Joint Logistic Support Group Standard Operating Procedure

706

Sustainment

Drafted by:	FCMD	Version:	V 3
Authorized by:	COS SHAPE	Latest Update:	15 Oct 2011
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References:

A MC 319/2 - NATO Principles & Policies for Logistics
B AJP 4A - Allied Joint Publication for Logistics
C MC 526 - Logistics Support Concept for NRF Operations
D Generic Expeditionary Logistic Directive (to follow)
E AAP-6 - NATO Glossary of Terms and Definitions
F AJP-4.9 - Modes Of Multinational Logistics Support
G MC 55/4 - NATO Logistic Readiness and Sustainment Policy.
H AD 80-96 - ACO NRF directive

Content:

Amendment Record:

Serial	Amendment Number	Date
01	Version 0	28 Nov 08
02	Version 1	01 Jul 10
03	Version 2	14 Jan 11
04	Version 3	01 Dec 11
05		
06		

Related SOP:

AIM

1. The aim of this SOP is to outline the procedures and responsibilities of the JLSG to enable the provision of 3rd level logistics sustainment to deployed NATO forces and if required to NATO coalition forces. This SOP describes what elements are needed to establish an effective sustainment organisation and how sustainment stocks will be managed in an efficient way

GENERAL

2. In line with the parameters of the deployed NATO force the logistics systems, structures and resources must provide the capability to project and to sustain forces throughout the duration of operations covering the entire spectrum from SJO to MJO. Logistic sustainability requires sufficient deployable and in-place logistic support for all elements of the deployed NATO force in the JOA. This will include:

   a. medical support
   b. equipment maintenance
   c. supplies and stocks
   d. logistic infrastructure
   e. transportation of goods/supplies and personnel

3. As laid out in Reference C the NATO Commander must develop a comprehensive sustainment plan to meet the pre-determined stand-alone requirement. To maximise the operational flexibility required by the NATO Force, sustainment systems should aim to establish a network comprised of a set of logistics nodes. To enable the JLSG and its subordinate elements to deliver sustainment stocks forward to the components as they are needed, a designated sustainment system needs to be established. This sustainment system should be seamless both vertically (from echelon to echelon) and horizontally (between components or nations).

SUSTAINMENT

4. Sustainability is the ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. Hence, its objective is to achieve the maximum sustained combat effectiveness. Sustainment is the process of supplying force consumables and replacing losses through attrition and it is pivotal to the maintenance of combat power for the duration of to the mission. It is one of the four pillars[1] of joint operation planning.

5. The more accurately the demand can be quantified, the more economic, effective and efficient the system will be. The overarching Sustainability Statement (SUSTAT) in Annex B to this document provides Commander's direction and guidance to staff planners as well as defining the minimum required level of resources for an operation. The final OPLAN for any operation will contain SUSTAT as part of OPLANs Annex R.

[1] Four pillars of joint operation planning: deployment, employment, sustainment, and redeployment planning

6. The different levels have to be designed to hold a total of pre-determined Days of Supply (DOS). As a minimum, nations should plan to deploy initially with 72 hours of stocks for immediate use. If we consider, as an example, the 30 days stand-alone requirement laid out in reference C, the distribution between the different levels might be as follows

   a. Ideally 23 DOS are inbound to the theatre (4th level) or stored within the JLSG / TLB at theatre level (3rd level);

   b. the remaining 7 DOS at tactical level, of which:

      (1) 5 DOS in the 2nd level within the CSS Bn and 7 DOS within the DOBs

      (2) 2 DOS in the 1st level within the units as basic load

   These required DOSs may change as a result of operational requirements.

7. Logistics sustainability must be planned and established at the early stages of an operation for all force packages coming into theatre through all possible entry nodes (an SPOD, APOD, Railhead, Land Border Crossing points) to gain and maintain Full Operational Capability (FOC). Therefore, sustainment is a logistics process parallel to RSOM in order to guarantee the support to the forces.

   From the very beginning all CCs in theatre as well as the JLSG subordinate units have to be supported from or trough the JLSG structure. This has to be taken into account during the initial planning phase which ensures an effective sustainment and an efficient stocks management (see Annexes) to reduce the overall logistics footprint. This strives for multinational (bilateral- or multilateral support arrangements, LLN, RSN) and commercial (TPLSS) support solutions and to have support mechanisms in place timely.

8. In general, supply will be executed on a PULL principle (STANAG 3024). To meet the operational needs supply has to be planned and executed in accordance with the overall mission progress (see Annex A Support Matrix).

CONCEPT OF OPERATIONS

9. The JLSG HQ Supply and Services Section plans, coordinates and executes support for all classes of supply for which the JLSG HQ is responsible, as follows: (see Annex B)

   a. Class I and III: Planning, monitoring, storage, provision to 3rd level, distribution to 3rd and 2nd level and executing logistic aspects of the OPLAN related to supply resources.

      CL I rations: Mainly national responsibility but nations are encouraged to use multinational solutions (bi-or multilateral arrangement).

   b. Class II and IV: (when possible) Monitoring, coordinating, planning logistics aspects of the OPLAN related to supply resources. If and where possible, nations are encouraged to use bi- or multilateral solutions.

   c. Class IV: Planning and providing building and construction materials for NATO owned infrastructure and projects.

   d. Class V: Transportation and storage on 3rd level.

For the execution the JLSG could use any of the modes of multinational support (See Ref F).

10. **Theatre Logistic Base (TLB).** The Theatre Logistic Base is the main supply asset belonging to the JLSG. The TLB may be a single contiguous piece of real estate, or could alternatively be a number of individual locations grouped together under the C2 of the TLB COM. Either way, it is envisaged that many of the JLSG units will be physically grouped together in the TLB, including all of the NSEs.

11. **Stocks management** Depending on the type of the operation (SJO / MJO) and the size of the Joint Force, the stocks management procedures may vary and need to be adapted with respect to the different classes of supply. However, in principle the following should apply:

a. Class I:

(1) Provision and storage: the preferred option for the provision and storage of class I (fresh food, rations, bottled water, etc.) is a multinational contract, managed by a LN/RSN or the NATO contractor integrator, provide class I for the whole JF, including contracting, payment, and reimbursement administration.

