New NAF-format codes proposed by Norway

Norway has used NAF extensively for reporting purposes. The Two-letter coding system has proved very useful both for data exchange between different FMCs and between fishing vessels and the Norwegian FMC.

From March 2005 Norway introduced new legislation allowing electronic reporting (ERS) for foreign and Norwegian fishing vessels in accordance with the Flag State principle. A bilateral project between Norway and EU on ERS going since 2003 has been extended.

In the summer of 2005 Norway also started Electronic Logbook tests using NAF.

Working with different VMS service providers, there has also been a need to describe some details about the positions and also to identify various transmitters characteristics.

This has created a need for new NAF-codes and also for some new reposts.
Especially the Test report (AUD) has been found to be very useful. When having ERS operational onboard vessels, ordinary reports must not be used for testing. If there are any problems one asks the masters to send an AUD report to be sure that the communication is operational.

The following are some of the new NAF two-letter codes and reports used by Norway in national and bilateral systems. Soon there will be two more systems operational : a Licence system for EU and Norway and a system for extended exchange of position information between Norway and Russia. The codes and reports of these systems will be submitted later.

New Reports

Used in Norwegian legislation and EU Norway ERS project.
AUD – Report used for testing purposes in all projects, se annex 1.
CON – Report used before exiting Norwegian waters, Control point/area report, se annex 2

New reports used in Electronic Logbook tests:
DEF – Gear definition report sent before starting to send Logbook entry reports, se annex 3
LOG – Logbook entry report sent every day for reporting details about the catch and effort of the preceding day, se annex 4. In Annex 5 there are an alternative format for the LOG report. This is developed because the experience showed that the format in Annex 4 generated a lot of return messages when received at the FMC and theses RET messages was confusing when received back at the vessel.

New user assigned code.
In ISO-3166 there is a possibility for users to assign their own Alpha-3 codes within some limits. Such codes are assigned for NEAFC (XNE), NAFO (XNW), CCAMLR (XCA).

A new code for SEAFO could be XSA .

New Data Elements

All new elements will be described in the same way as the data elements already on the NAF-web.

List of new data-elements, codes and definitions

Data-element	Field-code	Definition
Authentication	AU	Code to authenticate the report or message used for flag state domestic purposes
Bait	BA	Type of bait.
Block Date	BD	UTC date for the data in the block.
Gear Beam length	BE	Beam length in meters
Block Time	BT	UTC time for the data in the block
Control point/area	CP	Name of Control point/area
Duration	DU	Duration of fishing activity, in minutes
Gear Fabric	FA	Fabric material code
Fisheries Commission	FC	Short name of the different Regional Fisheries Management Organisations (RFMOs)
Gear Tread thickness	FI	Tread thickness in mm, one decimal
Forward to	FT	Final Destination code
Gear depth	GD	Gear depth/height in meters
Gear length	GL	Gear length in meters
Gear Bar distance	GO	Light opening in sorting grid in mm
Gear specification	GS	Gear specification code
Hours fished	HF	Hours the gear has been fishing calculated as described by CCAMLR (XCA)
ID number	ID	Id number for the transmitter/platform
Latitude	LI	Estimated latitude
Longitude	LN	Estimated longitude
Mem Code	MC	Macro Encoded Message
Gear Mesh type	MT	Gear mesh type
Position Quality	PQ	Codes for the quality of the position specific for the different providers
Report Period	RP	Code for Catch period
Trailer start	TS	Start of a trailer (Block) with a collection of data

List of field-codes, data-elements, syntax, contents and examples

Filed-code	Data-element	Syntax	Contents	Examples
AU	Authentication	Char*4	Hex -code	//AU/B234//
BA	Bait	Char*3	Code to be developed	
BD	Block Date	Num*8	YYYYMMDD , UTC	//BD/20050801//
BE	Beam length	Num*2	Beam length in meter	
BT	Block Time	Num*4	HHMM , UTC	//BT/2030//
CP	Control point/area	Char*1	Norwegian codes: Point A, B, C, D, E, F or G, Area 1, 2 or 3	//CP/A//
DU	Duration	Num*5	Durations of fishing activity, in minutes	//DU/180//
FA	Fabric	Char*3	Fabric material: PET=Polyethylene, PAM=Polyamide	//FA/PET//
FC	Fisheries Commission	Char*3	XNE, XNW, XCA(CCAMLR), XSA(SEAFO)	//FC/XNE//
FI	Tread thickness	Num*1.1	Tread thickness in mm, one decimal	
FT	Forward to	Char*3	ISO-3166 Land code including the user assigned codes (as used by NEAFC)	//FT/XEU//
GD	Gear depth	Num*4	Gear depth/height in meters	
GL	Gear length	Num*4	Gear length in meters	
GO	Gear Bar distance	Num*2	Light opening in sorting grid in mm	
GS	Gear specification	Num*3	For trawlers: 1 = single trawl, 2=double trawl, 3=triple trawl	//GS/1//
HF	Hours fished	Char*4	Hours the gear has been fishing calculated as described by CCAMLR (XCA)	//HF/250//
ID	ID number	Char*10	Unique number identifying a transmitter or platform from a special service provider.	//ID/1234567890//
LI	Latitude	Char*6	NDDMM (WGS 84)	//LI/N6230//
LN	Longitude	Char*7	E/WDDDMM (WGS 84)	//LN/E00502//
MC	Mem Code	Char*3	List of numbers describing details about the position and/or the transmitter (11 Normal, 64 Power Up..)	//MC/11//
MT	Gear Mesh type	Char*3	DIM=diamond mesh, SQM= square mesh	//MT/DIM//
PQ	Position Quality	Char*1	Number specific to the service provider	//PQ/1//
RP	Report Period	Char*1	Catch period defined by CCAMLR (XCA) A 1-5 of the month B 6-10 of the month C 11-15 of the month D16-20 of the month E 21-25 of the month F 26 and the rest of the month	//RP/A//
TS	Trailer start		No content	//TS//

