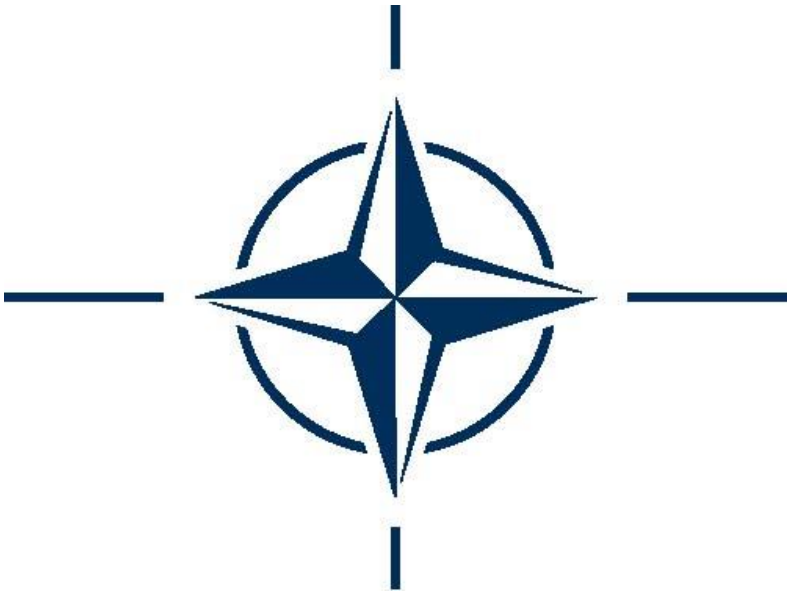
STANDARDS RELATED DOCUMENT

AMETOCP-3.1

MANUAL FOR THE ALLIED COMMAND OPERATIONS METEOROLOGICAL AND OCEANOGRAPHIC INFORMATION EXCHANGE - ACOMEX-MANUAL –

Edition A Version 1

FEBRUARY 2018



NORTH ATLANTIC TREATY ORGANIZATION

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NATO STANDARDIZATION OFFICE (NSO)

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

20 February 2018

1. The enclosed Standards Related Document, AMETOCP-3.1, Edition A, Version 1, MANUAL FOR THE ALLIED COMMAND OPERATIONS METEOROLOGICAL AND OCEANOGRAPHIC INFORMATION EXCHANGE, which has been approved in conjunction with AMETOCP-3 by the nations in the Military Committee Joint Standardization Board, is promulgated herewith.

2. AMETOCP-3.1, Edition A, Version 1 is effective upon receipt.

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4. This publication shall be handled in accordance with C-M(2002)60.

for

Dieter Schmaglowski
Deputy Director NSO
Branch Head P&C

Edvardas MAŽEIKIS
Major General, LTUAF
Director, NATO Standardization Office

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PREFACE

Forwarded is the edition of the manual for the Allied Command Operations meteorological and oceanographic Information Exchange (ACOMEX), dated November 2017.

AMETOCP-3.1 MANUAL FOR THE ALLIED COMMAND OPERATIONS METEOROLOGICAL AND OCEANOGRAPHIC INFORMATION EXCHANGE (ACOMEX Manual) will be published every two years, or in case of urgently required changes. The reader should feel encouraged to inform the custodian of the manual about required changes. Especially additions to the contents of the manual are highly appreciated. The easiest way to contact the custodian is to send an email to BGIC-NATOMetOcSupport@bundeswehr.org.

Chairman ACOMEX WG

Mr. Wayne Elliott

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CHAPTER 1 GENERAL INFORMATION

1.1 ACOMEX

To ensure the rapid exchange of meteorological and oceanographic (METOC) information between Allied Command Operations (ACO) and deployed NATO and national military units, an integrated network of national and NATO funded METOC telecommunications circuits has been established. The network consists of point-to-point connections in support of the NATO Automated Meteorological and Oceanographic Information System.

Allied Command Operations Meteorological and Oceanographic Information Exchange (ACOMEX) is the generic name for the exchange of METOC data and products.

1.2 NAMIS

The NATO Automated Meteorological Information System (NAMIS) is the primary tool used by the ACO METOC Subject Matter Experts to access Integrated METOC (IMETOC) Lead Nation (LN) data and provide METOC support to NATO-led activities. NAMIS X is the current NATO METOC visualization system. Also, NAMIS X workstations are fed by Moving Weather, which is the current NATO METOC Message Switching System .

1.3 NAMIS Data Supply

The ACOMEX Data Hub hosted by Bundeswehr Geoinformation Centre (BGIC) in Euskirchen, Germany feeds NAMIS IMETOC Lead Nation, Assisting Nation and Host Nation data via a DMZ HTTPS server hosted, operated and maintained by the NCI Agency at SHAPE. The DMZ HTTPS server exchanges data with:

1.3.1 Nations via a two-way dedicated VPN connection over the Internet. (Currently, data exchange is occurring with CAN, EST, SVK, TUR, NOR, ROU, DNK, GRC, and ESP)

1.3.2 A NATO Unclassified (NU) HTTPS server for further distribution utilizing NATO networks. The NU HTTPS server moves the data to:

a. All connected HQs and Combined METOC Units (CMU), static and deployed, throughout the NATO Command Structure/NATO Force Structure , utilizing the NU networks

b. A specific NATO Secret (NS) HTTPS server via a one-way data diode

c. A Mission Secret (MS)-Mission Anchored Function comprised of:

(1) A deployable operational gateway interfacing towards Deployable CIS deployed elements.

(2) A Network Interface Point

(3) A MS-Mission Information Room providing access to the Enterprise and Functional Service services on the MS domain, from and through the NS workstations and the NS Wide Area Network (WAN).

User created messages are transferred to the ACOMEX Data Hub utilizing the same pathways in reversed direction with the exception of messages from the NS and MS WAN).

1.4 NMDS

A password protected NATO METOC Data Server (NMDS) for unclassified information and data is operational at the BGIC for use by NATO and all national militaries and can be accessed via the Internet.

1.5 Organization

ACOMEX functionality and operations are overseen and monitored by the ACO Meteorological and Oceanographic Conference (AMC) Working Group (WG) for the exchange of METOC information (ACOMEX WG). The terms of reference for this ACOMEX WG are documented in ACO Directive 80-34, METOC Services for Allied Command Operations, Annex C, Appendix 4.

1.6 Responsibilities

The Chairman of the ACOMEX WG and the Custodian of AMETOCP-3.1 monitor and ensure correct execution of ACOMEX in day-to-day operations. Names, addresses and telephone numbers of ACOMEX officials are provided in Chapter 2. Final responsibility for AMETOCP-3.1 rests with the Chairman of ACOMEX WG. Revision of this manual is handled by the Custodian upon instruction of the Working Group Chairman.

ACO Commands and National METOC Agencies are responsible for the compilation and relay of METOC information as defined in Chapter 6.

