NATO *Logistics Handbook*

November 2012

FOREWORD

The NATO Logistics Handbook is published under the auspices of the Logistics Committee (LC) and aims to introduce logisticians at every level to some of NATO's basic principles, policies, concepts and the organisations which they will encounter in the course of their work. NATO and the security environment in which it operates are continually changing. An obvious indicator of transformation in NATO logistics since the 2007 version of the Handbook, is the change of name of the Senior NATO Logisticians' Conference (SNLC) to LC. We have a new NATO Strategic Concept which has guided the updating of the logistics vision, strategic goals and objectives. Furthermore, NATO logistics continues its migration to collective logistics. It is incumbent on all logisticians to ensure that the logistic support concepts that are required to ensure the deployability and sustainability of NATO forces change to meet political and other guidance and, most importantly, operational needs. The current principles, policies and concepts have been reflected in this edition of the Handbook, but its continuing usefulness will depend on the ongoing process of keeping it updated and readers should ensure that they use the latest version of the references quoted herein.

This 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, nor does it attempt to examine current issues or provide answers to the problems that logisticians will face in the field - these will change over time and circumstance.

If any readers have suggestions for improvements or amendments to the Handbook, they are asked to forward them to the LC Secretariat.

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CHAPTER 1

THE ALLIANCE'S NEW STRATEGIC CONCEPT, OVERARCHING POLICIES AND STRUCTURES

NATO's North Atlantic Council (NAC)

INTRODUCTION

The North Atlantic Treaty Organization (NATO) was created through the signing of the Washington Treaty on 4 April 1949 by 12 founding nations and falls within the framework of Article 51 of the United Nations (UN) Charter. The Treaty, a model of brevity and clarity, paved the way for the Alliance's adaptation to the constantly changing dynamic of international security. It provides built-in flexibility and scope for tackling new problems and applying solutions to them that reflect the changing environment. NATO's membership has been steadily enlarged to form currently an Alliance of 28 countries from North America and Europe committed to fulfilling the goals of its Treaty. NATO's door remains open to European democracies willing and able to assume the responsibilities and obligations of membership, in accordance with Article 10 of the Washington Treaty. With a need for greater solidarity in today's security environment, NATO's partnership policies have also been steadily extended with a view to building closer and more effective relationships with a variety of countries and international institutions.

Decision-making in NATO

NATO decisions are taken on the basis of consensus, after discussion and consultation among member countries. A decision reached by consensus is an agreement reached by common consent and supported by each member country and is the expression of the collective will of the sovereign states that are members of the Alliance. The North Atlantic Council (NAC) has effective political authority and powers of decision, and consists of Permanent Representatives of all member countries meeting together at least once a week. The Council also meets at higher levels involving Foreign Ministers, Defence Ministers or Heads of State and Government, but it has the same authority and powers of decision-making, and its decisions have the same status and validity, at whatever level it meets.

THE ALLIANCE'S STRATEGIC CONCEPT

The Heads of State and Government approved the new Strategic Concept for the Alliance[1] at the NATO Summit in Lisbon in November 2010. The modern security environment contains a broad and evolving set of challenges to the security of NATO's territory and populations. In order to assure their security, the Alliance must and will continue fulfilling effectively the following three essential core tasks, all of which contribute to safeguarding Alliance members, and always in accordance with international law:

- **Collective defence.** NATO members will always assist each other against attack, in accordance with Article 5 of the North Atlantic Treaty. That commitment remains firm and binding. NATO will deter and defend against any threat of aggression, and against emerging security challenges where they threaten the fundamental security of individual Allies or the Alliance as a whole.

1) *PO(2010)0169, The Alliance's Strategic Concept*

- **Crisis management.** NATO has a unique and robust set of political and military capabilities to address the full spectrum of crises – before, during and after conflicts. NATO will actively employ an appropriate mix of those political and military tools to help manage developing crises that have the potential to affect Alliance security, before they escalate into conflicts; to stop ongoing conflicts where they affect Alliance security; and to help consolidate stability in post-conflict situations where that contributes to Euro-Atlantic security.
- **Cooperative security.** The Alliance is affected by, and can affect, political and security developments beyond its borders. The Alliance will engage actively to enhance international security, through partnership with relevant countries and other international organisations; by contributing actively to arms control, non-proliferation and disarmament; and by keeping the door to membership in the Alliance open to all European democracies that meet NATO's standards.

All NATO members are committed to the principles of individual liberty, democracy, human rights and the rule of law. In order to carry out the full range of NATO missions as effectively and efficiently as possible, Allies will engage in a continuous process of reform, modernisation and transformation.

POLITICAL GUIDANCE

The Political Guidance, agreed by NATO Defence Ministers on 10 March 2011[2], provides direction for the continuing transformation of defence capabilities and forces and the implementation of the defence-related aspects of the Strategic Concept agreed at Lisbon. It provides the overall aims and objectives Allies should meet within the framework of the NATO Defence Planning Process (NDPP). This common planning process should facilitate maximum coherence of national plans with those of the Alliance, reduce unnecessary duplication, maximise coordination and the efficient and effective use of resources, as well as identify areas for possible cooperation, including through common solutions. The Alliance requires forces which are robust, mobile and deployable in order to carry out the full range of Alliance Operations and Missions (AOM), both Article 5, and non-Article 5 Crisis Response Operations (NA5CRO). Moreover, the range of capabilities needed to conduct both types of operation are, to a large degree, the same. Allies will, therefore, maximise the deployability of their forces and their capacity to sustain operations.

It is likely that NATO will continue to need to carry out a range of smaller but demanding operations, and the Alliance must retain the capability to conduct large-scale high-intensity operations, including in support of collective defence. In order to be able to undertake these missions, the Alliance must have the capability to launch and sustain two Major Joint Operations (MJOs) and six Smaller Joint Operations (SJOs) concurrently for collective defence and crisis management on NATO territory, on its periphery, and at strategic distance.

2) *C-M(2011)0022, Political Guidance*

Since only a few Allies can independently deploy and sustain their forces, it is important that NATO and Allies continue to pursue Collective Logistics with the aim of giving NATO commanders the greatest flexibility on current and future missions by providing effective logistics support, especially improved deployability and enhanced sustainability, more capable and interoperable logistics forces and optimised logistics command and control, at best value to Allies. To meet the demands and expectations for medical care for Alliance operations, it is important that NATO and Allies continue to develop, preserve and maintain the necessary medical capabilities individually or in cooperation with other Allies.

COMPREHENSIVE APPROACH

Experience in Afghanistan, Libya and Kosovo demonstrates that today's challenges require a comprehensive approach by the international community, involving a wide spectrum of civil and military instruments, while fully respecting the mandates and autonomy of decisions of all actors. To this end, while recognising that NATO has no requirement to develop capabilities strictly for civilian purposes, the NATO Heads of State and Government agreed[3] to develop pragmatic proposals to improve the coherent application of NATO's own crisis management instruments, as well as practical cooperation at all levels with partners, the UN and other relevant international organisations, non-governmental organisations, and local actors in the planning and conduct of ongoing and future operations, wherever appropriate. These proposals should take into account emerging lessons learned and consider flexible options for the adjustment of NATO military and political planning procedures with a view to enhancing the civil-military interface.

STABILISATION AND RECONSTRUCTION

The Council developed political guidance the Alliance should follow to improve NATO's involvement in stabilisation and reconstruction[4], when such requirements are expected to be part of a future operation. The guidance should also be used to inform and guide the conduct of current operations. In addition, it should also contribute to and complement the work in response to the tasking by Heads of State and Government to further progress work with regard to the implementation of NATO's ability to improve the delivery of stabilisation and reconstruction effects as part of the international community's efforts and NATO's intrinsic contribution to a civil-military approach.

3) *PO(2010)0143-FINAL, Comprehensive Approach Report*

4) *PO(2010)0140 (FINAL), Political Guidance on Ways to Improve NATO's Involvement in Stabilisation and Reconstruction*

NATO POLITICAL/MILITARY STRUCTURE

North Atlantic Council (NAC)

The NAC (or Council) is the highest authority in NATO and is the only body within the Alliance which derives its authority explicitly from Article 9 of the North Atlantic Treaty. The Council itself was given responsibility under the Treaty for setting up subsidiary bodies. Many committees and planning groups have since been created to support the work of the Council or to assume responsibility in specific fields such as defence planning, operations planning and military matters.

Deputy Permanent Representatives' Committee (DPRC)

The DPRC (also known as the Deputies Committee) deals with cross-cutting issues ranging from strategic and political oversight of areas such as Human Resources (HR) policy and the new Headquarters, to committee reform and energy security, as well as acting as the "trouble-shooting" committee for those issues on which no consensus can be achieved in the competent committee. The DPRC reports directly to the NAC.

The DPRC is chaired, according to the topic under discussion, by the Assistant Secretary General (ASG) of the relevant International Staff (IS) Division or his/her Deputy. The DPRC is supported by the Political Affairs and Security Policy (PASP) Division, which has overall coordinating responsibility of its activities.

The DPRC was created in 2010 in the framework of the NATO committee reform[5], as a successor to the Senior Political Committee.

Defence Policy and Planning Committee (DPPC)

The DPPC is the senior advisory body to the NAC on defence matters concerning all member countries and it also has the lead on defence aspects of Partnership.

The DPPC is a key committee bringing together defence counsellors from all national delegations. It deals with a broad range of issues such as transformation, defence capabilities, agency reform, common-funded acquisition and missile defence and, in Reinforced format (DPPC(R)), it manages the NATO Defence Planning Process.

Chairmanship of the DPPC is flexible depending on the topics being discussed, but the DPPC's permanent Chairman is the ASG for Defence Policy and Planning (DPP); in Reinforced format, it is chaired by the Deputy Secretary General of NATO.

This committee has been called the DPPC since the June 2010 committee reform[5]. It replaced both the Executive Working Group and the Defence Review Committee. It has no subordinate committees under its remit.

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5) PO(2010)0074-REV2, Recommendations from the Deputy Permanent Representatives' Group on Committee Review

Operations Policy Committee (OPC)

The OPC plays a lead role in the development and implementation of operations-related policy. It aims to provide coherent and timely advice to the NAC, to which it reports directly. It also seeks to enhance collaboration between the political and military sides of NATO Headquarters.

All member countries are represented on this Committee. The OPC also meets regularly in so-called International Security Assistance Force (ISAF) and Kosovo Force (KFOR) formats, with non-NATO member countries that contribute to the ISAF in Afghanistan and the KFOR in Kosovo.

The OPC is supported by the International Staff's Operations Division. The committee was created following the June 2010 committee reform5, replacing the former Policy Coordination Group.

Military Committee (MC)

The MC is the senior military authority in NATO under the overall political authority of the Council. It meets under the chairmanship of an elected chairman (CMC) and is the primary source of military advice to the NAC. Its members are senior military officers who serve as national Military Representatives (MILREPs) in permanent session, representing their Chiefs of Defence (CHODs). The MC is an integral part of the policy and decision-making apparatus of the Alliance and provides an essential link between the political decision-making process within the NAC and the integrated command structures of NATO which are charged with the conduct of military operations and the further military transformation of the Alliance. The MC is also responsible for overseeing the development of NATO's military policy and doctrine and for providing guidance to the NATO Strategic Commanders (SCs). The SCs are responsible to the MC for the overall direction and conduct of all Alliance military matters within their fields of responsibility. The MC is supported in its activities by the International Military Staff (IMS).

Political and Partnerships Committee (PPC)

The PPC is the single politico-military committee responsible for all NATO's outreach programmes with non-member countries. It also handles NATO's relations with other international organisations. The PPC provides the NAC with comprehensive and integrated advice across the entire spectrum of NATO's outreach policy.

The Committee meets in various formats: "at 28" among Allies; with partners in NATO's regionally specific partnership frameworks, namely the Euro-Atlantic Partnership Council (EAPC), the Mediterranean Dialogue (MD) and the Istanbul Cooperation Initiative (ICI); with individual non-member countries in "28+1" formats; as well as in "28+n" formats on particular subjects, if agreed by Allies.

The PPC was established in April 2010 and succeeded the Political Committee.

Civil Emergency Planning Committee (CEPC)

The CEPC is the top NATO advisory body for the protection of civilian populations and the use of civil resources in support of NATO's objectives. Civil Emergency Planning provides NATO with essential civilian expertise and capabilities in the fields of terrorism preparedness and consequence management, humanitarian and disaster response and protecting critical infrastructure. The CEPC coordinates planning in several areas to ensure, when necessary, civil support for the Alliance's military operations or support for national authorities in civil emergencies.

The CEPC reports directly to the NAC. The Secretary General is Chairman of plenary sessions (twice-yearly) but, in practice, these are chaired by the ASG for Operations, while permanent sessions (weekly) are chaired by the Deputy Assistant Secretary General (DASG) for Planning, Civil Emergency Planning and Exercises. Meetings alternate between those of NATO member countries only and those open to partner countries.

The CEPC was created when NATO first developed its Civil Emergency Planning programme in the 1950s.

Logistics Committee (LC)

The principal NATO committees are supported by a committee structure to ensure that each member country is represented at every level in all fields of NATO activity in which it participates. The LC was created in 2010 as part of the committee reform[5] and has replaced the former Senior NATO Logisticians' Conference (SNLC) as the senior body advising the NAC and the MC on consumer logistics matters. It is a joint civil/military body responsible for the assessment of Alliance consumer logistics requirements and for ensuring adequate logistic support for NATO operations. The LC has the primary responsibility, on behalf of the Council, for the coordination of issues across the whole logistics spectrum with other NATO logistics bodies. It meets regularly in NATO-only format and with representatives of Partner countries.

NATO-Russia Council (NRC)

The NRC is a mechanism for consultation, consensus-building, cooperation, joint decision-making and joint action. Within the NRC, the individual NATO member states and Russia work as equal partners on a wide spectrum of security issues of common interest.

The NRC was established at the NATO-Russia Summit in Rome on 28 May 2002 by the Declaration on "NATO-Russia Relations: a New Quality". The Rome Declaration builds on the goals and principles of the 1997 NATO-Russia Founding Act on Mutual Relations, Cooperation and Security[6], which remains the formal basis for NATO-Russia relations.

Work under the NRC focuses on all areas of mutual interest identified in the Founding Act. New areas may be added to the NRC's agenda by the mutual

6) *DPA(97)742, NATO-Russia Founding Act*

consent of its members. Under the NRC, Russia and NATO member states meet as equals "at 29".

A number of working groups and committees have been established under the NRC to develop cooperation on terrorism, proliferation, peacekeeping, theatre missile defence, airspace management, civil emergencies, defence reform, logistics, and scientific cooperation and all focused on new threats and challenges. Experts have been tasked to take work forward on individual projects in other key areas.

NATO-Ukraine Commission (NUC)

The NUC is the decision-making body responsible for developing the NATO-Ukraine relationship and for directing cooperative activities. It also provides a forum for consultation between the Allies and Ukraine on security issues of common concern.

The NUC was established by the NATO-Ukraine Charter on a Distinctive Partnership signed by Ukrainian and Allied Heads of State and Government in Madrid on 9 July 1997[7].

Joint working groups have been set up under the auspices of the NUC to take work forward in specific areas, namely defence and security sector reform, armaments, economic security, and scientific and environmental cooperation.

NATO-Georgia Commission (NGC)

The NGC was established in September 2008 to serve as a forum for both political consultations and practical cooperation to help Georgia achieve its goal of membership in NATO. A Framework Document establishing the body was signed by NATO's Secretary General (SG) and the Georgian Prime Minister on 15 September 2010[8] in Tbilisi. The inaugural session took place immediately afterwards, during the visit of the NAC to Georgia.

The NGC aims to deepen political dialogue and cooperation between NATO and Georgia at all appropriate levels. It also supervises the process set in hand at the Bucharest Summit in April 2008, when the Allies agreed that Georgia will become a NATO member. To this end, the NGC seeks to underpin Georgia's efforts to take forward its political, economic and defence-related reforms pertaining to its Euro-Atlantic aspirations for membership in NATO, with a focus on key democratic and institutional goals.

THE NATO HEADQUARTERS STAFF STRUCTURE

Secretary General (SG)

The NATO SG is the Alliance's top international civil servant. The SG is responsible for steering the process of consultation and decision-making in the Alliance and for ensuring that decisions are implemented. The SG is also NATO's chief

7) *SG(97)631, NATO-Ukraine Charter*

8) *DSG(2010)0598, Enhancing NATO-Georgia Relations Through Effective Military Cooperation*

spokesperson and the head of the Organisation's International Staff. The SG is supported by the Private Office in all aspects of work.

International Staff (IS)

The work of the NAC and its committees is supported by the IS. It comprises the Office of the Secretary General, seven Divisions[9], the Office of Resources and the Office of Security. Each Division is headed by an ASG.

The primary role of the IS is to provide advice, guidance and administrative support to the national delegations at NATO Headquarters. It helps to implement decisions taken at different committee levels and, in so doing, supports the process of consensus building and decision-making within the Alliance.

International Military Staff (IMS)

In the same way as the IS is the executive staff supporting the Council and its committees, so the IMS, under the authority of its Director General (DG IMS), is the executive staff mainly supporting the MC. The IMS comprises the office of the DG IMS, five Divisions[10] and supporting offices and services. Under DG IMS's direction, the IMS prepares assessments, studies and reports that form the basis of discussion and decisions in the MC. It is also responsible for planning, assessing and recommending policy on military matters for consideration by the MC, and ensuring that the policies and decisions of the MC are implemented as directed. The IMS provides the essential link between the political decision-making bodies of the Alliance and the Strategic Commands (SCs) and maintains close liaison with the IS.

NATO'S MILITARY COMMAND STRUCTURE

NATO Command Structure (NCS)

The military NCS, as distinct from the NATO Force Structure (NFS), is the mechanism which enables NATO's Military Authorities (NMAs) to command and control the forces assigned to them for joint operations involving more than one service branch – army, navy or air force. It is based on the hierarchical structure of the SCs – Allied Command Operations (ACO) and Allied Command Transformation (ACT) - and their subordinate commands with two Allied Joint Force Commands (JFCs), and one Allied Component Command (CC) for each of the land, maritime and air specialisations. In addition, ACT parents the Joint Analysis and Lessons Learned Centre (JALLC). All NATO operations draw on deployable or static elements and capabilities available to the integrated command structure and force structure, tailored to the requirements and challenges of the specific operation.

9) *Two of them are of direct interest to logisticians; Defence Investment (DI) is mainly responsible for production logistics matters; DPP, with its Logistics Staff, is responsible for consumer logistics matters. The other Divisions are: Emerging Security Challenges Division (ESC); Political Affairs and Security Policy Division (PASP); Operations Division (OPS); Public Diplomacy Division (PDD) and Executive Management Division (EM).*

10) *Intelligence Division (INT); Operations Division (OPS); Plans and Policy Division (P&P); Cooperation and Regional Security Division (C&RS) and Logistics and Resources Division (L&R).*

This applies whether they are operations undertaken by the Alliance in response to a threat to one or more of the member countries in accordance with Article 5 of the Treaty, or peace support or other military operations decided upon by the NAC (non-Article 5 operations). The command and control structure functions at three levels, namely strategic, operational and component levels.

At the strategic level, Allied Joint Forces are employed within a political-military framework endorsed by the MC and approved by the NAC, designed to fulfil the strategic objectives of the Alliance under the overall command of the Supreme Allied Commander Europe (SACEUR), who exercises this responsibility from the ACO Supreme HQ Allied Powers in Europe (SHAPE) at Mons in Belgium. At the operational level, the planning and conduct of operations, based on the strategic military guidance received, is in the hands of the designated NATO commander, who exercises his responsibilities through a JFC HQ or an operational Deployable Joint Force HQ (DJF HQ). The CC HQ provide service-specific expertise for Joint Force Commanders at the operational level, as well as advice on joint operations planning and execution. The air and maritime CC HQ are static, whereas the land CC HQ is able to deploy like the operational-level DJF HQ. Each of the CC HQs is supported by other specialised entities and subordinate elements, depending on the nature and scale of the operations involved, and can be augmented if necessary by additional elements and personnel at appropriate levels of readiness and training.

NATO Force Structure (NFS)

The NFS consists of organisational arrangements that bring together the forces placed at the Alliance's disposal by the member nations, temporarily or permanently, along with their associated command and control structures, either as part of NATO's multinational forces or as additional national contributions to NATO. These forces are available for NATO operations in accordance with pre-determined readiness criteria. Experience in Afghanistan, Libya and Kosovo demonstrates that today's challenges require smaller, more mobile forces that can be used flexibly for a range of military tasks, as opposed to the large, heavily armed concentrations of forces fixed to permanent HQs that were a feature of the Cold War force structures. NATO's present-day force structure is designed to be moved rapidly to the area of crisis or conflict when and where they are required and to have the capability to fulfil their role away from their home bases under the command and control of a Joint Task Force HQ (JTF HQ).

Graduated Readiness Forces (GRF)

In general, NATO does not have independent military forces, other than those contributed by the member countries to military operations. Therefore, when the NAC decides to launch an operation, forces have to be made available by member countries through a force generation process. This may include forces of non-NATO member countries, such as Partnership for Peace (PfP), MD, ICI and other so called "partners across the globe" (Afghanistan, Australia, Iraq, Japan, Mongolia, New Zealand, Pakistan and the Republic of Korea).

The structure of Allied Forces, following the NATO Deployable Forces (NDF) concepts, is based on two main principles: availability, which includes a pre-declared level of commitment, force readiness and deployability/mobility; and flexibility, which includes interoperability, sustainability and multinationality. Readiness is key to ensuring the availability of NATO's HQs and forces for the full range of the Alliance missions. Readiness assigned to an HQ or a unit is defined 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 (permanent or forward deployed) or ready for deployment.

In order to provide flexibility for conducting the full range of missions, as well as describing the availability of Allied Forces to NATO commanders, HQs and forces can be further sub-divided into two types of forces reflecting readiness levels: High Readiness Forces (HRF) and Forces of Lower Readiness (FLR). Together, HRF and FLR form the Graduated Readiness Forces (GRF). HRF readiness should range from 0 to 90 days and include NATO Response Force (NRF) capabilities for an immediate response at a state of readiness ranging from 0 to 30 days. FLR should be reported with readiness ranges from 90 to 180 days and are normally used to sustain deployed HQ and forces.

NATO Response Force (NRF)

The establishment of the NRF is an integral part of the transformation of NATO's military capabilities, complementing the Prague Capability Commitment made at the Prague Summit and the new command structure. The NRF is a joint force of land, sea and air elements, including the required logistics support structure that can be tailored to individual missions and deployed rapidly wherever the NAC requires. It is designed as a force that comprises technologically advanced, flexible, deployable, interoperable and sustainable elements, ready to deploy its leading elements within five days and able to sustain itself without further support for thirty days. It is not a permanent or standing force, but one comprised of units assigned by member countries in rotation, for set periods, and trained and certified together. The mission of the NRF is to provide a rapid demonstration of force and the early establishment of NATO military presence in support of an Article 5 or NA5CRO. The NRF consists of the very high readiness part called the Immediate Response Force (IRF) including an operational-level command and control capability and a Response Force Pool (RFP) of lower readiness.

ORGANISATIONS AND AGENCIES

In addition to its political headquarters and the military command structure, NATO also has a number of specialised organisations and agencies located in different NATO member countries. There are essentially two types of organisation/agency, namely those that act as project coordinators and those that are service providers. The outcome of a recent review[11] led to the merger of a number of existing organisations and their agencies.

11) *PO(2011)0242, Implementation Plan for NATO Agencies Reform*

The NATO Support Organisation (NSPO)

The NSPO was created on 1 July 2012 from the merger of the NATO Maintenance and Supply Organisation (NAMSO), the Central Europe Pipeline Management Organisation (CEPMO) and the NATO Airlift Management Organisation (NAMO). It provides responsive, effective and cost-efficient logistics, operational and systems support and services to the Allies, the NMAs and partner nations, individually and collectively, in times of peace, crisis and war and, where required, maximises the ability and flexibility of their armed forces, contingents and other relevant organisations, within the guidance provided by the NAC, to execute their core missions.

The NSPO includes an Agency Supervisory Board (ASB) comprised of a representative of each NATO nation and an Executive Body, which is the NATO Support Agency (NSPA). The Agency comprises a General Manager and Agency staff.

The NATO Procurement Organisation (NPO)

The NATO Procurement Organisation (NPO) is the NATO provider for multinational armament procurement programmes delivering capabilities to NATO, Allies and other customers by providing the framework for future and ongoing programmes (currently covered within the NATO Airborne Early Warning and Control Programme Management Organisation (NAPMO), the NATO Eurofighter and Tornado Management Organisation (NETMO), the NATO Helicopter Management Organisation (NAHEMO), the NATO Medium Extended Air Defence Systems Management Organisation (NAMEADSMO) and the NATO Alliance Ground Surveillance Management Organisation (NAGSMO)), while continuously striving for improved effectiveness, efficiency and cost savings.

The NPO stood up in July 2012 and has entered a "design phase" that will end in 2014. During the design phase, the Conference of National Armament Directors (CNAD) will act as the NPO's governing body with the ASB and an executive body, the NATO Procurement Agency (NPA). The head of the NPA will be the "Design Chief Executive" (DCE). To take into account the need for appropriate autonomy of existing armament procurement programmes, the NPO will act as a holding body into which current multinational procurement agencies will be integrated progressively while preserving the appropriate autonomy.

The NATO Communications and Information Organisation (NCIO)

The NATO Communications and Information Organisation (NCIO) was established on 1 July 2012, from the merger of the NATO Communications and Information Systems Services Organisation (NCSO), the NATO Consultation, Command and Control Organisation (NC3O), the NATO Air Command and Control System Management Organisation (NACMO) and the Active Layered Theatre Ballistic Missile Defence (ALTBMD) Programme Office. The intention is to meet, to best advantage, the collective requirements of some or all NATO nations in the fields of capability delivery and service provision related to Consultation, Command and Control as well as Communications, Information and Cyber Defence functions.

This will thereby also facilitate the integration of the intelligence, surveillance, reconnaissance and target acquisition functions and their associated information exchange.

The NCIO includes an ASB comprising a representative of each NATO nation and an Executive Body which is the NATO Communications and Information Agency (NCIA). The Agency is comprised of a General Manager and Agency staff including Multinational Programmes and Communications and Information Partnerships.

The NATO Shared Services Environment (NSSE)

NATO is in the process of looking into the benefits of creating a Shared Services Environment. The domains which are under consideration for inclusion in the NSSE are finance and accounting/general procurement, HR, general Information Technology (IT) management and facilities and infrastructure.

The NATO Science and Technology Organisation (NSTO)

Nations and NATO have expressed their satisfaction with the work being executed within the collaborative Science and Technology (S&T) programme and want to maintain these activities at the same level of quality, to make them more visible and accessible for the senior NATO leadership, and to better link them with common-funded S&T activities. To enhance the effectiveness and efficiency of S&T in NATO, a unified governance and a clearly visible leadership are proposed. As a consequence, nations have decided to establish a Science & Technology Organisation (STO), and to transfer the functions of the Research & Technology Organisation (RTO) and the NATO Undersea Research Centre (NURC) to this new organisation.

The STO is governed by a board (Science & Technology Board (STB)) comprising the national S&T leaders and with representatives of other S&T stakeholders in NATO participating in a consultative role. The STB reports to the Council through the MC and the CNAD. Through the strong involvement of S&T customers (nations in various NATO committees or directly; the SCs; and the three new agencies), the responsiveness of the NSTO to customers' requirements, objectives, and priorities will be ensured. The STB will work to improve the exploitation of S&T results, and facilitate the provision of knowledge and advice in support of Alliance and national decision-making.

Nations further agreed the position of a Chief Scientist, chairing the STB and serving as the senior scientific adviser at NATO Headquarters to the NATO leadership. The Chief Scientist is provided by a nation and selected by the STB. The Chief Scientist is supported by an Office of the Chief Scientist, and serves as the STB's representative to the SG and the Council. The Chief Scientist is responsible to the STB for the effective coordination of NATO's S&T programme.

The NATO Standardization Agency (NSA)

The NATO Standardization Agency (NSA) is NATO's authority for standardization management. The aim of NATO standardization is to enhance the Alliance's

operational effectiveness through interoperability amongst Alliance forces, and between NATO forces and those of Partners and other nations, thereby improving efficiency in the use of available resources. The NSA is a single, integrated body comprising military and civilian staff and its mission is to coordinate all NATO standardization activities as part of the integrated structure of the Alliance. The NSA coordinates and supports all operational (doctrinal and procedural), materiel and administrative standardization efforts on behalf of the MC, the Committee for Standardization (CS) and other Tasking Authorities such as the LC, CNAD and the C3 Board. It also administers all NATO terminology and civil standardization activities.

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DSG(2010)0598, Enhancing NATO-Georgia Relations Through Effective Military Cooperation

PO(2011)0242, Implementation Plan for NATO Agencies Reform

CHAPTER 2

FUNDAMENTALS OF NATO LOGISTICS

NATO constructed base

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.

By January 1996, NATO logisticians recognised the new challenges facing the Alliance. In particular, the downsizing of military resources underscored the necessity of increased cooperation 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 (NA5CRO), possibly at considerable distance from the supporting national logistic and industrial bases and on non-NATO soil, where a supportive or functioning host nation was non-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) (now the Logistics Committee (LC)), as the Alliance's senior body on logistics, translated the Alliance's former Strategic Concept into responsive, flexible and interoperable logistic principles and policies in MC319, NATO Principles and Policies for Logistics. It also 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 coordination and cooperation between national and NATO authorities during both the planning and execution phases of an operation, and includes greater consideration of the efficient use of civil commercial resources.

As a result of their experiences in NATO-led operations in the Balkans, Afghanistan, the Mediterranean and Libya, nations have gained an appreciation of the value of a collective approach to logistic support and have lent their full support to the implementation of this vision. The 2011 Political Guidance[12] states that: "Since only a few Allies can independently deploy and sustain their force, it is important that NATO and Allies continue to pursue Collective Logistics with the aim to give NATO commanders the greatest flexibility on current and future missions by providing effective logistics support, especially improved deployability and enhanced sustainability, more capable and interoperable logistics forces and optimised logistics command and control, at best value to Allies." This is fully reflected in the current Logistics vision and its supporting strategic goals and objectives[13] and is in harmony with the Alliance's new Strategic Concept[14] adopted by Heads of State and Government at the Lisbon Summit in November 2010.

12) *C-M(2011)0022, Political Guidance*

13) *AC/305-D(2010)0015, 2011-2020 NATO Logistics Vision and Objectives (V&O)*

14) *PO(2010)0169, The Alliance's Strategic Concept*

For the collective responsibility for logistics to work effectively and efficiently, NATO must provide joint and single service logistics command and control, identify the operational logistics requirements, plan the support solutions to meet those requirements and provide the means for the visibility of assets. The nations need to provide the national and multinational logistics capabilities and resources required while ceding the appropriate authority to allow the NATO commander to execute his mission. This does not imply that nations cannot select to use national logistic support solutions, but the aim should be to consider such solutions primarily to meet unique national requirements that cannot be met by multinational capabilities in order to improve efficiency for all parties involved and to limit the overall logistics footprint in theatre. Coordinated logistic planning is, therefore, an essential aspect of the efficient and economical use of resources.

