic support include the whole range of multinational support options, industrial contracts, leasing, common or multinational procurement, pre-positioning, pooling and sharing with other nations, as well as arrangements for the co-operative acquisition and management of certain logistic stocks. A framework and further guidelines forming the basis for co operation in logistics

are laid down in Reference I, which seeks to enhance co-operation by establishing a common vision across the full spectrum of logistics to provide the best support to the Alliance.

Redistribution of Logistic Resources

Nations have first call on the logistic resources integral to their forces. However, under exceptional circumstances, the NATO Commander may direct the redistribution of national logistic resources to overcome unanticipated deficiencies. Redistribution is not intended to redress national stockpile shortages. Nations are required to sustain forces as prescribed in MC 55 series.

Logistic resources are capabilities that could be made up of equipment, personnel, supplies, and services. Logistic assets are subsumed into logistic resources and viewed as materiel, spares, stocks and consumable items. Personnel are limited to those in existing logistic organisations and should be redistributed as a service. All these may be considered for redistribution by the NATO Commander if deemed essential for operational mission accomplishment.

Logistic resources held by units under multinational OPCODE are subject to redistribution within the limitations stated in the TOA message. Resources within the NSE or any other logistic resources declared unavailable by nations, are not subject to redistribution. However, this does not preclude the NATO Commander from requesting assistance from a national contingent (or NSE) commander, if deemed necessary.

While all NATO Commanders have logistic responsibilities and authorities, redistribution authority is limited to Joint Force Commanders, Air, Land and Maritime Component Commanders, and to those Commanders including those commanding assigned multinational units who have delegations in line with the TOA arrangements. The redistribution authority granted to a NATO Commander generally comes into effect upon TOA.

Prior to effecting redistribution if time allows or as soon as practical afterwards, the NATO Commander shall advise the affected national authorities and appropriate NATO Commanders of the redistribution action(s). Upon determination that redistribution is required, the NATO Commander shall direct applicable subordinate commanders of national elements to effect the transfer of the logistic resources. As soon as the operational situation permits, the logistic resources transferred under this authority will be replaced by receiving nations or, if agreed by the nations involved, reimbursed.

Multinational Logistics

Multinational logistics is described in details in Chapter 7.

Funding / Resources Provision

Nations are responsible for the deployment, sustainment and redeployment of their forces. National logistic resources are procured and maintained for that purpose at national expense, although co-operative multinational arrangements should be taken into consideration by nations and the NATO Commander.

The NATO Commander should establish resource requirements, including any foreseen exceptions to normal procedures, and obtain the requisite funding authorisations in the context of the planning documents. In particular, requirements to support reconnaissance, initial deployment and HQ set-up should be defined and included in a package of enabling funding, which should, in principle, be available at SC Activation of Pre-deployment.

Strategic infrastructure may be funded via the NATO Security Investment Programme (NSIP) dependent on the context of individual projects, while funding of Operations and Maintenance (O&M) costs via the Military Budget (MB) should be taken into consideration through categorical budget allocations. The SCs must determine the Minimum Military Requirements (MMRs). Those that are considered as strategic infrastructure may be eligible for common funding provision. As common funding of O&M is restricted to the NATO HQs in the AOR, any common funded continuing activities are the responsibility of the NATO HQ.

Civil Resources

Civil capabilities may complement those of the military. Civil equipment, goods and services can be utilised to provide timely and effective logistic support to any NATO or NATO-led operation. Support can be based on civil resources only when they securely meet the operational requirements of the assigned forces. Centralised procurement and control of civil resources should be pursued to achieve better efficiency.

Nations should have appropriate national legislation and other arrangements to facilitate the timely use of civil resources in peace, crisis and conflict. This is especially important to facilitate the rapid deployment of forces.

Life Cycle Support

A NATO Life Cycle Support (LCS) strategy should be used to provide equipment and materiel support that meets NATO and nations' operational requirements in the most efficient manner. This provides NATO with a force multiplier when applied multinationally. Such a strategy integrates acquisition and consumer logistic processes into one seamless process. It must start early in the requirement phase to ensure the greatest impact on design and development to maximise weapon system availability at the most economical total cost.

REFERENCES

MC 319/2 NATO Principles and Policies for Logistics

AJP 4(A) Allied Joint Logistic Doctrine

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

AJP	Allied Joint Publications
AOR	Area of REsponsibility
CJTF	Combined Joint Task Force
COMEDS	Committee of the Chiefs of Military Medical Services in NATO
CROs	Crisis Response Operations
C2	Command and Control
GOP	General Operational Plans
HCCM	Harmonisation, Co-ordination and Control Mechanism
HNS	Host Nation Support
JOA	Joint Operation Area
LCB	Logistics Co ordination Board
LCS	Life Cycle Support
LLN	Logistic Lead Nation
LRSN	Logistic Role Specialist Nation
MC	Military Committee
MEDAG	Medical Advisory Group
MILUs	Multinational Integrated Logistic Units
MMRs	Minimum Military Requirements
M&TF	Movement and Transportation Forum
NRF	NATO Response Force
NSEs	National Support Elements
NSIP	NATO Security Investment Program
O&M	Operations and Maintenance
OPCON	Operational Control
PARP	Partnership Planning and Review Process
SACT	Supreme Allied Commander Transformation

SCs	Strategic Commands
SHAPE	Supreme Headquarters of Allied Powers in Europe
SNLC	Senior NATO Logisticians' Conference
SPG	Stockpile Planning Guidance
STANAGs	Standardisation Agreements
TA	Tasking Authorities
TOA	Transfer of Authority
TTPs	Tactics, Techniques and Procedures

CHAPTER 7

MULTINATIONAL LOGISTICS



*Strategic Air Transport – An Antonov 124-100,
the strategic airlift workhouse of ongoing NATO operations*

CHAPTER 7

MULTINATIONAL LOGISTICS

“The more I see of war, the more I realize how it all depends on administration and transportation. It takes little skill or imagination to see where you would like your army to be and when; it takes much more knowledge and hard work to know where you can place your forces and whether you can maintain them there.”

- General Sir A. C. P. Wavell, 1977 -

NATO'S LOGISTIC SUPPORT CONCEPT

Multinational logistics is a tool, which, depending on the operational requirements and the specific situation, can enhance efficiency and effectiveness. More specifically, the benefits of multinational logistics can be the reduction of the overall costs and of the logistic footprint, the ability of nations to contribute their fair share of support, the improvement of the force's flexibility, the conservation of scarce local resources and a better use of specific national expertise.

Multinational logistics is not an aim in itself. During the force planning and the force generation process, the applicability, necessity and benefits of multinational logistics must be considered. Unilateral national logistic decisions could adversely impact on the effectiveness of the NATO Commander's mission. NATO operational experience demonstrates that once national logistic support structures have been established, it is likely to prove more difficult to move towards multinational logistic solutions. Therefore, multinational logistic solutions should be pursued at the outset of the logistic planning process.

Besides national logistic arrangements to support own forces, where ad hoc mutual support may be provided between nations and/or NATO Commanders, there are three types of multinational logistics, listed in order of increased multinationality:

- pre-planned mutual support, HNS, and contractor support to operations that are arranged bi- or multilaterally by NATO and/or nations;
- a nation formally undertakes to provide support or services to all or part of the multinational force, but under national command. Tasking authority will be the NATO Commander; and
- one or more nations formally undertake to serve all or part of the multinational force, under control of the multinational Commander (e.g. MILU).

Multinational logistics can be either pre-planned or introduced during an operation as the situation evolves. Based on the types above, NATO and nations can decide to apply multinational logistics where it replaces less effective or efficient national solutions. Retaining the overall operational responsibility for the specific missions, the NATO Commander is well suited to act as broker between nations to facilitate such multinational arrangements. This is usually accomplished

through development of appropriate Memorandum of Understanding (MOU) or Technical Agreements detailing the functional, administrative, and resource-related implications of such relationships.

SUPPORT FOR THE NATO RESPONSE FORCE (NRF)

“The NRF will (...) give us a highly capable quick-reaction force that is ready for operational deployment wherever required.”

- (Jaap de Hoop Scheffer, Secretary General of NATO) -

General

The NRF is one of the most ambitious undertakings that the Alliance has ever committed to. The NRF is NATO's primary force for conducting expeditionary warfare within the Alliance's territory and beyond. Further, the NRF is the engine for NATO's ongoing transformation, giving impetus to the development of transformational concepts and capabilities.

While Article 5 missions within NATO territory remains the foundation of Alliance collective defence, expeditionary operations beyond NATO's territory have taken on added importance with NATO's ongoing engagement in Crisis Response Operations (CROs) in Africa, Asia and Europe. The NRF is the first step enabling NATO to better address this issue.

The NRF could potentially be employed in a number of different missions, such as:

- initial entry force into a hostile environment, with or without Host Nation Support;
- support to counterterrorism operations;
- CROs, including peacekeeping;
- embargo operations;
- non-combatant evacuation;
- support to consequence management operations, including Chemical, Biological, Radiological and Nuclear (CBRN) events and humanitarian crisis situations; and
- demonstrative force package for diplomatic and/or deterrence purposes.

The NRF is fundamentally brigade sized with appropriate land, maritime, air and special operations forces at graduated readiness. The C2 element and the force are at 5 to 30 days Notice to Move (NTM) and, once deployed, capable of standing alone for up to 30 days, and longer if re supplied. The force will be multinational, which will not impair military effectiveness. The NRF must be robust enough to be employed as initial entry force in a hostile area and capable of preparing a theatre for follow-on forces.

A generic NRF Combined Joint Statement of Requirements (CJSOR) has been developed and refined through national consensus, with a view to providing nations with an indication on the type and scale of forces and the capabilities required: it is the driver for transformation. There is only one CJSOR to meet all seven NRF missions as prescribed in MC 477. The CJSOR is the basis for the production of a credible, deployable force with sufficient operational flexibility and resilience. It is important to understand that the Joint Force Command (JFC) selects the forces required and tailors them to the specific mission at hand. It is therefore very unlikely that the entire NRF would be employed for any given mission. For example, the force package for a humanitarian mission will be different from a hostile Initial Entry Operation. However, the key element must be able to get there quickly.

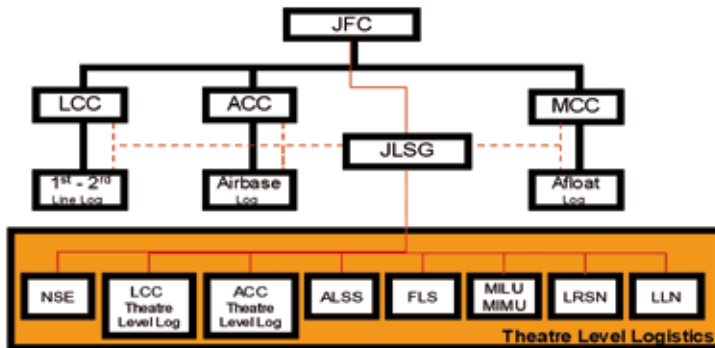
Capabilities are assigned to the NRF through a rotation cycle, either by individual nations or collectively by a group of two or more nations. Each rotation is planned for 12 months, with assigned forces generally serving 6 months on duty for land and air forces, 12 months for maritime forces. There is a 6 month work-up and training period before taking up the mission. The three Joint HQs at Brunssum, Naples and Lisbon take it in turn to run a 12 month rotation and provide the core of the Deployable Joint Task Force (DJTF) HQ that deploys.

The pulse of the NRF beats around the NRF rotation plan. A raft of enabling initiatives underpins the NRF's early rotations. These initiatives broke new ground and moved away from NATO's static regional defence posture to develop NATO's expeditionary capability and its ability to meet the modern global threats. MC 526, Logistics Support Concept for NRF Operations, was developed to complete a suite of concept documents addressing readiness reporting, new command relationships, a certification programme tied to the necessary qualifying criteria and a review of the capability packages needed to provide the NRF's requirements.

MC 526 – Logistic Support Concept for NRF Operations

The Logistic Support Concept for NRF Operations, MC 526, complements MC 477, NATO's overarching NRF Concept, and distills a broad range of NATO Logistic Policies and Principles into a forward-looking concept for defining the specific modalities required to most effectively support NATO expeditionary operations.

Logistics is a key enabler for the NRF. In order to achieve the key tenets of deployability within the 30 day timeline, the logistics support concept underscores the need to minimise the logistic footprint. To this end, jointness and multinationality are essential, but they can only realise benefits from unity of command and proper information management. In addition, using multinational solutions supports national requirements, shares burdens and reduces duplication. MC 526 sets the preconditions for the provision of logistic support for the NRF and builds on a C2 structure, with a Joint Logistic Support Group (JLSG) to provide theatre level logistic capability for the various components.



A key feature of MC 526 is integrated logistics with the main pillars defined as unity of logistic command, jointness and the optimum adoption of multinational logistic solutions. Integrated logistics aims at generating, supporting and maximizing the mission effectiveness of the joint force by enabling operational reach, facilitating the scheme of maneuver and maintaining desired levels of combat power.

MC 526 increases the reliance on a more centralized logistic organisation with expanded C2 and direct responsibility for the provision of theatre level sustainment. One of the key tenets is the NATO Commander being able to control the logistic assets, so that he is able to redirect logistic resources to best suit his operational mission. A natural consequence is the utilization of multinational logistics solutions thereby reducing National Support Elements (NSEs). To illustrate this, in Kosovo, the logistic footprint represents just over 50% of the troops on the ground.

Other related benefits include efficiencies in the sustainment of the joint force, enhanced jointness and improved visibility over theatre level logistic assets. Most military operations today will be joint, or are potentially joint in nature. This has significant logistic implications and all sustainment solutions must therefore appreciate the complexities of the joint dimension. 'Thinking joint' is necessary, even if the mission begins as a single component operation. The key challenge is to establish the capability for the application of the requisite unity of command over NRF logistics at theatre level, i.e. the JLSG HQ. Establishing this capability based on the MJLC as a core nucleus becomes a vital step in the implementation of MC 526.

The implementation of MC 526 is the main effort in the ongoing transformation of NATO logistic within Allied Command Operations (ACO) and its success is considered as a prerequisite to multinational logistics in NATO operations. Although nations fully support MC 526 and acknowledge the logistic operational advantages and the significant increased efficiency that it may bring, its implementation is incremental rather than 'Big Bang'.

The full implementation of MC 526 has two fundamental phases:

- Phase 1: the establishment and training of a certified JLSG HQ; and
- Phase 2: the provision, training and certification of assets for the JLSG CJSOR.

Phase 2 requires the efforts of both JFCs and nations. ACO is responsible for achieving Phase 1 and making the JLSG HQ a reality. Phase 1 is a crucial step to convince nations to contribute logistic elements to the CJSOR. The successful implementation of MC 526 rests squarely on the ability of ACO to establish a JLSG HQ from within the NCS and should ACO fail meeting this challenge, the expansion of multinational logistic solutions would be more difficult.

MC 551 – Medical Support Concept for NRF Operations

NRF operational employment principles also demanded changes in the way in which NATO provides medical support to deployed units. In this context, pre generation, training and certification of NRF units and high readiness timelines are key. This requires high transparency and co operation from Troop Contributing Nations, in particular if Multinational Medical Units are to be achieved. An NRF Medical Support Concept (MC 551) has been developed in line with the requirements set by MC 477 and MC 526. MC 551 concentrates on the composition and preparation of the Medical Task Force for a specific NRF rotation. Overall, the changes in planning and conducting medical support to NRF and NATO operations are reflected in the complete re write of AJP 4.10(A), Operational Medical Support. The specific demands of the transformed NATO on the capabilities, capacities and flexibility of NATO medical units are being incorporated in the NATO force planning cycle.

MC 526 and MC 551 are landmark achievements for the Alliance in its drive to make multinational logistic solutions the norm rather than the exception. The NRF Logistic Concept offers the nations a real potential for resource savings. However, the key operational driver must be to make the NRF a truly agile, lean and deployable force. This is the operational driver for a more integrated and multinational logistic construct. The JLSG HQ then becomes the most critical enabler in promoting this initiative.

THE MULTINATIONAL JOINT LOGISTIC CENTRE CONCEPT: AJP-4.6

NATO's new force structures provide a much higher degree of multinationality than during the cold war period. This applies not only to the number of existing or emerging multinational units but also to the deeper multinational integration at lower levels of command. Consequently, the logistic support system and structures also needed to be adapted to that process. The SCs have developed the MJLC Doctrine in order to assume the enhanced logistic authorities and responsibilities of NATO Commanders and to enable NATO headquarters at the different levels of command to properly co-ordinate the logistic support within their area of responsibility.

The MJLC is the logistic pillar of the CJTF (MC 389) which provides the structures and procedures that the NATO Commander needs to exercise his logistic authorities and responsibilities in an effective and well co-ordinated fashion.

Whilst MC 389 provides a solid foundation for the establishment of a MJLC, the following points related to its formation are salient and key:

- **Flexibility.** The guiding principle for the formation of a CJTF HQ and a MJLC is flexibility. Flexibility increases the organisation's ability to respond to changing needs and reduces the response time. It is improved by modularity and trained and ready staffs.
- **Modularity.** A modular approach to structuring the MJLC is essential, especially for non-Article 5 operations. This includes organisational templates and modular building blocks of MJLC functions, which may be quickly added, shifted or deleted as the requirements of an operation change.
- **Training.** No substitute exists for trained and ready staffs. These must be available upon activation of an MJLC if the centre is to be initially effective. Therefore, parent HQs will be identified to accommodate the MJLC nucleus staff.

MODES OF MULTINATIONAL LOGISTICS: AJP-4.9

Logistic support options for the NATO Commander range from a totally integrated multinational logistic force to purely national support. Normally, the NATO force will be supported through a combination of the various available options. Regardless, however, of the options used, national and NATO Commanders remain responsible for the sustainment of the forces involved. In all cases, the logistic support options used should be tailored to meet the mission requirements and adhere to the logistic principles set forth in MC 319/2.

To supplement purely national logistic support, ease the individual national burden and achieve increased economies of scale, the following modes of multinational logistic support may be implemented:

- lead nation logistic support;
- role specialist nation logistic support;
- mutual support arrangements;
- commonly funded logistic resources;
- multinational integrated logistic support, aircraft cross servicing; and
- contracting support.

These modes of support can be implemented at different levels of command and to different degrees. The parties involved will make a case by case decision as to which, where and when one of these modes is to be implemented. The appropriate NATO Commander may serve as a mediator between nations and

assume a co ordinating role if required. All of the above mentioned modes can be used for Article 5 and non Article 5 operations and for pre planned contingency operations, as well as for ad hoc operations and both within and beyond NATO's area of responsibility.

Lead Nation Logistic Support

One nation, based on capabilities, agrees to assume the responsibility for procuring and providing a broad spectrum of logistic support for all or a part of the multinational force and/or headquarters. In one operation more than one lead nation can be designated to provide a special range of support within a clearly defined functional and regional area of responsibility. A lead nation may also assume the responsibility to co ordinate logistics of other nations within its functional and regional area of responsibility. Compensation and/or reimbursement will then be subject to agreements between the parties involved.