1.7 Central Weather Information Switch

BGIC acts as the central weather information switch (communications host) for ACOMEX within ACO as defined in the Memorandum of Understanding between SHAPE and the German Ministry of Defence.

As such, it is represented by the German (DEU) National Representative in the ACOMEX WG. In this role, the DEU National Representative will advise the Working Group on all aspects regarding changes to resources and capabilities available to ACOMEX, the usage of transmission media (landlines and server), and availability of weather data. The DEU National Representative will also notify the Working Group whenever any resources risk running low, and will provide statistical data describing the status of available resource usage to the Working Group at least once a year.

The DEU National Representative will also act as the intermediary between the ACOMEX WG and the BGIC whenever there is a need for an upgrade in switching resources, a change in switching capabilities, and/or changes in the data program.

1.8 ACOMEX Manual

The ACOMEX Manual contains all necessary information concerning organization and operation of the ACOMEX. The ACOMEX Manual will be updated every two years and in case of urgently required changes.

Commands and National Military METOC Agencies will inform the ACOMEX Rapporteur of any required change to the contents of the ACOMEX Manual for their regions. If necessary, the Rapporteur will coordinate these requests with the ACOMEX WG. Additionally, agencies will submit a regional NEMA (NATO Exchange Manual Amendment) every two years via unclassified letter or service message to the Custodian of the ACOMEX Manual which contains a compilation of the required changes. NEMAs should arrive to the Custodian no later than 1 April or in case of urgently required changes. Negative reports are required. The Custodian of the ACOMEX Manual will compile the regional NEMAs and start the review procedures for AMETOCP-3.1 with the NATO Standardization Office (NSO). The updated Manual will be distributed to all users after promulgation by NSO, preferably not later than 01 June of the year.

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CHAPTER 2 ACOMEX OFFICIALS

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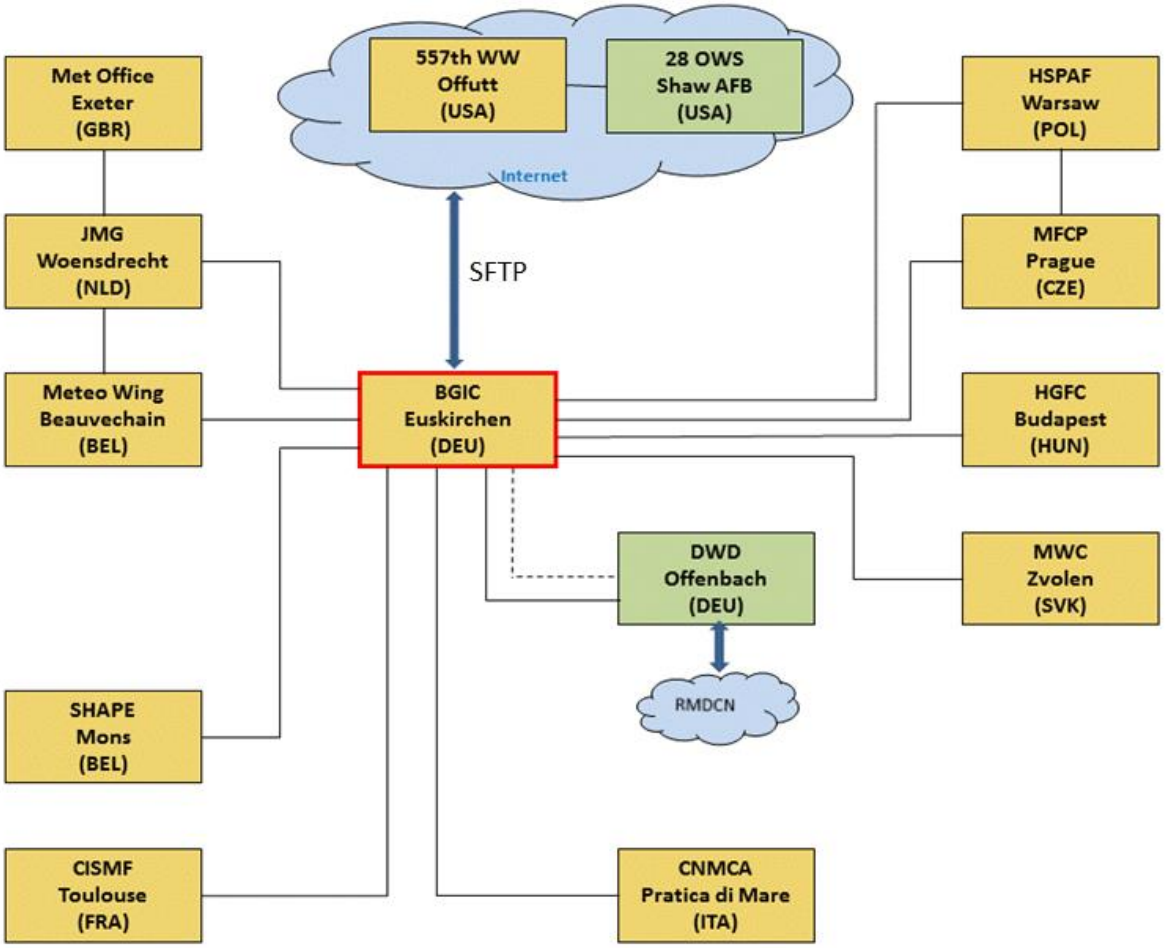
CHAPTER 3 ACOMEX DATA CIRCUITRY

In this chapter a general description of the ACOMEX circuitry is given.