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[15] that the forces need to accomplish their mission. NATO defines logistics as:

«**Logistics**[16]: 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, movement, distribution, maintenance, evacuation and disposal of materiel;
- 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 the process and procedures of research, design, development, manufacture and acceptance of materiel". Production logistics includes: standardization and interoperability, contracting, quality assurance, procurement of spares, reliability and defence analysis, safety

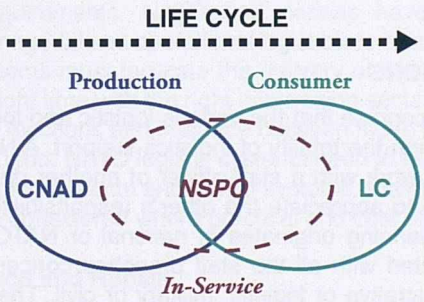
15) *Materiel: equipment in its widest sense including vehicles, weapons, ammunition, fuel, etc.*

16) *AAP-6, NATO Glossary of Terms and Definitions*

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 coordination 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. Although in-service support relates to activities required to assure that weapon system/equipment is available and fit for use, it actually begins with the decision to bring the system into the inventory. The NATO Support Organisation (NSPO) is the principal NATO organisation responsible for this area.

"**Consumer Logistics** (also known as: **operational logistics**): that part of logistics concerning the reception (of the initial product), storage, transport, maintenance (including repair and serviceability) and disposal of materiel, as well as the provision of support and services." 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 Capabilities Section in the IS Defence Policy and Planning Division (DPP) and the Logistics Branch in the IMS, L&R Division. The LC is the senior NATO committee that is primarily responsible for consumer logistics.



The three life cycle domains and their lead bodies are portrayed here. 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.

Collective Responsibility for Logistics: The principle of Collective Responsibility for logistics reflects the fact that neither NATO nor a nation is capable of assuming complete responsibility for the logistics support of a NATO operation. As a consequence, NATO and nations bear the obligation, taking account of each others' requirements and constraints[17], to cooperate in the logistic support of operations in a way that their common effort meets the overall requirement. Given the abstract nature of responsibilities at the policy level, the following definition for the principle of collective responsibility for logistics has been agreed[18]:

"The set of NATO's and nations' individual and largely complementary obligations to cooperatively organise and deliver the overall logistics support of NATO operations, taking into account one another's requirements and constraints."

Collective Logistics is the overall approach taken to execute the Collective Responsibility in Logistics. In a more formal way, it is defined as:

"the collective approach undertaken by NATO and nations to plan, generate, synchronise and prioritise national and NATO logistic capabilities, resources and activities to deliver logistic support to NATO missions, operations and exercises, by making use of common processes and organisational structures."[19]

Multinational Logistics: for multinational operations, logistics must function as an effective force multiplier. With the risk now omni-directional, 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 the 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 and logistic-related 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 coordinated with all the staff branches concerned, whether they be operational, administrative or logistic, military or civil. The various functions are detailed in the current edition of MC 319. A brief examination of the main functions is provided in the following paragraphs:

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17) This can include legal, financial or other regulatory constraints

18) EAPC(SNLC)D(2007)0003-REV1, Clarification of the Principle of Collective Responsibility for Logistics

19) AC/305(EAPC)D(2012)0006, Definition of Collective Logistics

Supply

Supply covers all materiel and items used in the equipment, support and maintenance of military forces - the classes of supply are listed at Annex. 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/or multinational NATO HQs, and their effectiveness depends on close cooperation 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 nations' 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 a 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, operations 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.

Infrastructure Engineering for Logistics (IEL)

IEL, while not exclusively a logistic function, will require close coordination 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 coordinated 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.

Contractor Support

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. Contractor support is fully covered in Chapter 15.

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 Cooperation (CIMIC)

CIMIC in support of a comprehensive approach to operations, 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, NATO commanders have to deal with completely new tasks. The lessons learned from operations in the Balkans, Libya and within the International Security Assistance Force (ISAF) in Afghanistan reveal that NATO commanders have to deal with civil tasks and organisations aimed at facilitating the accomplishment of the mission by making civil resources available to the military as well as military resources available to International Organisations (IOs) and Non-Governmental Organisations (NGOs) in view of military support to a Comprehensive Approach (CA).

NATO Standardization and Interoperability

Standardization is a key tool for achieving interoperability. Interoperability is essential for logistic cooperation 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 affect military operations, in particular NA5CRO. The implications of environmental protection for the execution of logistic functions have to be taken into account and are covered in MC 469, NATO Military Principles and Policies for Environmental Protection and STANAG 7141 (Edition 5), Joint NATO Doctrine for Environmental Protection in NATO-led Military Activities.

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 cooperation 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.

NATO LOGISTICS WEBSITE

The NATO Logistics website at https://dpplog.hq.nato.int provides users with access to unclassified policy and doctrinal documents as well as to Committee information including calling notices, agenda, decision sheets, associated documents and relevant points of contact. The website also provides links to various NATO structures and organisations. A project is underway to migrate the current application to a "sharepoint" environment. The new website will add several improvements to the functionalities of the present system as well as providing discussion forums and improved visibility of logistic events. The new website will include instructions on how to access the website.

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MC 469, NATO Military Principles and Policies for Environmental Protection

STANAG 7141 (Edition 5), Joint NATO Doctrine for Environmental Protection in NATO-led Military Activities

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.

CHAPTER 3

NATO's ORGANISATIONAL FRAMEWORK FOR LOGISTICS

INTRODUCTION

Against the background of the Strategic Concept[20] (See Chapter 1), Logistics must support the full range of NATO missions. Logistic support capabilities are critical for many of the types of operation that NATO may undertake, particularly for a disaster relief or a stabilisation and reconstruction operation. As an operational enabler, logistics has two functions: first, effective logistics enables a NATO force to project and sustain military power over extended lines of communication into a distant operational area; secondly, logistics can be a creator of non-kinetic operational effects throughout the whole spectrum of mission types, particularly in operations that are heavily dependent on logistics capabilities.

NATO LOGISTICS VISION AND OBJECTIVES (V&O)

Introduction[21]

The NATO Logistics V&O is the overarching guidance for logistic planning. It implements the logistics aspects of high level guidance within the framework of the NATO Defence Planning Process (NDPP). In addition to its role within the broader NDPP, the NATO Logistics V&O is the principal mechanism available to pursue solutions to logistic challenges in current operations, to help guide logistics transformation, and to deliver logistics capabilities through better harmonisation and coordination of otherwise independent efforts.

The NATO Logistics V&O structure comprises four layers: the vision, which articulates the overarching, enduring aim of Alliance logistics work; the strategic goals, which represent the enduring lines of effort over a 10-year period, thereby bridging the broad vision and the detailed objectives and giving structure to the latter; the objectives, which specify the lead body responsible for the completion of the objective and for the identification of those groups and bodies that should contribute to its work, by when; and the tasks, which are the programmes of work of the Logistics Committee Executive Group (LCEG), the Movement and Transportation Group (M&TG), the Petroleum Committee (PC), the Transportation of Dangerous Goods Group (TDGG), the Logistics Information Management Group (LOG IMG), the Standing Group of Partner Logistics Experts (SGPLE), the Bi-Strategic Commands' (Bi-SC) logistic groups and/or staff responsible for accomplishing the work called for by the objectives. The goal of the Logistics V&O is to devise objectives that when achieved, satisfy a Strategic Goal. However, it is highly likely that one or more of the objectives could actually satisfy more than one Strategic Goal.

The current Logistics Vision is taken from Political Guidance (PG)[22] and emphasises the need for operational effectiveness balanced with consideration of efficiencies. It reads:

"To give NATO Commanders the greatest flexibility on current and future

20) *PO(2010)0169, The Alliance's Strategic Concept*

21) *AC/305-D(2010)0015, 2011-2020 NATO Logistics Vision and Objectives (V&O)*

22) *C-M(2011)0022, Political Guidance*

missions by providing effective logistics support, especially improved deployability and enhanced sustainability, more capable and interoperable logistics forces and optimised logistics command and control (C2), at best value to Allies."

Strategic Goals and Objectives

The vision acknowledges the evolving nature of logistics in support of NATO operations. In that regard, the vision aims to build on today's logistic support concepts,

structures and capabilities in order to achieve the degree of logistic support that is implied by the Strategic Concept. The NATO Logistics Vision requires that logistics work in NATO be pursued along four main lines of effort: improved deployability of NATO forces; enhanced sustainability of NATO forces; availability of more capable and interoperable logistic forces; and optimised logistics C2. The Strategic Goals are summarised as follows:

Strategic Goal 1 - Improve Deployability. This strategic goal seeks to improve and, where appropriate, develop the enablers through joint and multinational approaches, to enhance NATO's ability to deploy expeditionary forces in a timely manner to where they are needed. It seeks to establish effective arrangements to enable rapid deployment; improve the availability and make better use of strategic and intra-theatre transportation assets; and establish mechanisms to coordinate and synchronise deployment, reception, staging and onward movement.

Strategic Goal 2 - Enhance Sustainability. This strategic goal aims to improve and, where appropriate, develop the enablers that enhance NATO's ability to support expeditionary forces, including the NATO Response Force (NRF), and to sustain them for extended periods, while retaining the ability to support large-scale high intensity operations in accordance with the agreed NATO Level of Ambition (LOA). It facilitates logistic support to operations by identifying logistic support challenges and developing solutions to them. It seeks to optimise the delivery of logistic support through multinational solutions, contractor support and other support arrangements. It promotes logistics transformation through the identification and adaptation of technological and commercial solutions.

Strategic Goal 3 – Provide more Capable and Interoperable Logistic Forces. This strategic goal seeks to improve the logistics results of the Defence Planning and the Force Generation processes by improving the availability of logistic capabilities to the NATO Commander, in order to provide him with the necessary tools to ensure effective logistic support to the overall force. It also seeks to enhance logistics interoperability between Alliance forces, as well as between NATO forces and those of the Partnership for Peace (PfP), Mediterranean Dialogue (MD), Istanbul Cooperation Initiative (ICI) and contact countries; to make best use of non-NATO logistic support capabilities where appropriate; and to harmonise logistic planning and

procedures with those of other organisations. Interoperability should aim for full compatibility of procedures, equipment and logistic Communication and Information Systems (CIS) among NATO and non-NATO Troop Contributing Nations (TCNs).

Strategic Goal 4 - Optimise Logistics C2. This Strategic Goal seeks to enhance NATO's logistic C2 structure in order to maximise freedom of action for the Commander. It aims to improve the overall logistic information management architectural framework in order to improve NATO's ability to plan, manage and deliver logistics for the full range of NATO's assigned missions. This strategic goal also seeks to generate effective and responsive multinational logistic C2 and CIS capabilities and arrangements in support of NATO operations.

The objectives reflect the guidance promulgated by the Logistics Committee's (LC) Principals with regard to specificity and quality. The objectives identify the required actions, action agencies and timeframes for completion. Whilst the strategic goals represent lines of effort that are of an enduring nature over the 10-year planning period, the objectives comprise a set of mostly near to mid-term high-priority targets that will be reviewed and revised every two years. The objectives can represent work to be done in support of one or more strategic goal, however they are listed with the strategic goal that is most supported.

The NATO Logistics V&O Process

The NATO Logistics V&O process follows a conceptual planning framework. The Alliance's Strategic Concept serves as the overarching high-level guidance for NATO. PG provides a framework and political direction for NATO's continuing transformation, setting out priorities for Alliance capability issues and planning disciplines. PG establishes capability requirements for the next 10 to 15 years. It directs the NATO committees and bodies responsible for the relevant planning disciplines to implement the PG in their work through the development of detailed policies, directives and guidance. Ministerial Guidance (MG), the NATO Military Authorities' (NMA) Strategic Priorities and Objectives (SPO), and Military Committee (MC) Guidance for the Military Implementation of PG also inform the development of the NATO Logistics V&O. Lastly, logistics lessons identified in the course of current and past operations also influence the development of the NATO Logistics V&O.

Based on the high level guidance, the operational lessons identified, military capability requirements input through such activities as the Capability Requirements Review (CRR), and the results from the previous cycle of the NATO Logistics V&O, the LC, with the assistance of the Strategic Commands (SCs), conducts a capability requirement analysis, determines the shortfalls in capabilities, and develops the objectives that apportion the requirements to nations, committees, NATO HQ staffs, or SCs, as appropriate. In practical terms, the LC performs this work through its subordinate groups and supporting staffs, with the assistance of the SCs, based on the guidance developed by the LC itself. The LC also conducts in-progress reviews of the work and provides further guidance as required.

V&O Reporting

The V&O consists of three levels with respect to management and execution. V&O reporting is accomplished at the following levels:

Level 1 (Strategic Goals) is for consideration at Council/MC/Ministerial level.

Level 2 (Objectives) is the level to be considered by the LC. Recommendations are provided to the LC by the LCEG, M&TG and the PC. If more detail is required on particular issues it will be made available from work being done at Level 3.

Level 3 (Tasks) is for use by Objective Lead bodies and reported to the LCEG, M&TG and PC. The Lead bodies provide analysis to support status and recommendations to the LCEG, M&TG and PC.

Progress on objectives is reported to the LC through its Annual Logistic Report, which is also sent to Defence Ministers for notation. In addition to complying with the LC'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. Ministerial reaction to the Annual Logistic Report provides valuable direction to the start of each NATO Logistics V&O cycle.

The NATO Logistics V&O is reviewed every two years with the primary aim of updating the objectives to reflect new high-level requirements and developments. The vision and strategic goals, because of their enduring character, should be revised less often. The LC approves the Vision, the Strategic Goals and the Objectives. The specific tasks required to accomplish the work are generally left to the discretion of the lead bodies, unless the LC takes a particular interest in these.

NATO LOGISTIC COMMITTEES

The Logistics Committee (LC)

The principal committee dealing with logistics, the LC, 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 (ASG DPP), and the Deputy Chairman of the Military Committee (DCMC). The Committee reports jointly to both the Council and the MC, reflecting the dependence of logistics on both civil and military factors.

Membership of the Committee 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 SCs, the NATO Support Agency (NSPA), the NATO Standardization 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 Committee. The overall mandate of the LC 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 coordinating authority across the whole spectrum of logistics vis-à-vis the other logistic committees and bodies of NATO.

The LC carries out its work though a number of subordinate bodies. The principal subordinate body is the **LCEG**, which advises the LC on general civil and military logistic matters. Acting on behalf of the LC, the LCEG:

- monitors and coordinates the implementation of logistic policies, programmes and initiatives through consultation and cooperation among nations, the SCs, and with other NATO logistic and logistic-related bodies;
- provides a forum for addressing logistic and logistic standardization concerns; and
- coordinates with the M&TG, PC, and other existing specialised subordinate bodies including those that may be created. It harmonises their work with the LC's overall logistic policies and programmes when their work is part of a broader logistic effort.

The LCEG also develops logistic policies, programmes and initiatives for the LC's consideration. The LCEG meets twice a year in the same format as the LC. LCEG membership mirrors that of the LC and it is co-chaired by a civil co-Chairman, the Head, International Staff (IS) Logistics Capabilities Section, and by a military co-Chairman, the Deputy Director, International Military Staff (IMS) Logistics and Resources (L&R) Division.

The **M&TG** is the LC's subordinate body that deals with movement and transportation (M&T). The M&TG advises the LC on M&T matters; it monitors and coordinates the implementation of M&T policies, programmes and initiatives through consultation and cooperation 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 Capabilities Section and a military co-Chairman, the Deputy Director, IMS L&R Division, and meets twice a year in the same format as the LC. M&TG membership mirrors that of the LC. The M&TG has a permanent subordinate Working Group, the **Transport of Dangerous Goods Group (TDGG)**, which is responsible for providing policy, direction and guidance concerning the safe handling and movement of dangerous goods using all modes of civil and military transport. In addition, the three Transport Groups (TGs) of the Civil Emergency Planning Committee (CEPC) are represented on the M&TG.

The **PC**, is co-chaired by a civil co-Chairman, the Head, IS Logistics Capabilities Section, and by a military co-Chairman, the Deputy Director, IMS L&R Division. The PC is the senior advisory body in NATO on consumer logistics relating to petroleum. It acts on behalf of the LC, in full consultation with the 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 Allied Command Operations (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 standardization 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 standardization 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 coordination with other relevant committees, guidelines for greater civil/military cooperation.

The PC has two permanent Working Groups, which have the following responsibilities:

- **NATO Fuels and Lubricants Working Group** - (Alliance Committee (AC)/112(NF&LWG)), which provides the focal point and forum to review and develop standardization 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:
  - Naval Fuels and Lubricants Working Party - AC/112(NAVAL F&LWP);
  - Army Fuels and Lubricants Working Party - AC/112(ARMY F&LWP); and
  - 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 standardization of the facilities, equipment (including Deployable Fuels Handling Equipment (DFHE)) and procedures for handling fuels and lubricants products set out in NATO Standardization Agreement (STANAG) 1135.

The **Standing Group of Partner Logistic Experts (SGPLE)**, under the guidance of the LCEG 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 SGPLE also makes recommendations concerning logistics pre-arrangements to the SCs. Furthermore, the Group provides a forum for addressing logistic topics concerning Partnership for Peace (PfP) that any member of the LCEG with Partners and the M&TG with Partners may wish to raise. The SGPLE meets twice a year under the Chairmanship of a Partner nation; the chair is assumed for a two-year term. SGPLE membership comprises senior staff officers from NATO and Partner nations, IS, IMS, the SCs and NSPA.

The **Logistic Information Management Group (LOG IMG)** is NATO's overarching logistic information management body. The group was established to review and assess NATO's logistic information requirements. The LOG IMG acts as the operational sponsor that manages NATO logistic information requirements in line with the NATO Network-Enabled Capability (NNEC) in support of present and future NATO operations. The LOG IMG works with national military authorities, NATO bodies and agencies, nations and industry, when applicable, to leverage existing efforts. The LOG IMG reports to the LCEG on its work and makes recommendations on key decisions to be taken.

In addition to the above Logistic Committees, there are a range of other logistic groups covering such matters as material handling equipment, maintenance, battle damage repair and combat service support, details of which can be found on the NSA website.

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

The COMEDS liaises with the LC and advises the MC on military medical matters affecting NATO. The COMEDS also acts as the coordinating body for the MC regarding all military medical policies, procedures and techniques within NATO. Its meetings are conducted bi-annually. The COMEDS comprises:

- the Chiefs of the military medical services of all nations as represented in the MC;
- the IMS medical staff officer;
- the ACO and ACT medical advisers; 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 coordination, standardization 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. In addition, it fosters the exchange of information relating to medical treatment and research and development between NATO nations in order to ensure that advances made by one nation 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 services, food hygiene and food technology, veterinary medicine, military psychiatry, military medical structures, operations and procedures, and coordination and cooperation in military medical research.

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

The NRC(LOG) is a joint civil/military group with the main aim of identifying 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 cooperation programmes and initiatives between NRC Member Nations. The annual Logistic Action Plan incorporates all NRC initiatives in logistic and medical cooperation on both the 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 and medical policies, doctrine, structures and lessons learned with a view to establishing a sound foundation of mutual understanding in the field of logistics. Its activities address such diverse topics as high-level structures for the development of logistic and medical policies, the logistic support of deployed peacekeeping operations, Host Nation Support (HNS), civil commerce, fuels interoperability, operational medical support lessons learned from current as well as former NATO and Russian operational theatres, and logistic training.

OTHER NATO LOGISTIC BODIES

Bi-SC Logistic Coordination Board (Bi-SC LCB)

The Bi-SC LCB was established by the SCs in 1996 as their senior forum for coordinating Alliance-wide concerns for logistic policy and planning between SCs, the 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. Several bodies support the duties and functions of the Bi-SC LCB:

- the Bi-SC LCB Stockpile Planning Committee (Bi-SC SPC);
- the Bi-SC Logistic Planning Advisory Committee (Bi-SC LPAC); and
- the Bi-SC Logistic Functional Services (LOGFS) Information Management Working Group (Bi-SC LOGFS IM WG).

Bi-SC SPC

The Bi-SC SPC's focus is to provide expert advice to implement Alliance aspects of the Logistics Sustainment and Readiness policy, MC 55/4. Planning guidance is developed for all classes of supply with particular emphasis on Battle-Decisive Munitions (BDM). Beginning in 2011, a major effort is underway to completely harmonise stockpile planning with the defence planning process. Air-to-Ground and maritime munitions planning levels were included in requirements modelling in 2012 and the air defence and land models will be harmonised prior to the next requirements cycle in 2016.

Bi-SC LPAC

The Bi-SC LPAC's mission is to provide expert advice on all logistics issues related to the provision of capable and interoperable forces for current and future operations. Working in coordination with other expert logistics groups, advice is provided to both defence and operational planning. The LPAC's focus is on

logistic planning issues of concern to Allies; however, several projects have been completed which have supported partner nations in the SGPLE.

Bi-SC LOGFS IM WG

The Bi-SC LOGFS IM WG is the SCs principal information systems and technical group. The LOGFS IM WG is a Bi-SC Group supported by NATO's Regional Commands and dealing with doctrinal/operational and technical aspects of the LOGFS. The group is responsible for managing the LOGFS Capabilities Package (CP), coordinating Information Technology (IT) aspects of the Scientific Programme of Work (SPOW), coordination of logistics IT experiments, maintaining relations with and providing direction to the NATO Communications and Information Agency (CIA), and providing oversight for LOGFS-related training at the NATO Communications and Information Systems School. 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. In addition, it administers the relationship of the LOGFS user community with the CIA.

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 concepts and policies.

The Bi-SC M&T Forum is the senior forum for coordinating Alliance-wide concerns for M&T policy and planning between the 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 with Partners or NATO-only plenary sessions. It is co-chaired by the two SCs: the Chief of the Allied Movement Coordination Centre (AMCC), Supreme Headquarters Allied Powers Europe (SHAPE) and Head of the Joint Deployment and Sustainment (JDS) Movement and Transportation (M&T) Branch at Supreme Allied Command Transformation (SACT). When required, the co-chairs may invite participation from other bodies and organisations.

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 standardization and interoperability in coordination with the NATO Standardization Programme (NSP);
- assesses NATO Commanders' M&T requirements to support operational plans and recommends changes, if required;

- using the M&T V&O as its programme of work, 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 LC and M&TG and to other bodies, as agreed or as directed.

Medical Groups

There are seven standing medical groups subordinate to the COMEDS. They are:

- **Military Medical Standardization Working Group (Med Std WG)** is responsible for providing working level advice on medical standardization matters to other medical WGs and expert panels, and for managing the development work including the staffing, ratification and promulgation of Standardization Agreements (STANAGS) and Allied Publications (APs);
- **Military Medical Structures, Operations and Procedures (COMEDS MMSOP)** staffs doctrine and procedures for joint military medical structures, organisations and medical support for all types of operations. It also provides medical domain expert planning input to the NDPP;
- **Military Health Care Working Group (MHCWG)** staffs doctrine and procedures related to evidence-based NATO military healthcare capabilities in order to advance clinical policy for common professional techniques and standards and to ensure continuous quality improvement;
- **Chemical, Biological, Radiological and Nuclear Medical Working Group (CBRN Med WG)** staffs doctrine and procedures for defence against radiation, biological, chemical and laser-directed energy weapons and/or hazards that result from military operations. Preventive and occupational medicine doctrine and procedures are excluded;
- **Force Health Protection Working Group (FHPWG)** staffs doctrine and procedures on techniques for all aspects of preventative medicine in the operational environment such as hygiene, vaccination, chemoprophylaxis and the detection, diagnosis and prevention of non-communicable diseases of an epidemiological character. It also staffs all aspects of environmental medicine in the operational environment;
- **Biomedical Advisory Council (BioMedAC)** coordinates standardization work in the biological medical defence field, identifies gaps between authoritative bodies and research, development and study groups and advises the Medical Working Groups on the development of NATO biological medical defence; and
- **Standing Group of Partner Medical Experts (SGPME)** is the primary body focused on partner medical issues.

In addition to these medical groups, there are a further 12 Expert Panels and Teams as detailed at Annex.

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

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

Bi-SC NATO Senior Joint Engineering Conference (Bi-SC NSJEC)

The aim of the Bi-SC NSJEC is to enhance the overall military engineering (MILENG) posture of the Alliance. The experience of senior NATO and national engineers is available to direct the development of all aspects of MILENG capability, particularly as this applies to higher level defence planning, concepts, doctrine and standardization. The output guides the programme of work for both the Military Committee Land Standardization Board (MCLSB) MILENG Working Group (WG) and the MILENG Centre of Excellence (COE) as well as making recommendations to the NAC, MC, NATO Commands and nations. The LC has established a formal relationship with the NSJEC to enhance the synergy that already existed between these bodies.

RELATIONSHIPS

In addition to the various logistic bodies outlined above, NATO logisticians work in close cooperation with the following in accordance with current guidelines:

European Union (EU)

An active and effective EU contributes to the overall security of the Euro-Atlantic area. Therefore, the EU is a unique and essential partner for NATO. The two organisations share a majority of members, and all members of both organisations share common values. NATO recognises the importance of a stronger and more capable European defence. Moreover, the entry into force of the Lisbon Treaty, which provides a framework for strengthening the EU's capacities to address common security challenges is most welcome. Non-EU Allies make a significant contribution to these efforts. For the strategic partnership between NATO and the EU, their fullest involvement in these efforts is essential. NATO and the EU can and should play complementary and mutually reinforcing roles in supporting international peace and security. NATO is determined to make its contribution to create more favourable circumstances through which it will:

- fully strengthen the strategic partnership with the EU, in the spirit of full mutual openness, transparency, complementarity and respect for the autonomy and institutional integrity of both organisations;
- enhance its practical cooperation in operations throughout the crisis spectrum, from coordinated planning to mutual support in the field;
- broaden its political consultations to include all issues of common concern, in order to share assessments and perspectives; and
- cooperate more fully in capability development, to minimise duplication and maximise cost effectiveness.

United Nations (UN)

Cooperation between NATO and the UN continues to make a substantial contribution to security in operations around the world. The Alliance aims to deepen political dialogue and practical cooperation with the UN as set out in the UN-NATO Declaration signed in 2008, including through:

- enhanced liaison between the two Headquarters;
- more regular political consultation; and
- enhanced practical cooperation in managing crises in which both organisations are engaged.

Euro-Atlantic Disaster Relief Coordination Centre (EADRCC)

The EADRCC's main function is to coordinate the response of NATO and partner countries to natural or man-made disasters within the Euro-Atlantic area. The Centre has guided consequence management efforts in various emergencies, including fighting floods and forest fires and dealing with the aftermath of earthquakes and hurricanes. The Centre also functions as an information-sharing tool for NATO and partner countries on disaster assistance. All tasks are performed in close cooperation with the United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA), which retains the primary role in the coordination of international disaster relief operations. The EADRCC is designed as a regional coordination mechanism, supporting and complementing the UN in its efforts. Furthermore, the EADRCC's primary function is coordination rather than direction. In the case of a disaster requiring international assistance, it is up to individual NATO and partner nations to decide whether to provide assistance, based on information received from the EADRCC.

REFERENCES:

PO(2010)0169, The Alliance's Strategic Concept

AC/305-D(2010)0015, 2011-2020 NATO Logistics Vision and Objectives (V&O)

C-M(2011)0022, Political Guidance

COMEDS Expert Panels and Teams

The expert panels and teams subordinate to the COMEDS are:

- **Dental Service Expert Panel (DS EP)**. Staffs doctrine and procedures on: techniques for all aspects of dental and maxillofacial care in the operational environment; tasks, organisation, equipment, training of personnel concerning dental service and dental field identification service; and the interchange of information relating to dental and maxillofacial care;
- Emergency Medicine Expert Panel (EM EP). Staffs doctrine and procedures on techniques for emergency care in the operational environment, related to emergency medical care provided by non-medical personnel, para-medical personnel, physicians serving as general medical officers and the general capabilities required of forward surgical teams, to define minimal capabilities expected of those personnel providing emergency medical care in the operational environment;
- **Food and Water Safety Support Expert Panel (FWSS EP)**. Staffs doctrine and procedures on techniques for all aspects of food and water hygiene, technology and inspection of veterinary medicine aspects in the operational environment;
- **Medical Material and Military Pharmacy Expert Panel (MMMP EP)**. Staffs doctrine and procedures to establish common standards and requirements for medical materiel and pharmaceuticals in the operational environment and for pharmaceutical and medical material activities in the operational environment;
- **Military Mental Health Expert Panel (MMH EP)**. Staffs doctrine and procedures on techniques for all aspects of psychological and psychiatric care in pre-, per- and post-military deployment and involvement of military mental health personnel in disaster medicine in peace and war;
- **Military Medical Training Expert Panel (MMT EP)**. Staffs doctrine and procedures on harmonisation of all aspects of military medical instruction and training, objectives, methods and aids;
- **Medical Communication and Information Systems Expert Panel (MedCIS EP)**. Staffs doctrine and procedures on techniques for all aspects of medical information management in the operational environment such as medical documentation, patient regulating and tracking, medical surveillance and all other capturing of medical information for Command, Control, Communications and Information (C3I) situational awareness, to identify common military medical technical architecture from NATO technical architecture standards on the collection, reporting, and dissemination of medical information;

- **Medical Naval Expert Panel (MedN EP)**. Staffs doctrine and procedures on all aspects of the maritime military medical field;
- **Special Operation Forces Medicine Expert Panel (SOFM EP)**. Staffs doctrine and procedures on all aspects of the special forces medical field;
- **Medical Intelligence Expert Panel (MedIntel EP)**. The MedIntel EP is closely linked to the FHPWG. The mission of the MedIntel EP is to initiate and develop common principles, policies, doctrines, concepts, procedures, programmes and techniques for the NATO MedIntel community in order to support military medical planning and operations. The MedIntel EP covers a range of issues for the nations and senior NATO medical policy and decision makers to foster interoperability among forces of NATO, Partner and other nations as appropriate;
- **Telemedicine Expert Team (TMED ET)**. The TMED ET is a permanent sub-element of the MedCIS EP. Its aim is to initiate, develop and recommend common principles, policies, doctrine, concepts, procedures, and techniques for the NATO Medical community in order to support the use of Telemedicine in support of military medical planning and operations, as well as developing and maintaining STANAG 2517. Through the continual exchange of information regarding the current status and development of telemedicine modalities within the nations, the ET will encourage interoperable development of systems suitable for use in the NATO Multinational Medical Environment. The TMED ET will present (through the MedCIS EP) a range of issues and proposed solutions to the nations and to senior NATO medical policy and decision makers to foster interoperability among forces of NATO, Partner and other nations as appropriate; and
- **Medical Blood Advisory Team (MedBAT)**. The MedBAT is a permanent sub-element of the MHCWG. Its aim is to initiate, develop and recommend common doctrine and principles on the use of blood and blood products for the NATO Medical community.

CHAPTER 4

NATO LOGISTIC PRINCIPLES, POLICIES AND DOCTRINE

INTRODUCTION

The Alliance's new Strategic Concept[23] adopted by Heads of State and Government at the Lisbon Summit in November 2010 demands responsive, flexible and interoperable logistic support to meet the challenges now faced. The Logistics Committee (LC) has developed a vision for NATO logistics which is taken from Political Guidance[24] and emphasises the need for operational effectiveness balanced with consideration of efficiencies.