Role Specialist Nation Logistic Support

One nation assumes the responsibility for procuring a particular class of supply or service for all or a part of the multinational force. If one participating nation has a particular and unique logistic strength, capability for common supplies and services should always be considered. Compensation and/or reimbursement will be subject to agreements between the parties involved.

Multinational Support Arrangements

These agreements may be concluded bilaterally and/or multilaterally among nations and/or between nations and NATO authorities. They should ease the individual logistic burden and enhance the overall logistic efficiency and economy. They can be implemented for each type of logistic support or service and will help avoid duplications of effort and redundancies. NATO Commanders may be tasked to mediate and co ordinate such arrangements.

Commonly Funded Logistic Resources

These include the assets that have been identified as eligible for common funding and for which funds have been made available. The funding procedures must be developed and agreed well before the operation starts and should provide sufficient flexibility and responsiveness. These resources may include but are not limited to the following assets and services:

- infrastructure and real estate, such as depots, airfields, headquarters, camps, ports and lines of communications (LOC);
- operating co-ordinating the use infrastructure and real estate;
- communication and information system (CIS) assets; and
- logistic engineering.

Multinational Integrated Logistic Support

Two or more nations agree to provide logistic assets to a multinational logistic force under operational control of a NATO Commander for the logistic

support of a multinational force. This is an especially attractive support option when one single nation is capable of providing the nucleus of the unit and/or the command structure, around which the whole unit can then be formed by other augmentations and contingents. Such multinational units can effectively avoid duplications of effort and redundancies within the logistic system of an operation. Compensation and/or reimbursement are subject to agreements between the parties involved.

Aircraft Cross-Servicing

This is defined as services performed on an aircraft by an organisation other than that to which the aircraft is assigned, according to an established operational aircraft cross-servicing requirement and for which there may be a charge. Aircraft cross servicing is divided into two categories:

- **StageA Cross-Servicing.** The servicing of an aircraft on an aerodrome/ship which enables the aircraft to be flown on another mission, without change to the weapon configuration. The servicing includes the installation and removal of weapon system safety devices, refuelling, replenishment of fluids and gases, drag chutes starting facilities and ground handling.
- **StageB Cross-Servicing.** The servicing of aircraft on aerodrome/ship which enables the aircraft to be flown on an operational mission. The servicing includes all Stage A service plus the loading of weapons and/or film/videotape and the replenishment of chaff and flares. This includes the processing and interpretation of any exposed film/videotape from the previous mission.

The Aircraft Cross-Servicing Programme (ACSP) includes operational tasks such as debriefing, re-tasking and mission planning. The aim of the ACSP is to provide operational commanders with a flexible means of achieving rapid regeneration of combat ready aircraft through interoperability.

Local Contracting

The NATO Commander and nations will use commercial contracts to support the NATO forces when it is economic and keeps military assets available for higher priority tasks. The NATO Commander and nations will adjust the extent of reliance on contracting based on the situation. The use of the NATO Maintenance and Supply Agency (NAMSA) for contracting assistance should be considered for NATO operations. Since NATO common and centralised funding is limited to specific categories of goods and services, most contract action will be funded nationally. NATO will, however, co-ordinate national contracting efforts to ensure enhancement of the contract process, reduction of competition between nations and realisation of economies scale. The prudent use of contracting co-ordinating activities and the co-operation of nations are essential. Effective NATO co-ordination of the contracting effort will enhance, not hinder, the contracting efforts of the nations.

CONTRACTOR SUPPORT TO OPERATIONS

Contractor support to operations enables competent commercial entities to provide a portion of deployed support so that such support ensures the most efficient and effective use of resources. Contractor support to operations offers a useful force-multiplier tool to NATO, its member nations and Partners.

Advantages of Contractor Support to Operations

Contractor support is a force multiplier that can be particularly valuable when:

- the military manpower strength in a national contingent or in a Joint Operations Area (JOA) is limited by a political decision;
- the required capability is not available from military sources;
- the required capability has not been made available for an operation;
- the military capability is not available in sufficient numbers to sustain an operation;
- the military capability is required for other missions; and/or
- the use of local contractors supports an agreed Civil-Military Co-operation (CIMIC) plan;
- the use of contractors (civilians or local labour) for certain functions, and at certain times may be more cost-effective; and
- there is an operational need for continuity and experience that cannot be provided by using military manpower on a rotational basis.

Planning for Contractor Support

Planned contractor support to operations entails a deliberate approach to determining which support requirements for an operation can be effectively and efficiently met by contracting with a commercial provider. Ad hoc contracting can also respond to unforeseen requirements that may arise during the course of an operation.

Both planned and ad hoc contracting can release military manpower for other tasks. However, the planned approach has the greater potential to make the best use of both military and civilian support capabilities, from the standpoint of operational effectiveness and cost efficiency.

Forms of Planned Contracting

Planned contracting can take a number of forms, the most common of which are:

- technical support contracts, which provide for industry specialists to accompany the force for the purpose of providing technical advice or support;

- system support contracts, which provide Contractor Logistic Support (CLS) as part of a contract to deliver, implement and maintain weapons systems and equipment for part or all of their life cycle;
- lease contracts, which provide real property for the exclusive use of the customer, for pre-defined purposes, typically at fixed cost arrangements over the contract duration, often providing the option to buy;
- partnering arrangements with prime contractors, on a long-term basis, who will sub-contract individual elements of support as required;
- dormant contracts, which are awarded to a firm for specified goods and/or services, but which execution is postponed until the requirement actually materialises;
- assured access contracts, which legally bind a contractor to provide a required capability when needed;
- preferred use contracts, which declare, by Letter of Intent, the willingness of the contractor to provide the required capability after tender when needed;
- Ready Invitations for Bid (RIFB), which are prepared and kept current, but which will be issued to potential contractors if and when the requirement occurs;
- Basic Ordering Arrangements (BOA), already in use by NATO Agencies, provide a 'call-off' capability in which multiple users can draw on a single contractual arrangement with a particular supplier; and
- spot market acquisition when goods and services are readily available on the market and do not require that arrangements be put in place in advance.

Technical support and system support contractors normally augment, rather than substitute for, military functions.

Lease, partnering, dormant and assured access contracts have the advantages of timeliness, as they require no last-minute solicitation, and availability, since there are legal assurances of performance when they are activated. Their disadvantages include the carrying costs associated with binding a contractor to perform at an indefinite time and place. Capabilities that require a significant capital investment could be considered suitable for lease, dormant and assured access contracts, because the capital investment would be made by the provider rather than by the customer. Capabilities that are required from the onset of an operation may be considered suitable for any number of forms of contracting that can be arranged in advance.

RIFBs are more cost-effective because they incur no such carrying costs. However, the cost advantage of RIFBs must be weighed against the additional time needed to solicit bids and award a contract, and the operational risks that

this might entail. Capabilities that are normally outsourced during the course of an operation could be considered suitable for RIFBs.

BOAs are suitable when there is regular sustained demand for low value items such as consumables. They may also be appropriate in the context of contractor support to operations.

In cases where required goods and services are readily available from the market, purchases may be arranged on-the-spot through ad hoc contracting without prior preparation.

All contractor support options are available for use by nations and should be considered where appropriate. If aggregate national requirements are of a sufficiently large scale, nations might consider developing partnering arrangements with a commercial provider, who could play a part in support planning, as well as in long term delivery of support services.

Funding Contractor Support

Contractor support entails meeting three groups of costs:

- set-up and management costs for NATO and the nations;
- costs associated with the employment of contractors, such as training and deployment; and
- payment for contractors' services. These would have to be met from a number of sources, i.e. NATO common funding, multinational funding including joint and trust funding and national funding.

Responsibility for Planning Contractor Support

Nations and NATO authorities have a collective responsibility for planning and implementing contractor support to NATO's multinational operations. This collective responsibility encourages nations and NATO to co operatively identify support requirements that could be met by civilian contractors, put into place contractual arrangements and share the provision and use of contractor capabilities and resources, through prior agreed arrangements, to support the force effectively and efficiently.

Authority over Contracted Capabilities

The NATO Commander, at the appropriate level, must be given sufficient authority over contracted resources in order to enable him to receive, employ, sustain and redeploy forces assigned to him by nations in the most effective manner. Where NATO is the contracting authority, the NATO Commander has full control over the contractors' activities in accordance with applicable regulations, terms and conditions laid down in the contract. However, where a nation is the contracting authority, and the contracted support is for national purposes only, the NATO Commander's authority over the contracted support will be in accordance with the TOA or other arrangements agreed between the NATO Commander and the nation.

Functions that could be Performed by Contractors

Properly prepared and funded, contractor support has the potential to enhance support to operations, release deployed CS/CSS resources for higher priority tasks elsewhere, overcome identified CS/CSS shortfalls and provide endurance where needed, with less impact on military assets than would be the case without it. Contractor support is not applicable to combat functions. It is applicable to a limited number of CS functions and a wide range of CSS functions, which may include:

- technical services, which are performed by qualified experts to support technical systems or processes. These could include: CLS, set up and maintenance of weapons systems, operation and maintenance of communications, certain aspects of support to health services, technical communications and information systems (CIS) services and automated data processing (ADP) support, in-theatre technical training and expert advice, such as that provided by national functional experts and technical staff of NATO agencies; and
- support services, which provide deployment and sustainment support such as strategic transport, strategic aero-medical evacuation, air—to air refuelling, operation of sea/air ports of debarkation, air traffic control, fire fighting, base camp construction and maintenance, installation security services, fuel storage and distribution, infrastructure engineering services, elements of deployed primary and secondary health care, medical ancillary services; ground transportation; maintenance and repair, recovery, environmental services (sanitation, refuse, salvage), provision of food and water, catering and local labour.

Status and Use of Contractors

The force consists of combatants and non-combatants. Contractor personnel, whether civilians accompanying the force or local hires, are non-combatants. Local hires, regardless of nationality, are subject to the laws of the nation where they are operating and may not enjoy the legal status accorded to civilians accompanying the force.

NATO and nations engaged in NATO operations which involve the employment of contractors should clearly define the status of contractor personnel and equipment in all agreements, understandings, arrangements and other legal documents with host nations. These documents, such as a Status of Forces Agreement (SOFA) or Transit Agreement, should establish legal jurisdiction, the rights to tax and customs exemptions, visa requirements, movement limitations and any other matters which host nations are willing to agree.

Multinational Co-operation

In order to obtain the best possible terms and conditions, nations should consolidate their requirements into common Requests for Proposals (RFPs). While most TCNs may have their own deployable contracting staffs and may

be prepared to act independently in theatre, there are considerable advantages to be gained from utilising a collective approach. Nations should therefore take advantage of the Theatre Allied Contracting Office (TACO) and of NATO Agencies such as the NATO Maintenance and Supply Agency (NAMSA) and the NATO Consultation, Command and Control Agency (NC3A), who can provide theatre contracting services on a reimbursable basis.

Operational Planning Considerations for Contractor Support

From an operational planning point of view, there is a number of considerations that influence decisions whether to employ contractor support. Additionally, planning and preparation is necessary to ensure that requirements for contractor support are identified early and that their contributions to operations are fully optimised. These considerations are the following:

- Type of Operation. Operations that entail a higher risk of combat, such as to initial entry operations, are less suitable for outsourcing than lower risk operations, such as peacekeeping and stabilization operations.
- Phase of the Operation. In the early stages of an operation, most support functions are performed by military units for reasons of high risk, efficiency, operational effectiveness and security. As the environment stabilizes and the risk is reduced, selected support functions can be gradually transferred to contractors and local authorities.
- Force Protection. Although contractors can be mostly self-sufficient, they are non-combatants and the force must therefore provide security for them and identify the requirement for equipping and training them for defence against chemical, biological, radiological and nuclear threats. In areas where local medical care is not available, the force may need to provide it as well. Thus the benefits of using contractors must be weighed against the resources required to ensure their health and safety.
- Operational Security. This risk applies at two levels - operational (knowledge of military plans and intentions) and tactical (local surveillance of military capabilities and activities). The former is a risk that NATO nations have accepted previously, not least in the case of strategic deployment, where commercial providers have long had a significant role. The latter risk is considered low in instances when the contractor staff consists of expatriate nationals of the same TCN as the force supported; but is higher in the case of host-country or third-country nationals. It demands management by security vetting and monitoring of these personnel.

Integration of Contractor Capabilities

Where contractors have already been selected in advance of an operation to provide support and when operational security requirements have been satisfied, they should contribute to the operational support planning process to

ensure that their capabilities are properly integrated into the relevant annexes of the Operation Plan (OPLAN). The deployment of contractors, whether using their own resources or not, must be included in the overall NATO deployment plan.

During execution, the force C2 structure must provide the required interface between the contractors and the echelons supported so that the contractor is informed of the operational picture as required, and to allow flexibility in the employment of contractors to meet operational requirements.

Contract Management

Commanders will require functional staff expertise to administer the contract, identify changes to requirements, negotiate changes to the contract, evaluate the performance of the contractor, assess penalties for non-performance and certify payment for delivery of services.

Contractual instruments shall, under the responsibility of the Contracting Officer, be administered in such a manner as to ensure that the contractual obligations of the contractor and NATO are correctly and promptly fulfilled and that NATO's rights under the terms of the contractual instruments are exercised lawfully and in the best interests of the Alliance and its customers.

COMPONENT SUPPORT CONCEPTS – (ALP-4.1, 4.2, 4.3)

While NATO's logistic concept embraces jointness, each component, due to the nature of its mission, has a slightly different approach to implementing the multinational logistic concept. Although the specific methods of supporting deployed multinational units do vary, their support requirements are very similar. That is, support elements must be flexible, mobile and responsive to the requirements of the component commander. Where efficiencies can be gained, jointness should be maintained down to the lowest level practicable. In general terms, this means that operational level support elements may have a geographical area of responsibility to provide support to a joint force. At the tactical level, however, support elements will likely be focused at supporting, on a functional basis, specific component elements. A broad synopsis of the component support concepts is provided below.

Maritime Support Concept: ALP-4.1

Support to a deployed Multinational Maritime Force (MNMF) has two facets: ashore and afloat supports. In a joint context, afloat support is the sole responsibility of the tactical level (MNMF) commander, whereas responsibility for ashore support is shared between the operational and the tactical commanders because the operational commander is the only commander with the capability to co-ordinate the flow of personnel, mail and cargo from ashore to the task force. To ensure the appropriate focus of the ashore element commander, the ashore element must be responsive to the afloat commander (MNMF), but responsible to the CJTF commander. In a large operation, the chain of command from the ashore support organisation may be through a Multinational Logistics Command (Maritime) (MNL(M)) while in a smaller operation, the ashore support commander may report directly to the MJLC.

The fundamental precept of the maritime logistic support concept is to provide ashore centralised distribution and support sites for the MNMF. The concept calls for multinational Advanced Logistic Support Sites (ALSSs) that provide a variety of life support, supply, distribution, medical, damage repair, etc., in support of the entire force. Smaller, more mobile, Forward Logistic Sites (FLSSs), located closer to the supported force, are employed as final distribution points for personnel, mail and cargo flowing from the larger, more capable ALSS. These support sites may be joint in nature or may be collocated with other component support elements.

Land Forces Support Concept: ALP-4.2

ALP-4.2 provides a common NATO Land Forces Logistic Doctrine, which guides NATO and national commanders and staff of the land component in optimising the use of available logistic resources in multinational operations. Military operations are conducted at three levels: strategic, operational and tactical. Logistics, as one of the combat functions that helps commanders build and sustain combat power, is a major operating system at these three levels of warfare. Strategic and operational level logistics are focused on the support of wars, campaigns and major operations, whereas tactical logistics is concerned more with the support of battles and operations at the land component level and below.

- Strategic level logistics deals with mobilisation, national acquisition, force projection, strategic mobility and the strategic concentration of logistic assets in a Joint Operations Area (JOA). Strategic level logistics interconnects with operational level logistics at joint force level. This connection is a major area of interest for logistic command and control in order to ensure the effective logistic support of deployed forces.
- Operational level logistics focuses on establishing and maintaining LOC and sustaining a force in a JOA, consistent with the commander's priorities. It also creates the conditions for converting strategic level guidance into success at the tactical level and therefore provides the linkage between strategic and tactical level logistics. Operational level logistics encompasses the support of force reception, staging and onward movement of units and personnel, infrastructure development, distribution and the management of JOA reserves, contracting, provision of supplies and services and movement control.
- Tactical level logistics sustains the tactical commander's ability to execute the mission by providing the tactical support. At this level, the essential functions of supply, transportation, maintenance, medical and health service support and personnel, administrative and field services are provided to soldiers to allow them to accomplish their specific mission. Successful tactical level logistics provides units with the right support at the right time and in the right place.

The land component support concept is designed to ensure the support of either national or multinational forces, taking their different structures and multinational composition into account. The Combined Joint Force Land Component Commander (CJFLCC) establishes requirements and sets priorities for support of forces in accordance with the overall direction given by the JFC. He co-ordinates logistic operations with all participating nations, and joint/JOA level logistic structures. For this, for NRF operations a JLSG, for CJTF operations a MJLC may be established. The CJFLCC will exercise co ordinating authority on movement and security matters over those National Support Elements (NSEs) operating in his Area of Operations (AOO). While movement control is primarily the responsibility of the Host Nation, this might be delegated to the CJFLCC, especially in the forward part of CJFLCC AOR, in the case of an actual full-scale military operation.

Air Forces Support Concept: ALP-4.3

ALP-4.3 details the concept of air component logistic support, which includes all participating, land-based flying and Ground Based Air Defence (GBAD) units and their support elements, as well as dedicated communications units and deployable Air Command and Control Systems (ACCS). The principles of the concept for air component logistic support are also applicable to NATO Airborne Early Warning (NAEW), Air-to-Air refuelling (AAR) and Air Transport (AT) forces, as well as air assets of other components.

The concept for air component logistic support is based on the precept that sending nations will deploy their air forces with sufficient indigenous support to initiate operations and establish re supply arrangements to sustain them. The level of deployed support takes account of available HNS, mutual support provided by Lead Nations (LN) and Role Specialist Nations (RSN), and co-operative logistic arrangements, e.g. Multinational Integrated Logistics Units (MILU), where appropriate.

LOGISTIC SUPPORT TO CRISIS RESPONSE OPERATIONS

For all multinational operations, there is a requirement to co-ordinate the deployment of national forces involved into an Area of Operation. This co-ordination is carried out by the AMCC, in close contact with all participating nations. Nations are responsible for planning and executing the deployment of their national contributions to NATO operations. Besides co-ordinating the multinational flow of forces, the AMCC is responsible for the preparation and planning for the deployment of all NATO owned equipment and NATO HQ. These transport missions are either handled by national contributions using national transportation assets or civilian aircraft are chartered from the commercial market.