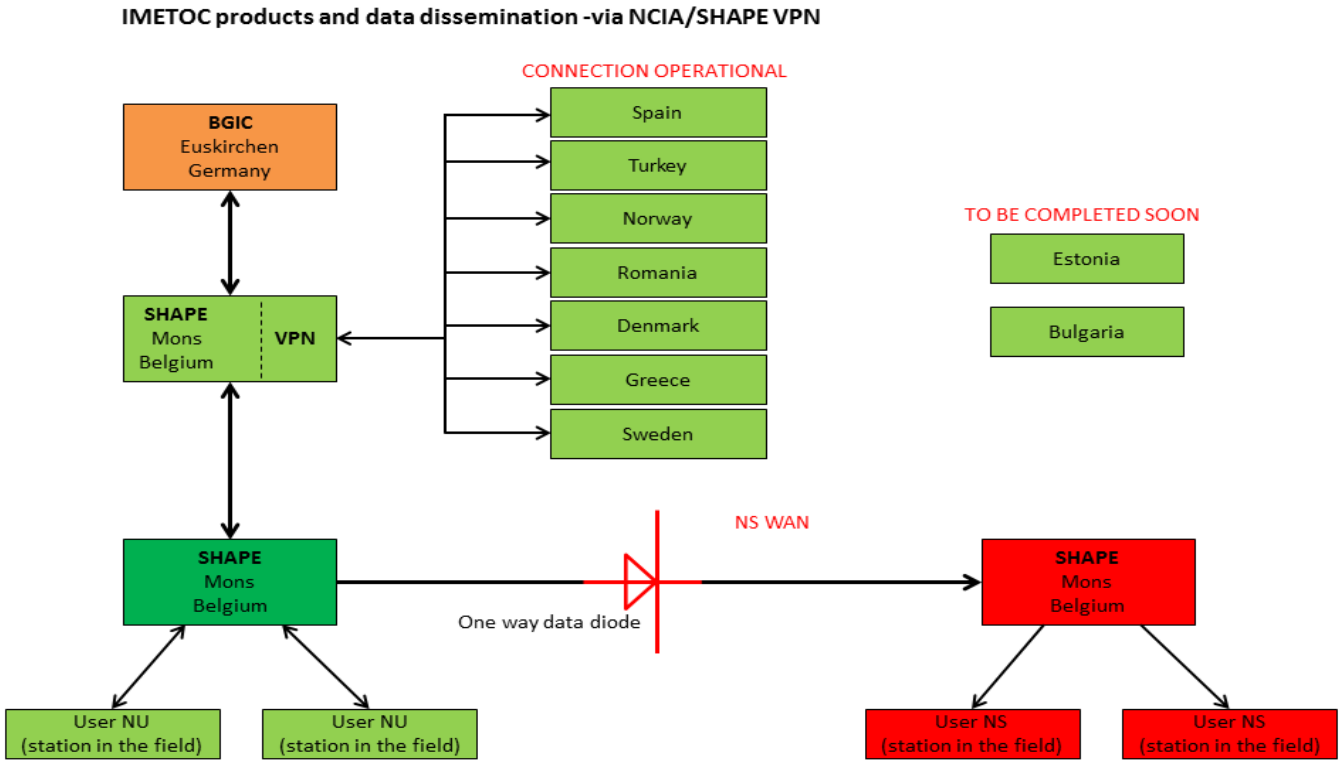
3.1 National Data Circuitry - Landlines

ICAO Location	Details
EBWM – EHWX	A national funded duplex digital circuit between the Meteo Wing (MV) at Beauvechain, BEL, and the Joint Meteorologische Groep (JMG) at Woensdrecht, NLD, (2 Mbps)
EHWX – EGRR	A national funded duplex digital circuit between JMG at Woensdrecht, NLD, and WAC Exeter, GBR, (2 Mbps)
ETGT – EBWM	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and the MW at Beauvechain, BEL, (2 Mbps)
ETGT – EDZW	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and WAC Offenbach, DEU, (10 Gbps)
ETGT – EHWX	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and the JMG at Woensdrecht, NLD, (2 Mbps)
ETGT – LFYF	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and the Centre Interarmées de Soutien Océanographic et Météorologique aux Forces (CISMF) at Toulouse,FRA, (2 Mbps)
ETGT – EPWA	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and the Hydrometeorological Centre Polish Armed Forces Meteorological (HCPAF), Warsaw, POL, (512kbps)
ETGT – LKMW	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and the Military Weather Service of the Czech Armed Forces, Prague, CZE, (2 Mbps)
ETGT – NCIA	A NATO funded duplex digital circuit between BGIC at Euskirchen, DEU, and Supreme Headquarters Allied Powers Europe (SHAPE), Mons, BEL, (10 Mbps)
ETGT – LIRE	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and CNMCA Pratica di Mare, ITA, (2 Mbps)
ETGT – LHBM	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and HGFC, HUN, (2 Mbps)
ETGT – LZIB	A national funded duplex digital circuit between BGIC at Euskirchen, DEU, and LZIB, SVK, (2 Mbps)

3.2 ACOMEX Data Circuitry – Landlines

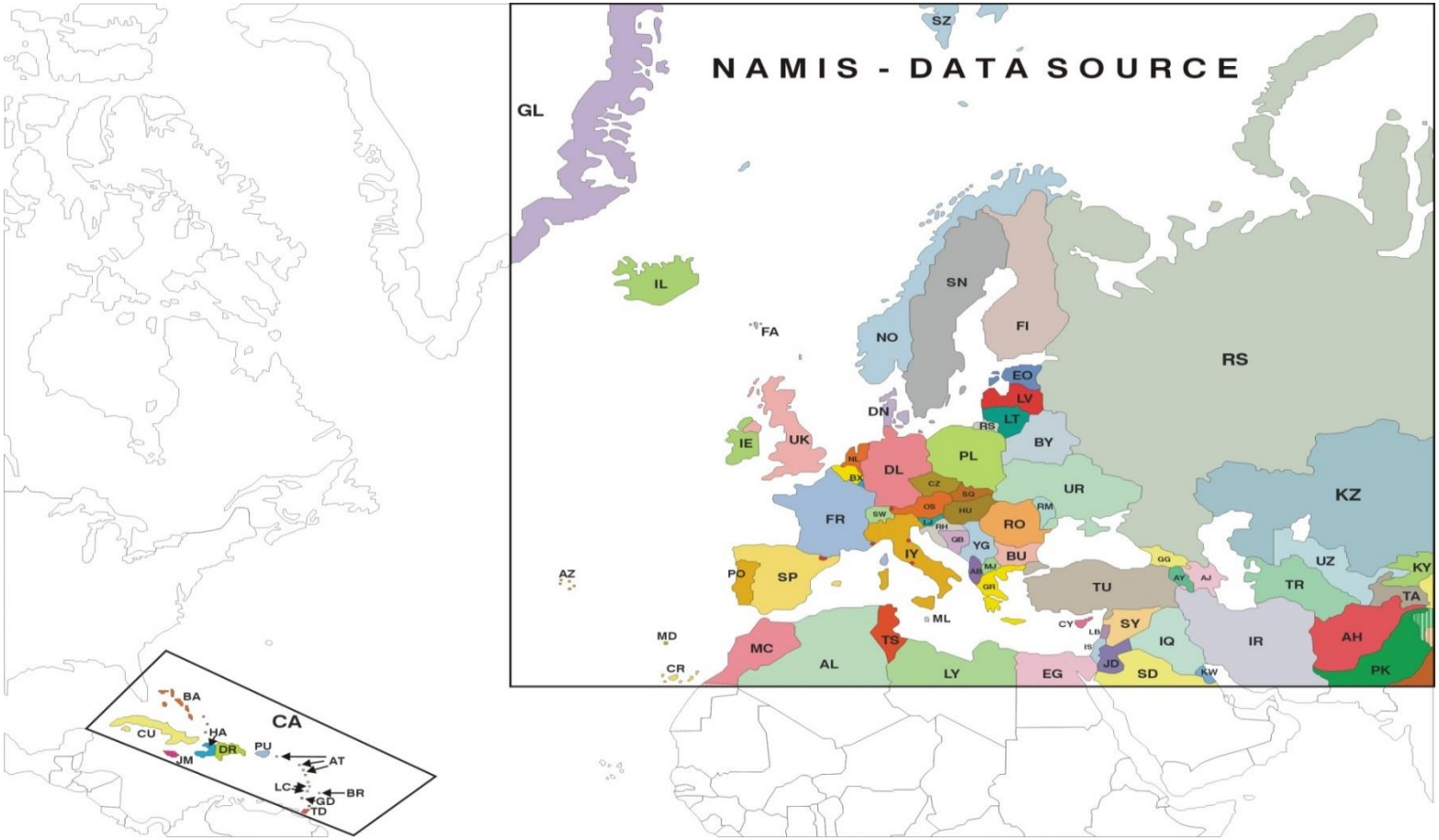


3.3 ACOMEX Data Circuitry via NCIA/SHAPE



3.4 NATO Data Source

According to the recommendation of the ACOMEX WG, and the decision by the ACO Chief METOC Officer (CMO), the alphanumeric data source for NAMIS is the area between 25 °N, 75 °N, 30 °W and 70 °E. Alphanumeric data from the Caribbean area is also transmitted.