(2) Distribution: from supplier to the warehouse (e.g. TLB), is a responsibility of the LN / contractor and from TLB to units (level 3 and 2) is a responsibility of the JLSG (executed by assigned units or contractors).

b. Class III:

(1) Provision and storage: the preferred option for the provision and storage of class III (aviation and surface POL) is a multinational contract, managed by a LN/RSN or the NATO contractor integrator, provide class III for the whole JF, including contracting, payment, and reimbursement administration.

(2) Distribution: the distribution points should be as close as possible to the operational (2nd level) units. In this case the unit can pull the supplies by themselves. In other cases, the JLSG will organize the distribution (executed by assigned units or contractors).

c. Class II/IV

(1) Provision: National responsibility.

(2) Storage: in TLB within NSEs.

(3) Distribution: the JLSG will organise the distribution (executed by to JLSG assigned units, TCN capabilities or contractors).

d. Class V:

(1) Provision: National responsibility.

(2) Storage: centrally stored, facility managed by the JLSG with separate storage for nations.

(3) Distribution: the JLSG will organise the distribution (executed by to JLSG assigned units, TCN capabilities or contractors).

For any operation specific Annexes regarding Classes of Supply or even items will be developed by the provider (LLN, RSN, Contractor etc) and added to the OPLAN Annexes, including the procedures for requesting, replying and implementing as well as the reimbursement.

ANNEX A – Example Logistics Support Dependency Matrix

					SUPPORT MATRIX											
No	CLASS SERVICE	START DATE	END DATE	SUPPLIER				CONSUMER			METHOD PAYMENT	RESPONSIBLE ORG			DOCs MOUs	REMARKS
				LLN	NATL	NAMSA/NATO	MN	JFC	JLSG	TCNs		JLSG	MN	TCNs		
	CLASS 1															
1.1	Fresh food	G+30	TBD	ITA				X	X	All	TBD			ITA		
1.2	WATER (BOTTLED)	See Remarks	TBD	ITA				X	X	All	TBD			ITA		1st 30 days supplied by TCN's, Italy to supply MRE's to JFC/ JLSG/ACC Forward on Day 1
1.3	MREs	See Remarks	TBD	ITA	X			X	X	X	TBD	X		X		1st 30 days supplied by TCN's, Italy to supply MRE's to JFC/ JLSG/ACC Forward on Day 1
1.4	STORAGE	G+7	TBD			X					TBD	X				
1.5	DISTRIBUTION	G+7	TBD					X			TBD	X				
1.6	WATER (BULK)	G+7	TBD		X			X	X	X	TBD	X		X		
1.7	CATERING	G+30	TBD			X		X	X	X	TBD	X		X		
	CLASS 2															
2.1	Furniture	As required	TBD		X	X		X	X	X	TBD	X		X		
2.2	Stationary	As required	TBD		X	X		X	X	X	TBD	X		X		
	CLASS 3															
3.1	DELIVERY	G+7	tbc			X		X	X	X	tbc	X				

	OF FUEL															
3.2	AVIATION FUEL	G+7	tbc			X		X	X	X	Tbc	X				
3.3	STORED	G+7	tbc		X	X		X	X	X	Tbc			X		
3.4	ORDERED	G+7	tbc			X		X	X	X	tbc			X		
3.5	QUALITY CONTROL	G+7	tbc		X	X		X	X	X	Tbc			X		
3.6	LUBRICANTS	G+7	tbc		X	X		X	X	X	tbc	X		X		
3.7	BULK FUEL	G+7	tbc		X	X		X	X	X	Tbc	X		X		
3.8	DISTRIBUTION	G+7	tbc			X		X	X	X	Tbc	X	X	X		
	CLASS 4															
4.1	Construction materials	As required	tbc		X	X					tbc					
4.2	Defence Store	As required	tbc		X	X					Tbc					
No	CLASS SERVICE	START DATE	END DATE	SUPPLIER				CONSUMER			METHOD PAYMENT	RESPONSIBLE ORG			DOCs MOUs	REMARKS
				LLN	NATL	NAMSA/NATO	MN	JFC	JLSG	TCNs		JLSG	MN	TCNs		
	CLASS 5															
5.1	STORAGE	G+7	tbc		X					X	tbc			X		
	LOG SERVICES															
6.1	Laundry	As required	tbc		X	X		X	X	X	Tbc	X		X		
6.2	Transport Services	G + Day	tbc		X	X	X	X	X	X	tbc	X	X	X		
6.3	HAZMAT Disposal	As required	tbc		X	X		X	X	X	tbc	X		X		
	ENGINEERING SERVICES															

7.1	Garbage Disposal	As required	tbc		X	X		X	X	X	tbc	X		X		
7.2	Power Supply	G+7	tbc		X	X		X	X	X	tbc	X		X		
7.3	Grey Water	G+ 7	tbc		X	X		X	X	X	tbc	X		X		
	MEDICAL SERVICES															
8.1	MEDEVAC	As required	tbc		X		X	X	X	X	tbc	X		X		
8.2	Role 1	As required	tbc		X		X	X	X	X	tbc	X		X		
8.3	Role 2	As required	tbc		X		X	X	X	X	tbc	X		X		
8.4	Role 3	As required	tbc		X		X	X	X	X	tbc	X		X		
8.5	AIREVAC	As required	tbc		X		X	X	X	X	tbc	X		X		
8.6	Blood Supply	As required	tbc		X		X	X	X	X	tbc	X		X		
8.7	Pest Control	As required	tbc		X	X		X	X	X	tbc	X		X		

ANNEX B – Sustainability Statement

1. The Main Focus of this Annex is to provide detailed information to enable a coherent and consistent approach during the initial stages of the planning and preparation of sustainment for NATO lead operations.

2. It includes:
   a. Reference to key documents (including STANAGs) that are relevant to sustainment planning.
   b. A standardised approach for sustainment planning calculations.
   c. Planning guidance for minimum sustainment holdings.
   d. Proposed National Support Element (NSE) capability.

