The Implementation of UN/CEFACT FLUX Standard

NEAFC's experience

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What kind of standard is NEAFC using for FA-information?

- Since the year 2000 NEAFC has been using a standardised format – The North Atlantic Format (NAF)

- NAF
  - Used for communication between fishing vessels, Flag State Fisheries Monitoring Centres and the NEAFC Secretariat

The NEAFC system

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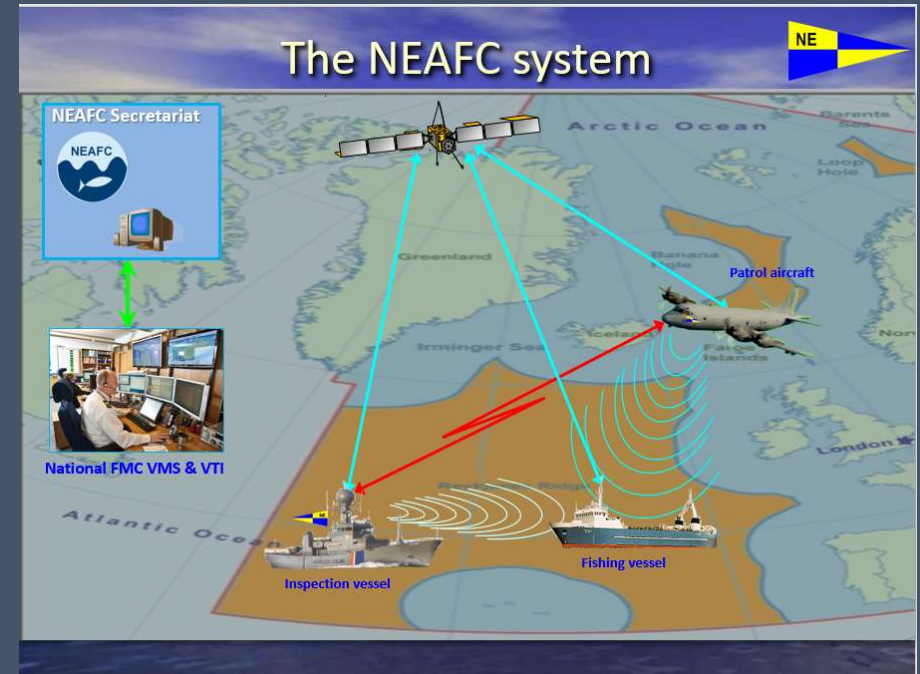
The North Atlantic Format

- NAF
  - Is a slash delimited format
  - Is computer readable
  - Can also be read as a text

NAF

//SR//AD/XNE//FR/ISL//RD/20110525//RT/1035//RN/1500//SQ/123//TM/CAT //RC/TFXX //CA/HAD2300 REB 45000//DF/1//DA/20110525//TI/1030//ER//

- Start Record
- Address..........................XNE (NEAFC)
- From..............................Iceland
- Record Date...................25th May 2011
- Record Time...................1035 UTC
- Record Number.............1500
- Sequence Number........123
- Type of Message...........Catch Report
- Radio Call Sign...............TFXX
- Catch..............................2.300 kg Haddock
                                          45.000 kg Redfish
- Days Fished...................1
- Date...............................25th May 2011
- Time...............................1030 UTC
- End Record

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Reports and Messages

- ## Control Measures
  - Notification   NOT
  - Authorisation   AUT
  - Limitation   LIM
  - Suspension   SUS
  - Withdrawal   WIT

- ## Monitoring of Fisheries
  - Catch on Entry   COE
  - Catch   CAT
  - Transhipment   TRA
  - Catch on Exit   COX
  - Port of Landing   POR

- ## VMS
  - Entry   ENT
  - Position   POS
  - Exit   EXI
  - Manual   MAN

- ## Surveillance
  - Surveillance Entry   SEN
  - Surveillance Exit   SEX
  - Observations   OBS

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Shift towards global standard for electronic exchange of fishery data

- In 2016 an Ad Hock Working Group on ERS (AHWGERS) began to explore the feasibility to use the UN/CEFACT P1000 FLUX standard for exchange of fishing activity information
  - UN/CEFACT – United Nations Centre for Trade Faciliation and Electronic Business
  - FLUX – Fisheries Language for Universal Exchange

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Why UN/CEFACT FLUX standard?