3.5 NATO METOC Data Web Portals (NMD Web)

BGIC provides and maintains a NATO METOC web portal on the Internet. This web portal is mirrored on the NS WAN. The NMD Web NS is hosted and maintained by the NCI Agency.

Website: https://www.nmds-BGIO.de

Users must register in order to gain access to the BGIC NATO METOC web portal. Access requests should be sent via email to bgic-natometocsupport@bundeswehr.org

3.6 SACT ACOMEX Website

SACT provides an ACOMEX page on the SACT managed TRANSNET Portal.

Website: https://portal.transnet.act.nato.int.

It has been created to serve the ACOMEX WG and to provide information to the entire NATO METOC community and Participating Nations. The website contains ACOMEX documents, briefings, reports, Working Group minutes, etc.

Only members of the ACOMEX WG have access to the ACOMEX page on TRANSNET. New users are required to complete the registration form on the TRANSNET website in order to gain access.

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CHAPTER 4 ACOMEX OPERATIONS

4.1 Data Exchange Requirements

4.1.1 Routine Exchanges

Every command and national meteorological communications centre responsible for the production and/or compilation of ACOMEX METOC information will transmit the required bulletins, applying agreed filenames and in agreed formats, to the BGIC communications centre. Once received by BGIC, collected data will be distributed to all participants via ACOMEX circuitry.

4.1.2 Permanent Exchange Requirements

Should new requirements arise and/or existing ones be no longer needed, then participants will contact SHAPE no later than 24 hours prior to the desired implementation of the change. On the instruction of the ACO Chief METOC Officer (CMO), BGIC will then change the routing lists and inform all participants with a message using the header NOEU20 NATO. (For description of a service message see ANNEX A).

4.1.3 Temporary Changes to the Data Program

Requirements resulting in temporary changes to the data program, which are not exceeding a period of 3 months, are handled as follows. Any user may request changes to the data program by informing the BGIC communications centre by means of a service message no later than 24 hours prior to the desired implementation of the change. The BGIC communications centre will, upon approval by CMO, change the routing lists and inform all participants by means of a message using the header NOEU20 NATO. Temporary inclusions will not result in changes to the ACOMEX Manual. (For description of service message see ANNEX A).

4.1.4 Immediate Demand for a Report or Bulletin

Every user may make immediate demands for single reports or bulletins. The communications host at BGIC, being the central data base, will automatically transmit the requested message. Request procedures are described in ANNEX A.

4.2 Telecommunication Procedures

The telecommunications procedures described in the WMO-Publication No. 386, Manual on the Global Telecommunication System (GTS), are the basis for ACOMEX data routine exchange operations. However, the coded message will be ruled following NATO-approved directions on the use of codes expressed in Allied Weather Publication-4(B), NATO Meteorological Codes.

Meteorological messages are collected, exchanged and distributed in the meteorological bulletin format (See ANNEX A).

The messages are distributed with 4 priorities:

Priority	Type of message
1 (highest)	Warnings
2	SPECI, administrative message, service message, answer to a request, answer to an incorrect request
3	Routine messages (SYNOP, METAR, TEMP, PILOT, etc.)
4 (lowest)	Binary data

Administrative and service messages are transmitted as addressed messages (See ANNEX A).

A detailed specification of the data type T_1T_2 is given in ANNEX A.

A detailed specification of geographical designators for A_1A_2 is provided in ANNEX C.

4.3 Trouble-Shooting Procedures

4.3.1 Break down of the BGIC – NCIA/SHAPE link

a. BGIC informs NCIA/SHAPE
b. BGIC informs ACOMEX-Chairman
c. BGIC informs ACO CMO
d. BGIC informs the ACOMEX-participants via E-Mail according to the list in Annex D

4.3.2 Outage of a landline to BGIC

a. BGIC informs the affected station
b. BGIC informs ACOMEX Chairman
c. BGIC informs the ACOMEX participants via service message (BMBB01 NATO)

4.4 Procedure for request of EQ location indicators

4.4.1 POC

Users will send a request for allocation of an EQ location indicator to BGIC either via mail, fax or email.

Mailing address:

Zentrum für Geoinformationswesen der Bundeswehr
VI (4)
Frauenberger Str. 250
53879 Euskirchen
Germany
Fax number: +49 2251 953 5983

Email TO: BGIC-NATOMetOcSupport@bundeswehr.org
CC: BGIOcomcen@bundeswehr.org

4.4.2 Required Sender Information

The sender of the request will provide the following information with the request:

a. Owner
b. Name/Location
c. Latitude (preferably in degrees with five decimal places or else in degrees, minutes and seconds)
d. Longitude (preferably in degrees with five decimal places or else in degrees, minutes and seconds)
e. Elevation [ft or m]
f. Type of weather data station will be providing (METAR/SPECI, TAF, SYNOP, TEMP, PILOT, WARNINGS, TEXT, BUFR)

WGS84 (World Geodetic System 1984) has to be used as geodetic reference system.

In purely national deployments, the nation may choose not to make the deployment public (e.g. in the context with military evacuation operations). In that case, the information can be replaced by “deployment classified”.

4.4.3 EQ Location Indicators Expiration Periods

- EQ location indicator for a mobile station or exercise station is given for a period of 6 months.
- EQ location indicator for semi-permanent deployed headquarters is given for the duration of the deployment.
- EQ location indicator for permanent headquarters is given for an indefinite period

4.4.4 Request for Allocation Extension

Four weeks before the end of the expiration period, BGIC will inform the owner of a mobile station or exercise station that the allocation of the EQ location indicator will end automatically.

Any request for extension of allocation of the EQ location indicator will need to reach the administrators at least 2 days prior to expiration date.