Ser	Sustainability Requirement For Generic Planning Purposes	Source/Authority	Other References
1.	**GENERAL** a. Mission/Contingency Plan-specific SUSTATs will be issued as part of the operational planning process (OPP). However this generic operation force planning SUSTAT defines the sustainability levels to be applied to all forces committed to the NATO forces and as quid lanes to NATO coalition forces. These levels represent one of the critical information requirements for sustainment planning. b. NATO policy (MC 55/4 Annex C paragraph 1) is that the overall sustainability requirement will be derived from the most logistically demanding combination of factors, tempered by an agreed level of operational risk and the required readiness and preparation time. The prescribed sustainability guidance within this SUSTAT incorporates a degree of risk; however it serves to enhance the CCs freedom of action by quantifying these risks and focussing on the equipment and stocks that are considered to be mission essential. c. Host Nation Support. Although Host Nations (HN) would normally be primarily responsible for the provision of many commodities and services[2], where a HN is unable (either wholly or partially) to meet requirements Nations will need to meet shortfalls using one or more of the methods described in NATO logistic doctrine, preferentially through multinational solutions. d. Multinational Logistics. During the OPP, options for the co-ordination of logistic support will be	a. MC55/4: NATO Logistic readiness and Sustainment Policy.	AJP-4: Allied Joint Logistic Doctrine and supporting publications ACE Dir 85-3: Reallocation of Resources in an Emergency in War by Major NATO Comd STANAG 2034: Procedures

	considered at all levels to ensure that, under the principal of collective responsibility for logistics, the desired levels of logistic readiness and sustainability are optimally achieved IOT reduce logistical footprint.. e. Contractor's support. Operations require early involvement of contractors to meet the operational requirements, especially in an expeditionary environment. A significant portion of the logistics requirements has the potential to be met by contractors. Contracted solutions provided by NAMSA can support both national and NATO responsibilities. Pre-arranged solutions are required to meet the specific criteria. f. Long Lead Time Items (LLTI). Details of any LLTI, which cannot otherwise be obtained within readiness preparation time, must be notified to the JLSG HQ logistic staff to ensure that visibility of logistic risk is maintained. Notification will be made through LOGFAS and will include Mission Essential Equipment.		for Mutual Logistic Assistance AJP-4.9 - Modes Of Multinational Logistics Support
2.	**ASSUMPTIONS** a. Location. For planning purposes, it is considered that missions can be executed 6000 NM from Brussels. b. Geography/Climate. Temperatures may range from +49 to – 32° C. b. CBRN. Benign, but with capability to operate under conditions of hostile CBRN threat. c. Limited or no HNS d. Long line of communications e. Duration of Operation min 30 days f. National NSEs are under LOGCON g. CJSOR is filled		
3.	**PERSONNEL**		

	a. Units. Ensure that national personnel programmes are managed so that the overall strength of the national contingent is maintained at, or above, 90% of the declared Operational Establishment (OE) with ability to achieve 100% manning prior to required notice to move. b. Reinforcement. Nations must be able to reinforce to maintain prescribed manpower levels throughout all phases.		ACO Interim Force Vol VII: NATO CREVAL Manual
4.	**MEDICAL** a. Casualty Estimates. The estimation of casualty rates for battle casualties depends on many parameters. The main factor is the type of the operation. 3 generic situations can be identified for the operations, namely Limited High Intensity, Peacekeeping/Stabilisation and Humanitarian Operations. Casualties are classed as below and the rates are used to identify the medical risk and required resources. (1) Disease and non-battle injury (DNBI) Rate. (2) Battle Casualty Rate (BCR). b. Holding Policy: In accordance with the Medical Support Directive. c. Evacuation Policy: In accordance with the Medical Support Directive. d. Immunisation. This will remain a national responsibility, however the following should be considered: (1) Personnel considered ready for deployment will be expected to be vaccinated in accordance with STANAG 2037.	a. For Article 5 operations, the standard algorithm in ACE Directive 85-8 (ACE Medical Support Principles, Policies & Planning Parameters) should be used as the primary planning document.	AJP 4.10: Allied Joint Medical Support Doctrine AC/320-WP/5: JMC Compendium of Technical Information for Medical Preparedness Within the Alliance STANAG 2453 MED: The extent of Dental and Maxillofacial treatment at ROLES 1-3 medical support. STANAG 2235: Pre and Post Deployment Health Assessments STANAG 3204: Aero medical Evacuation STANAG 2037: National Military Strategies For Vaccination of NATO Forces - AMedP-23

<table>
<tr><td></td><td>(2) National authorities are recommended to protect personnel against Diphtheria, Hepatitis A and B, Meningococcal Meningitis (A, C, W 135, Y), Mumps-Measles-Rubella, Poliomyelitis, Rabies, Tetanus and Typhoid. Other recommendations will be provided in OPLAN, according to mission

(3) Anti-malarial Precautions. Plans for arranging pre-deployment prophylaxis within readiness time need to be in place for deployment to areas known to constitute a malarial hazard.</td><td></td><td>STANAG 2491: Policy for Immunisation Against BW Agents</td></tr>
<tr><td>5.