REFERENCES

C M(2007)0004

MC 526	Logistic Support for NATO Response Force (NRF) Operations
AJP 4(A)	Allied Joint Logistic Doctrine
AJP-4.6	Multinational Joint Logistic Centre
AJP-4.9	Modes of Multinational Logistic Support
ALP-4.1	Multinational Maritime Logistic Doctrine
ALP-4.2	Land Forces Logistic Doctrine
ALP-4.3	Air Forces Doctrine & Procedures, Air Logistics

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

AAR	Air-to-Air refuelling
ACCS	Air Command and Control Systems
ACO	Allied Command Operations
ACSP	Aircraft Cross-Servicing Programme
ADP	Automated Data Processing
ALSSs	Advanced Logistic Support Sites
AMCC	Allied Movement Co ordination Centre
AOO	Area of Operations
AOR	Area of Responsibility
AT	Air Transport
BOA	Basic Ordering Arrangements
CBRN	Chemical, Biological, Radiological and Nuclear
CIMIC	Civil-Military Co-operation
CIS	Communication and Information System
CJFLCC	Combined Joint Force Land Component Commander
CJSOR	Joint Statement of Requirements
CLS	Contractor Logistic Support
CROs	Crisis Response Operations
CS/CSS	Combat Support / Combat Service Support
C2	Command and Control
DJTF	Deployable Joint Task Force
FLSs	Forward Logistic Sites
GBAD	Ground Based Air Defence
HQ	Headquarters
JFC	Joint Force Command
JLSG	Joint Logistic Support Group

JOA	Joint Operations Area
LN	Lead Nations
LOC	Lines of Communication
MILU	Multinational Integrated Logistics Units,
MJLC	Multinational Joint Logistic Centre
MNLC(M)	Multinational Logistics Command (Maritime)
MNMF	Multinational Maritime Force
MOU	Memorandum of Understanding
NAEW	NATO Airborne Early Warning
NAMSA	NATO Maintenance and Supply Agency
NCS	NATO Command Structure
NC3A	Command and Control Agency
NRF	NATO Response Force
NSEs	National Support Elements
NTM	Notice to Move
RFPs	Requests for Proposals
RIFB	Ready Invitations for Bid
RSN	Role Specialist Nations
SOFA	Status of Forces Agreement
TACO	Theatre Allied Contracting Office
TCN	Troop Contributing Nation

CHAPTER 8

HOST NATION SUPPORT (HNS)

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HOST NATION SUPPORT (HNS)

“There is nothing so common as to find consideration of supply affecting the strategic lines of a campaign and a war.”

- Karl von Clausewitz, On War, 1832 -

INTRODUCTION

Nations and NATO authorities have a collective responsibility to support NATO operations and must co-operatively arrange adequate Host Nation Support (HNS) to the complete range of NATO operations and exercises during peace, crisis and conflict and include Article 5, Collective Defence, and non Article 5 Crisis Response Operations (CROs). This strategy is workable only if Host Nations make the support available. The Strategic Commands (SCs) are responsible to ensure that the HNS agreements fulfil NATO operational requirements without reducing the combat potential of the HN.

The possibility of deployments of a rapid military response beyond NATO territory has significant implications for NATO HNS policy and planning procedures. In particular, it is necessary to adopt more rapid and flexible HNS planning mechanisms to ensure that HNS arrangements can be put into place as early as possible so that the required support can be assured to the maximum extent possible, consistent with maintaining or enhancing military effectiveness.

To achieve this, NATO Commanders must be involved in support planning and be given the authority to co-ordinate planning where necessary. The SNLC produced MC 319/2 that confers upon the NATO Commander key authorities for logistics, including HNS. The NATO Commander's authorities with respect to HNS are further defined in MC 334/2.

DEFINITION

HNS is civil and military assistance rendered in peace, crisis and conflict by a Host Nation to allied forces and organisations which are located on, operating in or transiting through the HN's territory.

NATO CONCEPT FOR HNS

HNS seeks to provide the NATO Commander and the Sending Nation (SN) with support in the form of materiel, facilities and services, including area security and administrative support in accordance with negotiated arrangements between the SN and/or NATO and the HN government. As such, HNS facilitates the introduction of forces into an area of operations by providing essential reception, staging and onward movement support. HNS may also reduce the amount of logistic forces and materiel otherwise required by SN to sustain and redeploy forces.

The goal is to use NATO HNS arrangements to the greatest extent possible to facilitate the negotiation and administration tasks of the HN by creating a standard process and standard documents that can be used by all parties. To this end, the SCs have implemented a programme to negotiate standing HNS Memorandum of Understanding (MOU) with NATO and PfP Nations, as well as non NATO Nations, in regions where NATO deployments may occur. This does not preclude bilateral arrangements between parties.

LEGAL ASPECTS OF HNS ARRANGEMENTS

Arrangements and agreements concluded between the appropriate national authorities and NATO form the basis of support for HNS arrangements. A Status of Forces Agreement (SOFA), negotiated at the highest level between SN and/or NATO and the HN authorities, governs the status of forces and determines their relationship with the HN. It may contain general provisions regarding support from the HN. Therefore, where it exists, the SOFA may have an impact on HNS and should be taken into account in the development of HNS arrangements.

Where a SOFA with a HN does not exist, one must be concluded with the utmost priority. This may not be possible in regard to many nations. In these cases, a Transit Agreement will be concluded between NATO HQ and the HN to authorise the transit of allied forces and goods through the HN's territory. The Transit Agreement will include some provisions that make reference to the support needed from the HN and in some cases may permit the development of HNS Technical Arrangements without development of an MOU.

An MOU is an instrument to record in a less formal manner specific understandings and obligations and is an expression of the concurring willingness of the parties participating in and subscribing to it. Within the context of HNS, the MOU is a written overarching bilateral or multilateral agreed document, which implies an intent or responsibility to support allied forces and organisations. It provides the mutually agreed military-political-legal basis for the development of further implementing documents within the agreed provisions embodied in the MOU.

HNS PRINCIPLES¹

The required mobility, flexibility and multinationality of NATO forces highlight the need for commonly agreed principles of HNS and for the NATO Commander to provide the structure necessary to facilitate the development of HNS arrangements. Moreover, the increasing requirement to take advantage of economies of scale and to more rapidly and effectively implement responsive support concepts dictates that HNS be considered as an integral part of the logistic planning process and should therefore be addressed in all support plans.

In order to realise consistent and effective HNS planning and execution, the following principles will apply:

- **Responsibility.** Nations and NATO authorities have a collective responsibility for HNS across the spectrum of NATO-led operations.

1) C-M(2000)56-REV1 (also MC 334/2)

This responsibility encourages nations and NATO to co-operatively plan for and share the provision of HNS to support the force effectively and efficiently with each nation bearing the ultimate responsibility for ensuring the provision of support for its forces .

- **Provision.** Nations individually, by co-operative arrangements or collectively with NATO must ensure the provision of adequate resources to support their forces during peace, crisis and conflict. When available, HNS is a fundamental supplement to support for deployed forces and once the MOU is concluded, will be provided by the HN to the greatest extent possible on the basis of national legislation, national priorities and the actual capabilities of the HN.
- **Authority.** The NATO Commander has the authority to establish requirements for HNS, to prioritise the provision of HNS to assigned forces and to initiate the HNS planning process, including negotiations. When delegated by the SC, the Commander also has the authority to conclude HNS arrangements for NATO multinational headquarters and other common-funded entities. These authorities also apply to non-NATO Commanders of a multinational force participating in a NATO led operation.
- **Co-ordination and Co-operation.** For HNS planning and execution, the co ordination and co operation between NATO and national authorities is essential for reasons of operational effectiveness, efficiency and the avoidance of competition for resources. It must be carried out at appropriate levels and may include non NATO nations and other relevant organisations, as required.
- **Economy.** Planning and execution of HNS must reflect the most effective and economic use of resources available to fulfil the requirement.
- **Visibility.** Information concerning HNS arrangements in support of allied forces and organisations should be available to the appropriate NATO Commander and to the Sending Nation.
- **Reimbursement.** The Host Nation should not derive profit from the official activities of NATO HQ or forces conducting or participating in operations, exercises conferences or similar events on their territory. Reimbursement for HNS will be agreed between the Host Nation and the Sending Nation and/or the NATO Commander, as appropriate.

HNS PLANNING

HNS planning is an integral part of logistic planning, but as a key component of operational planning, it requires multidisciplinary participation of all the planning staff. The Host Nation, the Sending Nation and the NATO Commander are responsible for HNS planning and development, while the conclusion of the HNS MOU is the responsibility of the Host Nation and the NATO Commander. The NATO Commander should also be made aware of other non-

NATO HNS arrangements that are in support of or may impact on the conduct of NATO-led operations.

HNS planning will be as detailed as possible to enable the HN to evaluate and adequately respond to requirements. However, the variety of deployment options may also require that a contingency approach be taken towards HNS planning. In terms of efficiency, NATO co ordinated HNS arrangements should be pursued where appropriate. As far as possible, Standing HNS MOU supporting a broad range of potential operations should be concluded. In either case, HNS arrangements should be concluded at the earliest opportunity in the planning process.

The NATO Commander’s logistic staff is responsible for the development of HNS arrangements. Because of the inter-relationships between HNS, Civil Military Co operation (CIMIC), contracting and other functions, and because of the legal and financial implications of HNS arrangements, close co-ordination will have to be maintained with all relevant staff from the outset.

During HNS planning, NATO Commander must ensure close co ordination between the SN, once they are identified, and the HN. This co ordination will be in accordance with established doctrine and procedures. The procedures should be standardised to the extent possible to ensure an effective and flexible response to any operational need. These should be kept under review to incorporate lessons identified from future exercises and operations.

The NATO Commander should be invited to participate in follow-on bilateral HNS negotiations between the Sending Nation and the Host Nation in order to promote co operation and assist where necessary. Nations and the NATO Commander should ensure that adequate guidance is provided to non-NATO nations when developing HNS arrangements.

The activities involved in a staged planning process are found in AJP-4.5, which details this planning framework. An overview of the key aspects of each stage and where they fit in the logistic/operational planning process is outlined below. NATO Commanders and nations identified as potential HN(s) are encouraged to embark on Stages 1, 2 and 3 at the earliest opportunity in order to develop useful generic HNS arrangements in readiness for future operations/exercises and/or common operational picture(s).

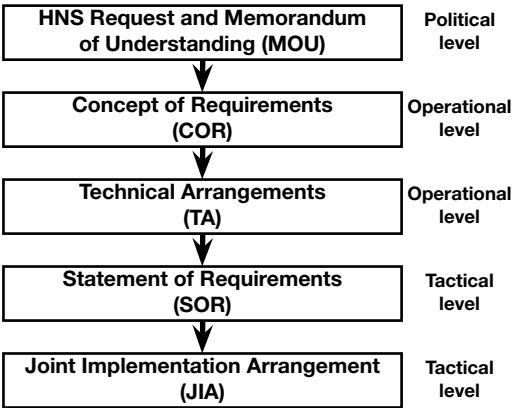


Figure 8-1. 5 Stage HNS Planning Process

- **Stage 1.** As a product of mission analysis, the NATO Commander first identifies the requirement for HNS in very broad terms to support plans being drafted, taking into consideration the HNS requirements of the Sending Nation(s) where these can be identified. Generally, an HNS MOU is developed with each Host Nation. If a Standing HNS MOU exists, it is applicable to all NATO operations or exercises and does not require any modifications.
- **Stage2.** A Concept of Requirements (COR) is called for and submitted to the HN by the NATO Commander and SN(s), respectively, who may undertake preliminary reconnaissance ahead of submitting their COR(s).
- **Stage 3.** The Technical Arrangement (TA) is finalised within the Joint HNS Steering Committee (JHNSSC), which is convened by the NATO Commander and the Host Nation with the participation of SN(s), to address common requirements and procedures for the provision of HNS.
- **Stage4.** The Statements of Requirements SOR(s) are developed on the basis of the results of site surveys co ordinated by the JHNSSC, in conjunction with the Host Nation. Following consideration of the SOR(s), the Host Nation confirms its ability to provide the requested HNS and identifies any shortfalls. Once signed, they are executable documents, which obligate the signatories and satisfy the specific requirements of the Sending Nation(s).
- **Stage 5.** The Joint Implementation Arrangements (JIA(s)) represent the final stage when more detail is required to effectively implement the HNS plan after confirmation by the Host Nation.

HNS POLICIES

The policies set out in this document define the responsibilities of NATO Commanders, the Sending Nations and the Host Nation.

Policies Specific to the NATO Commander

The NATO Commander shall negotiate and conclude HNS arrangements for NATO multinational headquarters and, when authorised, for designated multinational units and selected theatre-level support. The Sending Nations are encouraged to take advantage of these arrangements by acceding to the HNS MOU.

For each operational plan for which HNS is required, the NATO Commander shall establish a process to facilitate negotiations between the Host Nation and the Sending Nation and/or subordinate NATO Commanders in accordance with NATO's HNS doctrine and procedures.

The NATO Commander shall identify HNS requirements and has to co-ordinate and prioritise HNS requirements and the provision of HNS in consultation with nations.

The NATO Commander shall provide the Host Nation and the Sending Nation(s) with the necessary details, including points of contact, for proper HNS planning and execution.

The NATO Commander is authorised to request reports on HNS assets designated and agreed by the Host Nation to support the forces under their command. Conversely, the NATO Commander is required to inform the Sending Nation on the availability of HNS assets.

If NATO common funding or appropriate exercise funding is approved, the NATO Commander in conjunction with the Host Nation and prior to the receipt of HNS, will detail the funding arrangements to be applied for the payment of HNS for the multinational headquarters, designated multinational units and selected theatre-level support.

Policies Specific to the Sending Nation

The Sending Nation(s) is encouraged to accede to the HNS MOU concluded by the SCs and the Host Nation. Any outstanding concerns could then be addressed as part of the accession process. The Sending Nation may choose to negotiate their own bilateral MOU with the Host Nation.

The Sending Nation shall participate in the planning and execution processes in order to conduct effective HNS.

The Sending Nation shall notify its HNS requirements and any significant changes as they occur to the Host Nation and the NATO Commander as early as possible.

The Sending Nation shall report the status of HNS negotiations to the appropriate NATO Commander.

Ultimately and prior to the receipt of HNS, the Sending Nation is responsible to make the necessary arrangements for reimbursement.

Policies Specific to the Host Nation

The Host Nation shall advise SN and appropriate NATO Commander of its capability to provide HNS against specific requirements and of significant changes in capability as they occur. Furthermore, the Host Nation is encouraged to identify other HNS capabilities in order to assess their potential to provide additional support. The NATO Capability Catalogue for HNS may facilitate this.

The Host Nation retains control over its own HNS resources, unless control of such resources is released.

The Host Nation shall participate in the planning and execution processes in order to conduct effective HNS.

The Host Nation shall report the status of HNS negotiations to the appropriate NATO Commander.

The Host Nation shall determine the cost standards to be applied for cost calculations for HNS.

The Host Nation should ensure that, as far as possible, its bilateral HNS arrangements and associated plans are harmonised with the requirements of NATO operational planning.

The Host Nation should ensure the required co-operation and co-ordination between its civilian and military sectors in order to make the best use of limited HNS resources.

CAPABILITY DATABASE

In order to facilitate NATO Commanders' ability to assess a Host Nation's potential to provide support, they are encouraged to identify other HNS capabilities. The NATO Capability Catalogue for HNS provides a template for information related to facilities, infrastructure and resources that may be made available to the NATO Commander in support of his forces. The information will serve for planning purposes only. It is kept in an electronic database within Logistic Functional Area Service.

LOCAL CONTRACTING

There is a distinction between HNS and contracting as the latter is not based on formalised agreements that constitute the basis of HNS. Contracting is the commercial acquisition of materiel and civil services by the Sending Nation and/or the NATO Commander for their forces in support of NATO-led operations. Contracting from local resources should not interfere with HNS and should always take into account the essential needs of the local population. Contracting shall, therefore, be co-ordinated with or through the Host Nation, where possible.

In cases where there is no legitimate HN government with whom to co-ordinate HNS, a Sending Nation and/or the NATO Commander, may contract directly with private sources within the Host Nation. In such cases, it is essential that the NATO Commander establish a system to monitor or co-ordinate contracts to limit competition for scarce resources and establish HNS priorities when required.

CIVIL-MILITARY CO-OPERATION (CIMIC)

HNS must not be confused with CIMIC. The purpose of CIMIC is to establish and maintain full co-operation between NATO forces and the civilian population and institutions within a commander's area of operations in order to create the most advantageous civil-military conditions. Co-operation with civilian organisations in the framework of HNS should always be managed in full consultation with appropriate military and civilian authorities of the Host Nation.

REFERENCES

MC 319/2 NATO Principles and Policies for Logistics

MC 334/2 NATO Principles and Policies for Host Nation Support

MC 411/1 NATO Military Policy on Civil-Military Co-operation

AJP-4.5(A) Allied Joint Host Nation Support Doctrine and Procedures

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

CIMIC	Civil-Military Co operation
COR	Concept of Requirements
CROs	Crisis Response Operations
HN	Host Nation
JHNSSC	Joint HNS Steering Committee
JIA s	Joint Implementation Arrangements
MOU	Memorandum of Understanding
SCs	Strategic Commands
SN	Sending Nation
SOFA	Status of Forces Agreement
SOR(s)	Statements of Requirements
TA	Technical Arrangement

CHAPTER 9

MOVEMENT AND TRANSPORTATION SUPPORT

CHAPTER 9

MOVEMENT AND TRANSPORTATION SUPPORT

“Logistics is the art of moving armies. It comprises the order and details of marches and camps, and of quartering and supplying troops; in a word it is the execution of strategic and tactical enterprises.”

- Antoine Henri Jomini, *Summary of the Art of War*, 1838 -

INTRODUCTION

Movement and Transportation (M&T) encompasses the whole spectrum of infrastructure, facilities, airlift, surface transport, and sealift, command and control, and equipment, which directly support the deployment and Reception, Staging and Onward Movement (RSOM) of forces. M&T is the cornerstone of the Alliance's operational concept, requiring investment in resources, facilities and equipment. The need for co-ordination of NATO M&T planning is a result of the Alliance's new strategy to support expeditionary forces. Specifically:

- the multinational character of NATO forces requires co ordination and co operation, not competition, for movement and transportation resources;
- the flexibility inherent to the selection of NATO forces and the uncertainties that surround future deployments place a greater reliance on movement and transportation planning based on generic and ad hoc operational planning requirements. The greater reliance placed upon NATO forces' ability to deploy quickly, the closer co-ordination is required throughout the Alliance; and
- the limited availability of transportation resources underlines the continuing need for close co-ordination between the NATO Military Authorities (NMAs), NATO M&T-related committees and NATO civil agencies for providing support to NATO military operations.