4.4.5 Making New Station Known to Other Users

a. BGIC will disseminate the information immediately to:

(1) NAMIS-participants via NAMIS with the header NOEU30 NATO

(2) EHWX, EBWM, LFYF, ETAX and KGWC via landlines with the header NOEU30 NATO

(3) Nations and commands, which are not connected to NAMIS, via email or fax

b. An updated EQ-list will be disseminated to:

(1) ACOMEX participants via ACOMEX and NAMIS with the header NOEU31 NATO, every 2 months on the first of the month

PfP-participants can be informed on request about the EQ-indicators of the Former Yugoslavia theatre via email / fax.

Each participant of ACOMEX can request the most up-to-date list of EQ-indicators through a request message, with the procedure described in Annex A.

4.5 Account Request for the NATO METOC Data Web portal on the NATO METOC Data Server

a. Users will send a request for allocation of an account and a password to:

BUNDESWEHR GEOINFORMATION CENTRE (BGIC)

Email address: bgic-natometocsupport@bundeswehr.org

b. The sender of the request will provide the following information with the request:

Organisation Name (link to NATO)

c. BGIC will provide an account and a password immediately via E-Mail.

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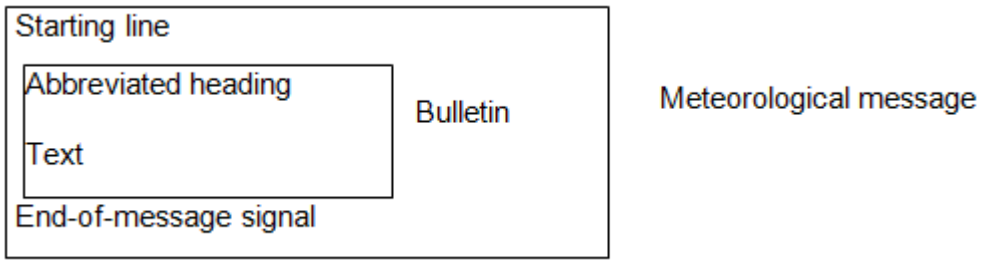
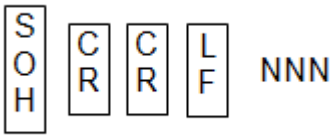
ANNEX A FORMAT OF MESSAGES

Format of METOC Messages, Addressed Messages and Requests for Bulletins and Reports

A.1 Format of a meteorological message



A.1.1 Format of the starting line



Explanation:

→	Blank, Space
S O H	Code sign for the beginning of a message (Start Of Heading)
C R	Code sign for Carriage Return
L F	Code sign for Line Feed
NNN	Transmission sequence number. A three-digit group giving the transmission sequence of messages from the BGIC comms computer. Numbers 000 through 999 inclusive are used in a cyclic manner.

A.1.2 Format of the abbreviated heading line of a meteorological message

$T_1T_2A_1A_2ii \rightarrow CCCC \rightarrow YYGGgg \rightarrow (BBB)$

Explanation:

T_1T_2	Data type Detailed specification see ANNEX B
A_1A_2	Geographical designators A_1A_2 Detailed specification see ANNEX C
ii	Alphanumeric bulletins containing reports prepared at the main synoptic hours for the stations included in the Regional Basic Synoptic Networks or stations included in the Regional Basic Climatological Networks shall be compiled into bulletins with ii in the series 01 to 19. Alphanumeric bulletins containing "additional" data shall be compiled into bulletins with ii above 19.
→	Blank Space
CCCC	Location-Indicator of the centre, which is appropriate for the bulletin or of the sending station.
YYGGgg	Date-time group
YY	Day of the month
GGgg	Standard time of observation in UTC
BBB	If a report is corrected, amended or delayed the original heading line will be used with the addition of a three-letter group. Indicator for: - Correction: BBB = CCn. It means: n = A for the first correction n = B for the second correction and so on including n = X n = Z should be used, when the bulletin is prepared more than 24 hours after the time of observation - Amendment: BBB = AAn. It means: n = A for the first amendment n = B for the second amendment and so on including n = X. n = Z should be used, when the bulletin is prepared more t than 24 hours after the time of observation - Delayed report: BBB = RRA

A.1.3 Format of the abbreviated heading line of an addressed message

$T_1T_2A_1A_2ii \rightarrow C_AC_AC_AC_A \rightarrow YYGGgg \rightarrow (BBB)$

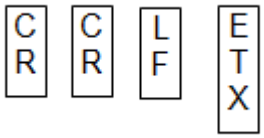
Explanation:

T_1T_2	T_1T_2 = BM, designator for addressed messages in alphanumeric form T_1T_2 = BI, designator for addressed messages in binary form
A_1A_2	A_1A_2 = AA, administrative message A_1A_2 = BB, service message A_1A_2 = RR, request-to-data-base
ii	ii = 01
→	Blank, Space
$C_AC_AC_AC_A$	Location indicator for the addressed centre
YYGGgg	Date-time group

A.1.4 Text of addressed messages

The first line of text of an addressed message contains the location indicator $C_OC_OC_OC_O$ of the centre originating the message. The actual content of the addressed message starts in the second line of the text.

A.1.5 Format of the end-of-message signal



Explanation:

≡	Carriage Return
NNNN	Fixed character sequence for the end of a meteorological message
C R	Code sign for Carriage Return
L F	Code sign for Line Feed
E T X	Code sign for End Of Text

A.1.6 Examples of meteorological messages

METAR

SAEU10 ETTT 030520
METAR EQAR 030518Z 0000 0200 FZFG OVC001 M06/M07=

SPECI

SPEU10 ETTT 031243
SPECI EQAR 031243Z 23006KT 9999 BKN0008 06/03 Q1016=

SYNOP

SMEU10 ETTT 030600
AAXX 03061
99867 41356 72304 10045 20037 30130 40150 58001 71022 876//
333 87706
999 02308=

TAF (< 12 hours)

FCDL51 ETHB 050800 TAF ETHB 050826Z 0509/0518 03005KT 9999 NSW SCT015 BKN050
TEMPO 0509/0512 06007KT 1200 SN BKN006 BKN015
PROB30 0512/0518 07007KT 1200 SN BKN006 BKN015=

TAF (≥ 12 hours)

FTXX69 KAWN 050416 TAF EQBK 0504/0610 VRB06KT 5000 BR BKN070 QNH2984INS
TEMPO 0504/0506 3200 BR BKN010
BECMG 0508/0509 16009KT 9999 NSW SCT030 QNH2980INS
BECMG 0511/0512 15012G18KT 8000 -SHRA BKN030 QNH2977INS
BECMG 0517/0518 18009KT 9999 NSW SCT030 BKN040 QNH2975INS
BECMG 0520/0521 VRB06KT 5000 BR BKN030 QNH2958INS
TEMPO 0521/0602 3200 BR
BECMG 0605/0606 11009KT 9999 NSW BKN025 QNH2957INS TX08/0511Z TN03/0506Z=

A.2 Format of a service message (SVC)

TTAAii → $C_AC_AC_AC_A$ → YYGGgg
$C_0C_0C_0C_0$
Text

Explanation:

TT	TT = BM	designator for addressed message
AA	AA = BB	designator for a service message
ii	ii = 01	
→	Blank, Space	
$C_AC_AC_AC_A$	Location indicator for the addressed centre	
YYGGgg	Date-time-group	
$C_0C_0C_0C_0$	Location indicator for the sending station	
Text	Content of the addressed message	

Example:

BMBB01 ETGT 050758
EQAC
TEXT=

A.3 Format of a request

A.3.1 Request for bulletins

BMRR01 → ETGT → YYGGgg

$C_0C_0C_0C_0$

AHD → TTAAii → CCCC → $Y_RY_RG_RG_Rg_Rg_R$=

Explanation:

BMRR01→ETGT	Header of a request
→	Blank, Space
YYGGgg	Date-time-group
$C_0C_0C_0C_0$	$C_0C_0C_0C_0$ = NATS for a request via NMDS $C_0C_0C_0C_0$ = CCCC (Location indicator of the requesting station) for a request via landline
AHD	Identification for the request of a bulletin
TTAAii→CCCC	Header of the requested bulletin
$Y_RY_RG_RG_Rg_Rg_R$	Date-time-group of the requested bulletin. The wild card ////// will be replaced by the date-time-group of the header.
=	Each line must be terminated by the equal (=) sign.

Headers of the answer to a request

BBXH41→CCCC→YYGGgg	Answer with the priority 1 (highest)
BBXH42→CCCC→YYGGgg	Answer with the priority 2
BBXH43→CCCC→YYGGgg	Answer with the priority 3
BBXH44→CCCC→YYGGgg	Answer with the priority 4 (lowest)
BMDA01→CCCC→YYGGgg	Answer to an incorrect request

Example:

BMRR01→ETGT→020635
NATO
AHD→SADL52→ETGT→020420=
AHD→SAFR41→LFPW→//////=
AHD→SAFR88→LFPW→//////=
AHD→SAFR888→LFPW→//////=

Answer:

BBXH43 NATO 020636
ETGT
SADL52 ETGT 020420
METAR

BBXH43 NATO 020636
ETGT
SAFR41 LFPW 020630 RRA
METAR

BMDA01 NATO 020636
ETGT
NIL AHD SAFR88 LFPW //////=
ERR AHD SAFR888 LFPW=

A.3.2 Request of a report:

BMRR01 → ETGT → YYGGgg

$C_0C_0C_0C_0$

AHD → NOEU31 → NATO////// =

Explanation:

BMRR01→ETGT	Header of a request
→	Blank, Space
YYGGgg	Date-time-group
$C_0C_0C_0C_0$	$C_0C_0C_0C_0$ = NATS for a request via NMDS $C_0C_0C_0C_0$ = CCCC (Location indicator of the requesting station) for a request via landline
RSR	Identification of the request of reports: All requests will be answered in one bulletin. Answers to different reports are separated by a character string
TT	Data designator of the requested report. The following designators are possible: FC, FT, SA, SI, SM, SN, UE, UG, UH, UK, UL, UP, UQ, US. The use of wild cards is possible. Example: S/ for SA, SI, SM, SN. SPECI cannot be requested separately. They will only be disseminated in connection with a request for METAR.
$Y_rY_rG_rG_rg_rg_r$	Date-time-group of the requested report. The following wild card can be used: ////// will be substituted by the date-time-group of the header.
-N	Reports from the latest N message-periods are requested. A message period is the time-span between the successive standard time of observation for the specified data type. It is recommended to use a high value for –N. (for example -5). The parameter –N is optional. Default is -1.

Iiiii	Applicable for TT = SI, SM, SN, UE, UG, UH, UK, UL, UP, US Iiiii Report of one station Iiiii Iiiii ..... Reports of several stations Iiiii – Iiiii Interval of stations Iiii – Iiii Interval of stations Iii – Iii Interval of stations II Interval II001 – II999
$C_nC_nC_nC_n$	Applicable TT = FC, FT, SA CCCC Report of one station $C_1C_1C_1C_1$ $C_2C_2C_2C_2$... Reports of several stations $C_1C_1C_1C_1$ – $C_nC_nC_nC_n$ Interval of stations CCC_x – CCC_y Interval CCC_xA – CCC_yZ CCC_x – CCC_y Interval CC_xAA – CC_yZZ CC_x – CC_y Interval C_xAAA – C_yZZZ CCC Interval CCCA – CCCZ
=	Each line must be terminated by the equal (=) sign.

Remarks:

- Missing reports are marked with NIL
- If none of the requested reports are available, a NIL-bulletin will be disseminated
- Limitations:
    - ♦ Maximal length of an answer: 15 000 characters,
    - ♦ Maximal number of answers: 99.

Example:

```
BMRR01 ETGT 030735
NATS
RSR SA ///// ETSB ETHM=
RSR SM 030000 10=
RSR U/ 030000 10868=
RSR SA ////// -5 ETNN=
RSR SI ///// 10001 - 10100=
RSR SA ///// ETS - ETZ=
RSR SN ////// 06200 - 07100=
RSR SA ////// ETSA - ETZZ=
```

A.3.3 Request of a local forecast

BMRR01 → GEOV → YYGGgg
$C_0C_0C_0C_0$
PUVO
Commands

Explanation:

BMRR01→GEOV	Header of a request
→	Blank, Space
YYGGgg	Date-time-group
$C_0C_0C_0C_0$	$C_0C_0C_0C_0$ = NATS for a request via NMDS $C_0C_0C_0C_0$ = CCCC (Location indicator of the requesting station) for a request via landline
PUVO	Identification for the request of a local forecast
Commands	)I Station)K Coordinates)T Date of model output)V Time interval of prediction)D Interval of prediction)M Model)E End sign Help Description of the procedure

Description of the commands

)I Station

)I list (of stations)

Example:)I 10400
)I 10476

)I interval (of stations)
Form: station index number (from) : station index number (to)

Example:)I 10708 : 10980
)I 06310 : 09700

)K Coordinates

)K list (of coordinates)

The coordinates are a pair of values (longitude latitude)
The coordinates are given in 1/100 degrees without a point
The longitude is 5-digit, the latitude is 4-digit
West and south are indicated with a minus (-) sign in front of the coordinate

Example:)K 02000 5000
)K -03000 6000

)K interval (of coordinates)
Form: coordinates (longitude latitude) : coordinates (longitude latitude)

Example:)K -18000 -9000 : 18000 9000

)T Date of model output

)T list
2 dates are possible: 00 and 12

Examples:)T 00
)T 12

)V Time interval of prediction
)V list The 3-digit hour is added to)T Example:)V 048)V 096 With)V 000 a list of all stations of the model)M is outputted)V interval Form: time interval (from) : time interval (to) Example:)V 024 : 036
)D Interval of prediction
Interval of prediction in hours. The intervals 1 or 3 respectively 01 or 03 are possible. Examples:)D 1)D 03
)M Model
)M list LDM = Limited Area Model to H + 48 LKA = Kalman Limited Area Model to H + 48 DMO = not filtered Global Model (ICON))D 01: to H + 78)D 02: to H + 168 MOS = Model Output Statistics)D 01: to H+78)D 03: to H+168
)E End sign
Each line must be terminated by)E