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

HIERARCHY OF LOGISTIC POLICIES AND DOCTRINE

The structure of logistics policies and doctrines is displayed below:

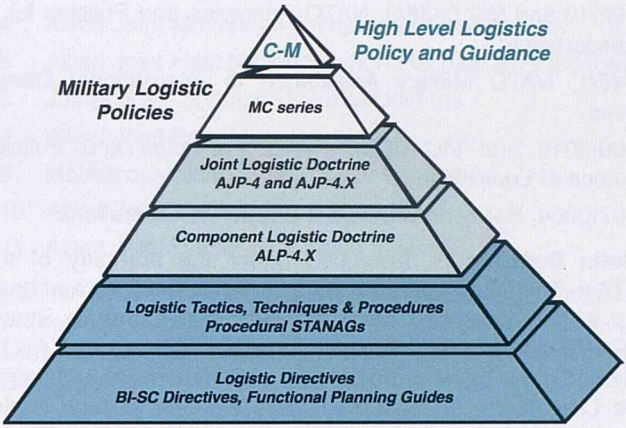

Figure 4.1 Structure of Logistic Policy and Guidance

NATO Logistic Policy documents are developed at the highest NATO levels. NATO Committees, such as the LC, submit recommendations for approval to the Military Committee (MC) followed by notation or approval by the North Atlantic Council (NAC), as appropriate. Generally, logistics policies are approved by both the MC and the NAC. Strategic level logistics policies are then published as Council Memoranda (C-M) and MC documents. C-M(2001)44, NATO's Policy on Cooperation in Logistics, establishes a common vision across the whole spectrum of logistics to enhance cooperation and the overall logistic posture of the Alliance. NATO Principles and Policies for Logistics[25] is the keystone policy document that establishes the principle of collective responsibility for logistics support between nations and NATO and gives the NATO Commander the necessary authority for the

23) *PO(2010)0169, The Alliance's Strategic Concept*

24) *C-M(2011)0022, Political Guidance*

25) *MC 0319 series, NATO Principles and Policies for Logistics*

execution of his responsibilities in logistics. Based upon these overarching policy documents, specific policies have been developed by the LC and its subordinate bodies in the areas of readiness and sustainability[26], Host Nation Support (HNS)[27], military engineering[28], Petroleum[29] and Movement and Transportation (M&T)[30], while the Committee of the Chiefs of the Military Medical Services (COMEDS) has developed policies for medical support[31]. These include:

C-M(2001)44, NATO Policy on Cooperation in Logistics

DPC-D(2002)2 and MC 0055/4, NATO Logistic Readiness and Sustainability Policy;

C-M(2003)101 and MC 0319/2, NATO Principles and Policies for Logistics;

MC 0326/3, NATO Principles and Policies of Medical Support;

C-M(2000)0056-REV1 and MC 0334/2, NATO Principles and Policies for Host Nation Support (HNS);

C-M(2002)10 and MC 0336/3, NATO Principles and Policies for Movement and Transportation;

MC 0343/1, NATO Military Assistance to International Disaster Relief Operations

C-M(2006)0013 and MC 0533, NATO Principles and Policies for the Maintenance of Equipment

C-M(2007)0004, Policy on Contractor Support to Operations

NATO Logistic Doctrine is developed under the authority of the Tasking Authorities (TAs). The LC is the TA for Joint Logistics Doctrine and has delegated this authority to the Logistics Committee Executive Group in Standardization Format (LCEG-S) and the Petroleum Committee (PC) for all NATO petroleum standardization. On the basis of policies for multinationality in Alliance logistics, the Strategic Commands (SCs) turned their attention to their implementation by developing joint logistics doctrine. The Logistics Committee Standardization Working Group (LC SWG) (successor to the Bi-SC Doctrine Committee since 01 January 2012) has, under the lead of the LCEG-S, developed AJP-4(B) as the keystone logistics doctrinal publication. Together with the Bi-SC Movement and Transportation Forum (M&T Forum) and the Bi-SC Medical Advisory Group (MEDAG), a series of subordinate level documents covering specific areas of logistics are elaborated. The SCs then develop implementing directives and planning guidance. The Standardization Service Boards are the Delegated Tasking Authorities (DTAs) on behalf of the MC for single-service logistics doctrine and a broad range of logistics tactics, techniques and procedures. The TAs/DTAs, including the LC, LCEG-S and MC, task the LC SWG, the M&T Forum, the MEDAG

26) *MC 0055/4 [DPC-D(2002)2], NATO Logistic Readiness and Sustainability Policy*

27) *MC 0334/2, NATO Principles and Policies for Host Nation Support (HNS)*

28) *5 MC 560/1, MC Policy on Military Engineering*

29) *EAPC(NPC)D(2009)0001-REV2, Policies, Principles and Characteristics of the NATO Petroleum Supply Chain*

30) *MC 0336/3, NATO Principles and Policies for Movement and Transportation*

31) *MC 0326/3, NATO Principles and Policies of Medical Support*

and appropriate Standardization Service Board Working Groups to develop their respective doctrine. HQ Strategic Allied Command Transformation (SACT) is the lead SC for developing and maintaining joint logistics doctrine and Supreme Headquarters Allied Powers Europe (SHAPE) will support the development. Support is also required from NATO HQ, Allied Joint Force Command HQs (JFC 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 coordination meetings and the drafting of assigned doctrines, Allied Publications (APs) and Standardization Agreements (STANAGs).

Allied Joint Logistics Doctrine documents are distributed as **Allied Joint Publications (AJPs)**. The AJPs provide foundational logistics doctrine, under which more detailed logistics techniques and procedures are established. The following AJPs have been developed or initiated for development:

AJP-4	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	Joint Logistics Support Group Doctrine
AJP-4.7	Allied Joint Petroleum Doctrine
AJP-4.9	Modes of Multinational Logistics Support
AJP-4.10	Allied Joint Medical Support Doctrine
AJP-4-11	Allied Joint Doctrine for Asset Visibility

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

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

STANAGs/Allied Fuels Logistic Publications (AFLPs) are developed to standardise fuels, lubricants, associated products and petroleum handling equipment; for example, AFLP-7, Deployable Fuels Handling Equipment.

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

NATO Logistics Planning Guidance is generally developed at SC level and below and includes the logistics elements of General Operations Plans (GOP) and other logistics functional planning in line with Allied Command Operations' (ACO) Comprehensive Operations Planning Directive (COPD), which identifies essential information exchanges with other members in the Strategic Operations Planning Group (SOPG) or the Joint Operations Planning Group (JOPG).

ACO Functional Planning Guidance – Logistics (FPG-Log) is designed to be used by both Strategic and Operational logistic planners in coordinating planning efforts for NATO operations. It is also intended for use by national logistic planners in determining the level of interaction with SHAPE at each phase in the planning process and to understand what information is available at each stage of the planning process in an effort to provide transparency in NATO crisis response planning.

NATO PRINCIPLES AND POLICIES FOR COLLECTIVE LOGISTICS

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

LOGISTIC PRINCIPLES

Collective Responsibility. Nations and NATO authorities have a collective responsibility for the logistic support of NATO's operations. This collective responsibility encourages nations and NATO to cooperatively share the provision and use of logistic capabilities and resources to support the force effectively and efficiently. Standardization, cooperation and multinationality in logistics build together the basis for flexible and efficient use of logistic support, thereby contributing to the operation's 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 the NATO Commander to receive, employ, sustain and re-deploy forces assigned to NATO 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 the military and civil sectors, should be focused to satisfy the operational requirements necessary to guarantee the success of the operation.

Cooperation. Cooperation amongst the nations and NATO is essential. Cooperation across the full spectrum of logistics, including between the civilian and military sectors within and among nations, will contribute to the best use of limited resources. For non-Article 5 CRO (NA5CRO), this cooperation must be extended to non-NATO nations, and other relevant organisations, as required.

Coordination. Logistic support must be coordinated 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 agreements are the tools to facilitate logistic coordination and cooperation. The overall responsibility for coordination 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 necessary quantity and quality, when and where it is required throughout the full spectrum of NATO operations. It must be ensured for any NATO-led operation continuously and for the duration required to accomplish it.

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 transparency of logistic resources are essential for effective logistic support. NATO Commanders require a timely accurate exchange of information to effectively manage logistics operations in the Joint Operations Area (JOA).

LOGISTIC POLICIES

General

Logistic support should be provided by balancing the peacetime provision and locations of logistic assets with stockpiles and the ability to re-supply and reinforce to ensure timely and continuous support. This must include appropriate arrangements for NA5CRO.

Responsibility

Nations have the ultimate responsibility for equipping their forces and for ensuring, individually or by cooperative arrangements, the provision of required logistic resources to support the forces assigned to NATO during peace, crisis and conflict. While the ultimate support responsibility rests with nations, efficient support for deployable headquarters and forces and the provision of the wide range of theatre capabilities requires collective solutions.

Nations are responsible for ensuring that units and formations assigned to NATO are properly supported by an effective and efficient logistic structure tailored for the operation, including a proportional contribution to theatre support capabilities[32].

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 common-funded capabilities as directed, and is responsible for their logistic support. NATO forces must operate under the principle of Unity of Effort and should adhere to Unity of Command to the

32) *EAPC(SNLC)D(2008)0007, Guidelines* for a Proportional Contribution of Logistics Capabilities to a Single Rotation of the NATO Response Force (NRF) (* Guidelines should be interpreted as non-binding.)*

maximum extent possible by reducing national or component support stovepipes and increasing multinational, joint and collective logistic cooperation.

The NATO Commander is responsible for logistic planning and coordination within his area of responsibility and, in concert with Troop Contributing Nations (TCN), for establishing the common logistic requirements for all phases of an operation. The NATO Commander is further responsible for executing theatre level logistic support, using assigned national, Host Nation (HN) and/or commercial resources, as agreed with TCN.

The NATO Commander is responsible for the development and promulgation of a collective logistic support plan that supports the operations plan. This plan must identify the structures and procedures required to reduce competition for scarce resources by nations and NATO Headquarters (HQs) and include the implementation of the different modes of logistic support. Contractual support solutions as well as the employment of a contract integrator should be considered from the outset of the planning process as discussed in Chapter 15.

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 coordinates support among TCNs and with the HN and retains the responsibility to coordinate the overall logistic effort even when participating nations rely solely on national logistics.

Nations and NATO authorities have a collective responsibility for ensuring that the NATO Commander has access to the required logistic information.

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

Authority

MC 0319 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. Logistics command structures must provide the NATO Commander at the appropriate level with the authority to support the force by using in-Joint Operational Area (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 logistic assets, as directed;
- task all assigned theatre-level logistics units not organic to tactical level formations, provided to the NATO Commander at least under LOGCON[33].

33) *Logistics Control (LOGCON): The authority granted to a NATO Commander over assigned logistic units and organisations in the JOA, including National Support Elements (NSE), that empower him to synchronise, prioritise and integrate their logistics functions.*

- redistribute the logistic assets of nations for the support of the forces in accordance with pre-agreed terms and conditions; and
- inspect 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 and specified assets prior to the deployment.

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 the Force Planning Process and Partnership Planning and Review Process (PARP) and continues its efforts under a more comprehensive NATO Defence Planning Process (NDPP) as described in Chapter 5. It is at this level of planning that identification of the civil and military logistic capabilities required to deploy, sustain and re-deploy Alliance forces to match NATO's Level of Ambition (LOA), is carried out 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 and support options.

The SCs must ensure timely and proper inclusion of requirements for logistic forces and capabilities in the NDPP so that nations, including PARP nations, can be convinced to acquire and then to provide them to NATO for its use during NATO-led or NATO-supported operations. The authority, responsibility and funding for multinational logistic arrangements are to be established during the Operations Planning Process (OPP).

To support nations' generic and long term stockpile planning within the overall NDPP, the SCs are responsible for developing stockpile requirements in consultation with nations and publishing them as part of the NDPP to nations. NATO's stockpile targets should provide adequate guidance for all classes of supply and should be considered along with other national commitments to homeland defence, training and participation in other international organisations. However, where no such guidance has been developed by NATO, national planning factors should apply.

Operations Logistics Planning

Operations Logistics Planning (OLP) is embedded in MC 0133/4, NATO's Operations Planning and in ACO's FPG-Log. The level of detail is related to the planning category and the level of responsibility. Logistic support doctrine, concepts and structures must be tailored to the respective forces and for each operation. All logistic functions, described later in this document, are vital and indispensable parts of the planning process. OLP is described in detail in Chapter 6.

OLP must be comprehensive, engaging all relevant military and civil, national and international actors from the start of the OPP. This approach should deliver improved situational awareness, enhanced collaboration and optimal employment of resources.

To achieve the optimum use of resources, deliver timely, effective and efficient support and exploit the potential benefits of multinationality, TCNs and NATO must engage in collaborative logistics planning from the start of the OPP. The Force Generation Process must take into consideration the different levels of standardization. OLP should consider the contributions of non-NATO nations and other organisations as well as multinational and contractor support solutions. The primary focus of OLP is to identify requirements and potential support solutions that NATO and TCNs can select and implement prior to deployment.

Logistic Command and Control (C2)

The NATO Commander will determine the C2 structure to satisfy the requirements of a specific operation, employing options from both the NATO Command and Force Structures. This will be decided early in the OPP in order that the designated units can undertake the relevant planning and preparation. This flexible approach will allow C2 to be tailored for specific operations. To facilitate this, nations must provide NATO Commanders with the logistic C2 authority and capabilities they require to execute their responsibilities throughout all phases of an operation. It includes coordination, prioritisation and deconfliction of logistics and includes Operational Control (OPCON) over logistic units providing theatre-level logistic support, such as Multinational Integrated Logistic Units (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. Those assets belonging to the national support chain, including units performing Logistics Lead Nation (LLN) and Logistics Role Specialist Nation (LRSN) missions, should be provided to the NATO Commander at the minimum under LOGCON. NATO will typically deploy a Joint Logistics Support Group (JLSG), which will be responsible to the deployed NATO Commander through the functional staff (CJ4) for the execution of theatre level logistic support, using assigned national, HN and/or commercial resources, and coordination of theatre wide logistic support. Nations will retain C2 of national logistic resources.

Logistic Readiness and Sustainability

Logistics sustainability must support NATO's LOA as defined in the Political Guidance. National and NATO logistic plans must ensure that sufficient quantity and quality of logistic resources are available at the same or at higher readiness and deployability levels than the forces they support. These logistic resources must cover the entire spectrum of NATO operations.

Cooperation in Logistics

Cooperation 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, contractor support, leasing, common or multinational procurement, pre-positioning, pooling and sharing with other nations, and arrangements for the cooperative acquisition

and management of certain logistic stocks. A framework and further guidelines forming the basis for cooperation in logistics are laid down in NATO's Policy on Cooperation in Logistics[34], which seeks to enhance cooperation 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, in exceptional circumstances, when achieving the mission objectives is at danger, 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 the 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 are viewed as materiel, spares, stocks and consumable items. Personnel are limited to those in formed logistic organisations and should be redistributed as a service. All these might be considered for redistribution by the NATO Commander if deemed essential for the success of the operation.

Logistic resources held by units under multinational OPCON 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, when deemed necessary.

While all NATO Commanders have logistics responsibilities and authorities, redistribution authority is limited to Joint Force Commanders, JLSG Commanders, Air, Land and Maritime Component Commanders, and to those Commanders, including Commanders of 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.

If time allows prior to effecting redistribution, 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, nations receiving logistic resources transferred under this authority will replace the resources or reimburse the providing nation(s) as agreements dictate.

Multinational Collective Logistics

Multinational collective logistics is described in detail in Chapter 7.

34) *C-M(2001)44, NATO's Policy on Cooperation in Logistics*

Funding/Resources Provision (See also Chapter 14)

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 multinational and collective arrangements should be taken into consideration by nations and the NATO Commander.

The NATO Commander should establish resource requirements, 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 Area of Responsibility (AOR), any common-funded continuing activities are the responsibility of the NATO HQ.

Civil Resources

Civil capabilities may complement those of the military as military capabilities may be used in civilian-led disaster relief, stabilisation and reconstruction or humanitarian assistance efforts. Civil equipment, goods and services can be utilised to provide timely and effective logistic support to any NATO or non-NATO led operation. Support can only be based on civil resources so long as they securely meet the operational requirements of the assigned forces. To achieve better efficiency and to include sharing and deconfliction, centralised procurement and control of civil resources should be pursued.

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 and sustainment of forces.

Life Cycle Support

The materiel function of logistics covers the full life cycle of materiel and will generally remain under national responsibility. However, multinational cooperation can enhance the efficiency and effectiveness of the support provided. All phases of the life cycle of materiel should be focused on maximum interoperability. From an early stage, all participants in the materiel management process must be made aware of, and take into account, the materiel support requirements and logistic capabilities and constraints within combined and joint operations.

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. 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.

LOGISTIC ASPECTS OF COMPREHENSIVE APPROACH AND STABILISATION AND RECONSTRUCTION

While the primary use of logistic capabilities is to provide effective support to military forces, its secondary role is to contribute to a Comprehensive Approach (CA) that effectively combines political, civilian and military crisis management instruments. Military logistic capabilities and stocks as well as logistic C2, may be used to support the local population until proper civilian institutions such as Governmental Organisations (GOs), Non-Governmental Organisations (NGOs) or local authorities are able to perform these tasks. This role does not imply only the support to the local population, but it also implies the enabling of civilian institutions to establish themselves in order to be able to deliver the support to the local population for example, support to NGOs and International Organisations (IOs), civilian staff for strategic and tactical transport, fuel, medical, food, warehousing and maintenance. Depending on the operation, individual nations and NATO's agreed role, NATO may make a major contribution within a CA, but NATO cannot lead this effort. Leadership is clearly the role of the United Nations which has the responsibility for coordinating the necessary international civilian and military aspects of crisis management and peace building in current and future operations. NATO will decide on a case-by-case basis how to support the CA of the international community and to contribute to potential stabilisation and reconstruction operations, establishing a safe and secure environment as well as freedom of movement for the relevant national authorities and population as well as for other actors.

REFERENCES

PO(2010)0169, The Alliance's Strategic Concept

C-M(2011)0022, Political Guidance

C-M(2001)44, NATO's Policy on Cooperation in Logistics

MC 0319 Series, NATO Principles and Policies for Logistics

MC 0055/4, NATO Logistic Readiness and Sustainability Policy

MC 0334/2, NATO Principles and Policies for Host Nation Support (HNS)

MC 560/1, MC Policy for Military Engineering

EAPC(NPC)D(2009)0001-REV2, Policies, Principles and Characteristics of the NATO

Petroleum Supply Chain

MC 0336/3, NATO Principles and Policies for Movement and Transportation

MC 0326/3, NATO Principles and Policies of Medical Support

MC 0343/1, NATO Military Assistance to International Disaster Relief Operations

MC 0533, NATO Principles and Policies for the Maintenance of Equipment

AJP-4, 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, Joint Logistics Support Group Doctrine

AJP-4.7, Allied Joint Petroleum Doctrine

AJP-4.9, Modes of Multinational Logistics Support

AJP-4.10, Allied Joint Medical Support Doctrine

AJP-4-11, Allied Joint Doctrine for Asset Visibility

ALP-4.1, Multinational Maritime Force Logistics

ALP-4.2, Land Forces Logistics Doctrine

ALP-4.3, Air Forces Logistic Doctrine & Procedures

AFLP-7, Deployable Fuels Handling Equipment

EAPC(SNLC)D(2008)0007, Guidelines* for a Proportional Contribution of Logistics Capabilities to a Single Rotation of the NATO Response Force (NRF)

MC 0133/4, NATO's Operations Planning

** Guidelines should be interpreted as non-binding.*

CHAPTER 5

DETERMINATION OF LOGISTIC REQUIREMENTS

INTRODUCTION

NATO has two major planning processes. The first is planning related to a specific mission and is called operations planning. The second process is unique to NATO and it seeks to build sufficient capability to meet NATO's Level of Ambition (LOA) to simultaneously conduct two Major Joint Operations (MJO's) and six Smaller Joint Operations (SJOs). This long-term process is called the NATO Defence Planning Process (NDPP). The Logistics Committee (LC) leads the logistic domain's planning effort with detailed military support and expertise provided by the Bi-Strategic Commands (Bi-SC) Logistics Planning Advisory Committee (LPAC).

NATO DEFENCE PLANNING PROCESS (NDPP)

The Outline Model for the NDPP[35], as shown schematically below, defines the new four-year and five step process to define NATO capabilities required to meet the LOA, 'fair share' these needs to Allies, determine any shortfalls and, finally, work nationally, multinationally or collectively to address the shortfalls. NATO Partners have a similar planning process which mirrors many of the logistic issues considered important for more formal planning by Allies.

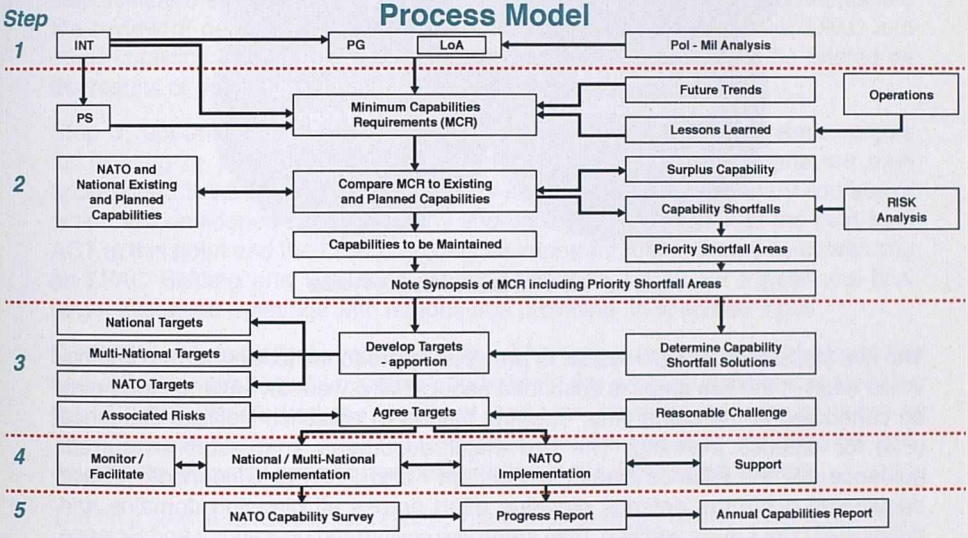

Figure 5.1 - NDPP Outline Model

The NDPP provides a framework within which national and Alliance defence planning activities can be harmonised to meet agreed targets in the most effective way, whilst addressing the full capability life cycle. The process consists of the following five main functions or steps which are generally sequential and cyclical

35) *PO(2009)0042, Outline Model for a NATO Defence Planning Process*

in nature, although the frequency of the individual functional activities may vary and the function of facilitating implementation is a continuous activity:

Step 1: Establish political guidance;

Step 2: Determine requirements;

Step 3: Apportion requirements and set targets;

Step 4: Facilitate implementation; and

Step 5: Review results.

An outline of the NDPP steps is shown below:

Figure 5.2 - The NATO Defence Planning Process

The five steps of NDPP are similar to previous approaches to long-term planning. While each of the five steps is described sequentially, work on several steps may be conducted at the same time. The first step is to establish Political Guidance (PG) for defence planning. The two major documents that establish current guidance are the Alliance Strategic Concept[36] and Political Guidance[37]. These documents guide the defence planning effort across all planning domains and define NATO's LOA. In addition, new areas like civilian-led operations and Science and Technology(S&T), will be better integrated under a more Comprehensive Approach to planning. Step 1 is led by the International Staff (IS), working through the Defence Policy and Planning Committee (DPPC), to reflect a consensus of national agreement on these planning parameters.

36) *PO(2010)0169, The Alliance's Strategic Concept*

37) *C-M(2011)0022, Political Guidance*

As one of the recognised planning domains, Logistics direction for planning is specifically mentioned in the Political Guidance as follows:

> *"Since only a few Allies can independently deploy and sustain their forces, it is important that Allies continue to pursue Collective Logistics with the aim to give NATO Commander's the greatest flexibility on current and future missions by providing effective logistics support, especially improved deployability, enhanced sustainability, more capable and interoperable logistics forces and optimised logistics command and control, at best value to nations."*

The Logistics specific input at Step 1 is limited; however, the LC as the senior committee in Logistics can provide its input to PG when it is reviewed.

Step 2 of the NDPP is to determine requirements. The complete set of Minimum Capability Requirements (MCR) will result from a Capability Requirements Review (CRR) and will define the minimum capabilities necessary to meet the quantative and qualitative ambitions set out in the PG. This step is led by Allied Command Transformation (ACT) who coordinate with the respective domains for their subject matter expertise and the Communications and Information Agency (CIA) for its operations research skills. Step 2 is completed with the approval of the MCR and staffing of Priority Shortfall Areas (PSAs). LPAC tasks in this step include the expert review of Capability Codes and Capability Statements and the review of generic Case Studies and key modelling assumptions. LPAC and other Logistics Subject Matter Expert (SME) committees will also be briefed on the results of modelling the MCR in their areas

Step 3, apportioning of requirements and setting of targets, develops targets for existing or planned capabilities against the MCR. These targets are then apportioned to nations, groups of nations and NATO, and preliminary courses of action are developed to address any shortfalls. The IS takes over the lead from ACT at this point and the LPAC can play an important role at Step 3 by conducting an LPAC Bidding and Brokering meeting between the NDPP's initial and final target allocation meetings with nations and providing its specialist input.

NDPP Step 4 is to facilitate implementation. This step assists national, multinational and collective efforts to fill planning shortfalls. In the area of Logistics capabilities, the LC will be briefed on the results of long-term planning and may establish a Tiger Team to examine persistent shortfalls. LPAC's role is to provide advice in developing remedial options and participating in the Tiger Team's efforts.

The final step is to review the results. The NATO Defence Review assesses Allies' national and collective plans to determine the degree to which the Alliance's forces and capabilities are able to meet the requirements of the PG. Nations first respond to the Defence Planning Capability Survey (DPCS) and then their responses are verified at follow-on bilateral and multilateral meetings. On receipt of the nation's Capability Survey responses, NATO conducts a Defence Review. The SCs, in conjunction with the IS, produce a military assessment called, "the NATO Staff Analysis"; this looks at the nation's force contribution, Force Goal responses and assesses a nation's transformational progress, as well as providing the SC's Impact Statements. In its final form, the NATO Staff Analysis is accompanied by the relevant

force tables, financial and economic tables and an overview. It is this overview which is agreed by the DPPC(Reinforced) in multilateral session before going on to be agreed at the ministerial level and included as an Annex in the Secretary General's General Report. ACT has the lead on the military aspects of the NATO Staff Analysis and ACO assists in the process by providing the operational focus.

On completion, the SCs draft a report called a "Suitability and Risk Assessment" (SRA) identifying the degree of any shortfall and its effect on the conduct of operations. The SRA is forwarded to NATO HQ in Brussels where the participation of those nations outside the formal Defence Planning process, primarily Partner nations, are considered when addressing any shortfall. Any remaining capability shortages are subject to a political decision to modify the LOA, seek increased capabilities from NATO/nations, or accept the risk associated with the capability shortfall. In addition, the review provides a key mechanism for generating feedback for the next planning cycle. LPAC input will be sought to improve the quality of questions and tables used in the DPCS and to educate national logisticians to use capability-based planning.

MANAGEMENT OF LOGISTIC INFORMATION[38]

NATO Logistics Policy[39] states that nations and NATO authorities jointly have a collective responsibility for logistic support. Nations must ensure that adequate logistic support is provided to their forces allocated to NATO during times of peace, crisis, and conflict, both within NATO boundaries and in support of out-of-area operations. However, to comply with the agreed principle of collective responsibility for logistics, NATO and nations are expected to put in place measures or enablers to enhance cooperation and multinationality in logistics. Timely and accurate logistic information is required for the efficient management and coordination of support to NATO forces. This further requires the need for close coordination and cooperation during NATO multinational operations. NATO has taken a proactive approach to meet current and future information requirements.

Regulatory Framework for the Logistic Information System Architecture (LOGIS)

The Regulatory Framework[40] provides a management environment for information and communication systems and services that gives the principles for the logistic information system architecture. It is the means to develop the information system architecture to guide development and harmonisation of existing and future Alliance logistics-related systems.

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

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38) *Further information on the Logistics Information Management Group (LOG IMG) and the Logistic Functional Services (LOGFS) Information Management Working Group (LOGFS IM WG) are contained in Chapter 3.*

39) *MC 319 series, NATO Principles and Policies for Logistics*

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

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 coordination are 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 READINESS AND SUSTAINABILITY

The NATO Logistics Readiness and Sustainment Policy is contained in MC 55/4. It covers both the principles and policies associated with readiness and sustainability and includes specific direction for nations and for the conduct of NATO stockpile planning.

There are several important concepts to understand in this area of planning. Most important is to understand that the military falls within the 'just in case' business, so many supply chain theories aimed at commercial production capabilities do not apply. Secondly, stockpiles are similar to an insurance policy which allows continued operations until the required spare part can be replaced. This 'lead-time' is the critical factor in determining the quantity of spares to be held in stock.

Logistic readiness is a component of overall unit or force readiness. A unit at very high readiness is ready to deploy from their home unit. All training has been completed, strategic lift has been arranged and all mission stockpiles are in place and ready to move. Logistics sustainability refers to building and maintaining the supply chain in theatre so that the overall combat power of the force can be sustained. Stockpiles also form part of this sustainment network.

NATO STOCKPILE PLANNING

First started in the middle of the 1980's, NATO Stockpile Planning, including munitions planning, was one of the first areas supported by detailed requirements modelling. As part of the NDPP effort to create a single source for all NATO requirements, all four munitions requirements' models in the Allied Commands' Resource Optimisation Software System (ACROSS) are being simplified and moved to the NDPP CRR. The air-to-ground and maritime models were included in CRR 12 (2012) and the air defence and land munitions models will be included before CRR 16 (2016).

STANDARDIZATION AND INTEROPERABILITY

The NATO Policy for Standardization[41] describes the mechanisms whereby NATO achieves interoperability through standardization, which is defined as the development and implementation of concepts, doctrines, procedures and designs in order 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.

In recognising the importance of standardization to the Alliance, the North Atlantic Council (NAC) established the NATO Standardization Organisation (NSO)[42] to

41) *C-M(2010)0063, NATO Policy for Standardization*

42) *EAPC(NCS)D(2009)0002, Charter of the NATO Standardization Organisation*

harmonise and coordinate all standardization activities. The NSO comprises the Committee for Standardization (CS), the CS Representatives, and the NATO Standardization Agency (NSA). Each of these bodies is responsible for developing and enhancing the standardization process to provide the mechanisms that facilitate the exchange of information necessary for national experts to agree on how best to achieve standardization.

The CS oversees the activities of the NSO, which is responsible for providing support to the senior committees that have been designated by the NAC as Tasking Authorities (TAs). These presently include: the Conference of National Armaments Directors (CNAD), the Consultation, Command and Control Board (C3B), the Air and Missile Defence Committee (AMDC), the Logistics Committee (LC) and the Military Committee (MC). The TAs are able to delegate their authority to subordinate bodies to initiate, develop and approve NATO standardization documents.

The LC developed a policy for logistics standardization[43] to ensure it's visibility, coordination and/or control over all logistics standardization activities and to ensure vertical (across TAs) and horizontal (internal to TA) coherence of all logistics and logistics-related standardization documents and products. The policy covers the initiation, development and management of all logistics and logistics-related standardization documents and products. It applies to all NATO member nations, their respective bodies and staffs and to the NATO bodies involved in the logistics standardization process. The management function to ensure the policy is executed is the Logistics Committee Executive Group in Standardization format (LCEG(S)). The Logistics Committee Standardization Working Group (LC SWG), subordinate to the LCEG(S), is required to develop logistics standardization documents and to advise other standardization bodies on the development, review and harmonisation of logistics and logistics-related standardization documents.