Annex 1
Audit report used for testing purposes
Format used in communication between FMCs, and recommended to be used between Flag State FMCs and their vessels

Data Element:	Field Code:	Mandatory / Optional	Remarks:
Start Record	SR	M	Indicates start of record
Address	AD	M	Destination Party Alfa-3 ISO country code.
From	FR	M	The transmitting Party Alfa-3 ISO country code
Record Number	RN	M	Serial number of the record in the relevant year from the FMC
Record Date	RD	O	Date of transmission
Record Time	RT	O	Time of transmission
Type of Message	TM	M	Message type, "AUD" as Audit message
Radio Call sign	RC	M[1]	International radio call sign of the vessel
External Registration Number	XR	M[1]	The side number of the vessel
Assigned Inspector	AI	M[2]	Inspector code
Name of Master	MA	O	Name of the master
Free text	MS	O[3]	Free text string (used here to report software version)
Date	DA	M	Date of transmission
Time	TI	M	Time of transmission
End of Record	ER	M	Indicates end of the record

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[1] Mandatory only if the test report is from a vessel or an inspector.
[2] Mandatory only if an inspector is sending the message
[3] Note that a FMC has no obligation to check this element unless this has been specially agreed before sending the report.

Annex 2

Control point/area report

Format used in communication between FMCs

Data Element:	Field Code:	Mandatory / Optional	Remarks:
Start Record	SR	M	Indicates start of record
Address	AD	M	Destination Party Alfa-3 ISO country code
From	FR	M	The transmitting Party Alfa-3 ISO country code
Record Number	RN	M	Serial number of the record in the relevant year from the FMC
Record Date	RD	O	Date of transmission
Record Time	RT	O	Time of transmission
Sequence number	SQ	M	Serial number of the report from the vessel in the relevant year
Type of Message	TM	M	Message type, "CON"
Radio Call sign	RC	M	International radio call sign of the vessel
External Registration Number	XR	M	The side number of the vessel
Name of Control point/area	CP	M	Name of Control point/area (Char*1) Point A, B, C, D, E, F or G, Area 1, 2 or 3
Latitude	LA	M[4]	Estimated latitude in control area NDDMM
Longitude	LO	M4	Estimated longitude in control area E/WDDDMM
Date	PD	M	Date UTC when the vessel intends to arrive at the control point/area (YYYYMMDD)
Time	PT	M	Time UTC when the vessel intends to arrive at the control point/area (HHMM)
Date	DA	M	UTC date of transmission from vessel (YYYYMMDD)
Time	TI	M	UTC time of transmission from vessel (HHMM)
End of Record	ER	M	Indicates end of the record

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[4] Mandatory if the element CP is a control area

Annex 3

Gear definition report

A report with gear definition (DEF) must be send before any LOG-reports with reference to that specified gear. This definition will have a specific gear FAO-code and be valid for the following LOG-reports send from the vessel, until a new DEF report is forwarded.

Data Element:	Code:	Mandatory /Optional	Remarks:
Type of message	TM	M	DEF, Gear definition report
Record number	RN	M	Report serial number in current year
Authenticity	(AU)	(M)	(Code to authenticate the report used for flag state domestic purposes)
Address	AD	M	Destination, Flag state ISO-3 code
Radio call sign	RC	M	International RC of the vessel
External registration	XR	O	The side number of the vessel.
Fishing Gear	GE	M	FAO gear code
Gear Manufacture	MS	O	Free text string used here for gear manufacturer product code
Gear Mesh type	MT	M^{5,6,7}	DIM=diamond mesh, SQM= square mesh
Gear Mesh size	ME	M^{5,6,7}	Average mesh size in mm
Gear Fabric	FA	M^5	Fabric material: PET=Polyetylen, PAM=Polyamid
Gear Bar distance	GO	M^5	Light opening in sorting grid in mm
Gear Beam length	BE	M^6	Beam length in meters
Gear Tread thickness	FI	M^7	Tread thickness in mm, one decimal
Gear length	GL	M^{7,8,9}	Gear length in meters
Bait	BA	M^8	Type of bait.
Gear depth	GD	M^{7,8,9}	Gear depth/height in meters
Date	DA	M	Date of transmission (YYYYMMDD) in UTC
Time	TI	M	Time of transmission (HHMM) in UTC.