5.a</td><td>EQUIPMENT

Mission Essential Equipment List (MEEL). At the start of deployment MEE availability must be at 100%. Thereafter they are to be maintained at:
<table><tr><th>(a)
Serial</th><th>(b)
NATO RIC</th><th>(c)MEE Com Priority</th><th>(d)
Availability</th></tr><tr><td>1</td><td>AC****</td><td>Armour: Armoured Fighting Vehicles (AFV)</td><td>80%</td></tr><tr><td>2</td><td>AD1***/AD3***/ AD8***</td><td>Armour: Armoured Support Vehicles (ASV)</td><td>80%</td></tr><tr><td>3</td><td>A*****</td><td>Armour: Others</td><td>80%</td></tr><tr><td>4</td><td>CA1***</td><td>Artillery: Gun & How, SP</td><td>80%</td></tr><tr><td>5</td><td>CA2***</td><td>Artillery: Gun & How, Towed</td><td>80%</td></tr><tr><td>6</td><td>DA****</td><td>Ground AD: AA Gun</td><td>80%</td></tr><tr><td>7</td><td>DB****</td><td>Ground AD: SAM</td><td>80%</td></tr><tr><td>8</td><td>HB1***</td><td>Aircraft: Rotary, Attack</td><td>75%</td></tr><tr><td>9</td><td>HB2***</td><td>Aircraft: Rotary, Tpt</td><td>75%</td></tr><tr><td>10</td><td>HB3***</td><td>Aircraft: Rotary, Special Electronic</td><td>75%</td></tr><tr><td>11</td><td>HB7***</td><td>Aircraft: Rotary, Recce</td><td>75%</td></tr><tr><td>12</td><td>HC1***/ HC2***</td><td>Aircraft: Special Purpose, RPV/Drone</td><td>75%</td></tr><tr><td>9</td><td>HA11***</td><td>Aircraft: Fixed wing, Fighter</td><td>70%</td></tr><tr><td>10</td><td>HA12***</td><td>Aircraft: Fixed wing, Attack</td><td>70%</td></tr><tr><td>11</td><td>HA13***</td><td>Aircraft: Fixed wing, Multimission</td><td>70%</td></tr><tr><td>12</td><td>HA14***</td><td>Aircraft: Fixed wing, Bomber</td><td>70%</td></tr><tr><td>13</td><td>HA15***</td><td>Aircraft: Fixed wing, Recce</td><td>70%</td></tr><tr><td>14</td><td>HA21***</td><td>Aircraft: Fixed wing, Transport Light</td><td>70%</td></tr><tr><td>15</td><td>HA22***</td><td>Aircraft: Fixed wing, Transport Medium</td><td>70%</td></tr></table></td><td>a. Initial (90%) level: SHAPE Interim Force Standards Volume II (Standards for Land Forces)

b. Other availability rates extracted from AMF (L) Log Handbook Part 1 (Planning Data) – Sustainability.

c. Reportable Item Codes (RIC) extracted from NATO Land Forces Reportable Item List (RIL).</td><td>MC 55/4: NATO Logistic Readiness and Sustainability Policy</td></tr>
</table>

	16	HA23***	Aircraft: Fixed wing, Transport Heavy	70%		
	17	HA25***	Aircraft: Fixed wing, Tanker	70%		
	18	HA28***	Aircraft: Fixed wing, MEDEVAC	70%		
	19	HA31***	Aircraft: Fixed wing, Early Warning	70%		
	20	HA32***	Aircraft: Fixed wing, Electronic Recce	70%		
	21	HA33***	Aircraft: Fixed wing, Electronic Warfare	70%		
	22	HA35***	Aircraft: Fixed wing, Airborne C3	70%		
	23	HA3A***	Aircraft: Fixed wing, Jamming	70%		
	24	LA21D*/LA21E*/LA21F*	Veh&Log: Truck, Cargo, > 10 ton	80%		
	25	LA22**	Veh&Log: Truck (>1500kg), Dismountable Rack System	80%		
	26	LA25C*/LA25D*/LA25E*/LA225H*	Veh&Log: Tanker, Water, > 20 mc	80%		
	27	LA3***	Veh&Log: HET	80%		
	28	LB13**/LB22**	Veh&Log: MHE, Rough Terrain	75%		
	29	LB31**	Veh&Log: MHE, Container Handler	80%		
	30	LE14**	Veh&Log: Engr & Sp, Repair & Maint Veh	80%		
	31	LE2***	Veh&Log: Engr & Sp, Construction & Fd Fortification	75%		
	32	LE3***	Veh&Log: Engr & Sp, Mine Warfare	75%		
	33	LE4***	Veh&Log: Engr & Sp, Bridging	75%		
	34	LE61**	Veh&Log: Engr & Sp , Spec Sp, Decontamination	80%		
	35	LE65**/LE66**	Veh&Log: Water Sup, Purification Eqpt >5mc/hr	80%		
	36	NA****	NBC: Shelter & Shelter Filtration	80%		
	37	NB3***	NBC: Protective Suits & Masks, NBC Suits	80%		
	38	ND****	NBC: Detection Devices & Ident Eqpt	80%		
	39	RA1***/RA2***/RA4***	EW: Radar, Land Based, Battlefield Surv/ Ground Surv/ AD	80%		
	40	RB11***	EW: EW, Land Based, ESM	80%		
	41	RB12***	EW: EW, Land Based, ECM	80%		
	42	TA****	C4I: CIS	80%		
	43	TB****	C4I: Communication Networks	80%		
	44	TC****	C4I: Intelligence Gathering Systems	80%		
	Note: MEEL is to be derived from COM's operational priorities to support the desired effect. Overall equipment priorities are then derived from the capability required. An example of a capability driven MEEL is shown above. LogFAS derived information.					