- FLUX provides a harmonized message standard that allows RFMO´s to automatically access the electronic data (generated from the E-Logbooks) from fishing vessels

- Fishing activity information recorded and transmitted by the master of a vessel:
  - Vessel and trip identification
  - Fishing operations (daily catch or haul-by-haul)
  - Fishing data (catch area, species and quantity, date and time, and gear used)

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Implementation of FLUX in NEAFC Context

Diagram showing contents of a FLUX FA Report Message
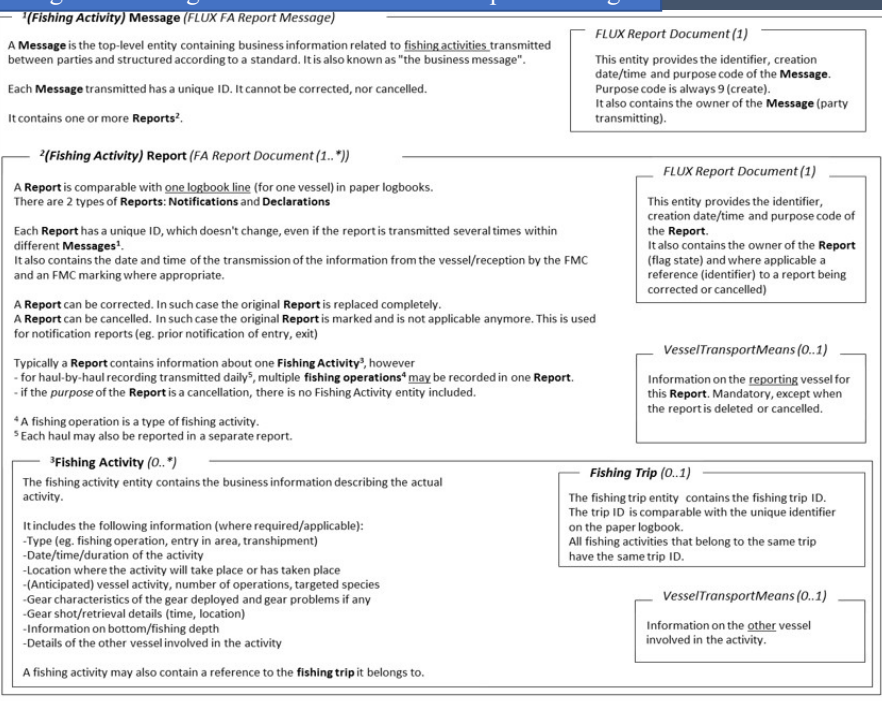
Diagram showing contents of a FLUX Response Meassage
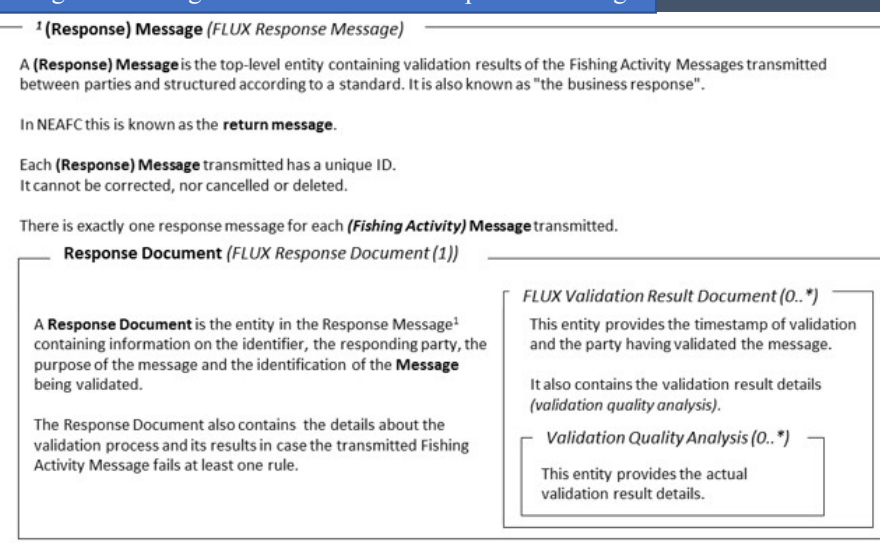
Implementation of FLUX in NEAFC Context