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[5] Trawl

[6] Danish seine

[7] Gillnett

[8] Long line

[9] Seine

Annex 4 – Simple Logbook entries

Such reports must be sent in one batch no later than 1 hour after the end of the day to which they refer, and/or with the same maximum delay after a change of NEZ. Fishing operations initiated one day and finished the following day shall be submitted together with the reports for that following day.

Data Element:	Code:	Mandatory /Optional	Remarks:
Type of message	TM	M	LOG, Catch report per haul/set
Record number	RN	M	Report serial number in current year
Authenticity	(AU)	(M)	(Code to authenticate the report used for flag state domestic purposes)
Address	AD	M	Destination, Flag state ISO-3 code
Radio call sign	RC	M	International RC of the vessel
External registration	XR	O	The side number of the vessel.
Zone	ZO	M	NEZ or fishing zone, ISO-3 code
Fishing Gear	GE	M	FAO gear code
Gear specification	GS	M	For trawlers: 1 = single trawl, 2=double trawl, 3=triple trawl
Latitude	LT	M	Latitude for start of set, decimal degrees
Longitude	LG	M	Longitude for start set activity, decimal degrees
Date	DA	M	Date for start of set, (YYYYMMDD) in UTC
Time	TI	M	Time for start of set , (HHMM) in UTC
Duration	DU	M	Duration of fishing activity, in minutes
Fishing effort	FO	M[1]	Number of hooks per set
Catch	CA	M	Total catch from this fishing operation. by species in round weight. Given in pairs as needed.
Undersize	US	M	Undersized fish from this fishing operation, by species in round weight. Given in pairs as needed.

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[1] Long line only

Annex 5 – Alternative record format.

Early trials onboard a trawler has shown that an alternative record format for LOG-reports may be appropriate. A prime reason for this is less data redundancy, but a secondary reason is that fewer return message are needed.

In long line and gillnets fisheries activity always starts with a gear being *set*. While this gear fish, the vessel will be engaged in searching and *hauling* other fishing gear, and setting of new gear, which later again is hauled. This means that there will be several sets of gear in work at a certain point in time. Normally a continuous registration of fishing activities will be carried out as events occur. The challenge here will be registration of a haul and catch per haul in a correct manner.

But as for the trawlers the reporting must be per haul and not on sets. Today the role of DEF reports in long-line fisheries is undecided.

Annex 5 - Alternative LOG – format.

All these reports must be send no later than 1 hour after they are registered and on the same date, and/or the same time as demanded for changing zones. A fishing operation started one day and finished the following day shall be reported the day the operation ends. The new LOG-format is comprised of one *Block A* with header type information and one or more *Block B*, one per haul/set as appropriate.

Data Element Block A:	Code:	Mandatory /Optional	Remarks:
Type of message	TM	M	LOG, catch reports per day per haul.
Authenticity	(AU)	(M)	(Code to authenticate the report used for flag state domestic purposes)
Record number	RN	M	Report serial number in current year
Address	AD	M	Flag state ISO-3 code
Radio call sign	RC	M	International RC of the vessel
External registration	XR	O	The side number of the vessel.
Date	DA	M	Date of transmission (YYYYMMDD) in UTC
Time	TI	M	Time of transmission in UTC (TTMM).
Zone	ZO	M	NEZ or fishing zone, ISO-3 code
Fishing Gear	GE	M	FAO gear code
Undersize	US	M	Undersized fish from this fishing operation, by species in round weight. Given in pairs as needed.

Data Element Block B:	Code:	Mandatory /Optional	Remarks:
Block Date	BD	M	Date for start of set , (YYYYMMDD) in UTC
Time	BT	M	Time for start of set, (HHMM) in UTC
Latitude	LT	M	Latitude for start of set, decimal degrees
Longitude	LG	M	Longitude for start of set , decimal degrees
Gear specification	GS	M	For trawlers: 1 = single trawl, 2=double, 3=triple
Duration	DU	M	Duration of fishing activity, in minutes
Fishing effort	FO	M[10]	Total number of hooks
Catch	CA	M	Total catch from this fishing operation, by species in round weight. Given in pairs as needed.

It may be one or several blocks of type B in one LOG – report. The start of a new block should always be signalled with //TS//, e.g. Trailer Start element, and end by the next //TS// or by the end of the report with //ER//.

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[10] Long line only

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