REFERENCES

PO(2009)0042, Outline Model for a NATO Defence Planning Process

PO(2010)0169, The Alliance's Strategic Concept

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MC 55/4, Logistics Readiness and Sustainability Policy

C-M(2010)0063, NATO Policy for Standardization

EAPC(NCS)D(2009)0002, Charter of the NATO Standardization Organisation

AC/305-D(2011)0021 and AS-1, Logistics Standardization Reform

43) AC/305-D(2011)0021 and AS-1, Logistics Standardization Reform

CHAPTER 6

OPERATIONS LOGISTIC PLANNING

INTRODUCTION

In order to prepare for and conduct complex and multi-dimensional operations, it is necessary to develop comprehensive operations plans which address all relevant factors for the efficient and successful conduct of an operation. MC 0133/4, NATO's Operations Planning, sets out broadly how at the HQ NATO level the Alliance initiates, develops, coordinates, approves, executes, reviews, revises and cancels all categories of operations plans. The Comprehensive Operations Planning Directive (COPD)[44] is applicable to all operations planning activities at the strategic and operational levels of command within the NATO Command Structure and can be adapted to the component/tactical level in order to enhance the collaborative planning activity. In that respect, each level should structure its planning organisation - Strategic Operations Planning Group (SOPG) at Supreme Headquarters Allied Powers Europe (SHAPE), Joint Operations Planning Group (JOPG) at the operational level, and Tactical or Maritime/Land/Air Component Planning Group as appropriate at the tactical level - in a way that is compatible and allows for easy interface and collaborative planning.

The Functional Planning Guide - Logistics (FPG-Log)[45] is a guide to help the logistic planner in operations planning by identifying logistic contributions to the planning process. When used with the COPD, it identifies essential information exchanges with other members in the SOPG or a JOPG as well as functional planners in other HQs. The FPG-Log will guide a planner in the development of functional staff estimates and concepts as well as the drafting of functional annexes to the plan. Logistic planning is fully integrated into the Operations Planning Process (OPP) and, therefore, it is vital for the logistic planner to be thoroughly familiar with the OPP. The logistic elements of the OPP are developed in coordination with the nations committed to the operation and the nations are therefore involved throughout the process from the strategic level down to the tactical level. Logisticians must therefore anticipate actions and be prepared to coordinate immediately with nations once authorised to do so.

The planning process, as articulated in the COPD, sees the Supreme Allied Commander Europe (SACEUR) informing the decision-making process at HQ NATO and creating the right conditions for the operational level commander to achieve operations' objectives successfully. The COPD emphasises the need and method to create a truly collaborative planning environment in a spirit of total transparency. No formal SACEUR product will be developed without guidance from HQ NATO or significant input from the designated Joint Force Commander (JFC) and his subordinate commanders.

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44) ACO Interim Version 3.0, dated 29 November 2010

45) AC/305(LSM)D(2010)0010, dated 2 December 2010

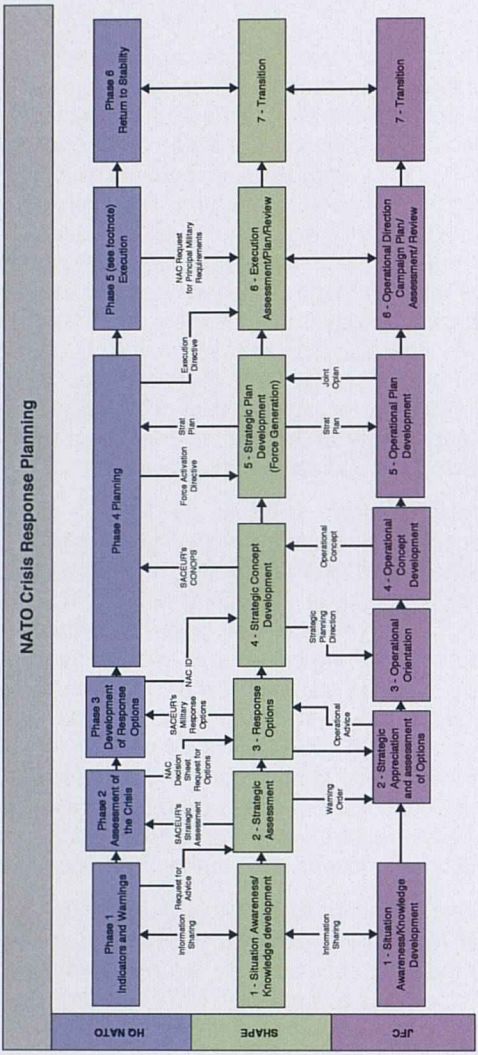

Figure 6-1 – NATO Crisis Response Planning

Figure 6-1 shows the interaction and exchange of products between HQ NATO, SHAPE and the Joint Force Commands (JFC) during each stage of NATO Crisis Response Planning. As depicted, the stages are dependent on the inputs and outputs at each respective level and do not necessarily commence concurrently.

KEY PLANNING DOCUMENTS

The key documents produced during operations planning are the Strategic Military Response Options, Concept of Operations (CONOPS), the Operation Plan

(OPLAN) and the Contingency Operation Plan (COP). The Logistics staff must work closely with the other staffs throughout the entire OPP to ensure that the main plan and the logistics supporting portions are realistic and properly coordinated. Early collaborative logistic planning between NATO and nations is essential for delivering multinational support solutions[46]. Participating nations must therefore be involved in the planning process as early as possible. An OPLAN will contain a Logistic Annex (Annex R) with a Medical Appendix, and a Movements Annex (Annex S). The Annex R has to be coordinated with other support Annexes such as the Financial Annex.

LOGISTIC SUPPORT GUIDELINES

At all planning levels, it is necessary to analyse the situation, especially: the political, economic, social and military aspects; the geography of the theatre; the support requirements and potential options. The results of the analysis should then be combined with operations guidance in order to develop the logistic support concept. This general concept, usually contained in paragraph 4 of the CONOPS and OPLAN, is developed by the logistics staff and promulgates the Commander's intent on how logistic support will be provided. The concept may include:

- Major peculiarities of the theatre and how they can affect logistics;
- Approximate forces and logistic capabilities required;
- The Command and Control structure for logistics;
- Likelihood of Host Nation Support (HNS); and
- Potential Troop Contributing Nations (TCNs) and the possibility of multinational and joint logistics.

LOGISTIC PLANNING CONSIDERATIONS

Multinational Logistics

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

Joint Logistic Support Group HQ (JLSG HQ)

If a JLSG HQ is deployed, it will be responsible for the coordination of theatre-level logistic support with participating National Support Elements (NSEs), Component Commands (CCs), Host Nations (HNs) and non-military organisations. It is also responsible for the Command and Control of assigned resources in order to execute the agreed theatre level logistic support. It synchronises, prioritises and integrates logistic units, Logistic Lead Nations (LLNs), and Logistic Role Specialist Nations (LRSNs) or contracted logistic support for the benefit of the overall force.

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46) Multinational support options include bi-lateral or multilateral agreements, Contractor Support to Operations (CSO) and Host Nation Support (HNS)

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 OPP.

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. This should include both the initial phase of the mission, and the expected sustainment period.

Infrastructure Planning

Part of the Infrastructure Engineering for Logistics (MC 0536)[47] responsibilities will be to establish base camps and to facilitate Reception, Staging and Onward Movement (RSOM) including security issues such as for ammunition storage.

Petroleum Planning

Petroleum planning in NATO is covered in two ways: the short-term planning for operations is covered by the Logistic Operations Planning Process (LOPP), the long-term capability development is considered in the NATO Defence Planning Process (NDPP).

HNS

Guidance on HNS planning is contained in MC 0334/2 and AJP-4.5(B). 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 operations plans. The availability of existing HNS arrangements, Memoranda of Understanding (MOU) and/or bilateral or multilateral agreements will need to be considered in the development of plans. North Atlantic Council (NAC) or Military Committee (MC) tasking to the Strategic Commands (SCs) will include full authorisation for Allied Command Operations (ACO) to negotiate HNS arrangements. All negotiations should be conducted by an experienced team of personnel covering all disciplines including legal, Civil-Military Cooperation (CIMIC), infrastructure, finance, purchasing and contracting, engineering, medical, transportation and real estate, as required.

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47) *MC 0536 Infrastructure Engineering for Logistics (IEL) covers the construction, restoration, acquisition, repair, maintenance and disposal of those infrastructure facilities required to mount, deploy, accommodate, sustain and re-deploy military forces. This also includes construction, restoration and maintenance of lines of communication (LOC), and the facilitation of environmental protection.*

Contracting and Funding

The logistics staff will need to work closely with the financial staff to arrange contracts for required services not provided by military means. Contracts may be common-funded for NATO entities such as Joint Task Force Headquarters (JTF HQ) or nationally funded. The NATO Support Agency (NSPA) will act as the Contract Integrator (CI) for ACO. Further details are provided in Chapters 14 and 15 with regard to funding and contractor support respectively.

Participation of Non-NATO Nations

The participation of non-NATO nations in NATO-led operations is likely to continue. A high level of cooperation and coordination 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 that non-NATO participants are competent to participate in any operation will be completed as early as possible. Non-NATO nations may require special assistance for logistic support.

Coordination with NSEs

Most nations will establish a NSE and/or deploy a Senior National Representative to coordinate or provide national logistic support. It will be necessary for the NATO logistic commander and the JLSG HQ to coordinate closely with these organisations. Where possible, and in order to facilitate coordination, NSEs will be collocated with the JLSG HQ.

NATO must encourage nations to minimise the size of the NSEs and the logistic footprint through sharing logistic capabilities and multinational logistic arrangements.

Coordination with International Organisations (IOs) and Non-Governmental Organisations (NGOs)

With the implementation of the Comprehensive Approach to the planning process, planning should include, where possible, IOs such as the United Nations (UN), Organisation for Security Cooperation in Europe (OSCE) or the Red Cross and various NGOs such as Médecins sans Frontières.

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 (POD) to their final destination. Although RSOM is an operational matter, it requires the provision of a significant degree of logistic support. The NATO Commander will consider the availability of HNS to the maximum extent possible as this can provide infrastructure and services to facilitate RSOM. Where a HN does not exist or cannot provide the required RSOM support, the NATO Commander should seek to use TCNs logistic support units or commercial resources to provide RSOM

support to the force, or request one or several nations to assume responsibility as LLN on behalf of deploying NATO forces.

Concluding the Operation/Exercise

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

Stabilisation and Reconstruction

Political guidance on ways to improve NATO's involvement in stabilisation and reconstruction has been developed to inform and guide the conduct of current operations[48]. It requires the careful prioritisation of resources and the need to avoid unnecessary duplication with other IOs, particularly the UN and the European Union (EU), which could provide complementary capabilities. Related activities require due consideration by logistic planners and could include:

- establishing a safe and secure environment and freedom of movement;
- helping to restore public security;
- helping to restore basic utilities and infrastructure;
- facilitating support to humanitarian aid; and
- helping to establish the conditions for governance and development.

FORCE GENERATION PROCESS

Combined Joint Statement of Requirements (CJSOR)

While the CONOPS/OPLAN are being developed, there is a parallel force generation process to identify the required capabilities and to provide the required forces from TCNs.

The CJSOR provides a list of the key capabilities required and details of the nation(s) offering to fill each serial. Contributing nations are responsible for funding and arranging logistic support for their CJSOR units. Logistics staff must become involved in helping to arrange multinational logistic support, particularly for small or non-NATO force contributions.

Theatre Capability Statement of Requirements (TCSOR)

The TCSOR lists the key capabilities required to deliver theatre level support such as port units. Nations that provide units for the TCSOR are eligible for reimbursement for providing them to the NATO commander.

48) *PO(2010)0140 (FINAL), Political Guidance on Ways to Improve NATO's Involvement in Stabilisation and Reconstruction.*

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 OPERATIONS PLANNING PROCESS (LOPP)

The FPG-Log sets out the process for the LOPP. The aim of the LOPP is to:

- improve situational awareness;
- provide for earlier engagement in the Planning Process;
- provide collaborative planning tools;
- allow for the consideration of multinational and commercial solutions;
- pursue initiatives that underpin the revision of the LOPP; and
- improve education, training and exercising of the LOPP.

LOGISTIC REPORTING (LOGREP)

The requirement for the SCs' request for logistic reports is outlined in MC 0053/4. 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), provided via Logistics Functional Area Services (LOGFAS).

The Bi-SC Reporting Directive Volume V, Logistics Reports (Bi-SC Directive (Bi-SC D) 80-3 Vol V) provides the necessary guidance on reporting requirements. Its procedures and formats are applicable to all services - Air, Land and Maritime - in peace, crisis, war and operations other than war. They also allow easy adoption by non-NATO nations. The majority of logistic reports in the Directive provide an assessment of logistic capabilities and concerns or enable an exchange of information with nations for logistic management purposes. Subordinate headquarters are authorised to supplement the Bi-SC D 80-3 Vol V for their operational needs for specific operations. For current operations, the logistic reporting requirements will be stated in ANNEX CC (Documentation, Records and Reports) to the OPLAN or in a supplement to the OPLAN using the Bi-SC D 80-3 Vol V as the basis.

The LOGUPDATE is a key logistic report. Its purpose is to provide NATO Commanders with a dynamic update of changes to core database information on capabilities, 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.

LOGISTICS FUNCTIONAL AREA SERVICES (LOGFAS)/LOGISTICS FUNCTIONAL SERVICES (LOGFS)

LOGFAS is NATO's logistic tool that allows for data exchange and reporting between NATO's Headquarters, Units, and TCNs in all phases of planning and execution of

logistic operations by use of an integrated series of computer programmes. These programmes use the same database format and therefore data can be shared easily. Designed for use in any multinational exercise or operation, the LOGFAS modules can also be applied to any coalition situation or can be used by individual nations. The future of NATO logistics will reside in the transition to LOGFS. In support of NATO's ambition for collective responsibility for logistics, LOGFS will provide a Command and Control (C2) capability, collective planning capabilities, better visibility, wider theatre-level logistics authority and more agile and adaptive capabilities to exploit emerging technologies to optimise the logistic footprint, thereby improving effectiveness and efficiency. LOGFS is where the logistic community is headed. Full transition and implementation is expected within the next 5 years.

OPERATIONS LOGISTICS CHAIN MANAGEMENT (OLCM)

The OLCM Capability is designed to optimise the prioritisation and coordination of the flow of logistic resources and the provision of services into, within and out of the NATO Joint Operations Area (JOA) from the very beginning of an operation. OLCM enables NATO and TCNs to conduct near real-time collaborative planning and to improve logistics coordination between them through:

- FPG-Log principles;
- renovated processes that include:
  - early engagement of all logistic actors including the HN in the OPP to enable them to coordinate bilateral and multilateral arrangements as well as commercial support solutions;
  - early identification of potential force elements;
  - early identification of deployment critical points;
  - earlier contracting authority for theatre logistic requirements;
  - logistics authority and control in the JOA through the JLSG;
  - improved logistic coordination and solution brokerage between NATO and the NSEs in the JOA;
- networked logistics C2 (the Functional Services for Logistics C2 – LOGFS) that will offer comprehensive data collection and processing, enhanced visibility over requirements and resources, as well as decision support through modelling and simulation of logistic alternatives and plans.

The OLCM benefits are optimised capabilities, economies of scale, reduced duplication of effort and reduced competition for resources in the JOA. It is expected that OLCM will deliver an Initial Operational Capability (IOC) by mid-2014 and a Full Operational Capability (FOC) in 2018.

CIVIL SUPPORT TO PLANNING

Lessons learned from operations in the Balkans and Afghanistan reveal that NATO Commanders increasingly require civilian capabilities to support the mission.

Contractor support provided by NATO Agencies such as the NATO Support Agency (NSPA), or other commercial entities, form the basis of the commercial support capabilities from which the NATO Commander can draw. Additionally, useful expertise can be drawn from the Civil Emergency Planning Committee's (CEPC) Transport Groups (TG). The CEPC engagement in the early stages of the planning process is essential in order to ensure that all internal and external aspects of the sustainment flow is determined and assessed prior to the final planning and execution phase.

Some examples of potential TG support to the military include:

- The TG (Civil Aviation) (TG(CA)) 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 TG(CA) can also evaluate complex aviation issues against the backdrop of national and international laws and regulations.
- The TG (Inland Surface Transport) (TG(IST)) can make available information on rail transport capabilities that could be used in the deployment of NATO forces. The TG(IST) can also initiate studies to examine potential surface transport Lines of Communication (LOC) to support NATO operating forces.
- The TG (Ocean Shipping) (TG(OS)) serves as the NATO focal point for advice and assistance on commercial sea transport capabilities and on the protection of civilian maritime assets against acts of terrorism.

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CHAPTER 7

MULTINATIONAL COLLECTIVE LOGISTICS

Multinational Unit at work

INTRODUCTION[49]

Since only a few Allies can independently deploy and sustain their forces, it is essential that NATO and Allies continue to pursue Collective Logistics with the aim of giving NATO Commanders the greatest flexibility on current and future missions. This can be achieved by providing effective logistic support, especially improved deployability and enhanced sustainability, more capable and interoperable logistic forces and optimised logistic command and control, at best value to Allies. The practical application of collective responsibility for logistics is essential in supporting NATO forces, especially for the delivery of theatre-level logistic capabilities. Logistic support must strike a balance between expeditionary agility and adequate sustainment and take advantage of multinational, Host Nation (HN) and commercial support solutions as early as possible.

Similarly with medical care, it is vital that NATO and Allies continue to develop, preserve and maintain the necessary medical capabilities individually or in cooperation with other Allies in order to meet the demands and expectations for Alliance operations. This includes exploring and using the benefits of partnership activities, continuous improvement in healthcare support on operations, establishing an effective medical communication and information system, as well as more effective use of multinational procurement and common national procurement mechanisms.

A range of logistic requirements could be satisfied, as already witnessed, from military and/or non-military sources via the civil emergency planning domain. These requirements comprise both physical assets and expert advice.

A number of initiatives are currently under development to bring coherence and clarity of purpose to all aspects of Alliance operations. This Chapter focuses on the main elements of these initiatives and all references should be viewed in their current edition.

MULTINATIONAL LOGISTICS[50]

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 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;
- greater influence by a NATO Joint or Component Commander; and
- a better use of specific national expertise.

49) *C-M(2011)0022, Political Guidance (PG)*

50) *MC 319/2, NATO's Principles and Policies for Logistics*

Multinational logistics is not an aim in itself, however, the Joint Logistics Support Group Headquarters (JLSG HQ) and similar deployable maritime organisations such as Advanced Logistic Support Sites (ALSSs) or Forward Logistic Sites (FLSs) must be multinational in order to perform their functions. 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 and cost of the NATO Commander's mission. NATO operational experience demonstrates that once national logistic support structures have been established, it is more difficult and expensive to move towards multinational logistic solutions. Therefore, multinational logistic solutions should, where possible, be pursued long before 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, Host Nation Support (HNS), and contractor support to operations that are arranged bilaterally 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. The 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 (such as Multinational Integrated Logistic Units (MILUs)).

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

ALLIED FORCES AND THEIR USE FOR OPERATIONS

MC 586, Military Committee (MC) Policy for Allied Forces and their Use for Operations is the overarching policy document developed in collaboration with NATO nations. It has brought together a raft of MC policies and underpins the Bi-Strategic Commands (Bi-SC) Conceptual Framework for Alliance Operations (CFAO). The Policy addresses those Headquarters (HQ) and forces that nations make available to the Alliance for use in the full range of operations and missions. The Policy describes:

- the principles of availability and flexibility for structuring the Alliance military capabilities;

- the structure of all NATO forces and the way in which forces are organised, expanded and sustained including Command and Control (C2) principles for the provision of an Alliance immediate response to an emerging crisis;
- how forces should be logistically supported and resourced;
- relations to NATO Education, Training, Exercise and Evaluation (ETEE);
- general principles of interaction between all relevant levels of NATO forces and forces from non-NATO contributing nations as well as the relationship with other national and international organisations and agencies; and
- the policy aspects of suitable arrangements that need to be established in order to ensure that the enhanced relationship and interaction between the NATO Command Structure (NCS) and the NATO Force Structure (NFS) can deliver effective C2 capabilities for NATO-led operations at all times in accordance with the NATO Level of Ambition (LOA) including the requirements for the linkages between the NCS, NFS and national HQs.

Logistic Support Policy

In accordance with the MC 55 series and MC 319 series of policy documents, logistic support forces must be available and useable to deployed commanders. The logistic support forces must be as cohesive, flexible, tailorable and responsive as the deployed forces they support. To achieve this versatility and responsiveness, NATO forces must operate under the principle of Unity of Effort and should adhere to the principle of Unity of Command to the maximum extent possible by reducing national or component stovepipes and increasing multinational joint logistic cooperation. As already indicated, the practical application of collective responsibility for logistics is essential to supporting NATO forces effectively and efficiently, especially for the delivery of theatre-level logistic capabilities. Logistic support must strike a balance between expeditionary agility and adequate sustainment and take advantage of multinational, HN and commercial support solutions as early as possible. The need for collaborative logistic planning before and during the Operations Planning Process (OPP) is, therefore, essential, especially to identify and provide for strategic deployment requirements, to optimise HN and multinational support options and to exploit commercial support solutions prior to deployment.

Logistic Command and Control

The logistic concept employs the principles in the MC 319 series and is applicable to all Alliance Operations and Missions (AOM). The designated Joint Force Command (JFC) is responsible for logistic planning and coordination. The JFC will normally tailor and deploy the JLSG HQ as the operational logistic C2 capability to plan, coordinate and synchronise theatre-level logistic operations. The core capability of this Headquarters will be provided from the NCS or NFS, but the core staffs will need to be reinforced from the NFS where necessary. Normally, a JLSG, complete with a full range of theatre capabilities, will deploy to execute theatre-level logistic support. The JLSG will employ assigned logistic capabilities,

HN resources and commercial support capabilities to deliver the required level of support. Tactical level logistic operations will be coordinated by the respective Component Commands (CC). To promote Unity of Effort, all assigned theatre-level logistic units not organic to tactical level formations should be provided to the NATO Commander under Logistic Control (LOGCON). This does not prevent nations from commanding organic logistic resources under their National Support Elements (NSE) should they so choose.

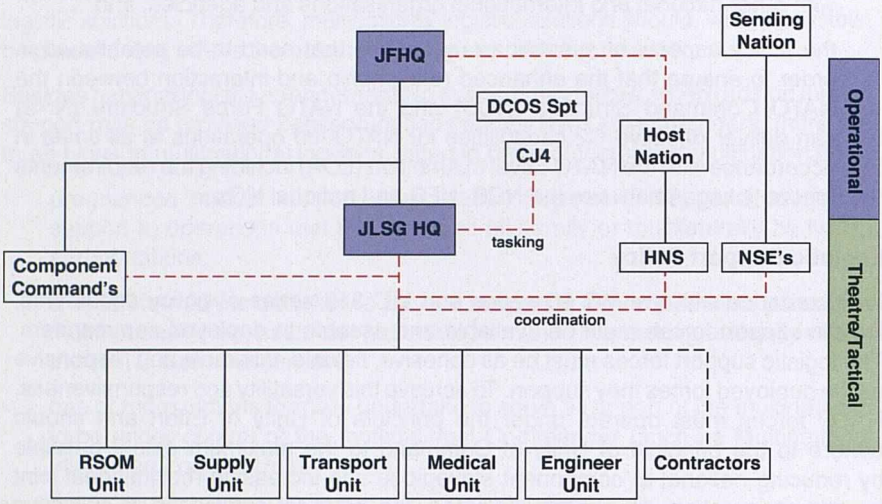

Figure 7.1 Deployed Logistic Command and Control Model

NATO Medical Support

Medical support is delivered in accordance with the principles and policy detailed in the MC 326 series. For operations, the provision of medical support is determined by the principles of timeliness of treatment, continuity of care and comparable standards throughout the medical support system. Nations retain responsibility for the provision of medical support to their forces, however, the overall duty of care for the force rests with the operational commander.

Movement and Transportation

During the initial stages of an operation, Transfer of Authority (TOA) at the commencement of strategic deployment is recommended in order to allow the Allied Movement Coordination Centre (AMCC) to coordinate and deconflict strategic deployment and in order to avoid competition amongst nations for scarce transport resources. This will also ensure a managed throughput at Air Ports of Debarkation (APODs) or Sea Ports of Debarkation (SPODs) and the available Land Lines of Communication (LLOCs).

Resources and Funding Policy (See Chapter 14)

Operations must be properly resourced through national, multinational or common NATO funding, including trust funds. Alliance funding policies as well as funding arrangements for a specific operation are approved by the Council based on recommendations developed by the Resources Policy and Planning Board (RPPB) and managed by the relevant financial committees.

CONCEPTUAL FRAMEWORK FOR ALLIANCE OPERATIONS (CFAO)

The NATO SCs have been tasked by the MC to produce a Bi-SC CFAO which, in conjunction with MC 586, MC Policy for Allied Forces and their use for Operations, will bring greater coherence to NATO's deployable forces' concepts. The Bi-SC CFAO is designed to provide comprehensive direction and guidance to all staff in the NCS and NFS HQs as well as to those national HQs which work together with NATO.

NATO and nations should plan and coordinate support to operations in a collaborative manner leading to a more effective use of resources, reduced logistic footprint, timely responsive support and cost reductions. Collaborative support planning must, therefore, commence at the earliest opportunity, perhaps years before any operational deployment and must continue during operations planning. This planning should engage all the actors in order to expose requirements and opportunities which will lead to the optimal utilisation of multinational and commercial support options. In order to provide effective and efficient support to the operational commander, logistic forces must be cohesive, flexible, scaleable, and as agile as the force itself. Logistic support will therefore be tasked and organised for each mission.

SUPPORT FOR THE NATO RESPONSE FORCE (NRF)

General

The NRF is NATO's primary force for conducting expeditionary warfare within the Alliance's territory and beyond. The NRF is also the engine for NATO's ongoing transformation, giving impetus to the development of transformational concepts and capabilities.

While Article 5 missions within NATO territory remain the foundation of Alliance collective defence, expeditionary operations beyond NATO's territory have taken on added importance with NATO's ongoing engagement in AOM. 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 HNS;
- support to counter-terrorism operations;
- AOM, 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 packages 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 if properly trained and certified. The NRF must be robust enough to be employed as an 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. There is only one CJSOR to meet all seven NRF missions. The CJSOR is the basis for the production of a credible, deployable force with sufficient operational flexibility and resilience. The 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 to be able to get there quickly and reach Full Operational Capability (FOC) as soon as possible.

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. There is a 6-month work-up and training period before taking up the mission. The two Joint Force HQ (JFHQ) at Brunssum and Naples take it in turn to run a 12-month rotation and provide the core of the Joint Theatre HQ (JTHQ) or JLSG HQ that deploy.

The NRF tailoring of its support forces to be deployed should be guided by a graduated framework proportional to the operational circumstances. This is not necessarily sequential and may occur as follows: Joint Logistic Reconnaissance Team (JLRT) from the appointed JFC JLSG HQ Core Staff Element (JLSG HQ CSE), Immediate Response Force (IRF) and then, the bulk of the NRF.

MC 526 - Logistic Support Concept for NRF Operations

MC 526, Logistic 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. However, MC 526 will be superseded by MC 586, MC Policy for Allied Forces and their use for Operations, when key elements of MC 526 have been included in the next edition of MC 319, NATO Principles and Policies for Logistics. MC 586 and the Bi-SC CFAO will then be the definitive documents for logistics at the operational and theatre/tactical level respectively.

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 cooperation from Troop Contributing Nations (TCN), in particular if Multinational Medical Units are to be formed. An NRF Medical Support Concept (MC 551) has been developed in line with the requirements set by MC 586 and MC 319. 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.

THE JOINT LOGISTIC SUPPORT GROUP (JLSG): AJP-4.6(B)

In the initial planning stages of an operation, the JLSG HQ CSE will be used. Thereafter, the JLSG HQ/JLSG will deploy and execute Reception, Staging and Onward Movement (RSOM) and theatre-level logistic support in coordination with the NSEs using assigned logistic resources and employing NATO logistic information systems as agreed in advance with nations. Where the size or scale of the operation necessitate, the JLSG will be augmented by the NCS and/or the NFS capabilities as appropriate. Nations will be responsible for tactical level logistic support for their forces employing bilateral and multilateral solutions where and when appropriate.

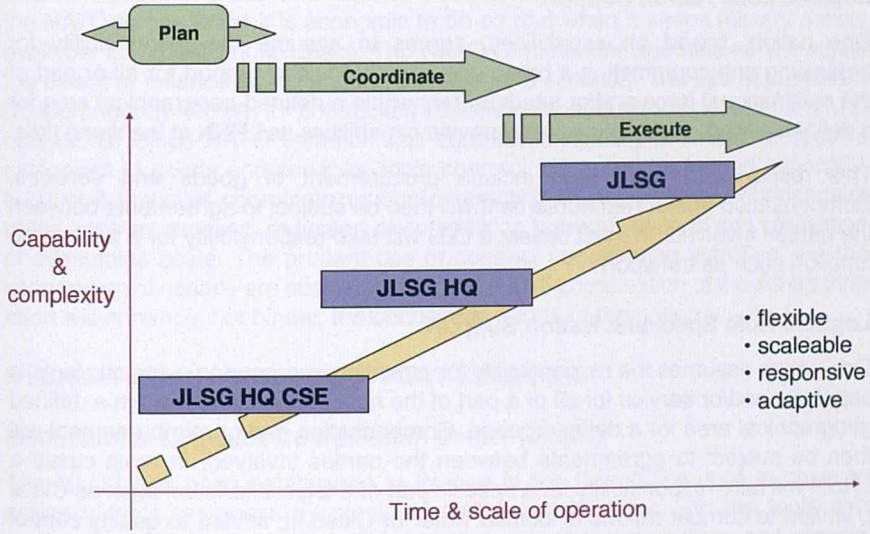

Figure 7.2 Mission tailoring of JLSG

MODES OF MULTINATIONAL LOGISTICS SUPPORT: 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 the current version of MC 319.

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:

- Logistic Lead Nation (LLN) support;
- Logistic Role Specialist Nation (LRSN) support;
- Multinational Integrated Logistic Unit (MILU);
- Multinational Logistic Unit (MLU); and
- Contractor Support to Operations.

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 coordinating role if required. All of the above mentioned modes can be used for Article 5 and other AOM.

Logistic Lead Nation Support

One nation, based on capabilities, agrees to assume the responsibility for organising and coordinating a broad spectrum of logistic support for all or part of the multinational force and/or headquarters within a defined geographical area for a defined period. The LLN can also provide capabilities as LRSN at the same time.

This responsibility may also include procurement of goods and services. Compensation and/or reimbursement will then be subject to agreements between the parties involved. In most cases, a LLN will take responsibility for a full logistic function such as transport.

Logistic Role Specialist Nation Support

One nation assumes the responsibility for providing or procuring a specific logistic capability and/or service for all or a part of the multinational force within a defined geographical area for a defined period. Compensation and/or reimbursement will then be subject to agreements between the parties involved. In most cases a LRSN will take responsibility for a specific part of a logistic function such as Class I, limited to combat rations or bottled water or Class III, limited to quality control or diesel.

Multinational Integrated Logistic Unit

Two or more nations agree, under the operational control of a NATO Commander at joint force or component level, to provide logistic support to 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.

Multinational Logistic Unit

A MLU is formed when two or more nations agree, at joint force or tactical level, to provide logistic support to a multinational force. A MLU normally remains under national command and control.