MOVEMENT AND TRANSPORTATION PRINCIPLES

MC 336/2, NATO Principles and Policies for Movement and Transportation, establishes the principles and policies for M&T. They are reprinted in the paragraphs to follow.

Collective Responsibility. NATO and nations take collective responsibility for movement and transportation support to NATO operations. Specific responsibilities are described hereafter.

- **NATO Responsibility.** NATO Commanders are responsible for initiating, prioritising, co ordinating and deconflicting the deployment (including RSOM), transportation for sustainment (re supply), and their respective forces redeployment. This must be done in co-operation with nations.

- **Nations' Responsibility.** Nations exercise primary responsibility for obtaining transportation resources to deploy, sustain and redeploy their forces. This responsibility may include planning and controlling the movement of national forces, national components of multinational forces, and, where a nation accepted lead nation responsibility, of a multinational headquarters group. This principle must be tempered by the need for co operation, co ordination, and economy, and may include bilateral and/or multilateral co operative arrangements.

Co-operation. Co-operation between NATO and national authorities, both military and civilian, is essential. Such co-operation can be of a bi- or multilateral nature. This incorporates both co operative and shared use of lift.

Co-ordination. Movement and transportation co-ordination between NATO and national and civilian authorities is essential and conducted at all appropriate levels.

Efficiency. Optimises military and civilian resources' use. Take into consideration the complementary and intermodal nature of airlift, sealift, and inland surface transport resources.

Flexibility. M&T planning and execution must be capable of reacting in a timely manner to dynamic changes in the operational situation and requirement.

Effectiveness. M&T planning and execution must be tailored to satisfy overall NATO operational requirements.

Simplicity. Simplify plans and procedures as much as possible.

Standardisation. Standardisation facilitates successful M&T. It applies as much to systems, data and software as it does to procedures, equipment and hardware.

Transportability. Design equipment, when possible, compatible with available transport resources for units and formations with a mobility role.

Visibility and Transparency. M&T data information exchange between NATO and national military and civil authorities is essential for the efficient support of movement and transportation tasks.

MOVEMENT AND TRANSPORTATION POLICIES

General Policies

NATO and national military and civil authorities are responsible for development of NATO force M&T directives, procedures and organisations.

The execution of the nations' responsibility to provide sufficient M&T resources could be hampered by a required lift asset shortage. Consequently, nations should, where appropriate and possible, make resources available to NATO for co operative or shared use. These should be responsive to NATO's operational requirements and co ordinated at the appropriate level.

- **Cooperative Use.** When nations make transportation resources or their surplus capacity available to other nations, compensation and/or reimbursement will be subject to arrangements between the parties involved, if required.
- **Shared Use.** When nations make transportation resources or their surplus capacity available to NATO, these resources are provided free of charge or under reimbursement arrangements.

Movement across international borders must be supported by standardised and harmonised arrangements.

NATO Commanders will review the effectiveness of military arrangements, both NATO and national, in support of the Alliance's operational M&T requirements.

M&T Planning

M&T planning is a distinct but integral part of logistic planning, and must be consistent with force and operational planning.

NATO and national military authorities are responsible for operational support planning. M&T planning for NATO operations must comply with the priorities set by the NATO Commander.

M&T planning must be tailored to the respective forces and their related employment options.

National and NATO M&T planning must be harmonised as early as possible during the Operational Planning Process (OPP).

RSOM is the phase of the deployment processes that transitions units, personnel, equipment and materiel from arrival at Ports of Debarkation (PODs) to the final destination. The designated Joint Force Commander (JFC), in co-ordination with the Host Nation (HN) and Sending Nations (SNs), must develop the RSOM plan in accordance with the Multinational Detailed Deployment Plan (MNDDP). When HN authorities are not able or not willing to provide the required RSOM support, NATO bears responsibility for assigning an executive authority or requesting a Lead Nation (LN) to act as HN on behalf of deploying NATO forces.

M&T planning must consider the use of Host Nation Support (HNS) and/or local resources, particularly during the RSOM stage.

NATO and national M&T planning should consider the possibility of prepositioning of stocks, material and equipment in order to improve M&T reaction time.

NATO civil transportation experts are a valuable asset and provide information and offer assistance to NATO military planners. Strategic Commands (SCs) should, as required, seek their advice and assistance in all phases of deployment planning (concept development, strategic planning, movement planning and execution planning) and execution.

NATO nations and, where appropriate, non-NATO nations will use the Allied Deployment and Movement System (ADAMS) as the NATO planning tool to facilitate multinational deployment planning and information transfer. Nations may use ADAMS or some other system to do their internal, national-level deployment.

NATO and NMAs will ensure that harmonised casualty evacuation is incorporated into movement plans.

M&T planning to support military operations must be carried out and co-ordinated on a combined and joint military/civil basis encompassing all modes of transport. Avoid separate M&T planning for maritime, land and air force packages.

Policy on Civil Support to the Military

Civil support to the military will be of critical importance in achieving the desired flexibility in support of the Alliance's objectives. The military will, at the appropriate level, require M&T expertise, as required, to assess and define civil transport support capability, availability and feasibility.

NATO and nations should make arrangements for close and well-structured co-operation between military and civil authorities.

Nations are invited to ensure that national legislation or other arrangements provide sufficiently for the acquisition of M&T resources for Article 5 operations and non-Article 5 CRO. The SCs will scrutinize this process and will monitor the development of legislative and other arrangements made by nations as part of the Annual Defence Review (ADR) process and the Senior Civil Emergency Planning Committee (SCEPC), through the Transport Planning Boards and Committees (PB&Cs), will monitor and advise nations on the adequacy of legislation or other national measures, as appropriate, to support NATO M&T capabilities.

Policy on Military Support to Civil Operations

Military support to civil operations will be conducted using the same principles and policies as described above.

Policy on Resource Acquisition

Nations are responsible to provide transportation resources to move their own forces and materiel. National operational support planning should involve appropriate national civil, as well as military transport authorities, in the acquisition process, which should extend as appropriate to both national and non-national sources. Nations should consider:

- entering into bi- or multilateral agreements with other nations concerning M&T resource provision;
- making appropriate arrangements to gain access to civil transport resources by using normal commercial practices to the maximum extent, including possible use of both non-NATO nations' transportation resources and contractual arrangements operative under specific conditions;

- applying to the appropriate SC for access to transportation resources or surplus capacity made available by nations for co operative or shared use;
- approaching the civil transportation market in a co ordinated manner, thus acquiring resources in accordance with operational priorities and minimising national competition for resources;
- making arrangements for control or redirection of civil transportation resources, if it appears that the commercial market may be unable to meet requirements. These may be constitutional, statutory or contractual and may include bi- or multi-lateral arrangements; and
- reporting to the appropriate NATO authorities those military and civil transportation resources that may be available for co operative or shared use.

Given that civil transportation resources normally operate in market conditions, NATO and national authorities will continue to devise collective arrangements, which ensure obtaining quickly and reliably suitable civil resources.

NATO is responsible for ensuring the provision of transportation resources for the movement of multinational HQs and other common-funded elements such as NATO owned equipment. The nation using a nation's or an agency's transportation resource is responsible for reimbursing that resource providing nation or agency, if such reimbursement is required.

Policy on Command, Control and Communications

M&T resource command and control will remain with the owning nations, unless nations make other arrangements with NATO authorities.

NATO will provide mission assignment to nations that will undertake M&T operational command and control and detailed mission tasking. To be viable, the communications and Automated Data Processing (ADP) systems must provide commanders with timely information concerning status of force deployment, availability of transportation resources and status of the lines of communication. As ADAMS is NATO's tool for multinational M&T planning, nations are to continue to support the use of ADAMS and communicate M&T data via this system.

M&T TASKS AND RESPONSIBILITIES

The M&T structure must be capable of responding flexibly to a national declaration of war and Crisis Response Operations and should make best use of NATO and national organisations. For the purpose of efficiency and simplicity, movement management is always executed at the highest practical level described hereafter.

NATO Headquarters

NATO Headquarters provides the political and military guidance through consultation with nations for overall M&T matters. The International Staff (IS) and the International Military Staff (IMS) assist deployment planning and execution by providing doctrinal and policy guidance and clarification to support the SCs in their planning processes for the transit of deployed forces through national territories.

The co ordinating authority for logistics, the Senior National Logisticians' Conference (SNLC), is responsible to co ordinate and harmonise the development and implementation of the Alliance's M&T policies and concepts. The Movement and Transportation Group (M&TG) supports the SNLC with regard to M&T policies and concepts.

The SCEPC, through its Transport PB&Cs, supports the NMAs by advising on the availability and use of civil transportation resources and related infrastructure in support of NATO and NATO-led operations, by assisting in the acquisition of civil resources, and by harmonising and standardising civil procedures relating to transport for defence purposes.

Strategic Commands (SCs)

The SCs are responsible for matters concerning implementation of M&T policies and doctrine and development of M&T plans and operational procedures. Under the authority of the SHAPE, the Allied Movement Co-ordination Centre (AMCC) will co ordinate strategic movement, transportation for sustainment (re supply) and redeployment of NATO forces. Specifically, the SCs are responsible to:

- develop the MNDDP based on national DDPs. The MNDDP must be developed in close co-ordination with the designated Joint Force Commander responsible for the RSOM plan and the authorising HN;
- address strategic lift shortfalls in co-operation with the nations;
- advise and assist in the development of bilateral or multilateral agreements and arrangements, if requested;
- consult, when appropriate, with experts from the Transportation PB&Cs and other M&T sources;
- prioritise and co ordinate the integrated use of M&T resources made available by nations for shared use;
- co ordinate with the Joint Force Commander who must provide the Statement of Requirement (SOR) in co-operation with the SCs. This commander gives specific operational guidance by listing priorities, PODs, final destination and sets the Commander's Required Date (CRD); and
- co ordinate with the Supporting Commander, if appointed, who assists the designated commander and ensures the unimpeded flow of reinforcing forces through his Area of Responsibility (AOR).

The Allied Movement Co-ordination Centre (AMCC) provides NATO's principal capability to plan, review, prioritise, deconflict and co ordinate movements supporting deployment, redeployment and transportation of sustainment supplies to NATO and non NATO troop contributing nations' forces during exercises and operations. The AMCC's planning focuses normally at the strategic level, and its responsibilities are multimodal. Its responsibilities include development/co-ordination of the national DDPs towards a Multinational DDP to support force deployment. It also supports sustainment, roulement and redeployment of NATO forces and equipment for NATO operations. This includes developing multimodal solutions for strategic movements, with the assistance of NAMSA and the PB&Cs where required. It does not normally acquire transport assets for deploying forces, although it may be called upon to do so in cases where NATO HQs or NATO-owned assets are being moved, or if assistance is specifically sought by nations.

The AMCC accomplishes movement planning as part of operational planning (Statements of Requirements, Concepts of Operation (CONOPs), analysis of potential Lines of Communication (LOCs) and Ports of Debarkation (PODs), and monitors execution. It is also responsible for monitoring, evaluating, and adjusting actual movements once an operation starts. AMCC works in close co-operation with other co ordination centres that provide support to NATO, such as the European Airlift Centre (EAC), the Strategic Air Lift Co-ordination Cell (SALCC) and the Sealift Co-ordination Centre (SCC), both located in Eindhoven, Netherlands, and the Athens Multinational Sealift Co-ordination Centre (AMSCC) in Greece.

The Nations

Sending Nations (SNs) are responsible to:

- develop the national Detailed Deployment Plan (DDP), in ADAMS format, based on the Allied Disposition List (ADL), which includes the Designated NATO Commander's priorities;
- control the movement of national forces and national components of multinational forces, taking into account the NATO Commander's operational requirements;
- determine movement requirements and make necessary transportation arrangements and then work with the SCs to identify shortfalls and surpluses in national M&T resources to meet the Alliance's movement requirements;
- respond to requests to develop/execute arrangements for co operative use of lift with other nations, in order to meet overall NATO priorities;
- control and co ordinate civil and military transportation resources in support of national and, as required, allied forces; and
- Provide national liaison/augmentation to the AMCC and, as necessary, to the HN National Movement Co-ordination Centre (NMCC).

Host Nations (HN) are responsible to:

- control and co ordinate movement of forces, on their own territories, taking into account the designated NATO Commander's priorities and SNs' requirements;
- establish a NMCC and appropriate executive movement control organisation for M&T co-ordination;
- control, support and execute their portions of the RSOM plan, which has been made in close co-ordination with the designated Joint Force Commander and SNs;
- identify for the SC the status of M&T resources and infrastructure in support of an operation;
- as required, make and/or implement necessary arrangements and co ordinate with neighbouring nations to facilitate border crossings;
- control and operate national civil and military transportation resources (e.g. personnel, facilities, equipment, infrastructure) for national and NATO support; and
- provide liaison/augmentation to the AMCC, as necessary.

Lead Nations (LNs) are responsible to:

- conduct either partially or totally the HN tasks and responsibilities set out above, when acting as a HN;
- when acting as a SN for multinational headquarters groups and/or units with a high degree of multinationality, fulfil all the respective M&T tasks set out above;
- as required, take the lead in performing specific M&T tasks as identified by NATO in co-operation with the nations; and
- establish arrangements for compensation and/or reimbursement for those LN functions with all parties involved.

REFERENCES

MC 319/2 NATO Principles and Policies for Logistics

MC 336/2 NATO Principles and Policies for Movement and Transportation (M&T)

AJP-4(A) Allied Joint Logistic Doctrine,

AJP-4.4 Allied Joint Movement and Transportation Doctrine

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

ADAMS	Allied Deployment and Movement System
ADL	Allied Disposition List
ADP	Automated Data Processing
ADR	Annual Defence Review
AMCC	Allied Movement Co-ordination Centre
AMSCC	Athens Multinational Sealift Co-ordination Centre
AOR	Area of Responsibility
CRD	Commander's Required Date
CRO	Crisis Response Operation
CONOPs	Concepts of Operation
DDP	Detailed Deployment Plan
EAC	European Airlift Centre
HN	Host Nation
HNS	Host Nation Support
HQs	Headquarters
IMS	International Military Staff
IS	International Staff
LN	Lead Nation
LOCs	Lines of Communication
MNDDP	Multi-National Detailed Deployment Plan
M&T	Movement and Transportation
M&TG	Movement and Transportation Group
NMAs	NATO Military Authorities
NMCC	National Movement Co-ordination Centre
OPP	Operational Planning Process
PB&Cs	Transport Planning Boards and Committees

PODs	Ports of Debarkation
RSOM	Reception, Staging and Onward Movement
SALCC	Strategic Air Lift Co-ordination Cell
SCs	Strategic Commands
SCC	Sealift Co-ordination Centre
SCEPC	Senior Civil Emergency Planning Committee
SHAPE	Supreme Allied Headquarters in Europe
SNs	Sending Nations
SNLC	Senior National Logisticians' Conference
SOR	Statement of Requirement

CHAPTER 10

PETROLEUM SUPPORT



*Deployable Fuel Handling Equipment for Expeditionary Operations
Main Bulk Fuel Installation at Kabul International Airport,
International Security Assistance Force (ISAF)*



Fuel Pump and Filter Installation

CHAPTER 10

PETROLEUM SUPPORT

*«Fuel is the life blood of modern armed forces.
Without an adequate supply, nothing can happen.»*

– Field Marshal Erwin Rommel, 1942 –

INTRODUCTION

Fuel is a commodity that is essential to NATO's defence planning and is also necessary for sustaining social and economic life. The MC-473 Directive provides guidance to NATO and national authorities on the policies, principles and characteristics of the NATO Petroleum Supply Chain. It also describes the NATO Pipeline System (NPS), the planning criteria and reporting requirements and addresses crisis management, legislative and environmental issues. Further, it defines the responsibilities of the Nations, the NATO Pipeline Committee¹ and NATO Military Authorities. There are several committees in NATO associated with fuels support and fuels supply planning, which can be generally grouped as those concerned with:

- civil preparedness to meet fuel problems within NATO;
- bulk distribution and storage of fuels for military use by the NPS and other associated facilities;
- expeditionary operations;
- air base, naval base and unit support;
- military fuels, oils, lubricants and associated products, and their relationship with weapon systems, and all type of military equipment and vehicles;
- petroleum planning; and
- standardisation, interchangeability, interoperability and research on fuels, oils and lubricants and related products, as well as Petroleum Handling Equipment (PHE).

CIVIL PREPAREDNESS

Civil preparedness in the area of fuel is the responsibility of the **AC/112 NATO Pipeline Committee (NPC)** following the demise of the **Petroleum Planning Committee (PPC)**. The NPC has determined the organisation and procedures needed to manage crisis situations and liaises with the **International Energy Agency** and with the AC/98 Senior Civil Emergency Planning Committee's (SCEPC) Planning Board for Inland Surface Transport (PBIST) and Industrial Planning Committee (IPC) on matters of common interest. A guide to the NATO bodies concerned with the NPS and other petroleum bodies is provided at Annex A.

1) Authority is being sought to change the name of the NATO Pipeline Committee to the NATO Petroleum Committee to better reflect its role and responsibilities.

BULK DISTRIBUTION AND STORAGE OF FUELS IN THE NPS

Although collectively referred to as one system, the NPS consists of nine separate and distinct military storage and distribution systems: Italy, Greece, Turkey (two separate systems - west and east), Norway, Portugal, the United Kingdom, the North European Pipeline System (NEPS) located in both Denmark and Germany, and the largest system, the Central Europe Pipeline System (CEPS) in Belgium, France, Germany, Luxembourg and the Netherlands. The NPS in total consists of some 14,500 km of pipeline running through 12 NATO nations with its associated depots, connected air bases, civil airports, pump stations, refineries and entry points. Bulk distribution is achieved using facilities provided from the common-funded NATO Security Investment Programme (NSIP). The networks are controlled by national organisations, with the exception of the CEPS which is a multinational system. Full details of the NPS are contained in the Charter of the Organisation of the NPS and Associated Fuel Facilities, C-M(2001)92.

In addition to the above elements of the NPS, there are also fuel systems in the Czech Republic, Hungary, Poland, Spain and the new member nations (Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia and Slovenia). While those in the Czech Republic, Hungary and Poland are national systems, NATO military requirements have been incorporated into approved Capability Packages (CPs) and the related projects are being implemented. A similar exercise is being conducted with regard to the NATO military requirements in the new member nations. The Spanish system is purely national.

The optimum utilisation of NATO petroleum facilities in peacetime is a prerequisite for the proper maintenance of the NPS and the necessary training of its staff. Nations should use the facilities to the fullest extent practicable for military purposes and, thereafter, put spare capacity to commercial use providing that does not detract from the primacy of the military use of the system. There are no restrictions on the type of NATO fuel facilities that can be used for commercial purposes provided the minimum safeguards are respected.