HELP Description of the procedure
With this command a German description of the procedure is given It is not allowed to combine the command HELP with other commands If there are other commands before HELP then HELP is ignored If there are other commands behind HELP then they will be ignored

Remarks:

Several sequences of commands are possible

Each command must begin with a new line

Header of the answer to a request:

BBXH58→CCCC→YYGGgg

Error messages:

The German error messages are:
by entering a non-existent command:
SYNTAXFEHLER BEI DER EINGABE:
WAHRSCHEINLICH SCHLÜSSELWORT NICHT GEFUNDEN

By entering a wrong parameter to a command:

SYNTAXFEHLER BEI DER EINGABE:
FEHLER ETWA BEI ZEICHENNR: n (n is a numerical value)

Examples:

BMRR01→GEOV→240908
NATS
PUVO
)I→10400→:→10500
)I→10868
)T→00
)V→024→:→048
)D→3
)M→DDM
)E

BMRR01→GEOV→241026
NATS
PUVO
HELP

ANNEX B DATA DESIGNATORS

Data designators T_1T_2 in Abbreviated Headings

Data designators on ACOMEX shall conform to WMO 386, Manual on the Global Telecommunications System, Attachment II-5 which can be found at http://www.wmo.int/pages/prog/www/TEM/GTS/index_en.html

ANNEX C GEOGRAPHICAL DESIGNATORS

Geographical Designators A_1A_2

Geographical designators on ACOMEX shall conform to WMO 386, Manual on the Global Telecommunications System, Attachment II-5 which can be found at http://www.wmo.int/pages/prog/www/TEM/GTS/indes_en.html.
http://library.wmo.int/opac/index.php?lvl=notice_display&id=10728#.VVmYcGf75aQ

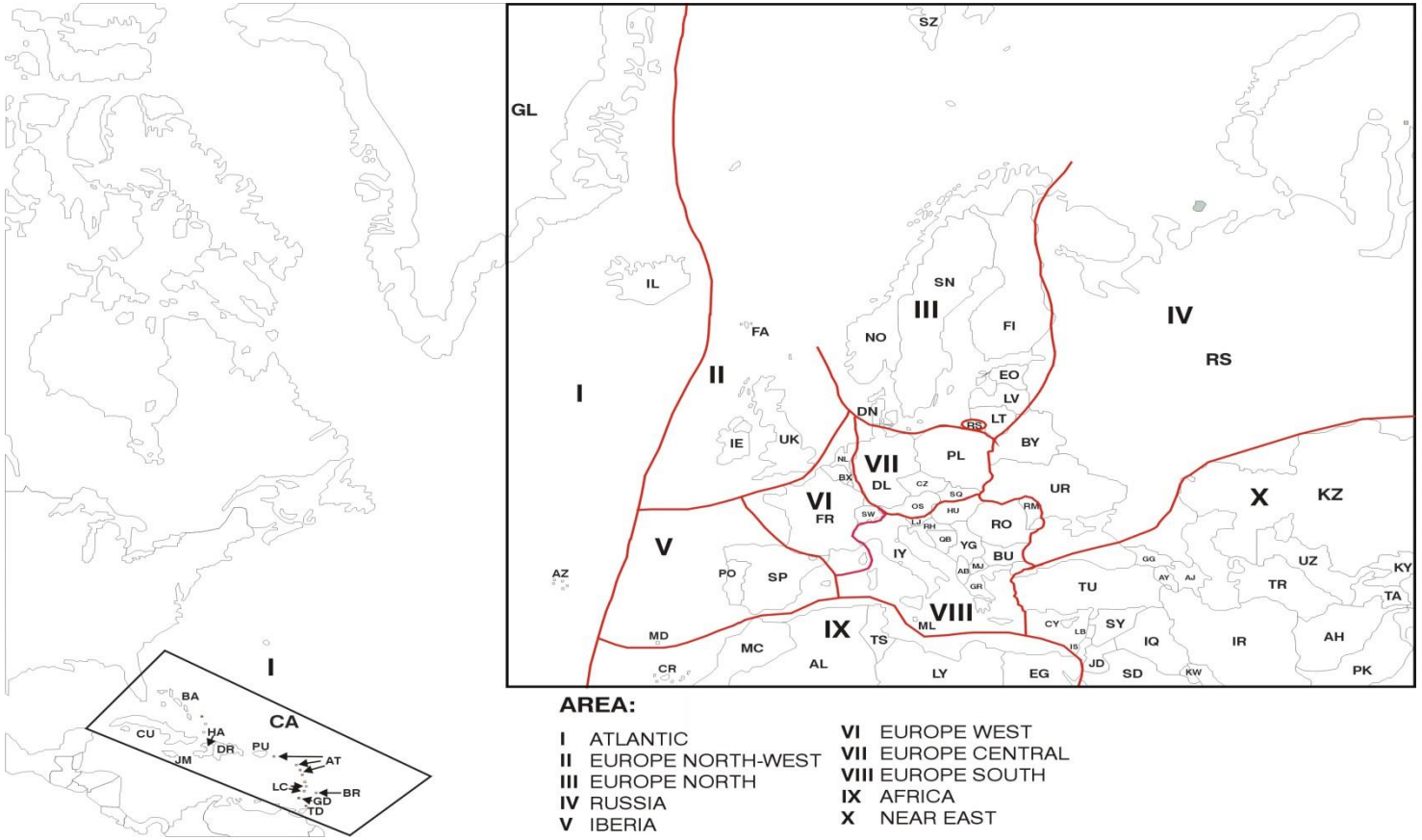
ANNEX D LIST OF POCS

POCs to be informed by the Central Switch on Link Outages to SHAPE

SHAPE	metoc@shape.nato.int
JFC Brunssum	metoc@jfcbs.nato.int
JFC Naples	weather@afsouth.nato.int with addition: to WO Aniello Latino
ARRC Innsworth	neil.chapman@metoffice.gov.uk
AMCC Northwood	fleetops-hmso2ops@mod.uk
AMCC Naples	noic01@afsouth.nato.int gsmith@afsouth.nato.int
NAVEURMETOCFAC	cdo@nemof.naples.navy.mil
NEMOD Souda Bay	oic@nemod.souda.navy.mil
SOUTHLANT	cpaizinho@southlant.nato.int
KFOR	meteo@hq.kfor.nato.int
EUFOR	cristian.ionita@eufor.eu.int piotr.soboliwski@eufor.eu.int
NAEW&CF Geilenkirchen	ofc-e3agkswam@naew.nato.int
Eurocorps	meteo@eurocorps.org
CMU Kandahar	james.baker@rcs.isaf.nato.int jeffrey.dickson@rcs.isaf.nato.int
ISAF RC South HQ	jeevan.toor@rcs.isaf.nato.int ISAFNURCSJERRYMEYERS@rcs.isaf.nato.int
Belgium (BEL)	robert.delalieu@mil.be
Canada (CAN)	philippe.labonte2@forces.gc.ca
Denmark (DNK)	karup@dmi.dk
Estonia (EST)	svetlana.puustusmaa@mil.ee
Greece (GRC)	ataratsas@hnms.gr
Hungary (HUN)	ksanyi@freemail.hu
Italy (ITA)	leonforte@meteoam.it litate@meteoam.it copolla@meteoam.it
Latvia (LVA)	nikolajs.smolovins@mil.lv
Norway (NOR)	helpdesk@met.no it.nettverk@met.no
Poland (POL)	sshsynoptyk@ron.mil.pl
Portugal (PRT)	TBD
Romania (ROU)	sgogu@roaf.ro