Contractor Support to Operations (See Chapter 15)

Contracting has become increasingly important to the support of all NATO operations. Contractors are now engaged in a progressively wider range of roles and functions as nations downsize their forces, outsource functions and bring into service highly technical weapon and equipment systems. In addition, deployed forces now face many tasks for which they are not equipped such as assisting with rebuilding war damaged national infrastructure. Contracting is a significant tool that may be employed to gain access to additional resources and services, but it should not be used to replace military capabilities. It may also be employed to augment or complement military support capabilities through ad hoc or permanent contracts.

The NATO Commander and nations will use commercial contracts to support the NATO forces when it is economic to do so and when it 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 Support Agency (NSPA) 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, coordinate national contracting efforts to ensure enhancement of the contract process, reduction of competition between nations and realisation of economies scale. The prudent use of contract coordinating activities and the cooperation of nations are essential. Effective NATO coordination of the contracting effort will enhance, not hinder, the contracting efforts of the nations.

MULTINATIONAL LOGISTIC SUPPORT ENABLERS

Multinational Logistics Coordination Centre (MLCC)

The MLCC has been established in Prague in the Czech Republic in order to enhance force readiness by providing NATO and its Allies with the tools and environment in which to match logistic requirements to capabilities, and provide

increased visibility of coordinated events. The MLCC provides real-time visibility of logistic events, reduces the cost of coordination of events through virtual environment capabilities and provides a central repository of logistic data which is readily available to all nations. Nations can submit logistic requirements for education, training events and exercises to the MLCC which also serves as a permanent point of contact for nations to receive and manage information and test tools for information exchange in a virtual environment.

Mutual Support Arrangements

These arrangements 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 coordinate such arrangements.

Commonly Funded Logistic Resources (See Chapter 14)

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 LOC;
- operating and coordinating the use of infrastructure and real estate;
- Communication and Information Systems (CIS) assets; and
- infrastructure engineering.

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:

- **Stage A Cross-Servicing**. The servicing of an aircraft on an airfield/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.
- **Stage B Cross-Servicing**. The servicing of aircraft on an airfield/ship which enables the aircraft to be flown on an operational mission. The servicing includes all Stage A servicing 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.

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MC 319 Series, NATO Principles and Policies for Logistics

MC 586, MC Policy for Allied Forces and their use for Operations

MC 526, Logistics Support Concept for NRF Operations[51]

MC 551, Medical Support Concept for NRF Operations

AJP-4.6(B), Allied Joint Doctrine for the Joint Logistic Support Group

AJP-4.9, Allied Joint Doctrine for Modes of Multinational Logistics Support

51) *MC 526 will be superseded by MC 586, MC Policy for Allied Forces and their use for Operations, when key elements of MC 526 have been included in the next edition of MC 319, NATO Principles and Policies for Logistics.*

CHAPTER 8

PETROLEUM SUPPORT

Fuel pipeline

INTRODUCTION

Fuel is a commodity that is essential to NATO's defence planning and also for sustaining social and economic life. Its availability cannot be taken for granted. Guidance to NATO and national authorities on the policies, principles and characteristics of the NATO Petroleum Supply Chain have been provided in EAPC(NPC)D(2009)0001-REV2 which also describes the NATO Pipeline System (NPS), the planning criteria and NATO's reporting requirements. It addresses crisis management, NATO infrastructure, standardization and interoperability, Deployable Fuels Handling Equipment (DFHE), and legislative and environmental issues. Further, it defines the responsibilities of the nations, the Petroleum Committee (PC) and the NATO Military Authorities (NMAs).

There are several committees in NATO associated with fuels support and fuels supply planning and these 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;
- fuel support to expeditionary operations;
- air base, naval base and unit support;
- military fuels, oils, lubricants and associated products, and their relationship with weapon systems, and all types of military equipment and vehicles;
- petroleum planning; and
- standardization, interchangeability, interoperability and research on fuels, oils and lubricants and related products, as well as Petroleum Handling Equipment (PHE).

CRISIS MANAGEMENT

A failure by NATO and nations to act collectively in the event of a major terrorist attack or incident that disrupts the overall flow and supply of petroleum products may constrain the Military Committee (MC) in providing advice to the North Atlantic Council (NAC). This could, in turn, negate the possibility of a credible NATO response. The PC has therefore developed a crisis management organisation and procedures for dealing with any such incident[52]. The organisation and procedures are under constant review.

Civil preparedness is also the responsibility of the PC. In this context, the PC liaises with the International Energy Agency (IEA) and with the Civil Emergency Planning Committee's (CEPC) Transport Group (Inland Surface Transport) (TG(IST)) and the Industrial Resources and Communications Services Group (IRCSG) on matters of common interest.

52) *AC/112-D(2010)0003, NATO Petroleum Crisis Management Organisation and Procedures*

MILITARY FUELS AND THE SINGLE FUEL POLICY

The coordinating body for military fuels, oils, lubricants and associated products is the Fuels and Lubricants Working Group (F&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.

Single Fuel Policy (SFP)

The aim of the SFP[53] is to achieve maximum equipment interoperability through the use of F-34 as the single fuel on the battlefield for land-based military aircraft, vehicles and equipment. Since its inception as a concept in 1986, the adoption of the SFP has been supported by a number of studies and trials in Member and Partner nations. 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 its own equipment replacement programmes; details of nations' progress in implementing the SFP are promulgated biennially by the F&LWG along with details of the experience gained in the process. 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 such as 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 specialised fuels such as F-18 and F-67 for Unmanned Aerial Vehicles (UAV) and this requirement is being addressed by the F&LWG and the Petroleum Handling Equipment Working Group (PHEWG) with the appropriate UAV working groups. 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 the policies, principles and characteristics of the NATO Petroleum Supply Chain.

THE NPS

Although collectively referred to as one system, the NPS consists of nine separate and distinct military storage and distribution systems located in 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

53) EAPC(NPC)D(2005)0002, The Single Fuel Policy

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[54].

In addition to the NPS, there are also fuel systems in the other NATO nations with NATO's military requirements incorporated into approved Capability Packages (CPs) for implementation as appropriate.

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.

THE NATO BULK FUEL STRATEGY (BFS)

The ability of NATO to ensure adequate bulk fuel support for Article 5 and other Alliance Operations and Missions (AOM) depends on the availability of deployable bulk fuel and fixed bulk fuel capabilities. The bulk fuel infrastructure serves as the storage and transportation backbone that: ensures NATO's ability to provide fuel to its military forces in support of Article 5 operations; provides the initial source of fuel for the sustainment of NATO forces responding to an out-of-area crisis; and acts as a NATO and national strategic reserve.

The NATO bulk fuel systems are a valuable strategic asset. Their value is enhanced by its features which ensure that NATO's fuel demands can be met through a networked, secure fuel grid which moves fuel through ecologically sound, buried distribution pipelines built on established rights of way and capable of delivering the surge and sustainment requirements needed to support operations. The fuel is also stored in tanks with built-in physical protection. These are important and unique features which ensure both energy security and the certainty of fuel supplies.

The NATO BFS provides NATO with a comprehensive and transparent strategy to secure access to fuels supplies in a timely manner through a readily available and cost effective fuel storage and distribution network. The NATO BFS has been coordinated by the PC on behalf of the Logistic Committee (LC)[55] in consultation with the NMAs and other relevant Committees and in accordance with its Terms of Reference[56]. The Strategy balances military requirements, logistics considerations and resource considerations using the so called 'three pillar approach' in order to allow NATO's bulk fuel requirements to be met and the NATO fixed bulk fuel infrastructure to be rationalised against these requirements. A joint military,

54) *C-M(2009)0084, Charter of the Organisation of the NPS and Associated Fuel Facilities*

55) *In accordance with PO(2010)0074-REV2, Recommendations from the Deputy Permanent Representatives' Group on Committee Review*

56) *AC/305-D(2010)0013, PC Terms of Reference*

logistics and resources implementation document is being developed in order to implement the Strategy endorsed by the Council[57]. This will enable a fine balance to be struck between deployable and fixed bulk fuel requirements.

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.

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 requirements, 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 or Contractor Support as appropriate. Such solutions should adhere to the SFP and the modular concept described below.

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 16 discrete but compatible modules of DFHE which can receive, store and distribute fuel within any theatre of operation. The concept, detailed in Standardization Agreement (STANAG) 4605/ Allied Fuels Logistic Publication (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 has been used in the development of logistic information tools, such as the Logistics Functional Services (LOGFS) and to assist with the fuels supply planning for expeditionary operations using the Fuel Consumption Units (FCU) detailed in STANAG 2115 to determine requirements.

PETROLEUM PLANNING

Petroleum planning in NATO is covered in two ways: the long-term capability development is considered in the NATO Defence Planning process (NDPP) and

57) *C-M(2011)0025-REV1, NATO Bulk Fuel Strategy*

the short-term planning for operations is covered by the Logistics Operations Planning Process (LOPP). Petroleum planning is primarily the responsibility of the NMAs, but such work is overseen by the PC which reports on its activities in this area to the LC, as appropriate.

STANDARDIZATION, INTERCHANGEABILITY AND INTEROPERABILITY

The PC is the Tasking Authority (TA) for some 50 STANAGs and AFLPs covering fuels, lubricants, associated products and petroleum handling equipment. These STANAGs are listed in the NATO Standardization Agreements and Allied Publications Catalogue available on the NATO Standardization Agency's website and all are releasable to Partner nations who may also attend all PC meetings in EAPC format.

FUTURE FUELS

The military are currently dependant on fossil fuels for the propulsion of their aircraft, vehicles and equipment. However, climate change, the finite nature of oil supplies and concerns over political security in the oil producing regions mean that availability, affordability and environmental acceptability need to be addressed now in order to cater for future propulsion needs. In order to address these needs, the PC has developed its vision on future fuels[58] under which NATO nations, the PC (through its F&LWG) and the NATO Science and Technology Organisation (NSTO) (through its Applied Vehicle Technology (AVT)) Panel are targeting their combined efforts at improving equipment performance by making it more energy efficient and compliant with the use of alternative fuels. These efforts are being conducted in close partnership with engine and oil manufacturers in order to develop future equipment and fuel specifications that are compatible with all the prevailing and forthcoming performance and environmental requirements. Compliance with the SFP remains unchanged.

REFERENCES

EAPC(NPC)D(2009)0001-REV2, NATO Petroleum Supply Chain – Principles, Policies and Characteristics

AC/112-D(2010)0003, NATO Petroleum Crisis Management Organisation and Procedures

EAPC(NPC)D(2005)0002, The Single Fuel Policy

C-M(2009)0084, Charter of the Organisation of the NATO Pipeline System and Associated Fuel Facilities

PO(2010)0074-REV2, Recommendations from the Deputy Permanent Representatives'

Group on Committee Review

AC/305-D(2010)0013, Petroleum Committee Terms of Reference

58) *EAPC(NPC)D(2010)0004, The Petroleum Committee Vision on Future Fuels*

C-M(2011)0025-REV1, NATO Bulk Fuel Strategy

STANAG 2115 Fuel ConsumptionUnits

STANAG 2536, Allied Joint Petroleum Doctrine – AJP-4.7

STANAG 4605/AFLP-7, Deployable Fuels Handling Equipment

MC 526, Logistics Support Concept for NATO Response Force (NRF) Operations

MC 586, MC Policy for Allied Forces and their use for Operations

EAPC(NPC)D(2010)0004, The Petroleum Committee Vision on Future Fuels

ANNEX

Aide Memoire on Fuels in NATO

Aide Memoire on Fuels[59] 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 purposes.[60]

F-34 is a kerosene type aviation turbine fuel for use in land based military aircraft gas turbine engines.[61] The fuel contains a Fuel System Icing Inhibitor (FSII)[62] (S-1745) and a Lubricity Improving Additive[63] (S-1747)

F-35 a kerosene type aviation turbine fuel for use in land based military aircraft gas turbine engines.[64] 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-1749[65] [66]. 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 engines.[67] 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 engine.[68] The fuel contains the additives S-1745 and S-1747.

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

60) Also known as AVGAS.

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

62) 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.

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

64) Known commercially as Jet-A1 or AVTUR.

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

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

67) Also known as AVTAG.

68) Also known as JP-5 or AVCAT.

GROUND FUELS

Gasoline

F-67 is 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.

CHAPTER 9

ARRANGEMENTS TO FACILITATE OPERATIONS

INTRODUCTION

Nations and NATO authorities have a collective responsibility for the logistic support of NATO's multinational operations[69] and should, where possible, cooperatively arrange adequate support arrangements to the complete range of NATO operations and exercises during peace, crisis and conflict. This will include Article 5, Collective Defence, and other non-Article 5 Alliance Operations and Missions (AOM). This strategy is workable only if Host Nations (HN) and supporting organisations make support available. Allied Command Operations (ACO) is responsible for ensuring that Alliance members' support agreements fulfil NATO's operational requirements without reducing the combat potential of the HN.

The possibility of the deployment of a rapid military response beyond NATO's territory has significant implications for NATO's policy and planning procedures. In particular, it is necessary to adopt more rapid and flexible support arrangements and planning mechanisms to ensure that arrangements can be put in place either prior to an operation, or as soon as possible thereafter, so that the required support can be assured to the maximum extent possible, consistent with maintaining or enhancing civil and military effectiveness.

To achieve this, NATO Commanders must be involved in support planning and be given the authority to coordinate planning where necessary. The Logistics Committee (LC) produced MC 319/2 that confers upon the NATO Commander key authorities for logistics, including support arrangements and Host Nation Support (HNS). NATO Commanders' authorities with respect to HNS are further defined in MC 334/2, NATO Principles and Policies for HNS.

DEFINITIONS

- 'Agreement' is an arrangement between parties regarding a course of action; a NATO Agreement with a nation or organisation is not usually considered a legally binding document.
- 'HNS' is civil and military assistance rendered in peace, crisis and conflict by a HN to allied forces and organisations which are located on, operating in or transiting through the HN's territory[70].
- 'Transit' is the act of passing over, across, or through a sovereign nation.

OPERATIONAL SUPPORT ARRANGEMENTS

With the potential for NATO forces to increasingly operate worldwide, it is difficult to predict where support arrangements, such as Transit Agreements, might be required. Nevertheless, NATO HQ is constantly looking to develop arrangements at potential key geographic locations. NATO HQ International Staffs

69) *C-M(2003)101(INV)/MC 319/2, NATO Principles and Policies for Logistics*

70) *AAP-6(2011), NATO Glossary of Terms and Definitions of Military Significance for Use in NATO (English and French)*

(IS) can also support, at short notice, deploying NATO forces by engaging with sovereign nations along the strategic Lines of Communication (LOC) to support a developing operation. NATO HQ is responsible for negotiating multimodal Transit Arrangements (TA) and other types of support agreements on behalf of all Sending Nations (SN). Having a single transit or support arrangement with a HN or transit nation has obvious benefits and can prevent that nation being overwhelmed with SN bilateral agreements and, in some cases, can create efficiencies through multinational collaborative efforts.

Support arrangements can take many forms and the type and style is often driven by the wishes of the HN. Some HNs prefer HNS Memorandum of Understanding (MOU) arrangements whilst others prefer the standard NATO Transit Agreement template, others, a less formal Exchange of Letters. Whilst the operational tempo will often drive support arrangement dialogue at a quicker pace, staffing support arrangements can be a drawn out process as political, technical, legal and financial experts from both sides attempt to seek middle ground, prior to final agreement.

COMPREHENSIVE APPROACH[71]

NATO has learned from recent operational experience that military means, although essential, are not sufficient to meet the many complex challenges to the Alliance's security. Both within and outside the Euro-Atlantic area, NATO must work with other actors to contribute to a Comprehensive Approach (CA) that effectively combines political, civilian and military crisis management instruments. NATO HNS policy establishes a framework and process that enables NATO to deal with HNs prior to and during crisis situations. This is in order to identify 'what and how' HNS could be provided to military forces from the beginning of an operation. The framework that enables NATO to use HNS capabilities can be expanded to include NATO and other International Organisations (IO)[72] with the HN government, but to clearly identify an HN Point of Contact (POC) that would deal with SNs including IOs such as NATO and the UN. This would also articulate the civil-military requirements the HN needs and how, where, what, when and to whom it should be provided. To support this, the NATO HQ Civil-Military Planning Cell will look to develop formal frameworks between NATO, IOs and HNs.

A major point of friction that can often impede a successful CA is the complex set of legal and financial systems inherent within NATO, the Alliance and with IOs. Military multinational logistic operations are often restricted by complex legal arrangements making financial transactions between national militaries and other organisations difficult and time consuming. Arrangements are often considered on a bilateral basis with other nations, with the exception being formal Alliance arrangements within NATO. The incorporation of other nations within a NATO operation or the formation of a non-NATO based coalition can require individual arrangements (military-to-military as well as nation-to-nation) to be developed, which is likely to be a difficult and lengthy process. When other

71) *C-M(2008)0029-COR1, Proposal on a Way Ahead on CA*

72) *Examples of International Organisations include: The United Nations, the World Food Programme, the European Union, the African Union, the World Bank and the International Red Cross.*

federal government agencies, as well as civilian agencies and other organisations involved in a CA are involved, the legal and financial management challenges are multiplied considerably. Where possible, NATO looks to complete pre-operational arrangements so that operations can be executed unhindered.

NATO CONCEPT FOR HNS

HNS seeks to provide the NATO Commander and the 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 (AOO) by providing essential Reception, Staging and Onward Movement (RSOM) 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 Strategic Commands (SCs) have implemented a programme to negotiate standing HNS MOU with NATO and Partner 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 concurrence by the parties participating in and subscribing to it. Within the context of HNS, the MOU is a written overarching bilaterally or multilaterally 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 PRINCIPLES[73]

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. This responsibility encourages nations and NATO to cooperatively 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 cooperative 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 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 ACO, the Commander also has the authority to conclude HNS arrangements for NATO's 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.
- **Coordination and Cooperation**. For HNS planning and execution, the coordination and cooperation 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 SN.
- **Reimbursement**. The HN 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

73) *C-M(2000)56-REV1/MC 334/2, NATO Principles and Policies for Host Nation Support*

be agreed between the HN and the SN 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 HN, the SN and the NATO Commander are responsible for HNS planning and development, while the conclusion of the HNS MOU is the responsibility of the HN 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-coordinated 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 staffs are responsible for the development of HNS arrangements. Because of the inter-relationships between HNS, Civil-Military Cooperation (CIMIC), contracting and other functions, and because of the legal and financial implications of HNS arrangements, close coordination will have to be maintained with all relevant staff from the outset.

During HNS planning, NATO Commanders must ensure close coordination between the SN, once they are identified, and the HN. This coordination 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 SN and the HN in order to promote cooperation 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 the AJP-4.5 series, Allied Joint HNS Doctrine and Procedures, which details this planning framework. An overview of the key aspects of each stage and where they fit into the Logistic Operations Planning Process (LOPP) 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).

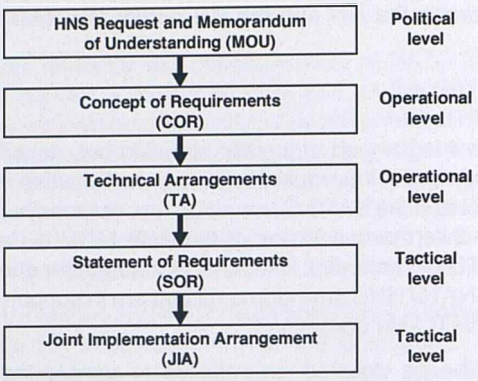

Figure 9-1. 5 Stage HNS Planning Process

HNS POLICIES

The policies set out in this document define the responsibilities of NATO Commanders, the SN and the HN.

Policies Specific to the NATO Commander

The NATO Commander shall negotiate and conclude HNS arrangements for NATO's multinational headquarters and, when authorised, for designated multinational units and selected theatre-level support. The SNs 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 HN and the SN and/or subordinate NATO Commanders in accordance with NATO's HNS doctrine and procedures.

The NATO Commander shall identify HNS requirements and has to coordinate and prioritise them and the provision of HNS in consultation with nations.

The NATO Commander shall provide the HN and the SNs 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 HN to support the forces under his command. Conversely, the NATO Commander is required to inform the SN on the availability of HNS assets.

If NATO common-funding or appropriate exercise funding is approved[74], the NATO Commander in conjunction with the HN 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.

74) *See also Chapter 14 with regard to common-funding*

Policies Specific to the Sending Nation (SN)

The SN is encouraged to accede to the HNS MOU concluded by the SCs and the HN. Any outstanding concerns could then be addressed as part of the accession process. The SN may choose to negotiate its own bilateral MOU with the HN.

The SN shall:

- participate in the planning and execution processes in order to conduct effective HNS;
- notify its HNS requirements and any significant changes as they occur to the HN and the NATO Commander as early as possible; and
- report the status of HNS negotiations to the appropriate NATO Commander.
- Ultimately, and prior to the receipt of HNS, the SN is responsible for making the necessary arrangements for reimbursement.

Policies Specific to the Host Nation (HN)

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

- retain control over its HNS resources, unless control of such resources is released;
- participate in the planning and execution processes in order to conduct effective HNS;
- report the status of HNS negotiations to the appropriate NATO Commander.
- determine the cost standards to be applied for cost calculations for HNS;
- ensure that, as far as possible, its bilateral HNS arrangements and associated plans are harmonised with the requirements of NATO operations planning; and
- ensure the required cooperation and coordination between its civilian and military sectors in order to make the best use of limited HNS resources.

CAPABILITY DATABASE

In order to facilitate the NATO Commanders' ability to assess a HN's potential to provide support, they are encouraged to identify other HNS capabilities. The NATO CAPCAT 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 the Logistic Functional Area Services (LOGFAS). HNs need to identify a POC to NATO that can facilitate access to the required up-to-date information on the nation's HN-related capabilities.

LOCAL CONTRACTING[75]

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 SN 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 coordinated with or through the HN, where possible.

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

CIVIL-MILITARY COOPERATION (CIMIC)[76]

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

REFERENCES

C-M(2003)101 (INV)/MC 319/2, NATO Principles and Policies for Logistics

AAP-6(2011), NATO Glossary of Terms and Definitions of Military Significance for Use in NATO (English and French)

C-M(2008)0029-COR1, Proposal on a Way Ahead on CA

C-M(2000)0056-REV1/MC 334/2, NATO Principles and Policies for Host Nation Support

AJP-4.5, Allied Joint Host Nation Support Doctrine and Procedures

MC 411/1, NATO Military Policy on Civil-Military Cooperation

75) See also Chapter 15 with regard to contractor support to operations

76) MC 411/1, NATO Military Policy on Civil-Military Cooperation

CHAPTER 10

MOVEMENT AND TRANSPORTATION SUPPORT

A 400M on the tarmac

INTRODUCTION

Movement and Transportation (M&T) encompasses the whole spectrum of infrastructure, facilities, airlift, surface transport, sealift, command and control, and equipment, which directly support the deployment, movement control, Reception, Staging and Onward Movement (RSOM), sustainment, and redeployment of forces. M&T is the cornerstone of the Alliance's operational concept, requiring investment in resources, facilities and equipment. The need for coordination 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 coordination, deconfliction and cooperation, not competition for scarce 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 M&T planning based on generic and ad hoc operational planning requirements. The greater reliance placed upon NATO forces' ability to deploy quickly at greater distances, the closer coordination is required throughout the Alliance; and
- the limited availability of transportation resources underlines the continuing need for close coordination between the NATO Military Authorities (NMAs), NATO M&T-related committees, NATO civil agencies and Multinational (MN) Coordination Centres for providing support to NATO military operations.

NATO's Principles and Policies for Movement and Transportation are established in MC 336/3, and Allied Joint Movement and Transportation Doctrine is recorded in AJP 4.4(A) to assist nations and NATO to operate in a combined and joint M&T environment. Joint doctrine for RSOM is in AJP 3.13.

M&T PRINCIPLES

The M&T principles and policies are copied from MC 336/3 in the following paragraphs:

Collective Responsibility. NATO and nations take collective responsibility for M&T support to NATO operations. Specific responsibilities are described hereafter:

- NATO Responsibility. NATO Commanders are responsible for initiating, prioritising, coordinating and deconflicting the deployment (including RSOM), transportation for sustainment (re-supply), and their respective forces' redeployment. This must be done in cooperation 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 cooperation, coordination, and economy, and may include bilateral and/or multilateral cooperative arrangements.

Cooperation. Cooperation between NATO and national authorities, both military and civilian, is essential. Such cooperation can be of a bilateral or multilateral nature. This incorporates both cooperative and shared use of lift.

Coordination. M&T coordination 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 inter-modal 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.

Standardization. Standardization 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.

M&T 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 lack of lift assets. Consequently, nations should, where appropriate and possible, make resources available to NATO for cooperative or shared use. These should be responsive to NATO's operational requirements and coordinated 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 HQ International Staff (IS) is responsible

for developing peacetime and operation-specific Transit Arrangements with Host Nations (HN) to support multi-modal movement and, where necessary, the right of overflight.

- 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 unique in that it is a distinct but integral part of logistic planning and an essential element to operational planning. M&T planning must also be consistent with force 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 Logistics Operations Planning Process (LOPP).
- M&T planning must consider the use of Host Nation Support (HNS) and/or local resources during all phases of an operation.
- NATO and national M&T planning should consider the possibility of pre-positioning of stocks, materiel and equipment in order to improve M&T reaction time.
- RSOM is the phase of the deployment process 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 coordination with the HNs 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. RSOM is equally applicable to the redeployment (reverse RSOM) phase of an operation.
- The M&T planning process generally applies also to sustainment and rotation of forces. However, the conditions might differ and have an impact on the planning results.
- 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 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. Similarly, the Effective Visible Execution (EVE) tool is used by contributing nations and NATO to manage logistic resources in theatres of operations.
- NATO and NMAs will ensure that harmonised casualty evacuation is incorporated into movement plans.
- To maximise efficiency, M&T planning to support military operations must be carried out and coordinated on a combined and joint military/civil basis encompassing all modes of transport. NATO and Allies should 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 civilian M&T expertise to assess and define the civil transport support capability, availability and feasibility. To this end, NATO and nations should make arrangements for close and well structured cooperation 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 Crisis Response Operations (NA5CRO)/Alliance Operations and Missions (AOM). The SCs will scrutinise 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 Civil Emergency Planning Committee (CEPC). Through its Transport Groups (TG), NATO will monitor and advise nations on the adequacy of legislation or other national measures, as appropriate, to support NATO M&T capabilities. See also Chapter 6.

Policy on Military Support to Civil Operations

Military support to civil operations will be conducted using the same principles and policies as described above taking into account NATO's contribution to a Comprehensive Approach (CA) involving the wider international community. See also Chapter 4.

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 bilateral 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 Allied Movement Coordination Centre (AMCC) for access to transportation resources or surplus capacity made available by nations for cooperative or shared use;
- approaching the civil transportation market in a coordinated 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 bilateral or multilateral arrangements; and
- reporting to the appropriate NATO authorities those military and civil transportation resources that may be available for cooperative or shared use.

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

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 another nation's or agency's transportation resource is responsible for reimbursing the resource providing nation or agency as 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 the status of force deployment, availability of transportation resources and status of the Lines of Communication (LOC). 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 STRUCTURES, TASKS AND RESPONSIBILITIES

The M&T structure must be capable of responding flexibly to a national declaration of war and NA5CRO/AOM 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 IS and the International Military Staff (IMS) assist deployment planning and execution by providing doctrinal and policy guidance and clarification to support Allied Command Operations (ACO) in its planning processes for the transit of deployed forces through national territories.

The coordinating authority for logistics, the Logistics Committee (LC), is responsible for coordinating and harmonising the development and implementation of the Alliance's M&T policies and concepts. The Movement and Transportation Group (M&TG) supports the LC with regard to M&T policies and concepts.

Civil-Military Planning and Support

The CEPC, through its Civil-Military Planning and Support Section (CMPS Section) and their TGs, 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.

COMPrehensive Approach Specialist Support (COMPASS)

The CMPS Section continues to manage COMPASS as part of the implementation of NATO's contribution to a Comprehensive Approach Action Plan. It is a roster of national civilian specialists deployable for short, medium and long-term assignments in support of certain NATO missions. COMPASS expertise covers the political, reconstruction and stabilisation and media fields, including categories outside the traditional NATO scope such as governance, the rule of law, and the economy. Experts can provide support to the NMAs at the strategic, operational and in-theatre levels and are voluntary contributions from NATO nations.

NMAs

ACO is responsible for matters concerning implementation of M&T policies and doctrine and development of M&T plans and operational procedures. Under the authority of SHAPE, the AMCC will coordinate strategic movement to include deployment, sustainment (re-supply) and redeployment of NATO forces. Specifically, the AMCC's responsibilities are to:

- develop the MNDDP based on national Detailed Deployment Plans (DDPs). The MNDDP must be developed in close coordination with the designated Joint Force Commander responsible for the RSOM plan and the authorising HN;
- address strategic lift shortfalls in cooperation with the nations;
- advise and assist, as required, in the development of bilateral or multilateral agreements and arrangements;
- consult, when appropriate, with experts from the TG and other M&T sources;

- prioritise and coordinate the integrated use of M&T resources made available by nations for shared use;
- coordinate with the Joint Force Commander who must provide the Statement of Requirement (SOR) in cooperation with the SCs. This commander gives specific operational guidance by listing priorities, PODs, final destination and sets the Commander's Required Date (CRD); and
- coordinate with the Supporting Commander, if appointed, who assists the designated commander and ensures the unimpeded flow of forces, materiel, and sustainment through his Area of Responsibility (AOR).

The **AMCC** provides NATO's principal capability to plan, review, prioritise, deconflict and coordinate 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 multi-modal. In addition to the responsibilities mentioned above, the AMCC aids in the development/ coordination of the national DDPs towards a MNDDP to support force deployment. It also supports sustainment, roulement and the redeployment of NATO forces and equipment for NATO operations. This includes developing multi-modal solutions for strategic movements, with the assistance of the NATO Support Agency (NSPA) and the TG 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 LOC and PODs, and monitors execution. It is also responsible for monitoring, evaluating, and adjusting actual movements once an operation starts. The AMCC works in close cooperation with other coordination centres that provide support to NATO, such as the Movement Coordination Centre Europe (MCCE), the Multinational Sealift Steering Committee (MSCC), and the Athens Multinational Strategic lift Coordination Centre (AMSCC).

Allied Command Transformation (ACT). ACT's Joint Deployment and Sustainment (JD&S) Movement and Transportation (M&T) Branch is responsible for developing deployment, redeployment, RSOM, and movement control aspects of strategic concepts, policies, doctrine and education through capturing, analysing, and incorporating lessons learned. The ACT JD&S M&T Branch:

- manages course development and the execution of M&T individual courses at the NATO school; advanced distributed learning is located at https://jadl.act.nato.int;
- ensures that standardization and interoperability are achieved through developing tools to enhance the staff function, supporting personnel through education and training, streamlining processes and procedures and enhancing tools;

- manages and coordinates M&T-related multinational transformation activities through concept development and experimentation projects, research and development, and supports the NATO defence planning process by identifying and prioritising capability shortfalls across the continuum from existing capabilities and from short and long-term requirements;
- through the Bi-SC M&T Forum, seeks to draw upon the expertise of the nations, acting as the hub for coordinating innovation and the implementation of capability improvements for deployment/redeployment, movement control, and RSOM functions;
- promotes multinational approaches and innovative solutions to capability development, aiming at improved utilisation of existing capabilities and enhancing interoperability in the most cost-effective manner.