EXPEDITIONARY OPERATIONS

Expeditionary operations require NATO forces to operate away from the fixed infrastructure of the NPS. To reduce the demand on strategic lift assets to carry fuel into a theatre of operation, maximum use should be made of Host Nation Support (HNS) or in country resources, as available. Without such resources, NATO and participating nations should strive to satisfy the operational fuel requirement, achieve economies of scale and ensure the quality of fuel provided through multinational solutions such as Logistic Lead Nation or Role Specialist Nation, or a Fuels Multinational Integrated Logistic Unit as appropriate. Such solutions should adhere to the Single Fuel Policy and the modular concept described below.

AIR BASE, NAVAL BASE AND UNIT SUPPORT

This is a user nation responsibility, although certain facilities may be provided under the NSIP such as fuel storage on air bases and connections to the NPS.

MILITARY FUELS AND THE SINGLE FUEL POLICY

The co ordinating body for military fuels, oils, lubricants and associated products is AC/112 NATO Fuels and Lubricants Working Group (NF&LWG), which is concerned with the more detailed technical aspects of military fuels including the Single Fuel Policy. Details of aviation, ground and naval fuels used in NATO are provided at Annex B.

Single Fuel Policy (SFP)

The aim of the original Single Fuel Concept (SFC) was to achieve maximum equipment interoperability through the use of a single fuel, namely F-34, on the battlefield for land-based military aircraft, vehicles and equipment. Since its inception as a concept in 1986, the adoption of the SFC has been supported by a number of studies and trials in Member and Partner nations. At its Autumn meeting in 2004, the NPC adopted the SFC as the NATO Single Fuel Policy. The SFP implementation process consists of three stages. The first stage, now complete, was the replacement of F-40 with F-34 for use by land-based military aircraft. The second stage is the replacement of diesel fuel (F-54) with F-34 in land-based vehicles and equipment with compression ignition or turbine engines deployed on the battlefield. This stage is being implemented independently by each NATO and Partner nation in accordance with their own equipment replacement programmes, as reflected in corresponding Force and Partnership Goals. The third stage consists of the elimination of gasoline (F-67) from military use on the battlefield to the point that the requirement for gasoline is so small that it could be supplied through national or bilateral agreements (i.e. by the use of jerry cans, drums or collapsible tanks). This stage is still ongoing but could be implemented before the second stage is completed. There is, however, a growing requirement for F-67 for Unmanned Aerial Vehicles (UAV) and this requirement is being addressed by the NF&LWG and PHEWG with the appropriate UAV committees. The ready and universal availability of F-34 to a worldwide quality standard has helped to promote the application of the SFP. The logistic benefits of a single fuel are related to a variety of technical, operational, economic and environmental factors, but the major advantage is the simplification of the fuel supply chain and the supporting static or deployable infrastructure described in MC 473, the Directive for the NATO Petroleum Supply Chain.

Details of nation's implementation of the SFP and the experiences gained in the process are promulgated biennially by the NF&LWG.

DEPLOYABLE FUELS HANDLING EQUIPMENT (DFHE) – THE MODULAR CONCEPT

DFHE is a generic term covering all special-purpose, mobile military equipment designed to enable the supply of fuel quickly and efficiently on operations. It encompasses Tactical Fuel Handling Equipment (TFHE), Mobile Pipeline Repair Equipment (MPRE) and the readily deployable components of any equipment system that are intended to receive and dispense fuel. It excludes all fixed infrastructure.

In order to support the Alliance's new missions, the emphasis has shifted away from static pipeline infrastructure to the rapidly deployable support of NATO's expeditionary forces. To this end, NATO has developed a modular concept whereby all fuel requirements can be satisfied through a combination of 13 discrete but compatible modules of DFHE which can receive, store and distribute fuel within any theatre of operation. The concept, detailed in STANAG 4605/AFLP-7, also enables both NATO and Partner nations to combine their capabilities to provide a multinational solution to meet all fuel requirements. The modular concept forms the basis of the Allied Fuels Distribution System model which has been developed to assist with the fuels supply planning for expeditionary operations using the Fuel Consumption Units detailed in STANAG 2115 to determine requirements.

PETROLEUM PLANNING

Petroleum planning is primarily the responsibility of the NMAs, but such work is overseen by AC/112 WG/1 which reports on its activities in this area to the NPC, as appropriate.

STANDARDISATION, INTERCHANGEABILITY, INTEROPERABILITY AND RESEARCH

The NPC is the Tasking Authority for some 50 STANAGs and Allied Fuels Logistic Publications (AFLPs) covering fuels, lubricants, associated products and petroleum handling equipment. These STANAGs are listed in the NATO Standardisation Agreements and Allied Publications Catalogue available on the NATO Standardisation Agency's website and are all releasable to Partner nations that are also able to attend all AC/112 meetings in EAPC format.

The Research and Technology Organisation (RTO) deals with various aspects of fuel through its Applied Vehicle Technology (AVT) Panel.

REFERENCES

C-M(2001)92	Charter of the Organisation of the NATO Pipeline System and Associated Fuel Facilities
C-M(2003)30/MC-473	Directive for the NATO Petroleum Supply Chain
EAPC(NPC)D(2005)0002	The Single Fuel Policy
EAPC(NPC-NFLWG)D(2005)0002	Implementation of the NATO Single Fuel Policy
STANAG 2536	Allied Joint Petroleum Doctrine – AJP-4.7
AC/112-D(2006)0007	NATO Petroleum Crisis Management Organisation and Procedures
MC 526	Logistic Support for NATO Response Force (NRF) Operations

ANNEXES

- A Guide to the NATO bodies concerned with the NPS and other petroleum bodies
- B Aide Memoire on fuels within NATO
- C Acronyms used in this chapter

COUNCIL/DPC

INFRACSTRUCTURE COMMITTEE ↔ SSB ↔ SCEPC ↔ IPC

NAO AGENCIES ↔ NPC AC/112 ↔ SMLC ↔ MILITARY COMMITTEE

PHEWG, INF-LWG, WG/1, ARMY FWP, NAVAL FWP, AVIATION FWP

ALJC BRUNSSUM, JFC NAPLES, ACO, ACT

CEMOA BOD, CEPMA

DIV I/II FR, DIV IV BE, DIV V NL, DIV VI/VII GE, POL DIV DE, POL DIV GE

CENTRAL EUROPE PIPELINE SYSTEM (CEPS), NORTH EUROPEAN PIPELINE SYSTEM (NEPS), NORWIGIAN PIPELINE SYSTEM (NOPS), UK GOVERNMENT PIPELINE AND STORAGE SYSTEM (UKGPSS), ISLANDIC PIPELINE SYSTEM (ICPS), GREEK PIPELINE SYSTEM (GRPS), NORTHERN ITALY PIPELINE SYSTEM (NIPS), TURKISH PIPELINE SYSTEM (TUPS) EAST AND WEST, JIC USOBM, PORTUGUESE PIPELINE SYSTEM (POPS)

KEY :

- ALJC Allied Command Operations
- ACO Allied Command Transformation
- ACT Allied Joint Force Command
- ALJC Brunssum Central Europe Pipeline Management Organisation - Command
- CEMOA BOD Central Europe Pipeline Management Agency
- DPC Defence Planning Committee
- FWP Fuels and Lubricants Working Party
- IPC Industrial Planning Committee
- JFC Joint Force Command
- JIC Joint Command
- NAOASO NATO Maintenance and Supply Agency
- NACSA NATO Consultation, Command and Control Agency
- NMSA NATO Standardisation Agency
- INF-LWG NATO Fuels and Lubricants Working Group
- NIPS NATO Pipeline Committee
- PHWP Petroleum Handling Equipment Working Group
- PHRC Research and Technology Organisation
- CEPC Senior Civil Emergency Planning Committee
- SCEPC Senior NATO Logistics Conference
- SMLC Senior Resource Board
- WG/1 Working Group/1 (Special Tasks)

Bodies dealing with Main Aspects of NATO Petroleum Planning

NATO UNCLASSIFIED

ANNEX B

AIDE MEMOIRE ON FUELS² IN NATO

AVIATION FUELS

NATO Code

- F-18** is a low leaded aviation gasoline for use in aircraft with piston engines. This fuel is still used by certain nations, mostly in aircraft meant for training purposes³.
- F-34** is a kerosene type aviation turbine fuel for use in land based military aircraft gas turbine engines⁴. The fuel contains a Fuel System Icing Inhibitor⁵ (S-1745) and a Lubricity Improving Additive⁶ (S-1747)
- F-35** a kerosene type aviation turbine fuel for use in land based military aircraft gas turbine engines⁷. This fuel is equivalent to F-34 but does not contain the additives S-1745 and S-1747.
- F-37** is equivalent to F-34 but contains a thermal stability additive S-1749⁸ ⁹. It is only used by certain nations and is not allowed for cross-servicing within NATO.
- F-40** is a wide cut type aviation turbine fuel for use in land based military aircraft gas turbine engines¹⁰. The fuel contains the Fuel System Icing Inhibitor (S-1745) and the Lubricity Improving Additive (S-1747). Only a few nations are still using this type of fuel, mainly for training purposes. It is also listed within NATO as an emergency substitute for F-34/F-35.
- F-44** is a kerosene type aviation turbine fuel, high flash point type, for use by ship borne military aircraft gas turbine engine¹¹. The fuel contains the additives S-1745 and S 1747.

2) Further details about these fuels appear in Annex C to STANAG 1135.

3) Also known as AVGAS.

4) Also known as JP-8 or AVTUR/FSII.

5) F-1745 is an additive which reduces the freezing point of water precipitated from the fuel due to cooling at high altitudes and it prevents the formation of ice crystals which restrict the flow of fuel to the engine.

6) F-1747 enhances the lubricity properties of the aviation fuel.

7) Known commercially as Jet-A1 or AVTUR.

8) F-1749 is a thermal stability improver needed to inhibit deposit formation in the high temperature areas of the aircraft fuel system.

9) F-37 is also known as JP-8+100.

10) Also known as AVTAG.

11) Also known as JP-5 or AVCAT.

GROUND FUELS

Gasoline

F-67 unleaded gasoline automotive (minimum 95 RON). It complies with the European Standard EN 228 and is therefore interchangeable with commercial gasoline.

Diesel Fuels

F-54 is a military designation given to commercial diesel fuel used in compression ignition engines. It complies with European standard EN 590 and is equivalent to similar US diesel known as DF-2 and therefore interchangeable with commercial diesel fuel.

F-63 is a kerosene-type diesel engine fuel. It is F-34 treated with 0.1% by volume of multi-purpose additive, S-1750 which, in the context of the Single Fuel Policy, is used to enhance the lubricity and ignition performance of F-34 when required.

This fuel is intended for land equipment only and must not be used for aircraft.

S-1750 is a combined lubricity and ignition improving additive for ground fuels.

NAVAL FUELS

F-75 is a naval distillate fuel with low pour point and used in high and medium speed compression ignition engines, gas turbines, certain helicopters (for emergency use only) and steam raising plant in ships. Some nations are using this fuel in ground equipment operated by compression ignition engines

F-76 is the primary naval distillate fuel used in high and medium speed compression ignition engines, gas turbines, certain helicopters (for emergency use only) and steam raising plant in ships. F-76 may require special handling and storage due to low temperature characteristics.

ANNEX C

ACRONYMS USED IN THIS CHAPTER

AFLPs	Allied Fuels Logistic Publications
AVT	Applied Vehicle Technology
CEPS	Central Europe Pipeline System
CPs	Capability Packages
DFHE	Deployable Fuels Handling Equipment
HNS	Host Nation Support
IPC	Industrial Planning Committee
MPRE	Mobile Pipeline Repair Equipment
NEPS	North European Pipeline System
NF&LWG	NATO Fuels and Lubricants Working Group
NMA	NATO Military Authorities
NPC	NATO Pipeline Committee
NPS	NATO Pipeline System
NSIP	NATO Security Investment Programme
PBIST	Planning Board for Inland Surface Transport
PHE	Petroleum Handling Equipment
PPC	Petroleum Planning Committee
RTO	Research and Technology Organisation
SCEPC	Senior Civil Emergency Planning Committee
SFC	Single Fuel Concept
SFP	Single Fuel Policy
STANAG	Standardisation Agreement
TFHE	Tactical Fuel Handling Equipment
UAV	Unmanned Aerial Vehicles

CHAPTER 11

MEDICAL SUPPORT

CHAPTER 11

MEDICAL SUPPORT

*“To the average military officer, the military surgeon is an unwillingly tolerated non combatant who clutters up the battlefield, causes transportation difficulties, gives cathartic pills, and makes the water taste bad...[but]...
Generals have rarely won wars.... They more often gain credit
for mopping up after the barrages of epidemics have taken their toll.”*

- Hans Zinsser, 1935 -

INTRODUCTION

MC 326/2 describes the NATO principles and policies of operational medical support. This document is complementary to the MC 319/2 and is linked to other NATO policy documents in a number of areas. The AJP 4.10, the “Allied Joint Medical Support Doctrine” was approved as STANAG 2228 in February 2002 and is currently under revision.

According to the NATO 1999 Strategic Concept and the “Military Guidance for the Military Implementation of Alliance Strategy” (MC 400/2), the ability to produce medical support for war fighting is still important but this is no longer the only focus due to the increasing importance and broad spectrum of NATO non-Article 5 Crisis Response Operations. The context in which military medical support must be provided has also changed due to recent changes in society, medicine, military and threat. The medical services of each nation must be fully prepared to operate in a truly multinational environment. Health and medical care on operations have increasingly become the responsibility of the Alliance’s operational commanders and, at times, the medical factors may even become the commander’s main concern and a limiting factor on operational decisions.

MISSION OF THE MEDICAL SERVICE

An effective and reliable military medical support system must contribute “to preserve the fighting strength” but must also meet the increasing public expectation of an individual’s right to health and high quality treatment outcomes. By the prevention of diseases, the rapid treatment of the injured, wounded or diseased and their medical evacuation and eventual recovery and return to duty, the medical services make a major contribution to force protection and sustainability. But health is not merely the absence of injury or disease. In an operational context, health is the ability to carry out duties unimpeded by physical, psychological or social problems. In such a way, health becomes a key force multiplier of fighting power.

STANDARDS OF HEALTHCARE

Compliance with the Laws of War and Humanitarian Conventions

The conduct of medical activities will comply with the rules laid down under The Hague and Geneva Conventions. In any case, these principles define the minimum acceptable standard. Without discrimination, all entitled sick, injured,

or wounded shall be treated on the basis of their clinical needs and medical resources available.

Medical Ethics and Legal Constraints

Medical personnel have additional individual responsibilities to the ethical and national legal requirements of their own clinical profession.

Standards of Care Provided

Organisation, training, environment and equipment affect the outcome of the clinical care. The standards should be acceptable to all participating nations. The quality of the outcome of the medical care must be guided by the concepts of Clinical Governance and Evidence Based Medicine. Standardisation in procedures, equipment and training promotes interoperability and multinationality.

Primacy of Clinical Needs

Clinical needs must be the principal factor governing the priority, timing and means of a patient's medical care and evacuation.

Spectrum of Medical Responsibilities

Medical care is provided on a progressive basis ranging from preventive medicine, first aid, emergency resuscitation and stabilisation of vital functions, to evacuation and definitive specialised care.

Treatment Philosophy for Mass Casualty Situations

In operational situations where large numbers of casualties are being sustained, a shift in approach is required to ensure that the best possible quality of care is given to all. The primary medical responsibility is to provide such treatment that ensures that the casualty reach the next stage in the chain in a stable condition. As long as a large flow continues and is expected, the minimum treatment compatible with further evacuation is given in order to conserve medical effort and benefit the greatest number of casualties.

Fitness for Evacuation

The clinical condition of the patient will govern the priority, timing, means and destination of evacuation. Co-ordination by medical regulating staff is required.

Medical Confidentiality

Patient medical information is not to be communicated to any individual or organisation that does not have a medical need to know, except as required by national policy for that nation's patient.

Patient Welfare

The general welfare of patients is an important element of their health. Particular issues will be communication with relatives, management of personal effects, psychological support, social and spiritual welfare.

OPERATIONAL PRINCIPLES

Responsibility for the Health of NATO Forces

Nations retain the ultimate responsibility for the provision of medical support to their forces allocated to NATO. However, upon Transfer of Authority, the NATO commander shares the responsibility for the health and medical support of assigned forces. The appropriate NATO Commander, in consultation with contributing nations and considering the opinion of his medical advisor, is responsible for determining the medical support requirements (Statement of Requirements). Multinational arrangements may require more responsibility of the NATO commander.

NATO Commanders Medical Authority

The NATO Commander is granted co ordinating authority over medical assets to best support his plans.

Principal Components of Deployed Health Care

A deployed medical system comprises a command and control structure, an integrated system of treatment and evacuation and medical logistics. The principle components of operational health care, around which the medical system is built, are medical force protection, emergency medicine, primary care, secondary care and evacuation. The required medical capability and their locations will be principally determined by the time-related constraints of the medical care, the commander's campaign plan and casualty estimates.

Fitness and Health Standards

Individuals allocated for NATO operations must achieve the basic standards of individual fitness and health predetermined by national policy prior to their deployment.

Treatment Timelines

- **Advanced Trauma Care.** A high percentage of personnel suffering from serious trauma on operations will have an increased chance of survival if they receive prompt and appropriate care. The guideline for NATO operations is that advanced trauma care should be available within one hour of injury.
- **Surgical Planning Timeline.** Prompt medical evacuation to a stable intensive care environment and, where necessary surgery, is essential to the survival of severely injured casualties and their quality of outcome. The principle medical planning timeline for deployments should be to provide primary surgery within one hour. However, when this is not reasonably practicable, the planning timelines may be extended to two hours for the provision of Damage Control Surgery (DCS) and four hours for Primary Surgery.
- **Exceptional Circumstances.** Validated contingency plans must be in place for those specific operational situations, such as maritime

and Special Forces operations, when the guidelines above cannot practicably be applied.

Continuity of Care

Patients (wounded, injured and ill) passing through the medical system must be given care, which is continuous, relevant and progressive. In transit, care must be available during the whole chain of evacuation.

Environment

Medical units should provide the best possible clinical environment for casualty care, which is compatible with their role and operational situation.

Force Health Protection

Disease and Non-Battle Injury (DNBI) is an ever-present health risk to personnel. The primary responsibility of medical support is the maintenance of health through the prevention of disease and injury. The defence against Weapons of Mass Destruction (WMD) requires an integrated approach including vaccination, chemoprophylaxis, personal and collective protection. Whenever there is a suspected or confirmed outbreak of a contagious disease, the commander must be given medical advice on Restriction of Movement (ROM).

Planning

Planning for medical support must be part of both contingency and operational plans. A medical staff with the adequate levels of rank and experience must be functioning at the NATO HQ of the Force Commander from the outset of a contingency planning process. Medical support planning must be specific for each operation.

Appropriate medical planning staff must be supported by an operational medical intelligence system to estimate the risk, predict the casualty rates and develop comprehensive plans. Medical support concepts, plans, structures, operating procedures must be understood and agreed by all involved. The medical support should ensure a surge capability to deal with peak casualty rates in excess of expected daily rates.