<table>
<tr><td></td><td colspan="4">All remaining non-MEE: 75%.</td><td></td><td></td></tr>
<tr><td>5.b</td><td colspan="4">Utilisation. Utilisation is the varied employment and/or usage of the equipment type per day:</td><td>Average Daily Utilisation rates</td><td></td></tr>
<tr><td></td><td>(a)
Serial</td><td>(b)
Equipment Type</td><td>(c)
Average Daily Utilisation</td><td>(d)
Surge</td><td>Average Daily Utilisation rates extracted from AMF (L) Log Handbook Part 1 (Planning Data) – Sustainability.</td><td></td></tr>
<tr><td></td><td>1.</td><td>Fighting Vehicles. (terrain orientated 50% off-road):</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>a.</td><td>Armour: AFV</td><td>30 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>b.</td><td>Armour: ASV</td><td>30 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>c.</td><td>Armour: Recce</td><td>30 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>d.</td><td>Artillery: SP Arty</td><td>25 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>e.</td><td>Artillery: AD Systems</td><td>30 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>2.</td><td>Fixed Wing AC.</td><td>2 sorties/day</td><td>3 sorties/day</td><td></td><td></td></tr>
<tr><td></td><td>3.</td><td>Rotary Wing AC.</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>a.</td><td>Hel: Attack</td><td>3 hrs</td><td>8 hrs for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>b.</td><td>Hel: Transport/Others</td><td>3 hrs</td><td>10 hrs for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>4.</td><td>Other Vehicles. (terrain orientated):</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>a.</td><td>Logistic task vehicles</td><td>150 km</td><td>300 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>b.</td><td>Non task vehicles</td><td>60 km</td><td>120 km for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>5.</td><td>Engineer Plant Equipment.</td><td>12 hrs</td><td>12 hrs for 5 days</td><td></td><td></td></tr>
<tr><td></td><td>6.</td><td>Generators and Static Equipment.</td><td>22 hrs</td><td></td><td></td><td></td></tr>
<tr><td></td><td colspan="4">Note: Example of sorties. 12 aircraft in squadron, 2 sorties per aircraft per day regardless of serviceability. Therefore, 24 sorties expected. Serviceability rate of 70% would mean 8 serviceable aircraft doing on average 3 sorties a day.
Note: This example is for the ACC.</td><td></td><td></td></tr>
<tr><td>5.c</td><td colspan="4">Attrition. Losses due to failure and operational casualties:</td><td>Attrition rates</td><td>STANAG 2375: Battlefield</td></tr>
</table>

	(a) Serial	(b) Equipment Type	(c) Routine Attrition	extracted from AMF (L) Log Handbook Part 1 (Planning Data) – Sustainability.	Vehicle Recovery And Evacuation Guide - AEP-13
	1.	Fighting Vehicles:			
	a.	Armour: IFV	11% over 30 days		STANAG 2399: Battlefield Recovery/ Evacuation Operations
	b.	Armour: APC	11% over 30 days		
	c.	Armour: Recce	5% over 30 days		STANAG 2418: Policy For Expedient Repair, Including Battle Damage Repair
	d.	Artillery: SP Arty	9% over 30 days		
	e.	Artillery: AD Systems	5% over 30 days		
	2a.	Hel: Attack	10% over 30 days		
	b.	Hel: Transport/Others	4% over30 days		
	3.	Other Vehicles:			
	a.	Logistic task vehicles	6% over 30 days		
	b.	Non task vehicles	4% over 30 days		
	4.	Engineer Plant Equipment	11% over 30 days		
	5.	Generators and Static Eqpt	National mean times between failures (MTBF)		
	Reportable Item List. Reports and returns referring to equipment and supplies will use the Reportable Item Codes (RIC) contained within the NATO Log IS application LOGREP. Actual reporting requirements for deployed forces will be IAW Annex YY.				STANAG 3150: Codification - Uniform System Of Supply Classification

6. **SUPPLY**

6.a Days of Supply: Standard Planning Modifying Factors. For planning purposes the following standard modifying factors will be applied to calculate the overall intensity factor to convert Standard Days of Supply (SDOS) to Combat Days of Supply (CDOS). (see note below for details[1]):

Ser	Consideration	Condition	Class 1 Food	Class 1 Water	Class II Material	Class III POL	Class IIIa AvPOL	Class IV Engr	Class V Ammo[2]
1A	**Climate**	Cold	1.0	1.5	1.0	1.3	1.3	1.5	1.0
1B		Moderate	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1C		Hot	1.0	1.5	1.0	0.9	0.9	1.5	1.0
2A	**Mission**	Combat	1.0	1.0	1.0	2.0	2.0	1.0	1.0
2B		PSO	1.0	1.2	1.2	1.0	1.0	2.0	0.1
3A	**NBC**	No	1.0	1.0	1.0	1.0	1.0	1.0	1.0
3B		Yes	1.0	1.5	1.3	1.0	1.0	1.1	1.0
4A	**Terrain[3]**	Flat	1.0	1.0	1.0	1.0	1.0	1.0	1.0
4B		Hilly	1.0	1.0	1.0	1.2	1.2	1.0	1.0
4C		Mountain	1.0	1.0	1.0	1.5	1.5	1.0	1.0

a. The modifying factors shown are those used within Italian Land Forces and STANAG 2115.

b. Environmental factors (Climate, NBC, Terrain) taken from SUSTAT Para 2.

MC 55/4: NATO Logistic Readiness and Sustainability Policy

STANAG 2115: Fuel Consumption Unit

STANAG 2961: Classes of Supply of NATO Land Forces

	5A	**Unit Type**	CS	1.0	1.0	1.0	1.0	1.0	1.5	1.0		
	5B		CSS	1.0	1.2	1.0	1.0	1.0	1.1	1.0		
	5C		Comd & Con	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	5D		Combat	1.0	1.0	1.0	1.0	1.0	0.9	1.0		
	Notes: (1) The product of the modifying factors for each class of supply is the overall intensity factor to be applied. (2) Ammunition multiplier is for non-aircraft munitions only. Battle Decisive Munitions (BDM) requirements are calculated by ACROSS.											

6.b Initial Minimum Sustainment Holdings:

Ser	Commodity	Minimum Stockholdings			Remarks
		1st/2nd Level	3rd Level	FOS	FOS to be available within 7 days. As a minimum, nations should plan to deploy initially with 72 hours of stocks for immediate use.
1a.	Class I– combat rations	7 SDOS	5 SDOS	18 SDOS	
1.b	Class I – potable water	7 SDOS	5 SDOS	18 SDOS	HNS critical
1.c	Class I – general purpose water	7 SDOS	5 SDOS	18 SDOS	HNS critical
2.a	Class II – clothing and eqpt	7 SDOS	5 SDOS	18 SDOS	
2.b	Class II – NBC	7 SDOS	5 SDOS	18 SDOS	
2.c	Class II – Medical	7 SDOS	10 SDOS	13 SDOS	
2.d	Class II – Spares	7 SDOS	5 SDOS	18 SDOS	
3.a	Class III – Fuel	7 FCU/ 7 SDOS	5 FCU/ 5 SDOS	18 SDOS	Dependant on HNS or contractor: Single fuel policy
3.b	Class III/IIIa – Lubricants	7 FCU/ 7 SDOS	5 FCU/ 5 SDOS	18 FCU/ 18 SDOS	
4.a	Class IV – Engineer Resources	2 SDOS	5 SDOS	23 SDOS	To be confirmed IAW MC55/4 Annex C.8.d.
4.b	Class IV –	-	-	30 SDOS	Mission specific

a. Overall requirement (30 days) from MC 477: Military Concept for the NATO Response Force and ACE Force Standard chapter 5 (paragraph 5-4 and 5-23).