The Joint Force Commands (JFC) and **Component Commands (CC)** have M&T staffs responsible to their respective commanders. The JFC or CC will establish a theatre movement control system in line with the general principle that a commander should command the resources necessary for him to complete his mission. The M&T structures will be tailored to specific operations.

The Nations

Sending Nation (SN) responsibilities are to:

- develop the national 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 cooperative use of lift with other nations, in order to meet overall NATO priorities;
- control and coordinate 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 Coordination Centres (NMCC) and the National Support Elements (NSE).

Host Nation (HN) responsibilities are to:

- coordinate the 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 coordination;

- control, support and execute their portions of the RSOM plan, which have been made in close coordination 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 coordinate with neighbouring nations to facilitate border crossings;
- control and operate national civil and military transportation resources (including personnel, facilities, equipment, infrastructure) for national and NATO support; and
- provide liaison/augmentation to the AMCC, as necessary.

Lead Nation (LN) responsibilities are 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 cooperation with the nations; and
- establish arrangements for compensation and/or reimbursement for those LN functions with all parties involved.

MULTINATIONAL COORDINATION CENTRES

Movement Coordination Centre Europe (MCCE)

The MCCE is a multinational organisation that coordinates and optimises on a global basis the use of airlift, sealift and land movement assets owned or leased by national militaries of the member nations. The Centre is located at the Eindhoven military Air Base in The Netherlands.

The MCCE Mission is to:

Coordinate Participants' Strategic lift (Air, Sea and Inland Surface Transport) and Air-to-Air Refuelling (AAR) capabilities with operational, exercise and routine requirements for lift and AAR in order to improve efficiency and effectiveness through making lift available and coordinating full use of otherwise spare capacity. Be prepared to provide coordination support to European Union (EU) or NATO operations. Be prepared to provide coordinating services to third parties if proposed by a participant.

Sharing, willingness to cooperate, and visibility of requirements and opportunities are the key elements of the MCCE mission.

Multinational Sealift Steering Committee (MSSC)

The aim of the MSSC is to provide additional strategic sealift capacity in order to reduce the shortfalls in the near-term and to resolve the foreseen shortfalls in the longer-term. This is achieved by establishing a Sealift Capability Package (SCP) of "roll-on/roll-off" (Ro-Ro -- so called because equipment can be driven onto and off the ships via special doors and ramps into the hold) ships on assured access contracts, full-time charter or from national contributions. NATO member countries have pooled their resources to charter special ships, giving the Alliance the capability to rapidly transport forces and equipment by sea. The sealift consortium finances the charter of up to 10 special Ro-Ro ships.

Athens Multinational Strategic Lift Coordination Centre (AMSCC)

The AMSCC mission is to provide for the acquisition of sealift assets through tender, chartering and the monitoring of chartered vessels. The AMSCC has the flexibility to support the deployment, sustainment and redeployment of forces for operations and exercises with any number and type of vessels at a market competitive cost. The AMSCC serves the United Nations (UN), EU, NATO and other International Organisations and countries. It can support these organisations and bodies with the appropriate assets as required. The AMSCC's roles include: recommend effective utilisation of the strategic lift capabilities; upon a request for lift, carry out acquisition of suitable assets; provide necessary data regarding strategic lift requirements and spare capacity and to monitor chartered assets.

OTHER M&T BODIES

European Air Transport Fleet (EATF)

The EATF is established to: improve the airlift provision within the EU; develop concrete solutions to better use existing and future airlift assets made available by the Permanent Member States (pMS) for military needs to meet national, EU, NATO and other frameworks' operational requirements; develop means for the optimisation of interested existing and future air transport organisations and structures; and, finally, to be able to transport any personnel/equipment by any asset with a minimum of constraints by, for example, harmonising rules and procedures. Pooling of airlift assets enhances their availability, generates economies of scale (personnel, infrastructure and material) and increases military efficiency. Ultimately, the EATF is a European framework for enhanced cooperation in military air transport.

European Air Transport Command (EATC)

Created to cope with a lack of airlift resources, the EATC is a multinational command centre located at Eindhoven Air Base (Netherlands). It coordinates air transport for French, Dutch, Belgian and German air assets. These countries are also members of the European Air Group (EAG). The EATC has operational control of all military cargo aircraft (excluding helicopters) belonging to participating nations including the existing fleet of Transall C-160 and C-130 Hercules. In due

course, the Airbus A400M aircraft belonging to the four members will be placed under the command of the EATC.

Movement Control Multinational Integrated Logistics Unit (MovCon MILU)

The MovCon MILU has been established to coordinate and control the various transport elements used in the movement of designated force elements during the deployment, sustainment, and redeployment stages of a NATO-led operation or exercise. The Unit was established in order to overcome an Alliance capability shortfall. The MovCon MILU consists of an operations centre and a number of movement detachments. The Unit will deploy as ordered to operational theatres where it will be largely self-sufficient and capable of operating at multi-modal ports of debarkation/embarkation simultaneously, 24 hours a day over an extended period. The MovCon MILU provides an important capability in support of NATO operations. Membership remains open to all NATO and Partner nations who would like to join this multinational collaborative logistic effort.

REFERENCES

MC 336/3 NATO Principles and Policies for Movement and Transportation (M&T)

AJP-4.4(A) Allied Joint Movement and Transportation Doctrine

AJP-3.13 Allied Joint Doctrine for the Deployment of Forces

CHAPTER 11

MEDICAL SUPPORT

Medevac ISAF Afghanistan

INTRODUCTION

The aim of this chapter is to provide general background information on the approach taken by medical staffs to ensure the adequacy of medical support to NATO operations. It is not intended to describe NATO medical support principles, policy and procedures which are detailed in MC 0326/3, NATO Principles and Policies of Medical Support, and the current version of AJP-4.10, NATO Medical Doctrine.

Historically, the provision of medical support to NATO operations had been a national responsibility. Consequently, no NATO high-level military medical authority had been in charge of coordinating and promoting common projects.

The new scope of missions based on the demands of the Alliance increasingly called for the adoption of common and coordinated approaches to medical support as a means of sharing the operational burden and in order to optimise the use of scarce medical resources. For that reason, the Committee of the Chiefs of Military Medical Services in NATO (COMEDS) was established in 1994.

COMEDS

COMEDS is the senior committee for medical issues within the Alliance. COMEDS acts as the core for the development and coordination of military medical matters and is the NATO Military Committee's (MC) advisory group on all medical matters.

COMEDS has a key role supporting the military medical community which contributes greatly to preserving the "fighting strength" of Alliance forces, to meeting the increasing public expectations in an individual's right to health and high quality treatment, and to supporting the NATO Strategic Concept[77], Political Guidance[78] and taking into account the Comprehensive Approach and other such developments.

COMEDS is very active in the development of new concepts such as the Multinational Approach to Military Healthcare[79], the Modular Approach to Medical Support Capability[80] and contracted operational medical support. COMEDS is also extremely active in fostering the development of partnerships, in encouraging partner countries to participate in its activities and in openly sharing its doctrines and standards with them.

In 2011, COMEDS created the Dominique-Jean Larrey[81] Award which is awarded annually to a serving individual from a military medical service or, in exceptional circumstances, to a military medical organisation or structure. It is awarded in recognition of a significant contribution to NATO multinationality and/or interoperability within the fields of military medical support or healthcare.

77) *PO(2010)0169, The Alliance's Strategic Concept*

78) *C-M(2011)0022, Political Guidance*

79) *Enclosure 1 to IMSM-0289-2012, Conceptual Basis for a Multinational Approach to Military Healthcare and a Modular Approach to Medical Support Capability*

80) *Enclosure 2 to IMSM-0289-2012, Conceptual Basis for a Multinational Approach to Military Healthcare and a Modular Approach to Medical Support Capability*

81) *Dominique-Jean Larrey was the French surgeon general of the Napoleonic imperial forces. He invented, amongst other things, field ambulances improving significantly medical care in the field.*

Roles and responsibilities

COMEDS meets biannually in plenary session and reports annually to the MC. It makes recommendations to the MC on NATO military medical policy and procedures with the purpose of enabling coordination, standardization and interoperability. The Committee also helps improve the exchange of information within NATO and non-NATO nations and undertakes studies of general and particular interest such as preventive medicine, force health protection, veterinary and dental services, food hygiene and mental health. For this purpose, several subordinate working groups and expert panels support these efforts as detailed in Chapter 3. COMEDS is the key component of the Alliance's military medical support system, principally in preparation for the support of operations, in facilitating the development of medical capabilities in individual countries and in helping the quality improvement of NATO medical support.

COMEDS represents the medical community in the NATO Standardization Organisation as well as in specific areas such as defence planning and in the Chemical, Biological, Radiological and Nuclear (CBRN) field.

Composition

The Chairman is elected by the Committee in plenary session for a three year term. The country of origin of the Chairman is also responsible for providing a Liaison Officer to NATO HQ. He/she is the point of contact for military medical matters for NATO HQ and individual countries. For practical reasons, this Liaison Officer cooperates closely with the medical branch of the International Military Staff (IMS), which also supports his/her work. COMEDS also cooperates closely with the medical branches of Allied Command Operations (ACO) and Allied Command Transformation (ACT) in developments regarding defence planning, capability development, standardization needs, training and education and certification.

COMEDS is composed of:

- Chiefs of the military medical services of all member countries;
- Branch Chief of the IMS Medical Branch, who is also the Medical Adviser (MEDAD) to the Director General of the IMS (DG IMS); and
- MEDADSs of the two strategic commands – ACO and ACT.

Its meetings in plenary session, as well as its other activities, benefit from the participation of the following observers:

- Chiefs of the military medical services from all Partnership for Peace (PfP), Mediterranean Dialogue (MD), Istanbul Cooperation Initiative (ICI) countries and Partners across the Globe (Afghanistan, Australia, Iraq, Japan, Mongolia, New Zealand, Pakistan and the Republic of Korea);
- the Chairman of the Joint Health, Agriculture and Food Group (JHAFG);
- a representative of the NATO Standardization Agency (NSA), the MC, the Logistics Committee, the NATO Military Medical Centre of Excellence, the

Human Factors and Medicine (HFM) Panel of the NATO Scientific and Technology Organisation (NSTO), the Health and Societal Dimensions Panel of the NATO Science for Peace and Security Committee, and the organisation of military medical reserve officers.

COMEDS can also invite non-NATO troop contributing countries and organisations. In 2011, the medical adviser of the European Union Military Staff (EUMS) and the Chief of Military Medical Services in Singapore were granted observer status to COMEDS.

Subordinate Working Groups

To assist in carrying out its tasks and in addition to the bodies referred to above, COMEDS has a number of subordinate working groups and expert panels to support its activities as detailed in Chapter 3. These meet at least annually and address the following topics: military medical structures, operations and procedures (including planning and capability development); military preventive medicine (force health protection); military healthcare; standardization; CBRN issues; emergency medicine; military psychiatry; dental services; medical materiel and military pharmacy matters; food and water hygiene and veterinary medicine; medical training; mental healthcare; medical naval issues; and medical information management systems.

The Military Medical Support System

Medical resources provided for operations will normally remain under national command, except those provided under NATO common-funding, which would be under command of the deployed NATO commander. For effective and efficient support throughout the patient care pathway, from point of illness or injury through initial treatment, evacuation, definitive treatment and rehabilitation, multinational cooperation will be necessary. The degree of cooperation will vary at different stages of this pathway. Four levels of commitment are available for nations to participate in medical multinationality, thus offering a choice as to a nation's entry level of engagement and also providing the flexibility to change between levels subsequently. These levels are: coexistence, cooperation, coordination and integration. NATO will retain overall responsibility for the level of integration achieved.

SOME COMPONENTS OF DEPLOYED HEALTHCARE WITH COMMON MEDICAL AND LOGISTIC INTEREST

Medical Logistics

Medical supply is the process of procurement, storage, movement, distribution, maintenance and disposition of medical material and pharmaceuticals, including blood, blood components and medical gases, in order to provide effective medical support and the application of this process in planning and implementation.

The medical logistic system needs to ensure the sustainability of the medical support system under all operational conditions. The scale and scope of a medical

supply system will be mission dependant. National responsibility for planning and executing an effective medical logistic system remains the guiding principle for operational support; however, the NATO Commander may exercise his authority to assure best possible coordination of national activities in this area. Economies of scale may result from coordinated supply to commonly-funded multinational assets.

The planning and execution of medical logistics is a shared medical and logistics responsibility. The unique characteristics of medical materiel set it apart from other commodities due to its protected status, regulatory aspects, handling requirements and importance for life saving. Medical personnel are responsible for the identification of the requirement, the specification and quantity of medical materiel and pharmaceuticals and will advise on the prioritisation of delivery. Logistic personnel are responsible for coordinating the management of medical materiel and pharmaceuticals within the overall logistic plan. Medical and logistic personnel will have shared responsibility for the tracking of medical materiel and pharmaceuticals from source through to final disposition.

Medical Evacuation

Medical evacuation includes movement and transport, but this is not merely the movement of patients under medical supervision to Medical Treatment Facilities as an integral part of the treatment continuum, but also mandatory medical assistance to patients provided as necessary by medical personnel during evacuation.

Contracted Operational Medical Support

NATO is affected by long-standing shortfalls in deployable medical capabilities. Mitigation will involve a number of complementary approaches, including the possibility of contracting commercial capabilities to release national military personnel for deployment. Nations will determine their own approach, but may wish to make use of framework agreements developed in consultation with NATO. NATO could also serve to facilitate engagement with industry on behalf of its members. Irrespective of the approach taken, the generation of an effective, efficient, deployable and sustainable medical capability will remain the overriding requirement.

ROLE AND PLACE OF MEDICAL STAFF

The provision of effective medical support is the responsibility of the Commander, coordinated on his behalf by the formation Medical Director. Combined Joint Medical Staff (CJMed) are distinct from Logistic staff and a functional area in their own right (Combat Support/Combat Service Support depending on nation). As a result, the role of medical within the HQ and subordinate commands, including Joint Logistic Staff Group (JLSG), are twofold and are distinguished as follows:

- Medical support in theatre is the responsibility of the Theatre Commander, but is executed by the HQ MEDAD and staff. HQ medical staffs perform additional functions in providing medical advice to the Commander including

medical threat assessment and Force Health Protection and running the Patient Evacuation Coordination Centre (PECC);

- MEDADs of subordinate commands, including JLSGs, are responsible for the planning, coordination and execution of medical support for assigned medical units only.

FURTHER INFORMATION

Further information can be obtained from:

COMEDS Liaison Staff Officer
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NATO Headquarters
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REFERENCES

MC 0326/3, NATO Principles and Policies of Medical Support

AJP-4.10 series, NATO Medical Doctrine

PO(2010)0169, The Alliance's Strategic Concept

C-M(2011)0022, Political Guidance

Enclosures 1 and 2 to IMSM-0289-2012, Conceptual Basis for a Multinational Approach to Military Healthcare and a Modular Approach to Medical Support Capability

CHAPTER 12

ENGINEERING SUPPORT[82]

Engineer crane at work

82) *Several of the references in this Chapter are in the course of being revised. As such, they should be referred to in their current edition.*

MILITARY ENGINEERING (MILENG)

Military Engineering (MILENG) is the Engineer activity undertaken, regardless of component or service, to shape the physical operating environment[83]. It is an inherent requirement of each of the joint functions, at all levels of command, in any mission, campaign or operation, to achieve the desired objectives by manipulating the operating environment such as enabling or preventing movement, providing life support and developing infrastructure.[84]

MILENG supports all operations (combat and non-combat), in all phases including Reception, Staging and Onward Movement (RSOM), sustainment and protecting the force. It incorporates specialist areas of expertise such as environmental protection, military search and management of infrastructure, including civil engineering contracts with local means and local population and supports a Comprehensive Approach (CA) by contributing to stabilisation and reconstruction and economic expansion. MILENG also makes a significant contribution to other capabilities, especially Explosive Ordnance Disposal (EOD) and countering Improvised Explosive Devices (IED).

During operations, infrastructure in-theatre is critical for both operational and logistic purposes. Close cooperation between logistic and military engineering staffs is essential in enhancing the effectiveness and efficiency of the support provided to deployed forces.

INFRASTRUCTURE ENGINEERING FOR LOGISTICS (IEL)

MILENG support to logistics also known as Infrastructure Engineering for Logistics (IEL) describes the roles of MILENG, mostly associated with sustaining the Joint Force and RSOM. Particular areas of expertise in support of logistics are environmental protection, infrastructure development and Freedom of Movement (FOM).[85] More specifically, IEL covers the construction, restoration, acquisition, repair, maintenance and disposal of those infrastructure facilities required to mount, deploy, accommodate, sustain and re-deploy military forces. Furthermore, it includes the construction, restoration and maintenance of Lines of Communication (LOC) and the facilitation of environmental protection.[86]

COMMON-FUNDING

Infrastructure engineering support uses different types of funding. NATO common-funding can be used when the requirement meets the eligibility criteria established by NATO. NATO funding structures are covered in more detail in Chapter 14.

MILENG support to infrastructure includes assistance in the assessment of the technical requirements and the balance of investment to determine the Minimum Military Requirement (MMR) in accordance with the operational concept and eligibility for NATO common-funding.

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83) MC 0560, MC Policy for Military Engineering

84) MILENG does not include the activities undertaken by those 'engineers' who maintain, repair and operate vehicles, vessels, aircraft, weapon systems and equipment. See Chapter 13.

85) MC 319 Series, NATO Principles and Policies for Logistics

86) C-M(2005)0100/MC 536, NATO Policy for IEL

Military engineers assist in the identification of operational infrastructure requirements and provide the technical expertise to develop them and contribute to the related Key User Requirement definition process.

SCOPE AND RANGE OF SUPPORT

MILENG support during the RSOM phase is particularly important as RSOM is the essential stage of any expeditionary operation that transitions deploying forces into forces capable of meeting the Joint Force Headquarters (JFHQ)'s operational requirements. The NATO Commander will consider the availability of Host Nation Support (HNS), which can provide infrastructure and services to facilitate RSOM.

Strategic infrastructure, such as air and sea ports, rail networks, roads and bridges may constitute part of the fabric of the Joint Operations Area (JOA). The assured availability of this infrastructure is likely to be vital for both operational FOM and manoeuvre and for the sustainment of an operation. It is the responsibility of the HN to maintain national strategic infrastructure. However, Engineer staffs are likely to be engaged closely with the appropriate HN authorities to ensure that this is the case and to offer support, advice and information, including NATO's requirements.

Civilian contractors or other organisations will likely play an essential role in providing MILENG support and, therefore, will be considered as an additional source of assets to the joint force. MILENG forces are able to plan for and manage the employment of military and civilian MILENG capabilities.

Military Engineers within the Joint Logistics Support Group (JLSG) (when employed) will cover the functional areas of MILENG current operations, plans, Infrastructure Resources (to include real estate), Environmental Protection and Management and EOD expertise. This is in order to provide advice on all MILENG-related matters to facilitate the process of RSOM and the sustainment and the redeployment of all forces.

The MILENG Branch of the JLSG, with its mission-tailored assigned force package, will mainly focus on supporting the improvement of infrastructure prerequisites of the Marshalling Area and Staging Area and the maintenance of the LOC. When a JLSG is not employed as part of the Joint Force, the Joint Force Engineer will be responsible for providing the same functions and capabilities to the Joint Force Commander.

PRIORITY OF EFFORT

In order to ensure optimum efficiency, use of available MILENG resources should be planned centrally and in most cases, execution of tasks should be decentralised and delegated to the lowest appropriate level of command. The Joint Force Engineer and staff are the focal point for the planning and execution of all aspects of MILENG support to Logistics within the assigned JOA.

The Chief Engineers of the subordinated commands (including the JLSG) are responsible for the prioritisation and coordination of the MILENG support within

their areas of responsibility. At any given stage of an operation, the Joint Force Commander may shift the main effort of MILENG support entirely to Logistics, and may allocate assets normally seen supporting manoeuvre to infrastructure development and sustainment, enhancement of FOM or the provision of real life support. Wherever two or more MILENG entities are assigned to any Command HQ, they should be under the command and control of a MILENG formation HQ to coordinate and synchronise their efforts with the appropriate subject matter expertise.

REFERENCES

MC 0560/1, MC Policy for Military Engineering

C-M(2005)0100/MC 536, NATO Policy for IEL

MC 319 Series, NATO Principles and Policies for Logistics

AJP 3.12 (A), Allied Joint Doctrine for Military Engineering

CHAPTER 13

EQUIPMENT MAINTENANCE

Ground equipment repair workshop

INTRODUCTION

The expanding scope of NATO operations, including defence against terrorism and the resulting transformation to expeditionary operations beyond NATO's territory, has had a significant impact on NATO logistics and its various functional areas such as equipment maintenance. The Logistics Committee (LC) determined that a set of specific NATO Principles and Policies for the Maintenance of Equipment was required to provide better guidance for this function. The overarching guidance was developed and approved, in turn, by the LC[87], the Military Committee (MC)[88] and the Council[89].

Maintenance is a critical factor in ensuring that the operational availability of equipment is kept at the highest level and in providing the requisite logistic support to all NATO operations and exercises including those conducted in close cooperation with the United Nations (UN), the European Union (EU) and other organisations. This Chapter outlines the approach that NATO and the nations should apply in delivering timely and effective maintenance support to such operations within a multinational environment. It places due emphasis on NATO's increasing requirement for multinationality.

NATO's MAINTENANCE SUPPORT APPROACH

NATO's approach to maintenance support incorporates Reliability and Maintainability (R&M) engineering practices along with Logistic Support Analysis (LSA) and Integrated Logistic Support (ILS)[90] techniques including Life Cycle Costing (LCC); LSA, ILS and LCC are described in Chapter 17. This approach emphasises the need for the effective and efficient use of national, multinational and NATO maintenance resources in order to enhance equipment availability to the NATO Commander.

MAINTENANCE PRINCIPLES AND POLICIES

Comprehensive principles and policies for logistics have been developed in the References which apply equally to equipment maintenance. C-M(2005)0013, NATO Principles and Policies for the Maintenance of Equipment, identifies additional principles and policies which cover specific maintenance considerations. Of note, the principles address:

- the collective responsibility of national and NATO authorities for the maintenance support of equipment assigned to NATO;
- the need for NATO Commanders at the appropriate levels to be given authority over the maintenance capabilities and resources necessary to provide effective maintenance support to the forces assigned by nations;
- the primacy of operational requirements;

87) *EAPC(SNLC)DS(2005)0002-AS1, 6 December 2005*

88) *MC 0533, NATO Principles and Policies for the Maintenance of Equipment*

89) *C-M(2006)0013-AS1, NATO Principles and Policies for the Maintenance of Equipment*

90) *ALP-10, Guidance on ILS for Multinational Equipment Projects*

- the criticality of interoperability in the context of multinational maintenance cooperation and the effectiveness of multinational forces;
- the need for the NATO Commander to be provided total visibility of maintenance resources and related assets;
- the need for coordination and cooperation to be established at an early stage in the equipment life cycle and operations planning process; and
- the impact the quality of maintenance has on the operational readiness of forces.

The maintenance policies identified in C-M(2005)0013 provide the basis for developing, preparing and optimising maintenance support for in-service and new equipments and apply to both preventive and corrective maintenance. The use of R&M practices along with ILS and LSA techniques aim to improve equipment availability, supportability and interoperability thereby reducing maintenance requirements. The policies encourage NATO and nations to consider multinational maintenance solutions while ensuring the provision of maintenance support to forces. In addition, the policies consider such other factors as the responsibilities and authority of participants, interoperability, efficiency and effectiveness, maintenance planning, maintenance support planning, different aspects of repair, maintenance information management, configuration management, quality control, safety and environmental protection. Application of this policy has proven to be highly successful in current operations using the Logistic Lead Nation principle.

REFERENCES

C-M(2001)44, NATO Policy for Cooperation in Logistics

MC 0533, NATO Principles and Policies for the Maintenance of Equipment

C-M(2005)0013, NATO Principles and Policies for the Maintenance of Equipment

ALP-10, Guidance on ILS for Multinational Equipment Projects

MC 319 Series, NATO Principles and Policies for Logistics

CHAPTER 14

NATO FUNDING STRUCTURES, PROCEDURES AND POLICY FOR NON-ARTICLE 5 NATO-LED OPERATIONS

INTRODUCTION

NATO Defence capabilities are acquired through different funding mechanisms. These are: national funding, multinational funding, joint funding, Common-Funding and contributions in kind. Trust Funds, which can permit contributions from non-NATO countries, have been used largely to help fulfil mission objectives in Kosovo and Afghanistan. NATO's military common resources consist of the NATO Security Investment Programme (NSIP), the Military Budget (MB) and International Manpower. The NSIP funds common investment projects in support of the Alliance's capabilities. The MB funds essentially the common Operations and Maintenance (O&M) costs of NATO's integrated military structure, including the programmes managed by the military authorities. International Manpower provides the necessary manning of that structure as well as other entities such as the International Military Staff (IMS) and posts in NATO Agencies. Different committees are involved in the management of NATO Common-Funding (CF): the Resource Policy and Planning Board (RPPB), the Investment Committee (IC), the Budget Committee (BC) and the NATO Defence Manpower Committee (NDMC).

Resource Policy and Planning Board (RPPB)

The RPPB is the senior advisory body to the North Atlantic Council (NAC) on the management of all NATO common-funded resources in order to obtain strategic guidance on resource issues as well as Council consideration of mid and long-term financial/resource plans for requirements, the availability of military common-funded resources, other types of funding in support of Alliance objectives and priorities, and annual budgets. It screens and endorses Capability Packages (CPs) for NAC approval and provides advice to the NAC in cases of potential imbalances between requirements and resources.

The RPPB is focused on the overall management of NATO's civil and military budgets as well as the NSIP and manpower. It has sole responsibility for resources policy, including eligibility and affordability. Therefore, the RPPB integrates and provides coherence and guidance to the work of resource committees and has the authority to task them. It is the sole resource committee reporting to the NAC. The BC and the IC report to the RPPB.

The main function of the NSIP is to determine the affordability and eligibility of CPs proposed for NSIP funding, and to recommend programming to the NAC. The RPPB also recommends to the Council the annual contribution ceiling for the NSIP and MB and provides guidance regarding NSIP implementation and budget execution.

Investment Committee (IC)

The former Infrastructure Committee was renamed in 2010 as the Investment Committee (IC) as part of the Resource Committee Structures review[91] at NATO Headquarters and continues as a separate committee reporting to the RPPB.

91) *SG(2010)0471, Resource Committee Structures*

The IC is responsible to the NAC through the RPPB for the overall "implementation" of NSIP projects. The role of the IC includes:

- reviewing and authorising the implementation of projects to fulfil requirements approved by the Council;
- establishing expenditure profiles and timeframes for implementation within available funds;
- monitoring, evaluating and controlling the implementation of the investment projects;
- managing the investment programme from a financial point of view, within the contribution ceilings;
- analysing eligibility and affordability issues related to implementation based on policy guidance from the RPPB; and
- proactively alerting the RPPB to potential imbalances between requirements and resources.

Budget Committee (BC)

The former Civil Budget Committee (CBC) and the former Military Budget Committee (MBC) were merged into the single BC in 2010. The BC is responsible to the RPPB for NATO's civil and military budgets. Nevertheless, the MB and the Civil Budget (CB) will continue to be considered strictly separately in order to reflect different eligibility for CF and a different budgetary source of funds for most nations.

The BC has the lead budget, planning and policy roles for the MB and CB and associated budgets assigned to the Committee by the NAC. It reviews and recommends civil and military budgets, which are forwarded to the RPPB for separate Council approval. The BC also monitors, evaluates and controls the implementation of civil and military budgets, reporting periodically to the RPPB. In this capacity, the BC has an essential position in ensuring effective use of the funds provided as well as carrying out all of the duties and responsibilities assigned to a finance committee in the NATO Financial Regulations (NFRs). The BC is responsible to the NAC, through the RPPB, for the common-funded MB and CB.

Sometimes there is an overlap in the requests for funding in the BC and in the IC, especially in the area of Communication and Information Systems (CIS) where investments can have an important impact on O&M costs. On such occasions, the BC and IC hold joint meetings as appropriate. At other times, it is necessary to have close cooperation between the two committees.

NATO Defence Manpower Committee (NDMC)

The NDMC is responsible to the NAC, through the MC, for the management of military and civilian manpower posts in the Military Command Structure. There is a Peacetime Establishment (PE) and a Crisis Establishment (CE) for each unit. Often, a new NSIP or Alliance Operations and Missions (AOM) project will require changes to the affected PE or CE. Like other committees, the NDMC must

operate within pre-approved ceilings; consequently, it is often necessary to delete posts in other units to offset the creation of new posts. The acquisition of new capabilities can have a significant impact on international manpower and, as such, this requires extensive coordination. The Logistics and Resources (L&R) Division in the International Military Staff (IMS) provides staff support to the NDMC.

THE MEDIUM-TERM RESOURCE PLAN (MTRP)

Resource planning for military requirements is handled through the MTRP; the Medium-Term Financial Plan is the vehicle for the CB. The MTRP is the primary document used for short to medium-term resource planning and is prepared on an annual basis by the RPPB.

The MTRP aims to facilitate planning stability by providing a five-year outlook of the requirements for military CF in support of Alliance objectives and priorities, assessing the affordability of these requirements in the light of the NATO Military Authority's (NMAs) consolidated impact statement and by making specific recommendations to the Council regarding the contribution ceilings for the next financial year and the planning figures for the subsequent four years. The MTRP also provides guidance to the implementing committees regarding resource planning and expenditures. By means of the MTRP and the ensuing discussions, the Council is made aware of the overall resource situation and of specific issues having a substantial financial impact.

THE CAPABILITY PACKAGES (CPs) OVERVIEW AND NSIP CONTEXT

A CP is defined as a combination of national (military and civilian) and NATO funded capital investments, O&M costs, manpower and other associated costs, which, together with the military forces and other essential requirements, enable a NATO Commander to achieve a specific Military Required Capability. The CP focuses on those activities most essential to the strategy as well as the resulting force and command structures and addresses overall resource implications, both national and international. They incorporate all elements necessary for the package to function and provide more flexibility in which elements of the CP should be considered eligible for CF.

The CP is also, therefore, an essential planning and programming tool for Resource Management and Capability Management. For the NSIP, all requirements except those for AOM will, as a rule, be submitted within the framework of a CP and compete for funding on the basis of the military priorities established for those packages.

The CP consists of three portions, which are the

- Capability Requirements Definition (RD);
- Consolidated Resource Proposal and Supporting Documents; and
- Supporting Documents as required.

The **first portion** of the CP is the RD, which identifies an Alliance military requirement that may be fulfilled (wholly or partially) through NATO CF and, or International Manpower. In detail, this portion compiles information on the Commander's Mission Area, the Military Function/Military Component, the Operational Assessment and defines the scope of the Required Capability (RC) covered by the CP, in terms of their required attributes as opposed to assets.

The **second portion** of the CP provides a comparison between the assets that are needed and the assets that are available or expected to become available in the near-term through other actions. It focuses on identifying the required resources (Infrastructure, O&M costs and Manpower) to satisfy the requirement, detailed in the RD, and comparing these requirements with existing capabilities to determine whether there are excesses or shortfalls.

The **third portion** of the CP groups further documentation. This includes Analysis Worksheets, a proposal for projects with a detailed discussion of their resource requirements in the format of a Project Data Sheet (PDS) (including, scope, cost – investment, O&M and Manpower – schedule, estimated date of authorisation request, contract signature and completion), a list of those RCs that are dependent on the inter-related Operational Assessment. The PDS is the document in which, for the first time, the provision of required capabilities is translated into different projects, which in turn determine future resource efforts (expenditures).