Readiness of the Medical Support System and Transition from Peace to Crisis or Conflict

Medical elements need to be as well prepared and as available for deployment as the forces they support. Medical readiness and availability must be sufficient to allow for a smooth transition from peacetime to crisis or conflict posture.

Mobility

Medical units must be as strategically and tactically dynamic, mobile, and responsive as the forces they support.

NATO and National Co-operation

Co-ordination and co-operation between NATO and national military and civilian authorities is essential and must be carried out at all appropriate levels to ensure optimised medical support.

Multinationality

Multinational medical solutions have considerable potential to reduce the burden of their provision upon individual nations. However, the existence of national differences, such as varying clinical protocols, different language and legal restrictions, can make this complex. Joint multinational training in peace is necessary for multinationality to work well in operations.

Roles of Care Capabilities

Deployable Medical Treatment Facilities (MTFs) are classified according to their treatment capability in a system of roles, progressively numbered from 1 to 4. A comprehensive operational medical structure will normally contain elements of all four roles. Most of the capabilities of each role are intrinsic to the next higher role. Generally casualties progress through the system from role 1 upwards.

- **Role 1** medical support provides for routine primary health care, specialised first aid, triage, resuscitation and stabilisation. It is a national responsibility and is integral or allocated to a small unit.
- **Role 2** provides an intermediate capability for the reception and triage of casualties, as well as being able to perform resuscitation and treatment of shock to a higher technical level than Role 1. It is prepared to provide evacuation from Role 1 facilities. It routinely includes Damage Control Surgery (DCS) and may include a limited holding facility for the short-term holding of casualties until they can return to duty or evacuated. Role 2 may also include dentistry, environmental health and psychiatry and psychology. It is a national or lead nation responsibility, usually allocated at Brigade or larger size units.
- **Role 3** is designed to provide secondary care within the restrictions of the Theatre Evacuation Policy. Role 3 medical support is deployed hospitalisation and the elements required to support it. This includes a mission-tailored variety of clinical specialties including primary surgery and diagnostic support. It is national or lead nation responsibility and may be multinational. It provides medical support at Division level and above.
- **Role 4** provides the full spectrum of definitive medical care that can not be deployed to theatre or is too time consuming to be conducted there. It is normally provided in the country of origin or the home country of another Allied. In many NATO nations, Role 4 is provided for within the national civil health system.

Evacuation Resources

The operational commander establishes the evacuation policy after consultation with the medical planning staff, the operational and logistic staff and the nations. There are three categories of medical evacuation, which applies to sea, land and air systems. They are forward, tactical (within theatre) and strategic (out-of-theatre) evacuation. The medical evacuation system requires the following capabilities:

- availability 24 hours a day;
- continuity of medical care throughout the evacuation; and
- casualty regulation of the flow and direction of individual patients.

National Medical Liaison Teams

National Medical Liaison Teams must be planned in advance to have an efficient liaison system between national contingents and theatre medical resources such as hospitals, evacuation control cells and the NATO commander's medical staff.

Provision of Non-Emergency Treatment

Policy must be established regarding the entitlement of non-military staffs and other authorised personnel for all non-emergency medical care.

MEDICAL LOGISTICS

The medical logistic system must be well regulated, efficient and cost effective.

Medical materiel has unique characteristics such as protected status, extensive national and international regulations, special handling requirements, short notice clinical demands and national restrictions. Blood/blood products and medical gasses are two supply items of special importance for operational purposes. The availability of medical materiel which includes supply rates and re supply must be in accordance with the required levels of readiness and sustainability during peace, crisis and conflict.

MILITARY MEDICAL SUPPORT RESPONSES TO DISASTER RELIEF AND CONSEQUENCE MANAGEMENT SITUATIONS

Comprehensive NATO guidance exists in relation to disaster relief operations. MC 327 provides policy on the planning and conduct of non-Article 5 Crisis Response Operations. MC 343 outlines the principles of military assistance in humanitarian emergencies not connected to any military operation. MC 411 addresses civil-military interfaces, including military support for humanitarian emergencies, within the context of other operations when NATO forces are already deployed or to be deployed. Allied Medical Publication 15 provides detailed guidance on Military Medical Support in Disaster Relief.

Consequence Management (CM) is the use of reactive measures to mitigate the destructive effects of terrorism. While CM remains the responsibility of national

civil authorities, the Alliance can provide a wide range of support including some crucial capabilities such as command, control and communication, logistics, engineer, medical, decontamination, explosive ordnance disposal and security capabilities.

THE COMMITTEE OF CHIEFS OF MILITARY MEDICAL SERVICES IN NATO (COMEDS)

COMEDS is the highest military medical authority within NATO. It was established in 1993 as a senior NATO body to give medical advice to the Military Committee. It acts as a central point and facilitator for the development and co-ordination of military medical matters.

The Committee is composed of the highest military medical representatives of NATO and Partner nations, as well as the senior medical advisors of the International Military Staff and both Strategic Commands. It meets in NATO only and EAPC formats and provides an annual report to the Military Committee. Currently, Germany provides the Chairman, the Secretary and the Staff Officer. The secretariat is located within NATO Headquarters. The Staff Officer acts as Liaison Officer with the IMS medical staff. The Chairman of the Joint Medical Committee participates as an observer.

Adapting to the multiple medical challenges of a rapidly changing security environment, the COMEDS has expanded its liaisons, observer and co operation arrangements. These include the Senior NATO Logisticians' Conference (SNLC), the Weapons of Mass Destruction Centre (WMDC), Research and Technology Organisation (RTO) Human Factors and Medicine Panel (HFM).

The COMEDS Plenary meets bi annually. The Spring meeting takes place in a NATO nation, Autumn meetings are held at NATO HQ. COMEDS has become the principal tasking authority for most NATO medical standardisation matters and has been playing an important role in promoting new relationships with PfP and Mediterranean Dialogue (MD) countries. COMEDS has also expanded its role in the areas of Weapons of Mass Destruction. It has currently 10 subordinated Working Groups, which focus on specialised fields of military medicine.

THE JOINT MEDICAL COMMITTEE (JMC)

The JMC is one of the committees and planning boards subordinated to the Senior Civil Emergency Planning Committee (SCEPC). Its mission is to carry out international co-ordination of civil and military medical planning. One of the major areas of emphasis has been on the medical response to crisis and disaster including the civil hospital readiness to receive large numbers of combat casualties and the civil support to aeromedical evacuation. The JMC has followed the actions of the medical part of the Civil Protection Action Plan to defend civil population against CBRN acts of terrorism. The JMC provides civil experts in various medical disciplines to assist in operational planning and crisis response, and provides the primary medical advice to the North Atlantic Council, through the SCEPC, during crises.

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C-M (2001) 44	NATO Policy on Co-operation in Logistics
MC 55/4	NATO Logistic Readiness and Sustainability
MC 319/2(MILDEC)	NATO Principles and Policies for Logistics
MC 326/2	NATO Principles and Policies of Operational Medical Support.
MC 327/2	NATO Military Policy for non-Article 5 Operations.
MC 334/2	NATO Principles and Policies for Host Nation Support
MC 335	Establishment of the Chief of Military Medical Services in NATO (COMEDS)
MC 336/2	NATO Principles and Policies for Movement and Transportation
MC 343/1	NATO, Military Assistance to International Disaster Relief Operations (IDRO)
MC 400/2	MC Guidance for the Military Implementation of Alliance Strategy
MC 411/1	NATO Military Policy on Civil-Military Co-operation
MC 469	NATO Military Principles and Policies for Environmental Protection
MC 472	NATO Military Concept for Defence against Terrorism
MC 477	Military Concept for the NATO Response Force
AJP 4.10	“Allied Joint Medical Support Doctrine”
AMedP-13	NATO Glossary of Medical Terms and Definitions
AD 85-8 ACE	Medical Support Principles , Policies and Planning Parameters

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

CBRN	Chemical, Biological, Radiological and Nuclear
CM	Consequence Management
COMEDS	Committee of Chiefs of Military Medical Services IN NATO
DCS	Damage Control Surgery
DNBI	Disease and Non-Battle Injury
HFM	Human Factors and Medicine Panel
JMC	Joint Medical Committee
MTFs	Medical Treatment Facilities
RTO	Research and Technology Organisation
ROM	Restriction of Movement
SCEPC	Senior Civil Emergency Planning Committee
SNLC	Senior NATO Logisticians' Conference
WMD	Wapons of Mass Destruction
WMDC	Weapons of Mass Destruction Centre

CHAPTER 12

LOGISTIC OUTREACH ACTIVITIES

CHAPTER 12

LOGISTIC OUTREACH ACTIVITIES

“Without supplies neither a general nor a soldier is good for anything.”

- Clearchus of Sparta, 401 B.C. -

PARTNERSHIPS WITH NATO

The Partnership for Peace (PfP) has proven a very successful programme for bringing Partner countries into consultation with the Allies and for integrating Partner capabilities into NATO-led operations. In the last years, Russia and Ukraine substantially enhanced and upgraded to a new level their relations with NATO through establishing a distinctive Partnership with NATO. New fora were established: the NATO Russia Council (NRC) and the NATO Ukraine Commission (NUC), as a means to facilitate regular consultation and discussion of security matters. Other complementary programmes have been set up outside the PfP, but using the methodology and working tools of the PfP initiative. Logistic co-operation is a component of each of these programmes. Its main objectives are:

- exchange of information;
- harmonisation of national logistic/medical concept, principles, policies, doctrine and procedures with NATO logistic/medical concepts, principles, policies, doctrine, directive, techniques and procedures;
- training personnel for all functional areas of logistics, including Command and Control (C2) and Movement and Transportation (M&T);
- development of national logistic/medical structures and capabilities viable, affordable and interoperable;
- improvement of the interoperability of the national logistic/medical capabilities through implementation of the Partnership Goals (PGs) and NATO Standardisation Agreements (STANAGs);
- development of Host Nation Support (HNS) arrangements, structures and database (Capabilities Catalogue -CAPCAT); and
- familiarisation with NATO Logistic Information Systems and Tools, e.g. Allied Deployment and Movement System (ADAMS), NATO Codification System (NCS), NATO Fuels, Integrated Logistic Support (ILS), Life Cycle Management (LCM) concepts and initiatives.

Standing Group for Partner Logistic Experts (SG PLE)

With the establishment of the SG PLE in February 2000, the Partners have been well integrated into the activities of the Senior NATO Logisticians' Conference (SNLC) and its subordinate groups. The SG PLE is under guidance of the Logistics Staff Meeting (LSM) with Partners and the Movement and Transportation Group (M&TG) with Partners and is an open forum to address logistic topics of interest

to PfP nations, LSM with Partners and M&TG with Partners members. The SG PLE is described in Chapter 2.

Standing Group for Partner Medical Experts (SG PME)

In 2001, the Committee of the Chiefs of Military Medical Services in NATO (COMEDS) Plenary Meeting set up a SG PME. In co-operation with the Strategic Commanders, this will provide a forum where medical assets and capabilities, PfP goals and medical pre-arrangements will be addressed.

PARTNERSHIP FOR PEACE

General

The PfP programme was launched in December 1994. Partners have joined and contributed greatly to NATO led efforts to ensure security in Europe and beyond. The Partnership plays an important role in international stability and security, in line with the basic objective of the PfP initiative, i.e. strengthen and extend peace and stability in the Euro-Atlantic area. Its objectives are:

- political dialogue and practical co-operation on a broad range of international and appropriate domestic issues of common concerns, in particular those related to terrorism and other evolving threats to security;
- defence reforms and restructuring of defence institutions in order to establish modern, effective, efficient, affordable and democratically responsible state defence institutions under civilian and democratic control, which will be able to support international security co-operation;
- preparing interested Partners for participation in NATO led Article 5 and non Article 5 operations through supporting the Partners' efforts to transform their defence and develop military interoperability and capabilities that provide a highly valuable contribution to NATO;
- support Partners who wish to join the Alliance, consistent with the open door policy enshrined in the Washington Treaty and PfP Invitation Document.

Political Military Steering Committee (PMSC)

The PMSC is the basic working group with responsibility for PfP matters. It meets in various configurations, either in NATO only or in EAPC format. The PMSC Clearing House is a non-decision making body, without policy responsibilities, that provides an informal forum for discussions on future assistance programmes and projects based on information data that should be coherent with other PfP mechanisms.

Partnership Co-ordination Cell (PCC)

The PCC is a unique PfP structure, located at the Supreme Headquarters Allied Powers Europe (SHAPE) in Mons (Belgium). The PCC, which is outside

the NATO military structure co-ordinates joint military activities within PfP, carries out the military planning necessary to implement the military aspects of the Euro Atlantic Partnership Work Programme and participates in the evaluation of such military activities. It is a point of contact where Partner countries can liaise and actively contribute to the co-ordination work for PfP.

The Partnership for Peace Planning and Review Process (PARP)

The PARP is a crucial element in fostering military interoperability and preparing prospective members of NATO accession. The PARP mechanism, which is offered to Partners on an optional basis, covers a two year planning cycle is modelled on NATO's own forces planning system. Planning targets, or Partnership Goals (PGs), are negotiated with each participating country, following which progress made is extensively measured. There are many logistic related PGs, aimed at assisting Partner nations in developing interoperability of logistic structures and in contributing logistically to NATO-led operations.

Euro-Atlantic Partnership Work Programme (EAPWP)

The EAPWP, which is the central mechanism of NATO co-operation with PfP countries, includes military and non-military activities. It covers a two year period but is reviewed annually. Its two main components are the overarching guidance and the list of supporting activities organised by Area of Co-operation (AOC), which is linked to relevant objectives and Military Tasks for Interoperability (MTIs). The EAPWP is the source of selected activities in support of other programmes.

PfP Trust Fund

The PfP Trust Fund aim is to assist Partner countries in the safe destruction of their Anti-personnel Landmines (APLs) stockpiles, surplus munitions, unexploded ordnance and Small Arms and Light Weapons (SALW). Actually, the framework of the Trust Fund policy was extended to allow assisting Partner nations to manage the consequences of defence reform. This may include but is not restricted to projects promoting civil and democratic reform of the armed forces, retraining of military personnel, base conversion and promoting effective defence planning and budgeting under democratic control. The decision of whether or not permitting the establishment of a Trust Fund is the sole prerogative of the Allies.

Operational Capabilities Concept (OCC)

The OCC represents a more integrated approach to military co-operation, aimed at improving the military effectiveness of multinational forces. It links together the normal co-operation in the context of the PfP and NATO force generation process which is activated in crisis. Other OCC central features are the pool of forces and capabilities database, assessment and feedback mechanisms and enabling mechanisms. As part of the implementation of the OCC, interoperability standards and related assessments are harmonised with respective NATO mechanisms.

NATO-RUSSIA LOGISTIC CO-OPERATION

Intensified co-operation in logistics was initiated after the 2002 Rome Summit. Accordingly, in June 2002 NATO and Russia set up three expert groups on logistics: Logistics, Air Transport (AT) and Air-to-Air Refuelling (AAR) in order to enhance their practical co-operation. Recognising the increasing importance of logistic co operation and the need to co ordinate the civil and military aspects of modern defence logistics, NRC Ambassadors at their meeting on 26 January 2004 established an Ad Hoc Working Group (AHWG) on Logistics, the NRC(LOG), replacing the three expert groups. The NRC(LOG) is described in Chapter 2.

NATO-UKRAINE LOGISTIC CO-OPERATION

The Charter on a Distinctive Partnership between NATO and Ukraine was signed in July 1997. It which remains the basic foundation of the NATO Ukraine relationship and since its signature, co-operation with Ukraine has developed in all areas foreseen under the Charter.

Ukraine has a unique ability to contribute logistically to NATO led operations and a framework for logistics co-operation has therefore been developed to assist with further progress. This framework aims at enhancing logistic co operation by identifying the linkages between key military goals, key logistics goals and the logistic objectives of those goals. It also establishes principles guiding future initiatives and projects that will strengthen logistic co-operation.

In November 2002, NUC Foreign Ministers adopted the NATO-Ukraine Action Plan, pursuant to the decision of the NUC to deepen and broaden the NATO-Ukraine relationship, and to reflect Ukraine's «Strategy on Relations with the North Atlantic Treaty Organisation».

MEDITERRANEAN DIALOGUE (MD)

General

The MD was initiated in 1994 with a view to contributing to regional security and stability in the Mediterranean area. The MD is composed of seven countries: Algeria, Egypt, Israel, Jordan, Morocco, Mauritania and Tunisia. In May 2001, the North Atlantic Council agreed to the participation of MD countries in carefully selected NATO/PfP exercises. MD countries are authorised to take part in SG PLE meetings.

Mediterranean Co-operation Group (MCG)

The MCG, which was established in 1997, enhances the MD initiative by providing a forum directly involving MD and Allied countries in political discussions. The MCG focuses on enhancing the Dialogue's political dimension, achieving interoperability, co operating in the fields of border security and defence reform and contributing to the fight against terrorism.

Mediterranean Co-operation Working Plan (MDWP)

The MDWP, which is the central mechanism of NATO co-operation with MD countries, includes military and non-military activities. It covers a two

year period but is reviewed annually. Selected NATO/PfP events, activities and exercises are opened for attendance by representatives of the Mediterranean Dialogue and the Istanbul Co operation Initiative (ICI), either as active participants or as observers.

ISTANBUL CO-OPERATION INITIATIVE (ICI)

The ICI was launched at the June 2004 Summit to expand the MD framework while respecting the MD specificity. It concerns countries in the broader region of the Middle East. This initiative aims at promoting practical co operation with interested countries, starting with the countries of the Gulf Co-operation Countries (GCC), i.e. Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates. It offers tailored advice on defence reform, defence budgeting and planning, promoting civil-military and military to military co operation to contribute to interoperability, fighting terrorism addressing the proliferation of weapons of mass destruction and their delivery means; and fighting illegal trafficking. Logistic co operation focuses on providing ICI countries with access to NATO logistic courses and with tailored activities, as may be requested.

Istanbul Co-operation Initiative Group (ICIG)

Following the launching of the ICI in 2004, it has been agreed that the mandate of the MCG be extended to include responsibility for ICI related matters while maintaining the possibility for this group to meet either in its MCG or ICIG configuration in order to reflect the specificity of the MD. The ICIG ensures the overall co ordination of the implementation of all aspects of the Istanbul decision. In line with this decision, NATO develops and offers a menu of practical activities within the agreed priority areas for possible development with interested countries of the region.

REFERENCES

Not available.