Bi-SC Stockpile Planning Guidance (SPG)

		Complete Eqpt					as required			
	5.a	Class V – personnel Ammunition		7 SDOS		5 SDOS	18 SDOS	Does not include training requirements (2).		
	5.b	Class V – aircraft Ammunition		7 SDOS		5 SDOS	18 SDOS	Does not include training requirement (2).		
	5.c	Class V Artillery Ammunition		7 SDOS		5 SDOS	18 SDOS	Does not include training requirement (2).		
	Maritime – All ships are expected to get underway with the following minimum stocks									
			Class I		Class III		Class V	Spares		
	Combatants		30 DOS		95%		100%	Std Load		
	Minor Ships		14 DOS		95%		100%	Std Load		
	Supply Ships		Std Load		95 % (Cargo)		100%	Std Load		
	Maritime Minimum Stock Holdings									
			Class I		F 76		F 44	LHO		Class V
	Combatants		14 DOS		70%		30%	50%		50%
	Minor Ships		3 DOS		70%		50%	50%		50%
	Supply Ships		14 DOS		40%		40%	50%		50%
	Notes: 1. Either held in JLSA/NSE or “on-call”. Must however be available within 7 days or less if specified otherwise. 2. Additional ammunition for training purposes is to be maintained to meet the training requirement specified for in-theatre training. 3. Availability of aircraft munitions will be critical factor of air forces, in particular, availability of PGMs. 4. The F/GLC is to amend the recommended planning figures depending on the class requirements of the maritime OrBat and issue his direction and guidance through the OpTask Log.									

Bi-SC Stockpile Planning Guidance (SPG)

STANAG 2885: Emergency Supply of Water in War

STANAG 2136: Minimum Standards Of Water Potability During Field Operations - AMedP-18

	Class I (Rations and Water). (1) Composite/Field Rations. (a) A National responsibility or other arrangements are on place. (bi- or multilateral agreements) For worst case planning purposes, field rations/on board stocks will be used at least for the first 30 days of operations. This planning assumption is subject to change based on availability of fresh rations in theatre or as provided by designated LLN and HNS capability. (b) The standard multinational planning figure of 3 kg/person/day will be used unless national planning figures vary by +/- 20%; if this circumstance arises then Nations are to advise the JLSG HQ Logistic Planning Staff. (2) Fresh Rations. A National responsibility unless other arrangements are planned (LLN, TPLSS). In addition to paragraph 6.b. (1) (a), it is assumed that trough multinational solution will provide fresh rations whenever possible. However, Nations should be prepared to support their own forces if here is no multinational solution available through an appropriate BOA via the JLSG HQ. The BOA may be through NAMSA or TPLSS. Nations must deploy refrigerated units to store fresh/frozen rations as required. The MCC will coordinate fresh resupply as required by platforms within means and support capabilities. (3) Water. (a) HNs are expected to provide all forms of water in required quantities. Where this is not possible, LLN/RSN/TPLSS will be required to provide water in conjunction with bulk water transport and storage, bottled water, and purification equipment. However, Nations must be prepared to support their own troops if no multinational solution is available through an appropriate BOA via the JLSG. BOA may be through NAMSA or TPLSS. (b) Worse Case Planning Consumption Rates. (i) Potable Water (Bottled or Bulk). As per STANAG 2885, assuming 50% available in bulk from local in theatre sources. (ii) General Purpose Water (Bulk). As per STANAG 2885, assuming 100% all available on demand on arrival in theatre. The daily bulk water requirement measured in Cubic Metres at the highest Intensity Factors and for a full		

	CJSOR is estimated as follows: FSE HQ FE CJSOCC LCC MCC ACC JLSG CBRN 11 m^3 11 m^3 18 m^3 361 m^3 241 m^3 216 m^3 79 m^3 38 m^3		
6.c	The daily bottled/potable water requirement measured in Cubic Metres at the highest Intensity Factors and for a full CJSOR is estimated as follows: FSE HQ FE CJSOCC LCC MCC ACC JLSG CBRN 4 m^3 4 m^3 5.7 m^3 114 m^3 76 m^3 68 m^3 25 m^3 12 m^3 The MCC will monitor water production and consumption in the TF and direct resupply if required. Class II (Materiel/Spare Parts). Whilst Class II resupply remains a national responsibility, the consumption rates shown below are to be used for generic planning purposes. Modification factors, as described at Para 6a, will be applied. (1) Clothing and Equipment. 1.65 kg / person / day. (2) Medical Supplies. 0.55 kg / person / day. (3) Vehicle Spares (Wheeled Vehicles). 3 kg / vehicle / day. The daily Class II requirement measured in tonnes at the highest Intensity Factors and for a full CJSOR is estimated as follows: FSE HQ FE CJSOCC LCC MCC ACC JLSG CBRN 3 t 3 t 4.5 t 9.0 t 6.0 t 5.4 t 19.8 t 9 t The quantity for the MCC is calculated on the number of personnel using LCC rates. It does not reflect the onboard stocks integral to a Maritime Task Force. It is illustrative only. If national planning figures vary by +/- 20% then Nations are to advise JLSG HQ logistic staff.		Bi-SC Stockpile Planning Guidance (SPG) STANAG 2121: Cross Servicing of Medical Gas Cylinders STANAG 2453 MED: The extent of Dental and Maxillofacial treatment at ROLES 1-3 medical support. STANAG 2128: Medical and Dental Supply Procedures STANAG 2352: Chemical, Biological, Radiological And Nuclear (CBRN) Defence Equipment – Operational Guidelines