Slovakia (SVK)	jaroslav.bitala@mil.sk
Spain (ESP)	incaballerol@aemet.es
Sweden (SWE)	ledr-metocc-systemavd@mil.se
The Netherlands (NLD)	JMG.HELPDESK@mindef.nl
Turkey (TUR)	ebayraktar@meteoroloji.gov.tr
United Kingdom (GBR)	servicedesk@metoffice.gov.uk
United States of America (USA)	PATRICK C. WILLIAMS, Lt Col, USAF U.S. Military METOC Representative to NATO Pentagon, Washington D.C. Tel: +01-703-697-1237 patrick.c.williams1.mil@mail.mil Matthew Stanley, Lt Col, USAF US Air Force Meteorology Liaison Officer +44 (0)1923 958860 matthew.f.stanley2.mil@mail.mil

ANNEX E LIST OF AREAS



ANNEX F NATIONAL WEBSITES

National Websites Available to the ACOMEX Community

Country	Address	Remarks
BEL	**http://www.mil.be/meteo**	Accessed by anyone, no need of a password for access the site
CZE	**http://www.chmi.cz**	Accessed by anyone. Only national website, that is written also in English language and provide reliable but limited info
CAN	**https://met.forces.gc.ca**	Military METOC Information. Access with username + password. In English and French
	http://weatheroffice.gc.ca	Public and Marine conditions, forecasts, warnings and climate information Accessed by anyone.
	http://www.flightplanning.navcanada.ca	Aviation weather. Accessed by anyone. In English and French
DNK	**http://www.dmi.dk**	Accessed by anyone
EST	**http://www.emhi.ee**	Accessed by anyone
HUN	**http://www.met.hu**	National (not military) website – accessed by anyone
LVA	**http://www.meteo.lv**	Access for anyone. In English: current weather for main Latvian observation station (changes every 3 hours), 3-days weather forecasts for state territory, and picture with Riga *Doppler* radar Information (changes every 10 min.)
	http://selfbrief.lgs.lv/	With user name and password. Registration is free of charge. Information for aviation (METAR, TAF, GAMET, SWL est.) for Latvia and Baltic region.

	http://www.freewebs.com/evgameto/metar.htm	Access for anyone. Web page made by Air Force Meteorological group personnel. METAR information from airfield Lielvarde (changes every 3 hours)
NLD	**http://jmg.mindef.nl**	With user name and password requests for an username must be sent to jmg.helpdesk@mindef.nl Only requests done with a military email address are allowed
NOR	**http://www.yr.no**	Accessed by everyone
	http://kilden.met.no	Access with username and password. the policy is given allied and partners access to our website on request during training and exercises. We do not have capacity to handle several users from all nations
POL	**http://meteo.mil.pl** **alternative:** **http://meteo.sp.mil.pl**	Access with username and password. Click the English flag for the English version. Start the automatic registration process. After submitting the registration form you get the the PDF access form. That must be printed, signed and sent to HS PAF (by fax, or scanned and sent by e-mail)
UK-JOMOC	**http://www.jomoc.com**	Accessed by anyone, in English. A copy of the JOMOC fax broadcast for the UK and Arabian Gulf.
	http://www.jomoc.net	Access with username and password. In English. Global military METOC information.
	http://www.jomoc.net/FWOC/small_ships.html	Access with username and password. In English. Low band width METOC information for Atlantic, UK and Arabian Gulf
	http://nato.fwoc.s.mil.uk	Accessed on **NSWAN**, in English, Global military METOC and impact information

ANNEX G TO
AMETOCP-3.1

ANNEX G LIST OF ACRONYMS

ACO	Allied Command Operations
ACOMEX	Allied Command Operations Meteorological and Oceanographic Information Exchange
AIRCOM	Command Air
AMC	Allied Command Operations Meteorological and Oceanographic Conference
ARRC	Allied Rapid Reaction Corps
BGIC	Bundeswehr Geoinformation Centre
CAOC	Combined Air Operations Centre
CISMF	Centre Interarmées de Soutien Océanographique et Météorologique aux Forces
CMU	Combined METOC Unit
CNMCA	Centro Nazionale per la Meteorologia e Climatologia Aeronautica
DMZ	Demilitarized Zone
EUFOR	European Union Force
FC	Forecast Centre
GTS	Global Telecommunication System
HQ	Headquarters
HTTPS	HyperText Transfer Protocol Secure
IMETOC	Integrated METOC
IMETOC LN	IMETOC Lead Nation
ISAF	International Security Assistance Force
JFC	Joint Force Command
JHQ	Joint Headquarters
JMG	Netherlands Joint Meteorological Group
KFOR	Kosovo Force
LANDCOM	Command Land
MARCOM	Command Maritime
METOC	Meteorological and Oceanographic
MIL	Military
MV	Belgian Meteo Wing
NAEW&CF	NATO Airborne Early Warning and Control Force Command
NAMIS	NATO Automated Meteorological Information System
NATO	North Atlantic Treaty Organization

NAVEURMETOCFAC	Naval European Meteorological and Oceanographic Facility (Naples, Italy)
NCIA	NATO Communications and Information Agency
NEMA	NATO Exchange Manual Amendment
NEMOD	Naval European Meteorology and Oceanography Detachment
NMDS	NATO METOC Data Server
NMD Web	NATO METOC Data Web Portals
NS	NATO Secret
NSO	NATO Standardization Office
NU	NATO Unclassified
OWS	Operational Weather Squadron
PfP	Partnership for Peace
POC	Point of Contact
SACT	Supreme Allied Commander Transformation
SHAPE	Supreme Headquarters Allied Powers Europe
SVC	Service Message
ToR	Terms of Reference
USAFE	United States Air Forces in Europe
UTC	Universal Time Coordinated
VPN	Virtual Private Network
WAC	Weather Analysis Centre
WAN	Wide Area Network
WG	Working Group
WMO	United Nations World Meteorological Organization

AMETOCP-3.1(A)(1)