ANNEX

A Acronyms used in this chapter

ANNEX A

ACRONYMS USED IN THIS CHAPTER

AAR	Air-to-Air Refuelling
ADAMS	Allied Deployment and Movement System
AHWG	Ad Hoc Working Group
AOC	Area of Co-operation
APLs	Anti-Personnel Landmines
AT	Air Transport
C2	Command and Control
CAPCAT	Capabilities Catalogue
COMEDS	Committee of the Chiefs of Military Medical Services in NATO
GCC	Gulf Co-operation Countries
HNS	Host Nation Support
ICI	Istanbul Co-operation Initiative
ICIG	Istanbul Co-operation Initiative Group
ILS	Integrated Logistic Support
LCM	Life Cycle Management
LSM	Logistics Staff Meeting
MCG	Mediterranean Co-operation Group
MD	Mediterranean Dialogue
MDWP	Mediterranean Co-operation Working Plan
M&T	Movement and Transportation
M&TG	Movement and Transportation Group
MTIs	Military Tasks for Interoperability
NAC	North Atlantic Council
NCS	NATO Codification System
NRC	NATO-Russia Council

NUC	NATO Ukraine Commission
OCC	Operational Capabilities Concept
PARP	Partnership for Peace Planning and Review Process
PCC	Partnership Co-ordination Cell
PfP	Partnership for Peace
PGs	Partnership Goals
PMSC	Political Military Steering Committee
SALW	Small Arms and Light Weapons
SHAPE	Supreme Headquarters Allied Powers Europe
SG PLE	Standing Group for Partner Logistic Experts
SNLC	Senior NATO Logisticians' Conference
STANAGs	NATO Standardisation Agreements

CHAPTER 13

PRODUCTION LOGISTICS

CHAPTER 13

PRODUCTION LOGISTICS

*“For the want of a nail, the shoe was lost –
For the want of a shoe, the horse was lost –
For the want of a horse the rider was lost –
For the want of a rider the battle was lost.”*

- Benjamin Franklin, Poor Richard's Almanac, 1790 -

INTRODUCTION

Unlike consumer logistics, which is concerned with providing direct logistic support to military forces, production logistics largely belongs to the industrial domain. The Conference of National Armaments Directors (CNAD) has the main responsibility for NATO armaments co-operation, but other committees and bodies are also involved in armaments related co-operation within the Alliance. The Defence Investment (DI) Division of the International Staff (IS) is the point of contact for matters of production logistics at NATO Headquarters.

Responsibility for equipping and maintaining military forces rests with the member nations of NATO. In most cases, research, development and production of equipment is organised by each country in accordance with its national requirements and commitments to NATO. However, armaments co-operation within the Alliance contributes to meeting the NATO Strategic Commanders' capability requirements and enabling the interoperability of forces in NATO operations.

METHODS FOR ARMAMENTS CO-OPERATION

There are various ways in which co-operation in armaments can be achieved, such as:

Agreements on Production, i.e. agreements to

- manufacture identical equipment in various countries
- produce one part of a «family of weapons», e.g. one nation undertakes production of a short-range weapon, whilst others produce medium and long-range versions;
- purchase equipment produced by other nations; and
- set up a joint international production agency for equipment.

Agreements on Standardisation, i.e. agreements:

- to ensure that certain national equipments are compatible with those of other nations;
- to ensure equipments are interoperable; and
- on the use of interchangeable components.

CONFERENCE OF NATIONAL ARMAMENTS DIRECTORS (CNAD) - AC/259

It is under the aegis of the CNAD that most of the effort aimed at identifying opportunities for collaboration in the research, development and production of military equipment and weapon systems takes place. The CNAD, which meets in full session twice a year, is chaired by the Secretary General. The permanent Chairman is the Assistant Secretary General (ASG) for Defence Investment. It brings together the National Armament Directors of member nations, representatives from the Military Committee (MC) and Strategic Command (SCs), the chairmen of its main groups and other civil and military authorities with an interest in production logistics. The CNAD is directly responsible for the following four key elements for co-operation:

- the harmonisation of military requirements on an Alliance-wide basis;
- the promotion of essential battlefield interoperability;
- the pursuit of co-operative opportunities identified by the CNAD and the promotion of improved transatlantic co-operation; and
- the development of critical technologies, including expanded technology sharing.

CNAD Sub structure

The CNAD sub structure consists of Main Groups (level 1), with supporting level 2 subject area management groups and level 3 expert working groups. Information on the CNAD structure is available on the Armaments Information Management System (AIMS) on the NATO intranet, or on the NATO public website. The level 1 CNAD groups are the following:

CNAD Main Armaments Groups covering land, sea and air warfare:

- NATO Naval Armaments Group (NNAG) - AC/141;
- NATO Air Force Armaments Group (NAFAG) - AC/224; and
- NATO Army Armaments Group (NAAG) - AC/225.

The CNAD Main Groups consist of:

- **NATO Industrial Advisory Group (NIAG)** - provides industry advice to the CNAD on industrial, technical, economic, management and other relevant aspects of research, development and production of armaments within the Alliance. The primary focus is the conduct of NIAG studies to provide technology advice for programme development efforts under the CNAD.
- **Life Cycle Management Group - AC/327** - is responsible, on behalf of the CNAD, for NATO policies, methods, use and support of armaments systems to meet NATO life cycle, quality and interoperability requirements.
- **CNAD Ammunition Safety Group - AC/326** - is responsible, on behalf of the CNAD, for promoting ammunition safety through the

life cycle and provides standards and guidance for munitions safety design, testing, transportation, handling and storage including in NATO operations.

- **Group of National Directors on Codification - AC/135.** This Group is concerned with the development, implementation and maintenance of a NATO Codification System (NCS) in support of Allied Forces. It works closely with, and receives secretarial support from, the NATO Maintenance and Supply Agency (NAMSA) which can be regarded as its executive arm.

The CNAD Ad Hoc Groups dealing with special armaments projects are the following:

- **Alliance Ground Surveillance Steering Committee - AC/259(Surv)**
- **Missile Defence Ad Hoc Group - AC/259(MDAHG)**

National Armaments Directors Representatives (NADREPS) assigned to national delegations to NATO and representing their National Armaments Directors. NADREPS meet generally every two weeks and hold regular meetings with Partner nation NADREPS. They oversee the CNAD Management Plan and act as the NATO Headquarters' focal points for their respective National Armaments Directors.

OTHER NATO COMMITTEES AND BODIES INVOLVED IN ARMAMENTS CO OPERATION

Other NATO committees and bodies are also involved in certain aspects of armaments co-operation.

NATO Air Defence Committee (NADC)

The NADC is chaired by the Deputy Secretary General and meets twice a year. It advises the North Atlantic Council and the Defence Planning Committee (DPC) on all aspects of air defence programme development for NATO and the adjacent sea areas. It has two subordinate panels:

- Panel on Air Defence Philosophy (PADP); and
- Panel on Air Defence Weapons (PADW).

NATO Project Steering Committees (NPSC)

A NATO Project is a formal status conferred by the CNAD on an armaments co operation project that is subject to the following conditions:

- two or more NATO nations participate in the project;
- there is a commitment to report progress annually to CNAD until the equipment has been produced or the project otherwise terminated; and
- provision is included for the admission of other interested NATO countries, subject to the acceptance of reasonable and equitable conditions to be provided by the participating countries.

A NPSC is a body composed of national representatives established by an intergovernmental agreement between two or more NATO nations in order to co-ordinate, execute or supervise an equipment procurement programme which has qualified as a NATO PROJECT. A number of projects continue to enjoy formal NATO status under the terms of the CNAD Charter. A list of NPSCs is provided at Annex A.

Research and Technology Organisation (RTO)

The governing body of the NATO Research and Technology Organisation is the Research and Technology Board (RTB) which is composed of national delegates drawn from government, industry and academia. The RTB has been designated by the Council as the single focus within NATO for the conduct of international collaborative defence Research and Technology (R&T), and the co-ordination of other R&T activities and issues. The Chairman of the RTB reports to both the CNAD and the MC.

The RTO is supported by the Research and Technology Agency (RTA), Paris (France). The primary work of the RTO is conducted by networks of national experts, involved in collaborative research projects, military studies and information exchange activities across a wide range of technology disciplines.

NATO Consultation, Command and Control Organisation (NC3O)

As a result of a Council decision, the NATO C3 Organisation (NC3O) came into being in July 1996. The work of the NATO C3 Community is overseen by the NATO C3 Board (NC3B) which meets twice a year with representation from capitals. The Board is assisted in its work by the National C3 Representatives (NC3REPS) who are normally resident in their delegation or military representation in NATO HQ. The Board oversees the work of its two Agencies, the NATO C3 Agency (NC3A) which is a planning, design, development engineering, technology and procurement agency, and the NATO CIS Operating and Support Agency (NACOSA). Staff support to the NC3B and its sub structure is provided by the NATO Headquarters C3 Staff, which is an integrated civilian and military staff responding to both the ASG/DI and the Director IMS (DIMS).

The NATO C3 systems that are being developed encompass the common funded communications systems, information systems, sensor (and warning installations) systems, and their facilities in NATO and national headquarters, that are required for political consultation, crisis management, civil emergency planning and military command and control. NATO C3 activities in these areas are related to the multinational decision making process which deals with:

- policy making, planning, programming, implementation, operation and maintenance of common-funded NATO C3 systems;
- standardisation and co-operative development, testing and procurement of NATO C3 and appropriate national C3 (including navigation and identification) equipment and systems; and
- interoperability between national C3 systems and between those systems and the common-funded NATO C3 systems.

PROCEDURES FOR ARMAMENTS CO-OPERATION

Armaments co-operation under the CNAD is based essentially on an information exchange process that seeks agreement between nations and the SCs on harmonised operational requirements in order to promote co-operative equipment programmes. Because the responsibility for equipping their forces is a prerogative of individual member nations, this co-operative process can be supported and encouraged, but not regulated, by NATO. There is therefore no formal or centralised NATO armaments planning system. However, in order to give greater coherence and structure to co-operative efforts, two major Planning/programming systems have been introduced in NATO: Conventional Armaments Planning System (CAPS) and the Phased Armaments Programming System (PAPS).

Armaments Programming: Phased Armaments Programming System (PAPS)

PAPS, which is published as AAP-20, is designed as a tool available as required for conducting programmes on a systematic basis. It should not be regarded as a set of formal and mandatory steps in the implementation of CNAD projects. There is a finite and fairly consistent number of milestones in the life of a weapon system programme where the nature of the programme changes. At these milestones, decisions must be made regarding alternative courses of action. PAPS is intended to provide a structured approach to decision-making at these milestones for all management levels involved in co-operative research and development and production programmes within NATO.

PARTNERSHIP ACTIVITIES

The CNAD is playing an active and important role in implementing practical co operation within the PfP framework. Some promising areas have already been identified which provide the substance for future co-operation activities. These activities are the following:

- Maintaining and upgrading ageing tactical aircraft (NAFAG);
- Ship design (NNAG);
- Ammunition and interchangeability (NAAG);
- Psychological readiness for multinational operations (RTB); and
- Continuous Acquisition and Life Cycle Support technical standards (NATO CALS Management Board (NCMB)).

Partners also need to be provided with additional training and assistance in working with NATO technical documentation and, specifically, NATO standards. To the extent possible, CNAD PfP activities are co-ordinated with related co-operation in other NATO bodies, and particularly with the NATO Standardisation Agency (NSA).

Individual Partnership Programmes (IPAPs)

Partners demonstrate significant interest in CNAD-sponsored co operation activities, as shown in the IPAPs.

Proposal to Launch CNAD «Partnership Armaments Projects»

The CNAD has developed a further initiative to offer opportunities for interested Partners to reap practical benefits from PfP co-operation in the near-term, by engaging in selected small-scale co-operative projects with NATO nations and industry. This proposal, if endorsed by the NAC, should give NATO industry an incentive to assist Partners in the development of realistic proposals for near-term projects to advance, in particular, interoperability between NATO and Partner force.

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NATO Facts and Figures

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AAP-27 Conventional Armaments Planning System (CAPS) - Users Handbook and Guidance

ANNEXES

A NATO Project Steering Committees

B Acronyms used in this chapter

ANNEX A

NATO PROJECT STEERING COMMITTEES

ADW	Area Defence Weapon
AGS	Alliance Ground Surveillance Capability
BICES	Battlefield Information Collection & Exploitation System
CSNI	Communications Systems Network Interoperability
DFD	Data Fusion Demonstrator
F-16	F-16 Fighter Aircraft
FORACS	NATO Naval Forces Sensors & Weapons Accuracy Check Sites
MIDS-LVT	Multinational Information Distribution System - Low Volume Terminal
MILAN	MILAN Anti-tank Weapon System
NCMB	NATO Continuous Acquisition and Life-Cycle Support (CALS) Management Board
NILE	NATO Improvement Link 11
NIMIC	NATO Insensitive Munitions Information Centre
NLRS	Multiple Launch Rocket System
NMPA	NATO Maritime Patrol Aircraft
OTO MELARA	OTO MELARA 76/62 Compact Gun
SEA GNAT	NATO SEA GNAT System
SEASPARROW	NATO SEASPARROW Air Defence Missile
SINS	Low Cost Inertial Navigation Systems for Ships
TRIPARTITE	(self-explanatory)
MINEHUNTER	
V/SHORAD	Very Short/Short Range Air Defence Systems

ANNEX B

ACRONYMS USED IN THIS CHAPTER

AIMS	Armaments Information Management System
ASG	Assistant Secretary General
CALS	Continuous Acquisition and Life Cycle Support
CAPS	Conventional Armaments Planning System
CNAD	Conference of National Armaments Directors
DI	Defence Investment
DIMS	Director IMS
DPC	Defence Planning Committee
IPAPs	Individual Partnership Programmes
IS	International Staff
MC	Military Committee
NAAG	NATO Army Armaments Group
NAC	North Atlantic Council or Council
NADC	NATO Air Defence Committee
NADREPS	National Armaments Directors Representatives
NAFAG	NATO Air Force Armaments Group
NCMB	NATO CALS Management Board
NACOSA	NATO CIS Operating and Support Agency
NAMSA	NATO Maintenance and Supply Agency
NCS	NATO Codification System
NC3A	NATO C3 Agency
NC3B	NATO C3 Board
NC3O	NATO Consultation, Command and Control Organisation
NC3REPS	National C3 Representatives
NIAG	NATO Industrial Advisory Group

NNAG	NATO Naval Armaments Group
NSO	NATO Standardisation Organisation
PADP	Panel on Air Defence Philosophy
PAPS	Phased Armaments Programming System
PADW	Panel on Air Defence Weapons
RTA	Research and Technology Agency
RTB	Research and Technology Board
RTO	Research and Technology Organisation
SCs	Strategic Command

CHAPTER 14

IN-SERVICE LOGISTICS

CHAPTER 14

IN-SERVICE LOGISTICS

“Understand that the foundation of an army is the belly. It is necessary to procure nourishment for the soldier wherever you assemble him and whenever you wish to conduct him.”

- Frederick II of Prussia, 1747 -

INTRODUCTION

In-Service Logistics is closely related to Production Logistics and is an integral part of the System Life Cycle Management (SLCM). Although in service support relates to those activities required to assure that weapon system/equipment is available and fit for use, it actually begins with the decision to bring the new system into the inventory. In service logistic planning starts at the outset of a system design. It is critical to determine the maintenance and support concepts as early as possible because approximately 60% to 80% of a defence system's Total Ownership Cost (TOC) occur after that system is put into operation. More importantly, the magnitude of that cost is determined during the design and development phase. For these reasons, the maintenance and support concepts need to be determined up front. This concept is known as Integrated Logistic Support.

Integrated Logistic Support (ILS)

ILS is the deliberate integration of systems/equipment logistic support considerations into the system life cycle management during the outset of the programme/project. ILS prescribes that all elements of logistic support be planned, acquired, tested and provided in a timely and cost-effective manner. NATO policy specifics that all financial and other resources required to maintain operational availability receive equal emphasis as those required to achieve performance objectives and timely equipment delivery. The SNLC developed ALP-10 on Integrated Logistic Support in 1991 to support the Alliance's ambition.

ILS is structured around the lifecycle management model detailed in the Phased Armaments Programming System (PAPS – see chapter 13). This model portrays the total life span of a system, commencing with mission-need evaluation and extends through the in-service phase to its eventual disengagement. The model applies to both common and jointly funded projects.

Logistic Support Analysis (LSA)

LSA is a structured process intended to define, analyse and quantify logistic support requirements and to influence design for supportability, throughout system development. LSA stresses simplicity by identifying an optimal level of logistic requirements. The objective of LSA is to enable optimum system performance and availability at minimum life cycle cost. LSA is conducted on an interactive basis throughout the acquisition cycle through the use of studies, trade-offs, service advice and test and evaluation leading to successive design refinement.

During design, the analysis is oriented towards assisting the design engineering in incorporating logistic requirements into equipment design. This includes incorporation of key logistic-related design objectives, reliability, maintainability and testability.

As the project progresses, the LSA process concentrates on providing detailed descriptions of specific resources required to support a system throughout its in-service phase by providing timely valid data for all areas of ILS. That data is used to plan, acquire and position support resources (personnel, funding and materiel) to ensure that deployed systems meet their availability requirements.

During the later production and in-service phases of the project, feedback data are used to review the continuing validity of data to ensure that Life Cycle Cost (LCC) plans are being realised.

Life Cycle Costing (LCC)

LCC is the total sum of direct, indirect, recurring, non-recurring and other related costs incurred, or estimated to be incurred, in the design, development, production, operations, maintenance and support of a major system over its anticipated life span. LCC analysis is an iterative process that starts at the beginning of the programme/project life cycle and continues throughout the life cycle of the system.

NATO PRODUCTION AND LOGISTIC ORGANISATIONS (NPLO)

An NPLO is a subsidiary body created within the framework of NATO for the implementation of tasks arising out of the Treaty, and to which the North Atlantic Council (NAC) grants organisational, administrative and financial independence. The NPLO is established with a view to meeting, to the best advantage, the collective requirements of participating nations in relevant fields of design and development, production, operational logistic support and management under the conditions agreed in its Charter. An NPLO is open to all NATO nations who become member states by signing the Memorandum of Understanding (MOU). An NPLO normally consists of:

- a Board of Directors (BOD), in some cases called a Steering Committee (SC), is the governing body acting with regard to the collective interests of member nations. The representatives of each member nation represent their nation's political, military, economic, financial and technical interests and fully participate in the BODs decision-making process;
- subordinate committee(s) established by the BOD as required; and
- an Agency that is the executive managing body under the authority of a General Manager.

Production Logistics Oriented NPLOs are listed at Annex A. Consumer Logistics Oriented NPLOs consist of the NATO Maintenance and Supply Organisation (NAMSO) and the Central Europe Pipeline Management Organisation (CEPMO). The latter is addressed in Chapters 2 and 10.

NATO MAINTENANCE AND SUPPLY ORGANISATION (NAMSO)

NAMSO and its agency NAMSA are described in Chapter 2.

NAMSA SPECIFIC CO-OPERATIVE LOGISTIC PROJECTS

NATO Logistic Stock Exchange (NLSE)

The NATO Logistic Stock Exchange (NLSE) is a set of tools developed by NAMSA to assist customers and suppliers in putting into practice co operative logistic concepts for item management and acquisition. The system allows customers to exchange information on stockholdings, arrange for redistribution of assets, increase global asset visibility in order to determine present and future requirements. The overall objective is to improve logistics availability, achieve economies of scale and simplify the supply chain processes.