			STANAG 2361: Minimum Essential Medical Supply Items In Theatres of Operations STANAG 2939: Medical Requirements for Blood, Blood Donors and Associated Equipment
6.d	Class III (POL). (1) Bulk Petroleum. MC 55/4 states that bulk petroleum products are a special case. The HN should be able to provide ground fuels in most cases. Where this is not possible, action will be taken at the strategic level to assist NATO commanders in arranging strategic lift or contract support. LLN/RSN is recommended. (2) Quality Control. Nations should have the ability for testing the quality of fuels once deployed. Other alternatives, if available, may be arranged in theatre. (3) Storage and Transportation. Nations should be prepared to deploy resources to augment in-theatre capabilities where that capability is limited or unsuitable within the HN. (4) Packed Fuel. Nations to provide unless otherwise directed. (5) Planning Consumption Rates. The following consumption rates should be used to calculate SDOS for planning purposes. (a) Bulk Fuel (non-aircraft). The fuel consumption for each vehicle/equipment/ship type should be based on national FCU figures. (b) Bulk Fuel (aircraft). The fuel consumption for each a/c type should be based on national FCU figures. (c) Lubricants. In accordance with national/platform usage rates with the following exceptions: (i) Tracked Vehicles. 6% of the fuel calculation. (ii) Wheeled Vehicles. 3% of the fuel calculation. If national planning figures vary by +/- 20% then Nations are to advise JLSG HQ logistic staff.	a. MC 55/4: NATO Logistic Readiness and Sustainability Policy. b. Annex A to Bi-SC Functional Planning Guide – Logistics (draft) [SHOPJ/1220/01 dated Apr 01]. c. Lubricants % based calculation is the standard method used within Italian ground forces.	Bi-SC Stockpile Planning Guidance (SPG) STANAG 1135: Interchangeability of Fuels, Lubricants and Associated Products STANAG 2115: Fuel Consumption Unit STANAG 3149: Minimum Quality Surveillance of Petroleum Products

	The daily Bulk Fuel requirement measured in Cubic Metres at the highest Intensity Factors and for a full CJSOR is estimated as follows: FSE HQ FE CJSOCC LCC MCC ACC JLSG CBRN 20 m^3 20 m^3 28 m^3 576 m^3 est. 1500 m^3 2500 m^3 126 m^3 61 m^3		
6.e	Class IV (Non-prescribed Supply). (1) Engineer Resources/Construction Material. Common supplies (cement, sand, steel and timber) will be made available through HN resources or by a nominated Nation, lead nation (LN) or role specialist nation (RSN) when the HN cannot. It is assumed that engineering resources will be limited given the nature of NRF deployment timelines. (2) Complete Equipment. (a) Mission Essential Equipment (MEE). Nations must be able to replace MEE within 72 hours to maintain prescribed availability levels throughout all phases. If unable to do so, nations must coordinate with the JLSG HQ at the earliest opportunity. (b) Remainder. Nations must be able to replace non MEE within 7 days to maintain proscribed availability levels throughout all phases. (3) Planning Consumption Rates. Although a non-prescribed supply, the planning rate used for planning is 3.85 kg/person/day, with appropriate modifying factors applied according to unit type. If national planning figures vary by +/- 20% Nations are to advise JLSG HQ logistic staff. The daily Class IV requirement measured in tonnes at the highest Intensity Factors and for a full CJSOR is in CDOS is estimated as follows: JSE HQ FE CJSOCC LCC MCC ACC JLSG CBRN 1 t 1 t 7.1 t 33 t N/A 19.9 t 7.3 t 3.5 t Note: The MCC will draw on organic stocks held within the Task Force organisation and generic onboard spares.	a. Annex A to Bi-SC Functional Planning Guide – Logistics (draft) [SHOPJ/1220/01 dated Apr 01].	Bi-SC Stockpile Planning Guidance (SPG) STANAG 2269: Engineer Resources
6.f	Class V: Ammunition Consumption Rates. The following table provides guidance on SDOS quantities for Class V in rounds/missiles per system: Ser | Wpn | Weapon System | Munition | Munition | SDO	Consumption rates are based on those extracted from	Bi-SC Stockpile Planning Guidance (SPG) AOP-1 to AOP-5:

	System NATO RIC		RIC		S (1)
(a)	(b)	(c)	(d)	(e)	(f)
1a.	AD***Z	Armour: AFV 20-30mm Cannon	MA3**Z	Cartridge: Cannon	70
2a.	BC***Z	Inf Wpns: Mortar	ML***Z	Mortar	100
b.	BA2ZZZ	Inf Wpns: Sub-machine Gun	MA***Z	Cartridge: Small Arms	20
c.	BA3ZZZ	Inf Wpns: Rifle	MA***Z	Cartridge: Small Arms	50
d.	BA5ZZZ	Inf Wpns: Machine gun	MA***Z	Cartridge: Small Arms	500
e.	BA6ZZZ	Inf Wpns: Cannon	MA3**Z	Cartridge: Cannon	70
f.	BB1**Z	Inf Wpns: Anti Tank, Non Guided	MA5ZZZ	Cartridge, Recoilless Rifle	2
g.	BB2**Z	Inf Wpns: Anti Tank, Guided	MK4**Z	Missile: Anti Tank	6
h.	BB3**Z	Inf Wpns: Anti Tank, Autonomous	ME2ZZZ	Rocket, Ground Launched	2
3a.	CA1**Z	Artillery: Gun & How, SP	MB26ZZ	Shell, Artillery (2)	175
b.	CA2**Z	Artillery: Gun & How, Towed	MB22ZZ	Shell, Artillery, 105mm (2)	150
c.			MB26ZZ	Shell, Artillery, 155mm (2)	175
4a.	DA***Z	Ground AD: AA Gun	MA3**Z	Cartridge: Cannon	500
b.	DB***Z	Ground AD: SAM	MK2**Z	Missile, Surface to Air	2
5a.	HB1**Z	Aircraft: Rotary, Attack	MA3**Z	Cartridge: Cannon	500
b.			ME1**Z	Rocket: Air Launched	20
c.			MK41*Z	Missile: Anti Tank	3

The daily Class V requirement measured in tonnes at the highest Intensity Factors and for a full CJSOR is in CDOS is estimated as follows:

JSE	HQ FE	CJSOCC	LCC	MCC	ACC	JLSG	CBRN
4 t	4 t	7.1 t	143 t	NK	85 t	31 t	15 t

The MCC will sail with 100% ammunition stocks and organic supplies. Once the Mission parameters are known and CONOPs developed then this figure can be refined.