Overview of the Capability Package Process (CPP)

All requirements are pursued through the CPP. The CPP can be split into five phases, which are linked into the NATO Defence Planning Process (NDPP).

First Phase

The first phase concerns the identification and prioritisation of the CPs, which are identified through the NDPP.

The proposals for the revision of this stage of the process state that Capability Area Plans (CAP) will capture all relevant elements associated with the Capability Development Process (all development stages from analysis of the strategic environment to implementation). Further, the CAP will be linked together to form a Capability Master Plan (CMP) that will identify the totality of the requirements that has to be met to provide the Alliance with capabilities. The CAP will be supported by Capability Area Improvement Programmes (CAIP) that deal with specific shortfalls in requirements identified in the CAP.

Second Phase

The second phase encompasses the development of the CP. In this phase, one or both Strategic Commands (SCs) (Allied Command Operations (ACO) and/or Allied Command Transformation (ACT)) define(s) the scope of the RC and identify(ies) the assets required to implement this capability, in the form of the RD. The SC(s) then consider the assets that are already available to the Command, and propose(s) projects to resolve the shortfall.

In some cases, the project proposals are updated periodically to include additional projects and to modify those included in the earlier submissions. Some projects relate to assets that should be provided by the nations, and are proposed for national funding; others relate to assets that are over and above what a NATO nation could be expected to provide, and are proposed for CF. In some cases, a project proposal may include national and NATO cost shares.

Third Phase

The third phase of the CPP covers the approval of the CP. Once submitted to NATO Headquarters, the International Staff (IS) and IMS work together to produce a Joint Staff Screening Report (JSSR). The MC then analyses the CP to confirm the military requirement and the priority of the requirement. In parallel, the RPPB determines the "eligibility and affordability" of the proposals for CF. After endorsement by the MC and RPPB, the CP is submitted to the NAC for approval.

From the IC's perspective for NSIP, the key event for going forward to implementation (fourth phase) is Council approval of the CP, which initiates the programming step.

Fourth Phase

The fourth phase constitutes the implementation of a CP. As mentioned above, the key event for the implementation is Council's agreement to the CP. It is from this point on, that implementation on individual projects may progress to a capability delivery with a known Host Nation (HN). It is also at this stage that the IC must take stock of the projects in the CP in the framework of the NSIP financial situation for the next several years. The method for doing so is the CP Project Implementation Plan (PIP).

There are 4 ways of programming projects, however only the CP method requires a PIP. The IS (NATO Office of Resources (NOR)) will publish a PIP for each approved CP within three months of CP approval. The HN produces a Project Authorisation Request, which is screened by the NOR and authorised by the IC. At the time of authorisation, the SCs have to confirm that the Military Requirement still exists. The IC reviews the implementation of projects mainly through the Implementation Management Procedure (IMP). The HN receive their funding by means of forecasts provided in the Semi-Annual Financial Report and the subsequent quarterly calls for contributions. Nations pay each other directly based upon calculations made by the IS; there is no NSIP treasury.

As soon as the works are completed, the HN should submit a formal request for the Joint Formal Acceptance Inspections (JFAI) to be conducted by the joint inspection team that will provide a report/recommendation (JFAI report) for the formal acceptance of the works on to the NATO inventory by the IC. Following the JFAI, the HN must present the project for audit by the International Board of Auditors NATO (IBAN).

Fifth Phase

The fifth phase is initiated when the capability is accepted into operational service. The lessons-learned during this 'in-service' phase should be fed-back into the initial identification and CP development stages of future CPs.

NATO SECURITY INVESTMENT PROGRAMME

The NSIP programme was renewed in 1993. The NSIP is based upon NATO's overall need presented in the MTRP requirement areas as follows:

- AOM;
- provide deployable forces;
- capabilities in support of deploying forces;
- provide training/exercise/education;
- provide research and development for NATO transformation;
- provide NATO-wide command, control and communication capabilities;
- provide NATO-wide air command and control capabilities;
- maintain the NATO command structure;
- develop cooperation initiatives; and
- maintain the nuclear deterrent posture.

Since it is not possible to implement NSIP projects within the window of an annual budget, the NSIP operates as a multi-annual programme rather than as a budget. Nevertheless, expenditures are requested and reported on a semi-annual basis, in order to satisfy resourcing requirements.

THE MILITARY BUDGET

The BC has overall management responsibility over the MB. The International Military Budget provides for the O&M costs (including personnel and operating costs, mission operating expenses and capital expenditures) of the network of NATO international military headquarters, programmes and agencies. The same MTRP requirement areas as in the NSIP apply to the MB, but NATO Airborne Early Warning and Control System (NAEW&CS) and Alliance Ground Surveillance (AGS) are reported separately due to different cost shares.

The MB operates as an annual budget, coinciding with the calendar year and is implemented by the BC. Expenditures are implemented by the SCs and NATO agencies. The funds are provided from the defence budgets in the nations. Most of its funding is used for recurring expenses.

FUNDING POLICY FOR NON-ARTICLE 5 NATO-LED OPERATIONS

Practically all of NATO's operations, including those in Afghanistan and Kosovo, are non-Article 5 NATO-led operations. In October 2005, the principles of a revised

funding policy for such operations were agreed[92]. The principles agreed constitute a framework within which guidelines for any specific operation can be developed.

General principles of the revised funding policy include that:

- the **primary** funding mechanism remains "costs lie where they fall", which means that nations cover all the costs associated with their participation in an operation;
- only costs not attributable to a specific nation and agreed as eligible for CF will be assumed by NATO;
- such costs will be limited to minimum military requirements in direct support of the military aspects of the operation;
- NATO CF will not be used for nation-building purposes;
- a number of critical theatre-level enabling capabilities, previously considered a national responsibility, can also be considered for CF: these capabilities will be put under the operational or logistic control of the theatre commander and will be listed in the OPLAN as part of the Theatre Capability Statement of Requirements (TCSOR);
- the lead nation approach is the preferred option for assembling and maintaining the required capability from their own and other nations' forces, but with CF paying for the deployment, installation and running of the provided capability; and
- costs agreed as eligible for CF will be borne by the MB and the NSIP and shared by all member nations.

Examples of elements assessed as eligible for CF on a case-by-case basis include:

- O&M costs of deployed HQ elements including: their logistic support; administrative and operational functioning; office accommodation and facility maintenance; Role 1 or 2 medical facilities; psychological operations (PSYOPS) requirements; local connectivity and connectivity to subordinate formations; and leased lines;
- transportation to and from theatre of HQ-related supplies and equipment;
- deployment and redeployment of CE personnel;
- specific incremental costs at existing NATO HQ;
- shortfalls in strategic communications;
- CIS and intelligence database equipment; and
- capital expenditure for the HQ elements such as accommodation for CE personnel, force protection measures, de-mining, NBC soft and hardware information communications systems, consequence management and force tracking.

92) *PO(2005)0098, Revised Funding Policy for Non-Article 5 NATO-Led Operations*

With regard to **funding arrangements**, the RPPB advises the Council on common-funded resource implications at the same time as the Military Committee (MC) approves the OPLAN. The IC decides on HN responsibility for NSIP projects under the procedure for Urgent Requirements.

ACO consolidates the MB submissions of Lead Nations and submits them to the BC; a theatre Financial Controller has direct responsibility for the financial management and contracting of the common-funded resources in theatre.

NATO may seek reimbursement from non-NATO Troop Contributing Nations (TCN) or governmental and non-governmental organisations for incremental consumption and additional requirements requested by such nations and/or bodies.

On **reporting**, the RPPB reports to the Council on the funding aspects of ongoing operations and the ACO Financial Controller, HNs and the IC report on the use of budgeted and authorised funds.

A review of this funding policy is currently underway and will result in new policy guidance. It is considered that outsourcing, in most cases, should be a last resort and used when military capabilities cannot be provided by nations.

REFERENCES

SG(2010)0471, Resource Committee Structures

PO(2005)0098, Revised Funding Policy for Non-Article 5 NATO-Led Operations

CHAPTER 15

CONTRACTOR SUPPORT TO OPERATIONS

Food services

INTRODUCTION[93]

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.

NATO has been involved in Crisis Response Operations (CRO) since 1995 with logistic support based on the accepted concept that it is a national responsibility. This arrangement was generally successful in Bosnia and Kosovo as the operational disposition suited disparate logistic solutions and the Area of Operations (AOO) was coincident to NATO territory thus easing logistical problems. Most Troop Contributing Nations (TCN) were able to utilise their national logistic support chains and there was little requirement to develop expeditionary capabilities given that the operations were conducted from mainly static garrison locations spread throughout the AOO. In addition, Alliance force structures were still fairly robust as the full effects of defence reductions had yet to be felt and NATO was not yet engaged in Afghanistan, thereby limiting the logistic impact on TCN.

There was limited scope or willingness to pursue deliberate multinational logistic solutions until after the Prague Summit in 2004 which authorised the setting up of the NATO Response Force (NRF). The creation, deployment and support of this high readiness joint force of some 25,000 personnel became the catalyst for nations and the NATO Command Structure (NCS) to embrace fundamental structural, organisational and procedural changes. These conceptual changes envisaged that the NRF would be a deployable, reactive and sustainable expeditionary force capable of undertaking the most demanding missions in austere locations with little or no Host Nation Support (HNS). This drove NATO logisticians to develop a complimentary logistic concept that would sustain an expeditionary posture, provide efficiencies and reduce the overall logistic footprint in theatre. This mandate, coupled with the expansion of the Afghan mission to encompass the entire country with the associated large increase in the force structure and the evolution of the operation from an expeditionary footing to that of a campaign, all placed ever increasing demands on an integrated TCN logistic capability.

These factors encouraged many nations to begin to utilise contracted support solutions to a larger extent. There were several nations who routinely developed a concept of support that was heavily based on contracted capabilities. Contracted support solutions for operations have now become routine within NATO.

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;

93) *C-M(2007)0004, NATO Policy on Contractor Support to Operations*

- 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 Cooperation (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.

The use of contractors will not be suitable for all operations and a commercial capability should not normally be used to mitigate shortfalls in force generation. It does mean, however, that the use of contractors should be considered during operational planning as long as they satisfy such requirements as: producing efficiencies; are reliable; they free up scarce military assets to do other more vital tasks; are deemed acceptable from an operational risk standpoint; and do not restrict a Commander's freedom of action to achieve mission success. These factors and the prevailing need to contract for major Classes of Supply such as fresh food and fuel will almost always necessitate a reliance on some degree of theatre-level contracting for most operations.

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 for 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 a 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, military functions.

Lease, partnering, dormant and assured access contracts have the advantages of timeliness, as they require no last-minute solicitation and availability, and 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 a 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 as appropriate. If aggregated 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 the 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, such as NATO common-funding, multinational funding - including joint and trust fund 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 cooperatively: 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. The consideration of options for the use of commercial capabilities in support of operations is now embedded in the Logistic Operations Planning Procedure (LOPP).

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 Transfer of Authority (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 Combat Support(CS)/Combat Service Support (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 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 aeromedical 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 healthcare, 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 locally hired personnel, are non-combatants. Locally hired personnel, 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 COOPERATION

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 Support Agency (NSPA) and the NATO Communications and Information Agency (NCIA), who can provide theatre contracting services on a reimbursable basis.

OPERATIONS PLANNING CONSIDERATIONS FOR CONTRACTOR SUPPORT

From an operations planning point of view, there are a number of considerations that influence decisions on whether or not 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. Considerations to be taken into account include:

- **Type of Operation**. Operations that entail a higher risk of combat, such as initial entry operations, are less suitable for outsourcing than lower risk operations, such as peacekeeping and stabilisation 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 stabilises 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; and
- **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's staff consist 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

The NATO Logistics Committee (LC) has analysed the use of contractors to support NATO operations and concluded that it is always useful to appoint a Contract Integrator (CI) to assist the military headquarters plan for and then deliver the required contracted support solution. Of course, the military headquarters can decide to utilise in-house procurement assets to conduct the contracting process or there may be a Lead Nation (LN) willing to undertake the contract integration and implementation task, but normally an experienced and accountable CI will be delegated. One of the key elements of ensuring the success of a contracted support solution is the reliance on an in-theatre presence. Problems must be dealt with quickly and remedial action taken to ensure that the contractor's lack of performance does not have a serious impact on the conduct of operations. In

addition, if there are events such as attacks on the Lines of Communication (LOC) that directly impede the contractor's ability to deliver the required level of service, then the in-theatre management team must work with the military to develop the mitigation plan. The effectiveness of the in-theatre management office will be greatly enhanced if there is both an established military logistics headquarters and a credible reach back organisation in place.

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 command and control 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. It is of great benefit if the CI has access to the NATO secure communications systems as this assists in maintaining transparency of ongoing events and issues.

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.

LEGAL AND FINANCIAL DOCUMENTATION

Regardless of how the commercial logistic solution is implemented, there is a requirement to proceed on a sound legal basis so as to protect the interests of all parties. If a LN is utilised this can normally be achieved with the signing of a Memorandum of Understanding (MOU) or a Technical Agreement (TA) with the other TCNs. If an Agency is engaged to be the CI, then a document called a Sales Agreement (SA) is usually required. It should be signed by the TCNs and the Agency. All of these legal instruments will take time to negotiate and staff through various nations and NATO headquarters, so they should be initiated as early as possible.

RISK MANAGEMENT

Although most expeditionary missions will require a degree of contracted support for major classes of supply, full contracted support options will not be suitable for all mission types. Threat levels and the associated risks have a direct impact on the ability

and willingness of contractors to deploy in support of the mission. Recent experience with contractors indicates that industry is robust and is willing to deploy to high risk areas. However, contractors are not soldiers and, although they may be performing mission critical tasks, there are limits to what a contractor can be requested to do. The NATO Commander needs to be made aware of these constraints during the deliberations on whether or not to follow the commercial route for the provision of support services. The joint logistics staff should develop a risk management strategy that fully considers the consequences of employing contractors on a particular operation. This analysis should also develop potential military responses in case the continued employment of contractors becomes untenable.

READINESS

Experience has shown that most reaction forces will not be engaged in a large mission at short notice. It is the smaller type of missions, such as a Non-combatant Evacuation Operation (NEO) or Humanitarian Assistance operation, that are more likely to occur with little warning. These types of operation usually demand rapid deployment and that generally dictates employing an all military force with integral sustainment. In such cases planning an extensive contracted support option is not usually feasible. A key limiting factor in the use of contracted logistic support solutions is the military's lack of early engagement with contractors to ensure the timely availability of their capabilities. Another limiting factor when planning the use of contractors to support expeditionary operations is the limited range of options there are available to improve the readiness of contractors to a point where it facilitates the Commander's freedom of action and meets nations' expectations for a timely military response. If readiness requirements are set at a high level, as they are for most standby military forces, this becomes an extremely demanding task both for the CI and for industry. If nothing is done to prepare in advance for the use of a contracted solution, then it can be very difficult for industry to meet the required response times. The crisis may occur in an area where there are companies already established and, if this is the case, then there may be scope for a contractor to meet short deadlines for the provision of services. Normally there will be a requirement for a contractor to mobilise and do some preparation in theatre prior to the initiation of service delivery. The Commander requires a range of contracting options that can respond to changing operational situations.

There are several ways that readiness for the delivery of a contracted support solution can be improved. The most basic level of pre-planning involves the establishment of a list of pre-selected contractors who may have responded to a generic NATO Statement of Requirement. This pre-selection allows the CI to contact companies who have already been made aware of a possible requirement. Once a crisis situation begins to evolve, the requirement can be refined as the Operations Planning Process (OPP) develops. Such pre-planned arrangements can save from between 30-45 days of contracting time. Although this represents a major saving in planning time, a significant gap remains between the operational readiness timings of the reaction force and the time it will still take a contractor to plan, mobilise and begin to deliver a commodity or service. This pre-selection process does not require an operational budget to be in place as there is no contract signed and funds paid.

The next logical step is to establish assured access contracts for required goods and services. This improves the responsiveness of contractors because they actually receive a fee for assured access to goods and services. Establishing assured access contracts as a matter of routine during the standby phase carries with it a degree of risk as maintaining these contracts will attract a significant yearly expenditure that is only optimised if the force deploys. Although an assured access contract would seem to improve readiness, there is still a risk and, depending on the type of mission to be carried out, it may not guarantee contractor availability. There is always the risk that even with penalty clauses in place, a contractor could refuse or be unable to deploy on a particular mission or to a geographical area. Current funding arrangements do not make the establishment of assured access contracts an easy process, but they remain an option should the operational situation demand such preparatory measures to be taken to ensure mission success.

CONCLUSION

The following are considered as the basic principles that should guide the development of a concept for a commercial logistic support solution for coalition operations:

- the decision to utilise a commercial solution for the provision of logistic support must be properly appreciated during the conduct of the OPP;
- the operational agility of a multinational logistic solution is enhanced if a CI is appointed;
- it is vital that an appropriate military logistics headquarters exist in theatre and be tasked to work with the CI;
- the CI must be capable of deploying and sustaining a robust in-theatre Project Management Office if this is required;
- a contracted logistics solution will require appropriate legal documentation to be in place. This will take time and negotiations should be started as soon as possible;
- an operations budget should be established as early as possible and a level of contractual pre-financing established to agreed readiness levels for specific critical services and supplies; and
- contractors can respond to the challenges of supporting ongoing operations, but Commanders need to be made aware of the limitations of employing contractors. There needs to be a risk assessment and suitable mitigation plans in place should the continued employment of contractors no longer be feasible.

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CHAPTER 16

LOGISTIC OUTREACH ACTIVITIES

PARTNERSHIP FRAMEWORKS WITH NATO

The existing partnership frameworks through the Euro-Atlantic Partnership Council/Partnership for Peace (EAPC/PfP), the Mediterranean Dialogue (MD), the Istanbul Cooperation Initiative (ICI) and with partners across the globe (Afghanistan, Australia, Iraq, Japan, Mongolia, New Zealand, Pakistan and the Republic of Korea) have proven to be very successful in bringing Partner countries into consultation with Allies and in integrating Partner capabilities into NATO-led operations. In addition, through their special relationship arrangements, Russia, Ukraine and Georgia have substantially enhanced their relations with NATO. The NATO-Russia Council (NRC), the NATO-Ukraine Commission (NUC) and the NATO-Georgia Commission (NGC) are specific fora which facilitate regular consultation and discussion on common security matters as outlined in Chapter 1.

Approved in April 2011, the Policy of Active Engagement in Cooperative Security[94] aims to substantially deepen and broaden NATO's partnerships and increase their effectiveness and flexibility in order to enhance their contribution to Euro-Atlantic and international security in the 21st century. This policy will ensure that partners play a fuller role than ever before in the development and implementation of cooperative activities and approaches with NATO, and amongst partners. The strategic objectives of NATO's relationship with Partners are to:

- enhance Euro-Atlantic and international security, peace and stability;
- promote regional security and cooperation;
- facilitate mutually beneficial cooperation on issues of common interest, including international efforts to meet emerging security challenges;
- prepare interested and eligible nations for NATO membership;
- promote democratic values and reforms;
- enhance support for NATO-led operations and missions;
- enhance awareness on security developments including through early warning, with a view to preventing crises; and
- build confidence and achieve better mutual understanding, including understanding about NATO's role and activities, in particular, through enhanced public diplomacy.

This Partnership Policy was developed in close consultation with partners and in a spirit of joint ownership to enhance cooperation and shared security.

PARTNERSHIP FOR PEACE (PfP)

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

94) *PO(2011)0124, Policy for a More Efficient and Flexible Partnership – Active Engagement in Cooperative Security*

line with the basic objective of the PfP initiative to strengthen and extend peace and stability in the Euro-Atlantic area. The PfP objectives are to:

- enhance political dialogue and practical cooperation on a broad range of international and appropriate domestic issues of common concern, in particular, those related to terrorism and other evolving threats to security;
- introduce 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 cooperation;
- prepare interested Partners for participation in NATO-led Article 5 and non-Article 5 operations through supporting the Partners' efforts to transform their defence posture and develop military interoperability and capabilities that provide a highly valuable contribution to NATO; and
- support Partners who wish to join the Alliance, consistent with the open door policy enshrined in the Washington Treaty and PfP Invitation Document.

MEDITERRANEAN DIALOGUE (MD)

The MD was initiated in 1994 with a view to contributing to regional security and stability in the Mediterranean area. The MD's overall aim is to contribute to regional security and stability, achieve better mutual understanding and dispel any misconceptions about NATO among Dialogue countries through enhanced practical cooperation. The Dialogue reflects the Alliance's view that security in Europe is closely linked to security and stability in the Mediterranean. The MD is currently comprised of seven countries: Algeria, Egypt, Israel, Jordan, Morocco, Mauritania and Tunisia. Most of the partnership tools were made available to MD partners at the 2011 Berlin Ministerial Meeting.

ISTANBUL COOPERATION INITIATIVE (ICI)

The ICI was launched in 2004 and concerns countries in the broader region of the Middle East - Bahrain, Kuwait, Qatar and the United Arab Emirates. Two more countries of the Gulf Cooperation Council are expected to join the ICI - Oman and Saudi Arabia. This initiative aims at promoting practical cooperation with interested countries. It offers tailored advice on defence reform, defence budgeting and planning, promoting civil-military and military-to-military cooperation to contribute to interoperability, fighting terrorism addressing the proliferation of weapons of mass destruction and their delivery means and fighting illegal trafficking. Logistic cooperation focuses on providing ICI countries with access to NATO logistic courses and with tailored activities, as may be requested.

POLITICAL MILITARY FRAMEWORK (PMF)

The PMF agreed in April 2011[95], supersedes the 1999 version, taking also into account experiences and lessons learned from past and ongoing NATO-led operations such

95) *PO(2011)0141, Political Military Framework for Partner Involvement in NATO-led Operations*

as in the Kosovo Force (KFOR) and the International Security Assistance Force (ISAF) in which partners are involved. It sets out the governing principles, procedures, modalities and guidelines for the involvement of "operational partner" countries in political consultations and the decision-shaping process in both operational planning and command arrangements for NATO-led operations to which they contribute. The PMF is used as a reference for all NATO non- Article 5 Crisis Response Operations (NA5CRO) where Non-NATO Contributing Nations (NNCN) are involved (operational partners) or willing to be involved (potential operational partners). PMF is implemented at the political and military levels. Council level meetings with operational partners are at Head of States, Ministerial and Ambassadorial level. At the military level, PMF procedures are applied as a matter of routine. Military Committee (MC) meetings in different formats such as the MC in Chiefs of Defence Session (MC/CS), MC in Permanent Session (MC/PS), MC Working Group (Cooperation) (MCWG(COOP), MCWG(Operations) are held in 28+ NNCN format when necessary. Partners also have open positions (Peace Staff Element (PSE)) in NATO command arrangements related to operations. "Operational partners" are involved in full consultation on all relevant aspects of an operation or discussion of documents in the form of regular meetings in the appropriate military and political bodies.

THE SINGLE PARTNERSHIP COOPERATION MENU (PCM)

In order to streamline NATO's partnership tools and to harmonise the partnership programmes, NATO established a single Partnership Cooperation Menu (PCM)[96] available to PfP, MD and ICI countries, as well as those partners across the globe who are engaged in a partnership programme with NATO. The PCM is a «rolling» programme, with periodic approval of specific activities, first by the MC through the MCWG(COOP)) and then by the Political and Partnerships Committee (PPC) on behalf of the Council. The electronic Partnership Real-time Information, Management and Exchange system (ePRIME) software establishes a single pool of activities for partners. Partners will continue to offer their activities to their respective frameworks and all partners are also encouraged to open their activities to all other partners. Organising authorities can recommend and Allies can approve limiting access to specific activities.

The Individual Partnership Programmes (IPP) (IPP for PfP partners, Individual Cooperation Programmes (ICP) for MD and ICI partners, and Tailored Cooperative Packages of activities (TCP) for partners across the globe) are to be replaced by an Individual Partnership and Cooperation Programme (IPCP) developed by all NATO partners. The IPCP is a modular document. The content and structure of the IPCP varies according to the specific interests of the partner and of NATO, and on the specific cooperation framework to which the partner belongs.

Logistic cooperation is a component of each of these programmes. Its main objectives are:

- exchange of information;
- harmonisation of national logistic/medical concepts, principles, policies,

96) *PO(2011)0125, Policy for a More Efficient and Flexible Partnership – Improving the Management of our Partnerships – Menu of Cooperation and Individual Programmes*

doctrine and procedures with NATO's logistic/medical concepts, principles, policies, doctrine, directives, 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 making them viable, affordable and interoperable;
- improvement of the interoperability of the national logistic/medical capabilities through implementation of the Partnership Goals (PGs) and NATO Standardization Agreements (STANAGs);
- development of Host Nation Support (HNS) arrangements, structures and databases (Capabilities Catalogue (CAPCAT); and
- familiarisation with NATO logistic information systems and tools, including the Allied Deployment and Movement System (ADAMS), NATO Codification System (NCS), NATO fuels, Integrated Logistic Support (ILS) and Life Cycle Management (LCM) concepts and initiatives.

The Partnership for Peace Planning and Review Process (PARP)

The PARP is a crucial element in fostering military interoperability and preparing prospective members for accession to NATO. The PARP mechanism, which is offered to Partners on an optional basis, covers a two-year planning cycle and is modelled on NATO's own force planning system. Planning targets, or PGs, are negotiated with each participating country, following which progress 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.

The Individual Partnership Action Plan (IPAP)

The IPAP prioritises, harmonises, and organises all aspects of NATO-Partner relationships in the EAPC and PfP frameworks in accordance with NATO's objectives and each interested Partner's particular circumstances and interests. IPAP also facilitates coordination of bilateral assistance provided by individual Allies and Partners, and the coordination of effort with other relevant international organisations.

In order to broaden and deepen the cooperation with all NATO partners, PARP and IPAPs are available to any partner with the political will and ability to deepen its relationship with NATO. PfP partners may opt to take part in PARP at any time by completing a PARP Survey; the possibility for a non-PfP partner to enter PARP will be subject to the approval of the Council. For IPAPs, Council approval is required.

Trust Funds

The aim of Trust Funds is to assist Partner countries in the safe destruction of their Anti-personnel Landmine (APL) stockpiles, surplus munitions, unexploded ordnance and Small Arms and Light Weapons (SALW). The framework of the

Trust Fund policy allows Partner nations who are being assisted 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 on whether or not to permit the establishment of a Trust Fund is the sole prerogative of the Allies.

Operational Capabilities Concept (OCC)

The OCC, as one of the main military tools, represents a more integrated approach to military cooperation and is aimed at improving the military effectiveness of multinational forces. It links together the normal cooperation in the context of the PfP and NATO force generation process which is activated in a crisis. In 2009, the OCC was opened to the MD and ICI nations. The programme is also opened to partners across the globe based on Council decisions, on a case-by-case basis. 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. The OCC Evaluation and Feedback (OCC E&F) programme is designed to improve and evaluate the levels of interoperability and military capabilities of partner units in order to enhance the operational relationship between the Alliance and partners contributing to NATO-led operations, including the NATO Response Force (NRF). The OCC E&F programme also supports transformation of partners' national Defence Forces. It has two NATO Evaluation Levels (NEL): the aim of NEL 1 is to evaluate the status of interoperability of partner units against the NATO Task List (NTL) by a NATO Evaluation Team (NET); in NEL 2, a NET evaluates the units' military capability against the Allied Command Operations (ACO) Forces Standards (AFS). Partners who provide units into the pool of forces through the OCC are assessed if they can make use of the ADAMS, Effective Visibility Execution (EVE) and Logistic Reporting (LOGREP) tools and if they have trained operators.

LOGISTIC-RELATED COMMITTEES AND STAFF ASSISTANCE

Standing Group of Partner Logistic Experts (SGPLE)

With the establishment of the SGPLE in February 2000, the Partners have been fully integrated into the activities of the Logistics Committee (LC) and its subordinate groups. The SGPLE is under the guidance of the Logistics Committee Executive Group (LCEG) with Partners and the Movement and Transportation Group (M&TG) with Partners. It provides an open forum to address logistic topics of interest to PfP, MD and ICI partners together with those partners across the globe who have a partnership programme with NATO, or other nations contributing to NATO-led operations. The SGPLE is described in Chapter 3.

Standing Group of Partner Medical Experts (SGPME)

In 2001, the Committee of the Chiefs of Military Medical Services in NATO (COMEDS) established the SGPME. In cooperation with the Strategic Commanders, this

provides a forum where medical assets and capabilities, PfP goals and medical pre-arrangements are addressed. The SGPME is also described in Chapter 3.

Staff Assistance

All Partner nations may request assistance from the International Staff (IS) and International Military Staff (IMS) on topics of logistic concern. On such occasions, IS-led Logistics Staff Assistance Visits (LSAV) or IMS-led Logistic Expert Team Visits (LETV) are organised to include relevant experts from NATO staffs, the Strategic Commands (SCs) and Agencies as required. Post visit reports are provided and include recommended courses of action for the Partner nation to consider in order to resolve the issues raised.

MILITARY COOPERATION DIVISION (MCD)

The MCD is a Bi-Strategic Command (Bi-SC) division with its principal location at Supreme Headquarters Allied Powers Europe (SHAPE). It was established as a result of a review of arrangements at the SCs level for support to military cooperation with partners. The aim of the MCD is to concentrate all partner-related military activities of ACO, Allied Command Transformation (ACT) and the former Partnership Coordination Cell (PCC) into a single body having a centralised management approach in order to eliminate redundancies of work and provide partners a "one-stop-shop." The majority of MCD staff are based at Mons, Belgium, with a detachment in Norfolk, USA to facilitate liaison with ACT. The MCD's tasks are to plan, programme, coordinate, implement and address NATO military outreach policies, activities and events at the SC level. It develops a Country Specific Plan (CSP) for each partner nation.

NATO-RUSSIA LOGISTIC COOPERATION

Intensified cooperation in logistics was initiated after the 2002 Rome Summit. Recognising the increasing importance of logistic cooperation and the need to coordinate 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 (NRC(LOG)). The NRC(LOG) is described in Chapter 3. The NRC in Military Representatives format (NRC-MR) also supports activities in other NRC formats with military involvement and avoids duplicative efforts with other NRC bodies. The goal of the logistics area of military-to-military cooperation is to achieve a level of cooperation in logistics sufficient to enable NATO-Russia the possibility of joint actions. The NATO-Russia cooperation in logistics is currently developed in three domains: fuels, medical and water handling.

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CHAPTER 17

PRODUCTION LOGISTICS

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 cooperation, but other committees and bodies are also involved in Armaments-related cooperation 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 cooperation within the Alliance contributes to meeting the NATO Strategic Commanders' capability requirements and enabling the interoperability of forces in NATO operations.

METHODS FOR ARMAMENTS COOPERATION

There are various ways in which cooperation in armaments can be achieved, such as:

Agreements on Production:

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

Agreements on Standardization:

- 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 efforts 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 NATO Secretary General (SG). The permanent Chairman is the Assistant Secretary General (ASG) for DI. It brings together the National Armament Directors (NADs) of member nations, representatives from the Military Committee (MC) and Strategic Commands (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 of cooperation:

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

CNAD Sub-structure

The CNAD sub-structure consists of Main Armaments 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 CNAD internet public website (https://diweb.hq.nato.int), which is access controlled and requires registration. The level 1 CNAD groups are the following:

CNAD Main Armaments Groups covering land, sea and aerospace 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 technological 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's life cycle, quality and interoperability requirements.
- **CNAD Ammunition Safety Group - AC/326** - is responsible, on behalf of the CNAD, for promoting ammunition safety throughout the life cycle and provides standards and guidance for munitions safety design, testing, transportation, handling and storage including during 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 Support Agency (NSPA) which can be regarded as its executive arm.