The NLSE information system platform consists of a set of databases and a web-based interface which allows:

- reporting and exchanging excess assets;
- reporting of armed forces' inventories to improve stock management;
- asset pooling to permit common stock management; and
- processing of NATO-wide mutual emergency support requests.

Customers wishing to use the NLSE directly must subscribe to the provisions of the COMMIT (Common Item Management) Partnership Agreement – which establishes the legal framework necessary for the management of common stocks and prescribes the rules for asset redistribution. This agreement has the same legal basis as a weapon system partnership agreement.

NATO Depot and Support System (NDSS)

The NDSS is a fully integrated software package designed, developed and maintained by NAMSA. It covers most areas of logistic support such as item identification, supply, maintenance and property accounting. The NDSS operates in a client-server architecture. Its scalability allows it to be installed in a stand alone workstation or in a local area network (LAN).

NAMSA assists in the installation of the package, if required, including the procurement of the necessary hardware. NAMSA also provides user and operator training and the services of a dedicated help desk.

NATO Ammunition Data Base (NADB)

The NADB provides an authoritative source of NATO ammunition interchangeability, technical and logistic information on CD. Users can search information on NATO Stock Number (NSN), item name, ammunition model number, manufacturer, weapon, user nation and other criteria.

NATO PROJECT STEERING COMMITTEES (NPSCs)

NPSCs are established in accordance with procedures for co-operation in research, development and production of military equipment approved by the Council. There are 20 NPSCs that report to the Conference of National Armaments Directors (CNAD) (see Annex A, Chapter 13).

CO-OPERATIVE LOGISTIC TECHNIQUES

There are a number of materiel management techniques which are prerequisites for or support to the introduction of co-operative logistic arrangements.

NATO Codification System (NCS)

The NATO Codification System (NCS) is a uniform and common system for identification, classification and stock numbering of Items of Supply (IoS) of user nations, designed to achieve maximum effectiveness in logistics support and facilitate materiel data management. The NCS has been agreed by all Allies and sponsors non NATO nations in identifying equipment and supplies. The NCS is governed by the NATO Group of National Directors on Codification (AC/135) – see chapter 13 and implemented by the National Codification Bureau (NCB) of each user nation.

The NATO Codification System provides accurate information regarding the identity of an IoS, permits recording of the sources of supply and provides other management data. It helps solve supply management problems by providing data users with ready access to a single, up to date source.

The operational and economic advantages for users of the NCS are the following:

- enhanced opportunities for standardisation and interchangeability, by recording and revealing the unique characteristics of IoS;
- access to the full range of information on all IoS in the users' inventories, thus pooling resources and sharing the burden of acquiring spare parts and maintaining common equipment; minimises the supply requirement for spares and consumables for operational deployment;
- permits users to readily identify spares and/or substitutes for a weapon system thereby reducing downtime and supporting force multiplication;
- common supply language understood by all users, which simplifies the technical dialogue between users;
- computer technology fostering the recording, processing and transmittal of IoS data in an efficient and user friendly manner;
- greater economies for the users resulting from avoiding the creation of new IoS for parts identifiable through the data base;
- improved determination of materiel requirements and budgeting;

- effective co-ordinated procurement by eliminating concurrent acquisition and disposal of the same IoS, consolidating orders from several users to benefit from price reductions on bulk purchases and visibility of several potential sources of supply; and
- interchange/exchange of assets, reduction of inventories, warehousing, data maintenance and personnel; and improved disposal of surplus and excess materiel.

The Group of National Directors on Codification (AC/135) often requests NAMSA, on a cost recovery basis, to carry out central codification support activities, which includes the following standing services:

- functional and technical support to AC/135;
- secretarial support;
- management of AC/135 Publications and Web Site;
- management of Codification data transmission and data quality; and
- management of the CD-ROM NATO Master Catalogue of References for Logistics (NMCRL) which is a CD-ROM/DVD that comprise 16m NSN, 31m Part Numbers, 1.2m data concerning Manufacturers and Vendors(NCAGE) and 23m User Registrations. NAMSA also manages the NATO Mailbox System (MBS) allowing the transfer of data among the member countries.

REFERENCES

Not available.

ANNEXES

- A NATO Production Logistic Related Organisations (NPLOs)
- B Acronyms used in this chapter

ANNEX A

NATO PRODUCTION LOGISTIC RELATED ORGANISATIONS (NPLOs)

NATO Helicopter for the 1990s (NH90) Design and Development, Production and Logistics Management Organisation (NAHEMO) with its Agency (**NAHEMA**) located at Aix-en-Provence, France. Member nations are France, Germany, Italy and the United Kingdom.

NATO Euro Fighter 2000 (EF 2000) and TORNADO Development, Production and Logistics Management Organisation (NETMO) with its Agency (**NETMA**) located at Unterlaching, Germany. Member nations are Germany, Italy, Spain (EF 2000 only), and the United Kingdom.

NATO Medium Extended Air Defence System, Design and Development, Production and Logistics Management Organisation (NAMEADSMO) with its Agency (**NAMEADSMA**) located at Huntsville, Alabama in the United States. Member nations are Germany, Italy, and the United States.

NATO HAWK Production and Logistics Organisation (NHPLO) with its Management Office located at Rueil-Malmaison, France. Member nations are Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands and Norway.

Other NPLOs that comprise all NATO nations are:

NATO Airborne Early Warning and Control Programme Management Organisation (NAPMO) with its Agency (**NAPMA**) located at Brunssum, the Netherlands.

NATO Air Command and Control System (ACCS) Management Organisation (NACMO) with its Agency (**NACMA**) located at Brussels, Belgium.

NATO Consultation, Command and Control (C3) Organisation (NC3O) with its Agency (**NC3A**) at Brussels, Belgium and the Hague, the Netherlands.

ANNEX B

ACRONYMS USED IN THIS CHAPTER

APM	Anti-Personnel Mines
CEPMO	Central Europe Pipeline Management Organisation
CIS	Communication and Information Systems
COMMIT	Common Item Management
CNAD	Conference of National Armaments Directors.
HLM	HAWK Logistic Management
ILS	Integrated Logistic Support
IoS	Items of Supply
LAN	Local Area Network
LCC	Life Cycle Cost
LSA	Logistic Support Analysis
MOU	Memorandum of Understanding
NAC	North Atlantic Council
NCB	National Codification Bureau
NADB	NATO Ammunition Data Base
NCS	NATO Codification System
NDSS	NATO Depot and Support System
NLSE	NATO Logistic Stock Exchange
MBS	NATO Mailbox System
NAMSA	NATO Maintenance and Supply Agency
NAMSO	NATO Maintenance and Supply Organisation
NMCRL	NATO Master Catalogue of References for Logistics
NPLO	NATO Production and Logistic Organisations
NPSCs	NATO Project Steering Committees
NSN	NATO Stock Number
PAPS	Phased Armaments Programming System

SC	Steering Committee
SLCM	System Life Cycle Management
TOC	Total Ownership Cost

ACRONYMS
USED
IN THIS
HANDBOOK

ACRONYMS USED IN THIS HANDBOOK

AAR	Air-to-Air Refuelling
ACCS	Air Command and Control Systems
ACE	Allied Command Europe
ACO	Allied Command Operations
ACROSS	Allied Command Resource Optimisation Software System
ACSP	Aircraft Cross-Servicing Programme
ACT	Allied Command Transformation
ADAMS	Allied Deployment and Movement System
ADL	Allied Disposition List
ADP	Automated Data Processing
ADR	Annual Defence Review
AFLPs	Allied Fuels Logistic Publications
AGARD	Advisory Group for Aerospace Research and Development
AHWG	Ad Hoc Working Group
AIMS	Armaments Information Management System
AJP	Allied Joint Publications
ALSSs	Advanced Logistic Support Sites
AMCC	Allied Movement Co-ordination Centre
AMSCC	Athens Multinational Sealift Co-ordination Centre
AOC	Area of Co-operation
AOO	Area of Operations
AOR	Area of Responsibility
AP	Allied Publication
APLs	Anti-Personnel Landmines
APM	Anti-Personnel Mines
ARMY F&LWP	Army Fuels and Lubricants Working Party
ASG	Assistant Secretary General
AT	Air Transport

AVIATION F&LWP	Aviation Fuels and Lubricants Working Party
AVT	Applied Vehicle Technology
BDR	Battle Damage Repair
Bi-SC LCB	Bi-SC Logistic Co-ordination Board
Bi-SC M&T Forum	Bi-SC Movement and Transportation Forum
Bi-SC MEDAG	Bi-SC Medical Advisory Group
BOA	Basic Ordering Arrangements
BOD	Board of Directors
C&RS	Co-operation & Regional Security Division
CALS	Continuous Acquisition and Life Cycle Support
CAPC	Civil Aviation Planning Committee
CAPCAT	Capabilities Catalogue
CAPS	Conventional Armaments Planning System
CBRN	Chemical, Biological, Radiological and Nuclear
CE	Crisis Establishment
CEPMA	Central European Pipeline Management Agency
CEPMO	Central European Pipeline Management Organisation
CEPS	Central Europe Pipeline System
CIMIC	Civil-Military Co-operation
CIS	Communication and Information Systems
CJFLCC	Combined Joint Force Land Component Commander
CJSOR	Joint Statement of Requirements
CJTF	Combined Joint Task Force
CLS	Contractor Logistic Support
CM	Consequence Management
CNAD	Conference of National Armaments Directors
COMCJTF	Commander CJTF
COMEDS	Committee of the Chiefs of Military Medical Services in NATO
COMMIT	Common Item Management
CONOP	Concepts of Operation

COP	Contingency Plan
COR	Concept of Requirements
CP	Capabilities Package
CPG	Comprehensive Political Guidance
CRD	Commander's Required Date
CRO	Crisis Response Operation
CS	Combat Support
CSCE	Conference for Security and Co operation in Europe
CSS	Combat Service Support
C2	Command and Control
C3	Consultation, Command and Control
DCI	Defence Capabilities Initiative
DCS	Damage Control Surgery
DDP	Detailed Deployment Plan
DFHE	Deployable Fuels Handling Equipment
DI	Defence Investment
DIMS	Director IMS
DJTF	Deployable Joint Task Force
DM	Deployability and Mobility
DNBI	Disease and Non-Battle Injury
DOS	Days of Supply
DPC	Defence Planning Committee
DPP	Defence Policy and Planning
DPQ	Defence Planning Questionnaire
DRC	Defence Review Committee
DRR	Defence Requirement Review
EAC	European Airlift Centre
EAPC	Euro-Atlantic Partnership Council
EM	Executive Management
EOD	Explosive Ordnance Disposal
EODTIC	NATO EOD Technical Information Centre

EU	European Union
FLR	Forces of Lower Readiness
FLSs	Forward Logistic Sites
GBAD	Ground Based Air Defence
GCC	Gulf Co-operation Countries
GOP	General Operational Plans
GRF	Graduated Readiness Forces
HCCM	Harmonisation, Co-ordination and Control Mechanism
HFM	Human Factors and Medicine Panel
HLM	HAWK Logistic Management
HN	Host Nation
HNS	Host Nation Support
HQ	Headquarters
HRF	High Readiness Forces
IC	Infrastructure Committee
ICI	Istanbul Co-operation Initiative
ICIG	Istanbul Co-operation Initiative Group
IEL	Infrastructure Engineering for Logistics
ILS	Integrated Logistic Support
IMS	International Military Staff
INT	Intelligence Division
IOs	International Organisations
IoS	Items of Supply
IPAPs	Individual Partnership Programmes
IPC	Industrial Planning Committee
IS	International Staff
ISAF	International Security Assistance Force (Afghanistan)
IT	Information Technology
JFC	Joint Force Command
JFCC	Joint Force Component Command
JHNSSC	Joint HNS Steering Committee

JHQ	Joint Headquarters
JIA	Joint Implementation Arrangements
JLSG	Joint Logistic Support Group
JMC	Joint Medical Committee
JOA	Joint Operations Area
JSB	Joint Service Board
LAN	Local Area Network
LCB	Logistics Co ordination Board
LCC	Life Cycle Cost
LCM	Life Cycle Management
LCS	Life Cycle Support
LLN	Logistics Lead Nation
LLTI	Long Lead Time Items
LN	Lead Nation
LOC	Lines of Communication
LOG IMG	Logistics Information Management Group
LOGFS	Logistic Functional Services
LOGFS IM WG	Logistic Functional Services Information Management Working Group
LOGIS	Logistics Information System
LOGREP	Logistic Reporting
L&R	Logistics and Resources Division
LRSN	Logistics Role Specialist Nation
LSA	Logistic Support Analysis
LSM	Logistics Staff Meeting
M&T	Movement and Transportation
M&TF	Movement and Transportation Forum
M&TG	Movement and Transportation Group
MBC	Military Budget Committee
MBS	NATO Mailbox System
MC	Military Committee

MCE	Multinational Command Element
MCG	Mediterranean Co-operation Group
MD	Mediterranean Dialogue
MDWP	Mediterranean Co-operation Working Plan
MEDAG	Medical Advisory Group
MG	Ministerial Guidance
MIMUs	Multinational Integrated Medical Units
MJLC	Multinational Joint Logistic Centre
MJO	Major Joint Operation
MMRs	Minimum Military Requirements
MNDDP	Multi-National Detailed Deployment Plan
MNLC(M)	Multinational Logistics Command (Maritime)
MNMF	Multinational Maritime Force
MOU	Memorandum of Understanding
MPRE	Mobile Pipeline Repair Equipment
MTFs	Medical Treatment Facilities
MTIs	Military Tasks for Interoperability
MTRP	Medium-Term Resource Plan
NAAG	NATO Army Armaments Group
NAC	North Atlantic Council or Council
NAC(R)	Reinforced North Atlantic Council
NACC	North Atlantic Co operation Council
NACMA	NATO ACCS Management Agency
NACOSA	NATO CIS Operating and Support Agency
NADB	NATO Ammunition Data Base
NADC	NATO Air Defence Committee
NADREPS	National Armaments Directors Representatives
NAEW	NATO Airborne Early Warning
NAFAG	NATO Air Force Armaments Group
NAMs	NATO Military Authorities
NAMSA	NATO Maintenance and Supply Agency

NAMSO	NATO Maintenance and Supply Organisation
NAVAL F&LWP	Naval Fuels and Lubricants Working Party
NC3A	NATO C3 Agency
NC3B	NATO C3 Board
NC3O	NATO Consultation, Command and Control Organisation
NC3REPS	National C3 Representatives
NCB	National Codification Bureau
NCMB	NATO CALS Management Board
NCS	NATO Command Structure
NCSA	NATO Communication and Information Systems Services Agency
NDMC	NATO Defence Manpower Committee
NDSS	NATO Depot and Support System
NEPS	North European Pipeline System
NF&LWG	NATO Fuels and Lubricants Working Group
NFS	NATO Force Structure
NGOs	Non-Governmental Organisations
NIAG	NATO Industrial Advisory Group
NLSE	NATO Logistic Stock Exchange
NMAs	NATO Military Authorities
NMCC	National Movement Co-ordination Centre
NMCRL	NATO Master Catalogue of References for Logistics
NNAG	NATO Naval Armaments Group
NPC	NATO Pipeline Committee
NPG	Nuclear Planning Group
NPLO	NATO Production and Logistic Organisations
NPS	NATO Pipeline System
NPSCs	NATO Project Steering Committees
NRC	NATO-Russia Council
NRF	NATO Response Force
NSA	NATO Standardisation Agency

NSE	National Support Element
NSIP	NATO Security Investment Programme
NSN	NATO Stock Number
NSO	NATO Standardisation Organisation
NSP	NATO Standardisation Programme
NSSG	NATO Standardisation Staff Group
NTM	Notice to Move
NUC	NATO-Ukraine Commission
O&M	Operations and Maintenance
OCC	Operational Capabilities Concept
OPCON	Operational Control
OPLAN	Operation Plan
OPP	Operational Planning Process
OPS	Operations Division
OSCE	Organisation for Security and Co operation in Europe
P&P	Plans & Policy Division
PADP	Panel on Air Defence Philosophy
PADW	Panel on Air Defence Weapons
PAPS	Phased Armaments Programming System
PARP	Partnership for Peace Planning and Review Process
PASP	Political Affairs and Security Policy
PB&Cs	Transport Planning Boards and Committees
PBIST	Planning Board for Inland Surface Transport
PBOS	Planning Board for Ocean Shipping
PCC	Prague Capabilities Commitment
PDD	Public Diplomacy
PfP	Partnership for Peace
PGs	Partnership Goals
PHE	Petroleum Handling Equipment
PHEWG	Petroleum Handling Equipment Working Group
PMR	Principal Military Requirements

PMSC	Political Military Steering Committee
PODs	Ports of Debarkation
POL	Petroleum, oil and lubricants
PPC	Petroleum Planning Committee
PSOs	Peace Support Operations
RFPs	Requests for Proposals
RIFB	Ready Invitations for Bid
ROM	Restriction of Movement
RSN	Role Specialist Nations
RSOM	Reception, Staging and Onward Movement
RTA	Research and Technology Agency
RTB	Research and Technology Board
RTO	Research and Technology Organisation
SACEUR	Supreme Allied Commander Europe
SACLANT	Supreme Allied Command Atlantic
SACT	Supreme Allied Commander Transformation
SALCC	Strategic Air Lift Co-ordination Cell
SALW	Small Arms and Light Weapons
SC	Steering Committee
SCC	Sealift Co-ordination Centre
SCEPC	Senior Civil Emergency Planning Committee's
SCs	Strategic Commands
SDOS	Standard Days of Supply
SFC	Single Fuel Concept
SFP	Single Fuel Policy
SG	Secretary General
SG PLE	Standing Group of Partner Logistic Experts
SGLO	Secretary General's Liaison Officer
SHAPE	Supreme Headquarters Allied Powers Europe
SL	Sustainability and Logistics
SLCM	System Life Cycle Management

SN	Sending Nation
SNLC	Senior NATO Logisticians' Conference
SNs	Sending Nations
SOFA	Status of Forces Agreement
SOR	Statement of Requirement
SPG	Stockpile Planning Guidance
SPM II	Sustainment Planning Module II
SPOW	Scientific Programme of Work
SRB	Senior Resource Board
STANAG	NATO Standardisation Agreement
TA	Tasking Authorities
TACO	Theatre Allied Contracting Office
TCN	Troop Contributing Nation
TFHE	Tactical Fuel Handling Equipment
TOA	Transfer of Authority
TOC	Total Ownership Cost
TTPs	Tactics, Techniques and Procedures
UAV	Unmanned Aerial Vehicles
V&O	NATO Logistics Vision and Objectives
WMD	Weapons of Mass Destruction