Notes:

(1) If national rates for all ammunition are applied and vary by +/- 20% the JLSG HQ Logistic staff must be notified.
(2) Recommended mix for artillery ammo is 85% HE, 10% smoke, 10% illuminating.

AMF (L) Log Handbook Part 1 (Planning Data) – Sustainability. They are "based on an average of national consumption rates for defence, attack and delay".

Land Forces Ammunition Interchangeability Catalogue

STANAG 4397: NATO Catalogue of Explosives - AOP-26

AOP-6 VOLUME I/ STANAG 2928 AMMO: Catalogue of ammunitions held by Nations that satisfy interchangeability criteria of form, fit and function only

STANAG 2953 – AOP-02: Identification of Ammunition

7.	**TRANSPORT AND MOVEMENTS** a. Strategic Lift. Nations will be responsible for the strategic lift (air and sea) of their own contingent (including NSEs forces and materiel) from home base to theatre of operations. Opportunities for multinational solutions and co-ordination exist. b. Transport During Reception Staging Onward Movement (RSOM). Coordination of RSOM is a JLSG HQ responsibility but Nations must have the capability to Integrate their forces in a non-permissive environment and/or areas without appropriate infrastructure and HNS. c. MHE and Outsize Loads. Nations must provide sufficient and suitable MHE for sustaining their forces, including the capability to handle outsize loads. d. Containerisation. Nations should maximize the use of 20-foot International Standardisation Organisation (ISO) standard containers. e. Demountable Load Carrying Platforms. The use of NATO-compatible demountable load carrying platforms is strongly encouraged, especially for logistic task vehicles. f. Asset Tracking. JLSG and Nations must be able to automatically track in-transit supplies and equipment. The requirement to meet the standards of STANAG 2184 is desirable.	a Interim Force Standards (IFS) Vol II: Standards for Land Forces Chapter 3 [1123/SHOPL/03-98471 dated 16 Jul 03]	AMovP-1: Regulations and Procedures for Road Movement STANAG 2184: NATO Principles And Policies For Asset Tracking STANAG 2413: Demountable Load Carrying Platforms STANAG 2827: Materials Handling in the Field STANAG 2926: Procedures for the Use and Handling of Freight Containers for Military Supply
8.	**SERVICES** a. Maps and Charts. Nations to provide as required, supplemented by other alternatives if available/arranged in theatre. b. Laundry/Bath. Nations to provide, supplemented by joint alternatives if available/arranged in theatre. c. Refuse. National responsibility to collect and dispose of toxic waste, including used oils and medical supplies by local contract supplemented by other alternatives if available/arranged in theatre. As a minimum, units must deploy with secure containers to collect toxic waste and hazardous material for appropriate disposal. A regular refuse collection is also required. Maritime assets are to comply with all Marpol requirements. d. Latrines. Nations to provide supplemented by other alternatives if available/arranged in theatre.	a. SHAPE Planning guidance for the implementation of Logistic Support for the NRF at FOC [SHLPX/J4/05-105708 dated 14 Oct 05] b. Annex A to Bi-SC Functional	STANAG 2070: Emergency War Burial Procedures STANAG 2109: Postal Organization and Courier Service for the NATO Forces STANAG 2982: Essential Field Sanitary Requirements

	e. Mortuary. Nations to provide supplemented by other alternatives if available/arranged in theatre. f. Infrastructure Facilities (including Accommodation). Facilities at operating and staging area locations may be available through HN or commercial contract. Non-forecasted requirements will be co-ordinated by in-place early arrival/advance party logistic staff. g. Customs. In accordance with Status of Forces Agreement (SOFA). h. Morale, Welfare and Recreation. National responsibility. j. Contracting. Theatre contracting requirements will be co-ordinated by the JLSG HQ. k. Labour Support Services. Requirements will be co-ordinated by in-place early arrival/advance party logistic staff. l. Basic Ordering Agreements (BOA). BOA have the potential to simplify theatre contracting and reduce costs to the Nations. The JLSG HQ will coordinate this process where no LLN/RSN exists for Classes of Supply.	Planning Guide – Logistics (draft) [SHOPJ/1220/01 dated Apr 01]	
9.	**NATIONAL SUPPORT ELEMENTS (NSEs)** a. Authority. Nations will retain control over their own resources until such time as they are released to the NATO commander. The NATO Commander assumes control of commonly provided resources as directed but will only relocate Nationally owned resources in the case of emergency and with the authority of the providing Nation iaw MC 477. NSEs will be located in the Joint Logistic Support Area under LOGCON of the NATO Commander through COM JLSG. b. Readiness. National plans must ensure resources are available at the same readiness and deployability levels to support forces until such time as a stable, robust resupply system has been established. c. Capability. (1) NSEs must be capable of meeting the requirement to support SUSTAT sustainability levels. (2) If the capability does not exist within forces committed to the operation, NSEs must also be able to:	a. Sub-para a and b - MC55/4: NATO Logistic readiness and Sustainment Policy. b. MC 526 Logistics support concept for NRF.	MC 477

	(i) Detach elements for NATO Supply Class I (rations and water), III/IIIA (POL) and V (ammunition) operating tactically in logistic bases and forward in mobile logistic task groups (LTG). (ii) Provide national movement teams (NMT), national medical liaison teams (NMLT) and a National Military Police Detachment (NMPD) to respective JLSG and CC units from arrival in the JOA. (iii) Provide lift capacity sufficient to move 50% of contingent personnel and the associated personal equipment.		