National Armaments Directors' Representatives (NADReps) are assigned to national delegations to NATO and represent their NADs. NADReps meet generally every second Monday and hold regular meetings with Partner nations' NADReps. They oversee the CNAD Management Plan and act as the NATO Headquarters' focal points for their respective NADs.

OTHER NATO COMMITTEES AND BODIES INVOLVED IN ARMAMENTS COOPERATION

Other NATO committees and bodies are also involved in certain aspects of Armaments cooperation and are:

Air and Missile Defence Committee (AMDC)

The AMDC is chaired by the Deputy Secretary General and meets twice a year. It advises the North Atlantic Council (NAC) on all aspects of air and missile defence development for NATO and the adjacent sea areas. As far as ballistic missile defence is concerned, the AMDC reports to the NAC through the Defence Policy and Planning Committee (Reinforced) (DPPC(R)). The AMDC includes a subordinated Panel on Air and Missile Defence (PAMD).

NATO Project Steering Committees (NPSC)

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

- two or more NATO nations participate in the project;
- there is a NATO requirement for the capability the project aims at developing and a commitment to report progress annually to the 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 inter-governmental agreement between two or more NATO nations in order to coordinate, execute or supervise an equipment procurement programme which has qualified as a NATO Project. Some 20 cooperative projects were developed in the past and some of them continue to enjoy formal NATO status under the terms of the CNAD Charter.

NATO Procurement Organisation (NPO)

The implementation of the NPO in July 2012, superseded the outdated business model to set up different Agencies managed by NPSCs for the capabilities to be developed/procured. The NPO will provide a framework for ongoing and future programmes allowing for a quicker, more effective and efficient way of initiating and executing Armament Procurement Programmes (APPs). The exploration of opportunities to establish a new APP as well as the execution of smaller armament

projects will be supported by a cooperation framework within the NPO called "procurement partnerships".

The structure of the NATO Procurement Agency (NPA) – the executive body of the NPO - will offer existing and new APPs opportunities to benefit from sharing common programme support functions and, thereby, to be more effective and cost-efficient.

NATO Science and Technology Organisation (NSTO)

The mission of the NSTO is to help position the nations and NATO's science and technology (S&T) investments, as a strategic enabler of the knowledge and technology advantage for the defence and security posture of NATO and Partner nations, by:

- conducting and promoting S&T activities,
- contributing to NATO's ability to enable and influence security and defence-related capability development; and
- supporting decision-making in NATO nations and NATO.

The NSTO is comprised of the Science and Technology Board (STB), Scientific and Technical Committees and Executive bodies. The STB is the governing body of the NSTO and it is comprised of national delegates drawn from Government, industry and academia. The STB has been designated by the NAC as the single focus within NATO for the conduct of international collaborative defence S&T, and the coordination of other S&T activities and issues. The Chairman of the STB reports to both the CNAD and the MC.

The primary work of the NSTO is conducted by networks of national experts, involved in collaborative research projects, military studies and information exchange activities across a wide range of technological disciplines.

NATO Communications and Information Organisation (NCIO)

As a result of the wider NATO Agencies reform[97], the NCIO came into being in July 2012. The NCIO is comprised of:

- an Agency Supervisory Board (ASB), where every NATO nation is represented;
- an Executive body consisting of a General Manager and his/her staff (the NATO Communications and Information Agency (NCIA);
- Multinational programmes; and
- Communications and Information (C&I) Partnerships.

The Senior Policy Committee (SPC) in the Consultation, Command and Control (C3) area is the C3 Board (C3B), reporting to the NAC and acting as NATO's overarching authority in the area of C3 architectures. It enables the effective integration of C3 capabilities into a NATO-wide network thereby supporting the NATO Network-Enabled Capability Concept (NNEC) and NATO's Transformational

97) *PO(2011)0242, Implementation Plan for NATO Agencies Reform*

Goals. The SPC is responsible for the preparation of top level policies in its assigned areas of responsibility. It ensures the linkage to and coherence within the NATO Defence Planning Process (NDPP) and translates NATO's Strategic Goals and Objectives or Capability Requirements into policies.

The C3B is assisted by the C3 Representatives (C3Reps) who are usually posted into their respective Delegations or Military Representatives' staffs (Mil Reps) in NATO HQ. Staff support to the C3B and its sub-structure is provided by the NATO Headquarters C3 Staff (NHQC3S), which is an integrated civil and military staff, responding to both the ASG/DI and the Director General International Military Staff (DG IMS).

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 (C2). NATO C3 activities in these areas are related to the multinational decision-making process which deals with:

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

PROCEDURES FOR ARMAMENTS COOPERATION

Armaments cooperation 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 cooperative equipment programmes. Because the responsibility for equipping their forces is a prerogative of individual member nations, this cooperative 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 cooperative efforts, two major planning/programming systems have been introduced in NATO: Conventional Armaments Planning System (CAPS)[98] and the Phased Armaments Programming System (PAPS)[99].

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

98) *AAP-27, Conventional Armaments Planning System (CAPS) - Users Handbook and Guide to CAPS Edition 3 -1996*

99) *AAP-20, Phased Armaments Programming System (PAPS) Edition 2 – February 2010*

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 cooperative research and development and production programmes within NATO.

NATO Defence Planning Process (NDPP)

With the introduction of the NDPP in 2009, NATO aimed at providing a framework for the integration and harmonisation of national and Alliance defence planning activities, to meet agreed targets in the most effective way. In terms of armaments, it should facilitate the timely identification, development and delivery of the necessary range of interoperable forces and provide a seamless planning spectrum from the short to the medium and long-term horizons.

Along with other possible multinational cooperative projects, NDPP is expected to be the main source for armaments planning guidance, whilst CAPS and PAPS will become more obsolete and outdated ways for armaments cooperation.

PARTNERSHIP ACTIVITIES

The CNAD is playing an active and important role in implementing practical cooperation within the Partnership for Peace (PfP) framework, Mediterranean Dialogue (MD), Istanbul Cooperation Initiative (ICI) countries and Partners across the Globe (Afghanistan, Australia, Iraq, Japan, Mongolia, New Zealand, Pakistan and the Republic of Korea). To the extent possible, CNAD groups are open to these Partners and countries, based on reciprocity and mutual benefit and in accordance with NATO's strategic guidelines; CNAD identifies new opportunities for cooperation with Partners and other countries, with the focus on the ones that could lead to improved operational support or capability development cooperation. Delegates from the PfP, MD, ICI and Partners across the Globe nations participate in those meetings or sessions open to them and represent their nations in the same way as the delegates from NATO nations.

Partners and other countries mentioned above 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's PfP, MD, ICI and Partners across the Globe activities are coordinated with related cooperation in other NATO bodies, and particularly with the NATO Standardization Agency (NSA) and with the NATO Standardization Organisation (NSO).

LOGISTIC SUPPORT ACTIVITIES

Integrated Logistic Support (ILS)

ILS is the deliberate integration of systems/equipment logistic support considerations into the system's 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. The former Senior NATO Logisticians' Conference (now Logistics Committee (LC)) developed ALP-10 on Integrated Logistic Support in 1991 to support the Alliance's ambition[100]. It specifies 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.

ILS is structured around the life cycle management model detailed in PAPS. 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 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.

REFERENCES

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NATO Facts and Figures

100) ALP 10, Guidance for Integrated Logistic Support

PO(2011)0242, Implementation Plan for NATO Agencies Reform

AAP-20, Phased Armaments Programming System (PAPS) Edition 2 – February 2010

AAP-27, Conventional Armaments Planning System (CAPS) - Users Handbook and Guide to CAPS Edition 3 -1996

PO(2009)0042, Outline model for a NDPP

PO(2009)0079, Implementation and Transition Plan - NDPP

ALP-10, Guidance for Integrated Logistic Support

CHAPTER 18

IN-SERVICE LOGISTICS

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 the system 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 Costs (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 as near as possible to the outset. These concepts are known as Integrated Logistic Support (ILS) as described in Chapter 17.

NATO SUPPORT ORGANISATION (NSPO)

General details of the NSPO and the NATO Support Agency (NSPA) are outlined in Chapter 1. The Charter of the NSPO is referenced, C-M(2012)0047.

Support Partnership Committees (SPC)

Support Partnerships are an excellent example of multinational logistics. They may be established within the NSPO through an initiative by two or more NATO nations wishing to organise common multinational logistic support and/or services and capabilities within the scope of the NSPO's mission and guidance provided by the Council. Typically, Support Partnerships are formed by nations wishing to consolidate their requirements to leverage economies of scale, make use of common expertise, or to set up common assets or collaborative logistic arrangements. Support Partnerships are an integral part of the NSPO and share its juridical personality derived from Article 4 of the Ottawa Agreement.

Each Support Partnership shall have a SPC comprised of a representative of each Support Partnership member nation. The SPC shall deal with the NSPA on matters within its purview as a subordinate committee of the Agency Supervisory Board (ASB). The SPC may set up subsidiary Committees or Working Groups as appropriate to assist it and make recommendations on Support Partnership matters.

The importance of Support Partnerships is reflected in the authority they have within the NSPO governance structure. It is the prerogative of the Support Partnership member nations to determine how to share the costs amongst themselves and to approve organisational matters, workforce, budgets, programmes and priorities.

COOPERATIVE LOGISTICS WITHIN THE NSPA

NATO Logistic Stock Exchange (NLSE)

The overall objective of the NLSE is to improve logistics availability, achieve economies of scale and simplify the supply chain processes. In support of this objective, the NLSE Information Technology (IT) system contains a set of logistic

processes and tools which allows NSPO nations to better manage their national responsibilities for item management in a multinational/joint cooperative logistic environment. The system allows nations who are members of the Common Item Management (COMMIT) Partnership to report national inventory information at the NATO Stock Number (NSN) level which allows/facilitates:

- asset visibility at a "global" level";
- redistribution (to include Mutual Emergency Support) of items between nations;
- the establishment of outline agreements with industry (known as eCat1 contracts) based upon present and future requirements.

NATO Depot and Support System (NDSS)

The NDSS is an integrated logistic support software tool for NATO designed, developed and maintained by the NSPA. It covers most functional areas of logistic support, such as item identification, supply, warehousing, stock management, maintenance, property accounting, asset management and vehicle fleet management. The NDSS is highly scaleable and is operated on a wide variety of platforms (including client-server architecture, web-access, web services). NDSS is also available as a Functional Service on the NATO Public Access Network (PAN).

Currently there are 59 organisations/sites using NDSS in 30 different geographical locations: all NATO Communication and Information Systems (CIS) depots, Forward Support Points, NATO Signal Battalions as well as most NATO HQ Support Commands. EUROCORPS, a NATO Readiness Force (NRF) unit, is also a NDSS user.

The NDSS is interfacing with relevant NATO Enterprise Resource Programme (ERP) systems (for example, Systems, Applications and Products (SAP) in Data Processing at NSPA) and NATO's Consignment Tracking Capability (NCTC).

NSPA assists in the installation of the package, if required, including the procurement of the necessary hardware and Commercial-off-the-Shelf (COTS) software. NSPA also provides end-user training/coaching and operates a Service Desk for its customers.

Electronic NATO Ammunition DataBase (eNADB)

The eNADB is a powerful ammunition-dedicated search tool, containing extensive information about ammunition, covering more than 338,000 items held in the NATO inventories. It includes:

- Ammunition Interchangeability, Technical and Logistics Data on all types of ammunition used in NATO countries;
- Publications Library - Collection of NATO ammunition publications (English & French versions), some national ammunition publications are also included. The library can be searched for words or text strings; and

- Cross-references between Ammunition Data entries and Publications.

The eNADB is available to authorised Government organisations and commercial entities on an annual subscription basis.

NATO PROJECT STEERING COMMITTEES (NPSC)

Details of the NPSC are outlined in Chapter 17.

NATO CODIFICATION SYSTEM (NCS)

The NATO Codification System (NCS) was established by the North Atlantic Council in 1958 since when all policies and procedures associated with the NCS have been agreed upon by all NATO nations. Additionally, 35 non-NATO nations have signed sponsorship agreements with NATO authorising them to use the NCS within their national systems.

The NCS is a uniform and common system for the identification, classification and stock numbering of the Items of Supply (IoS) of user nations, designed to achieve maximum effectiveness in logistic support and facilitate materiel data management. The NCS is governed by the NATO Group of National Directors on Codification (AC/135) under the auspices of the NATO Committee of National Armament Directors (CNAD) and implemented by the National Codification Bureau (NCB) of each user nation.

The NCS provides accurate information regarding the identity of 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 as follows:

- enhanced opportunities for standardization 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 coordinated 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 AC/135 often requests NSPA, on a cost recovery basis, to carry out central codification support activities, which include the following standing services:

- functional and technical support to AC/135;
- secretarial support;
- management of AC/135 publications and website;
- 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 items of data concerning Manufacturers and Vendors in the NATO Commercial and Governmental Entity (NCAGE) and 23m User Registrations. NSPA also manages the NATO Mailbox System (MBS) allowing the transfer of data among the member countries.

REFERENCE

C-M(2012)0047, Charter of the NATO Support Organisation

ACRONYMS USED IN THIS HANDBOOK

AAR	Air-to-Air Refuelling
AC	Alliance Committee
ACC	Air Component Command
ACO	Allied Command Operations
ACROSS	Allied Commands' Resource Optimisation Software System
ACSP	Aircraft Cross-Servicing Programme
ACT	Allied Command Transformation
ADAMS	Allied Deployment and Movement System
ADC	Air Defence Committee
ADL	Allied Disposition List
ADP	Automated Data Processing
ADR	Annual Defence Review
AFLPs	Allied Fuels Logistic Publications
AFS	ACO Force Standards
AGS	Alliance Ground Surveillance
AHWG	Ad Hoc Working Group
AIMS	Armaments Information Management System
AJP	Allied Joint Publication
ALP	Allied Logistics Publication
ALSS	Advanced Logistic Support Site
ALTBMD	Active Layered Theatre Ballistic Missile Defence
AMCC	Allied Movement Coordination Centre
AMDC	Air and Missile Defence Committee
AMSCC	Athens Multinational Strategic lift Coordination Centre
AOM	Alliance Operations and Missions
AOO	Area of Operations
AOR	Area of Responsibility
AP	Allied Publication
APL	Anti-personnel Landmines
APODs	Air Ports of Debarkation
APP	Armament Procurement Programmes
ASB	Agency Supervisory Board
ASG	Assistant Secretary General
AVT	Applied Vehicle Technology
BC	Budget Committee
BDM	Battle-Decisive Munitions
BDR	Battle Damage Repair

BFS	(NATO) Bulk Fuel Strategy
BioMedAC	Biomedical Advisory Council
Bi-SC	Bi-Strategic Commands
Bi-SC D	Bi-SC Directive
Bi-SC LCB	Bi-SC Logistic Coordination Board
Bi-SC LOGFS IM WG	Bi-SC Logistic Functional Services Information Management Working Group
Bi-SC LPAC	Bi-SC Logistics Planning Advisory Committee
Bi-SC M&T Forum	Bi-SC Movement and Transportation Forum
Bi-SC MEDAG	Bi-SC Medical Advisory Group
Bi-SC NSJEC	Bi-SC NATO Senior Joint Engineering Conference
Bi-SC SPC	Bi-SC Stockpile Planning Committee
BOA	Basic Ordering Arrangements
BOD	Board of Directors
C2	Command and Control
C3	Consultation, Command and Control
C3B	Consultation, Command and Control Board
C3Reps	C3 Representatives
C&I	Communications and Information
C&RS	Cooperation and Regional Security (Division)
CA	Comprehensive Approach
CAIP	Capability Area Improvement Programmes
CAP	Capability Area Plans
CAPCAT	Capabilities Catalogue
CAPS	Conventional Armaments Planning System
CBC	Civil Budget Committee
CBRN	Chemical, Biological, Radiological and Nuclear
CBRN Med WG	Chemical, Biological, Radiological and Nuclear Medical Working Group
CC	Component Command(s)
CE	Crisis Establishment
CEPC	Civil Emergency Planning Committee
CEPMO	Central Europe Pipeline Management Organisation
CEPS	Central Europe Pipeline System
CF	Common-Funding
CFAO	Conceptual Framework for Alliance Operations
CHODs	Chiefs of Defence
CI	Contract Integrator

CIA	Communications and Information Agency
CIMIC	Civil-Military Cooperation
CIS	Communication and Information Systems
CJ4	Combined Joint Logistics (Staff)
CJMed	Combined Joint Medical (Staff)
CJSOR	Combined Joint Statement of Requirements
CLS	Contractor Logistic Support
C-M	Council Memoranda
CMC	Chairman of the Military Committee
CMP	Capability Master Plan
CMPS Section	Civil-Military Planning and Support Section
CNAD	Conference of National Armaments Directors
COE	Centre of Excellence
COMEDS	Committee of the Chiefs of Military Medical Services in NATO
COMEDS MMSOP	COMEDS Military Medical Structures, Operations and Procedures
COMMIT	Common Item Management
COMPASS	Comprehensive Approach Specialist Support
CONOPS	Concept of Operations
COP	Contingency Operation Plan
COPD	Comprehensive Operations Planning Directive
COR	Concept of Requirements
COTS	Commercial-off-the-Shelf
CP	Capability/ies Package
CPP	Capability Package Process
CRD	Commander's Required Date
CRO	Crisis Response Operation
CRR	Capability Requirements Review
CS	Combat Support or Committee for Standardization
CSO	Contractor Support to Operations
CSP	Country Specific Plan
CSS	Combat Service Support
DASG	Deputy Assistant Secretary General
DCE	Design Chief Executive
DCMC	Deputy Chairman of the Military Committee
DDP	Detailed Deployment Plan
DFHE	Deployable Fuels Handling Equipment

DG IMS	Director General International Military Staff
DI	Defence Investment (Division)
DJF HQ	Deployable Joint Force HQ
DOS	Days of Supply
DPCS	Defence Planning Capability Survey
DPP	Defence Policy and Planning (Division)
DPPC	Defence Policy and Planning Committee
DPPC(R)	DPPC (Reinforced)
DPRC	Deputy Permanent Representatives' Committee
DS EP	Dental Service Expert Panel
DTA	Delegated Tasking Authority
EADRCC	Euro-Atlantic Disaster Relief Coordination Centre
EAG	European Air Group
EAPC	Euro-Atlantic Partnership Council
EATC	European Air Transport Command
EATF	European Air Transport Fleet
EM	Executive Management (Division)
EM EP	Emergency Medicine Expert Panel
eNADB	electronic NATO Ammunition DataBase
ePRIME	electronic Partnership Real-time Information, Management and Exchange system
EOD	Explosive Ordnance Disposal
EODTIC	EOD Technical Information Centre
ERP	Enterprise Resource Programme
ESC	Emerging Security Challenges (Division)
ETEE	Education, Training, Exercise and Evaluation
EU	European Union
EUMS	European Union Military Staff
EVE	Effective Visible Execution
F&LWG	Fuels and Lubricants Working Group
F&LWP	Fuels and Lubricants Working Party
FCU	Fuel Consumption Unit
FHPWG	Force Health Protection Working Group
FLR	Forces of Lower Readiness
FLS	Forward Logistic Site
FOC	Full Operational Capability
FOM	Freedom of Movement
FPG-Log	Functional Planning Guide-Logistics

FSII	Fuel System Icing Inhibitor
FWSS EP	Food and Water Safety Support Expert Panel
GO	Governmental Organisation(s)
GOP	General Operations Plans
GRF	Graduated Readiness Forces
HFM	Human Factors and Medicine (Panel)
HN	Host Nation
HNS	Host Nation Support
HQ	Headquarters
HR	Human Resources
HRF	High Readiness Forces
IBAN	International Board of Auditors NATO
IC	Investment Committee
ICI	Istanbul Cooperation Initiative
ICP	Individual Cooperation Programmes
IEA	International Energy Agency
IED	Improvised Explosive Devices
IEL	Infrastructure Engineering for Logistics
ILS	Integrated Logistic Support
IMP	Implementation Management Procedure
IMS	International Military Staff
INT	Intelligence (Division)
IOs	International Organisations
IOC	Initial Operating Capability
IoS	Items of Supply
IPAP	Individual Partnership Action Plan
IPCP	Individual Partnership and Cooperation Programme
IPP	Individual Partnership Programmes
IRCSG	Industrial Resources and Communications Services Group
IRF	Immediate Reaction Force
IS	International Staff
ISAF	International Security Assistance Force
IT	Information Technology
JALLC	Joint Analysis and Lessons Learned Centre
JD&S M&T Branch	Joint Deployment and Sustainment M&T Branch
JFAI	Joint Formal Acceptance Inspections
JFC	Joint Force Command or Commander

JFC HQ	JFC Headquarters
JFHQ	Joint Force Headquarters
JHAFG	Joint Health, Agriculture and Food Group
JIA	Joint Implementation Arrangement(s)
JLRT	Joint Logistic Reconnaissance Team
JLSG	Joint Logistic Support Group
JLSG HQ	JLSG Headquarters
JLSG HQ CSE	JLSG HQ Core Staff Element
JMC	Joint Medical Committee
JOA	Joint Operations Area
JOPG	Joint Operations Planning Group
JSSR	Joint Staff Screening Report
JTF HQ	Joint Task Force Headquarters
JTHQ	Joint Theatre Headquarters
KFOR	Kosovo Force
L&R	Logistics and Resources (Division)
LC	Logistics Committee
LCB	Logistics Coordination Board
LCC	Life Cycle Cost/Costing or Land Component Command
LCEG	Logistics Committee Executive Group
LCEG(S)	LCEG in Standardization format
LCM	Life Cycle Management
LCS	Life Cycle Support
LC SWG	LC Standardization Working Group
LETV	Logistic Expert Team Visits
LLN	Logistic Lead Nation
LLOC	Land Lines of Communication
LN	Lead Nation
LOA	Level of Ambition
LOC	Lines of Communication
LOGCON	Logistic Control
LOGFAS	Logistics Functional Area Services
LOGFS	Logistics Functional Services
LOGFS IM WG	Logistics Functional Services Information Management Working Group
LOG IMG	Logistics Information Management Group
LOGIS	Logistics Information System
LOGREP	Logistic Reporting

LOPP	Logistic Operations Planning Process
LRSN	Logistic Role Specialist Nation
LSA	Logistic Support Analysis
LSAV	Logistics Staff Assistance Visits
M&T	Movement and Transportation
M&TF	Movement and Transportation Forum
M&TG	Movement and Transportation Group
MB	Military Budget
MBC	Military Budget Committee
MBS	(NATO) Mailbox System
MC	Military Committee
MCC	Maritime Component Command
MCCE	Movement Coordination Centre Europe
MC/CS	MC in Chiefs of Defence Session
MCD	Military Cooperation Division
MCLSB	Military Committee Land Standardization Board
MC/PS	MC in Permanent Session
MCR	Minimum Capability Requirements
MCWG(COOP)	MC Working Group (Cooperation)
MD	Mediterranean Dialogue
MEDAD	Medical Advisor
MEDAG	Medical Advisory Group
MedBAT	Medical Blood Advisory Team
MedCIS EP	Medical Communication and Information Systems Expert Panel
MedIntel EP	Medical Intelligence Expert Panel
MedN EP	Medical Naval Expert Panel
Med Std WG	Military Medical Standardization Working Group
MHCWG	Military Health Care Working Group
MILENG	Military Engineering
MILREPs	Military Representatives
MILU	Multinational Integrated Logistics Unit
MIMU	Multinational Integrated Medical Units
MJO	Major Joint Operation
MLCC	Multinational Logistics Coordination Centre
MLU	Multinational Logistic Unit
MMH EP	Military Mental Health Expert Panel
MMMP EP	Medical Material and Military Pharmacy Expert Panel

MMR	Minimum Military Requirements
MMT EP	Military Medical Training Expert Panel
MN	Multinational
MNDDP	Multinational Detailed Deployment Plan
MOU	Memorandum of Understanding
MovCon MILU	Movement Control MILU
MPRE	Mobile Pipeline Repair Equipment
MSSC	Multinational Sealift Steering Committee
MTRP	Medium-Term Resource Plan
NA5CRO	non-Article 5 Crisis Response Operations
NAAG	NATO Army Armaments Group
NAC	North Atlantic Council or Council
NACMO	NATO Air Command and Control System Management Organisation
NAC(R)	North Atlantic Council (Reinforced)
NADs	National Armament Directors
NADReps	National Armaments Directors' Representatives
NAEW&CS	NATO Airborne Early Warning and Control System
NAFAG	NATO Air Force Armaments Group
NAGSMO	NATO Alliance Ground Surveillance Management Organisation
NAHEMO	NATO Helicopter Management Organisation
NAMEADSMO	NATO Medium Extended Air Defence Systems Management Organisation
NAMO	NATO Airlift Management Organisation
NAPMO	NATO Airborne Early Warning and Control Programme Management Organisation
NATO	North Atlantic Treaty Organisation
NC3O	NATO Consultation, Command and Control Organisation
NCAGE	NATO Commercial and Governmental Entity
NCB	National Codification Bureau
NCIA	NATO Communications and Information Agency
NCIO	NATO Communications and Information Organisation
NCS	NATO Command Structure or NATO Codification System
NCSO	NATO Communications and Information Systems Services Organisation
NCTC	NATO's Consignment Tracking Capability

NDF	NATO Deployable Forces
NDMC	NATO Defence Manpower Committee
NDPP	NATO Defence Planning Process
NDSS	NATO Depot and Support System
NEL	NATO Evaluation Levels
NEO	Non-combatant Evacuation Operation
NEPS	North European Pipeline System
NET	NATO Evaluation Team
NETMO	NATO Eurofighter and Tornado Management Organisation
NF&LWG	NATO Fuels and Lubricants Working Group
NFRs	NATO Financial Regulations
NFS	NATO Force Structure
NGC	NATO-Georgia Commission
NGOs	Non-Governmental Organisations
NHQC3S	NATO Headquarters C3 Staff
NIAG	NATO Industrial Advisory Group
NLSE	NATO Logistics Stock Exchange
NMAs	NATO Military Authorities
NMCC	National Movement Coordination Centre
NMCRL	NATO Master Catalogue of References for Logistics
NNAG	NATO Naval Armaments Group
NNCN	Non-NATO Contributing Nations
NNEC	NATO Network-Enabled Capability
NOR	NATO Office of Resources
NPA	NATO Procurement Agency
NPO	NATO Procurement Organisation
NPS	NATO Pipeline System
NPSC	NATO Project Steering Committees
NRC	NATO-Russia Council
NRC(LOG)	NATO-Russia Council Ad Hoc Working Group on Logistics
NRC-MR	NRC in Military Representatives format
NRF	NATO Response Force
NSA	NATO Standardization Agency
NSE	National Support Element
NSIP	NATO Security Investment Programme
NSN	NATO Stock Number

NSO	NATO Standardization Organisation
NSP	NATO Standardization Programme
NSPA	NATO Support Agency
NSPO	NATO Support Organisation
NSSE	NATO Shared Services Environment
NSTO	NATO Science and Technology Organisation
NTL	NATO Task List
NTM	Notice to Move
NUC	NATO-Ukraine Commission
NURC	NATO Undersea Research Centre
O&M	Operations and Maintenance
OCC	Operational Capabilities Concept
OCC E&F	OCC Evaluation and Feedback (programme)
OLCM	Operations Logistics Chain Management
OLP	Operations Logistics Planning
OPC	Operations Policy Committee
OPCON	Operational Control
OPLAN	Operation Plan
OPP	Operations Planning Process
OPS	Operations (Division)
OSCE	Organisation for Security and Cooperation in Europe
P&P	Policy and Plans (Division)
PAMD	Panel on Air and Missile Defence
PAN	Public Access Network
PAPS	Phased Armaments Programming System
PARP	Partnership Planning and Review Process
PASP	Political Affairs and Security Policy (Division)
PC	Petroleum Committee
PCC	Partnership Coordination Cell
PCM	Partnership Cooperation Menu
PDD	Public Diplomacy Division
PDS	Project Data Sheet
PE	Peacetime Establishment
PECC	Patient Evacuation Coordination Centre
PfP	Partnership for Peace
PG	Political Guidance or Partnership Goals
PHE	Petroleum Handling Equipment

PHEWG	Petroleum Handling Equipment Working Group
PIP	Project Implementation Plan
PMF	Political Military Framework
pMS	(EU) Permanent Member States
POC	Point of Contact
POD	Port of Debarkation
POL	Petroleum, Oil and Lubricants
Pol-Mil	Political-Military
PPC	Political and Partnerships Committee
PS	Planning Situation
PSA	Priority Shortfall Area
PSE	Peace Staff Element
PSYOPS	Psychological Operations
R&M	Reliability and Maintainability
RC	Required Capability
RD	Requirements Definition
RFP	Response Force Pool
RIFB	Ready Invitations for Bid
Ro-Ro	Roll on-Roll off
RPPB	Resources Policy and Planning Board
RSN	Role Specialist Nation
RSOM	Reception, Staging and Onward Movement
RTO	Research and Technology Organisation
S&T	Science and Technology
SA	Sales Agreement
SACEUR	Supreme Allied Commander Europe
SACT	Supreme Allied Command or Commander Transformation
SALW	Small Arms and Light Weapons
SAP	Systems, Applications and Products (in Data Processing)
SCs	Strategic Commands or Strategic Commanders
SCP	Sealift Capability Package
SDOS	Standard Days of Supply
SFC	Single Fuel Concept
SFP	Single Fuel Policy
SG	Secretary General
SGPLE	Standing Group of Partner Logistics Experts

SGPME	Standing Group of Partner Medical Experts
SHAPE	Supreme Headquarters Allied Powers Europe
SJO	Smaller Joint Operation
SLCM	System Life Cycle Management
SME	Subject Matter Expert
SN	Sending Nation
SNLC	Senior NATO Logisticians' Conference
SOFA	Status of Forces Agreement
SOFM EP	Special Operation Forces Medicine Expert Panel
SOPG	Strategic Operations Planning Group
SOR	Statement of Requirements
SPC	Senior Policy Committee or Support Partnership Committee
SPG	(Bi-SC) Stockpile Planning Guidance
SPO	Strategic Priorities and Objectives
SPODs	Sea Ports of Debarkation
SPOW	Scientific Programme of Work
SRA	Suitability and Risk Assessment
STANAG	NATO Standardization Agreement
STB	Science and Technology Board
STO	Science and Technology Organisation
TA	Tasking Authority or Technical Agreement or Transit Arrangement
TACO	Theatre Allied Contracting Office
TCN	Troop Contributing Nation
TCP	Tailored Cooperative Packages
TCSOR	Theatre Capability Statement of Requirements
TDGG	Transportation of Dangerous Goods Group
TFHE	Tactical Fuel Handling Equipment
TG	Transport Group(s)
TG(CA)	TG(Civil Aviation)
TG(IST)	TG(Inland Surface Transport)
TG(OS)	TG(Ocean Shipping)
TMED ET	Telemedicine Expert Team
TOA	Transfer of Authority
TOC	Total Ownership Costs
TTPs	Tactics, Techniques and Procedures
UAV	Unmanned Aerial Vehicles

UN	United Nations
UN-OCHA	United Nations Office for the Coordination of Humanitarian Affairs
V&O	Vision and Objectives

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