Diagram showing how Fishing Activity Messages are encapsulated in the FLUX TL transportation layer envelope

FLUX envelope (FLUX:ENV)

A **FLUX Envelope** is the entity of transmission on the FLUX Transportation Layer.
It can transport a **FLUX Message**.

Parameters:
DT: date time stamp of transmission
TS: test message (true/false)

FLUX Message (FLUX:MSG)

A **FLUX Message** is the entity containing the information to route a business message from one party to another.
It also contains the **Business Message**.

Parameters:
FR: originating party
AD: addressee
DF: dataflow (indicates which business message is being transported)
ON: Operation Number (unique ID of the FLUX Message)
AR: acknowledge of receipt
TO: synchronous timeout
TODT: date time of expiry of the FLUX Message
VB: verbosity level

Business Message (1)

A **Business Message** contains business information as described in an Implementation Document.
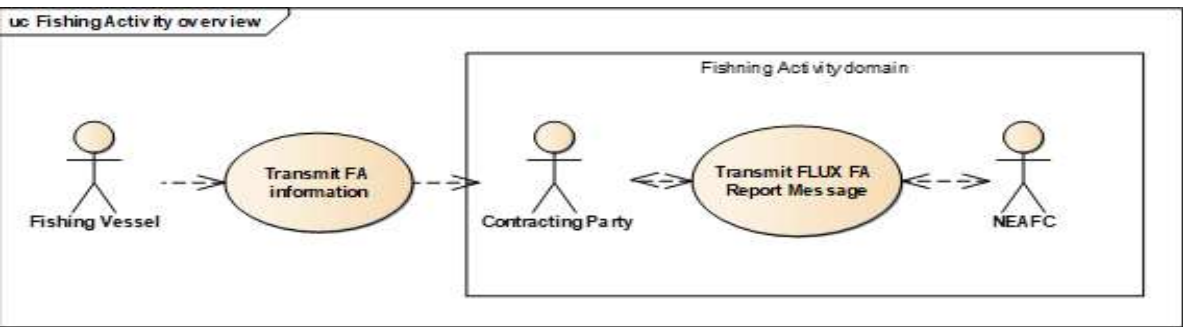The structure of the message depends on the business domain data model and the business rules defined.

Fishing Activities domain: FLUXFAReportMessage, FLUXResponseMessage

Stakeholders and their main responsibilities related to data exchanges

Stakeholder	Responsibility
Flag State or Contracting Party	• Store all data related to fishing activities received from the master of vessels carrying its flag. • Validate data received from the vessels carrying its flag, as a minimum according to the set of validation and verification rules[4]. • Send to the NEAFC Secretary validated information on fishing activities of its vessels that are or will be in the Regulatory Area. • Have fall-back procedures[3] in place to ensure timely exchange of relevant data. • Investigate and where possible correct and resend fishing activity messages that did not pass the validation rules applied by the receiving party. • Forward return message information to the master of the vessel.
Flag State or Contracting Party with inspection presence	• Receive from the NEAFC Secretary, fishing activity data of the vessels of other contracting parties in the NEAFC Regulatory Area, as set out in the Scheme.
NEAFC Secretary	• Receive, validate[4] and store data from all vessels covered by the scope of the Scheme. • Have fall-back procedures[3] in place to ensure timely exchange of relevant data. • Investigate and inform the Contracting Party if the received fishing activity messages did not pass the validation business rules. • Forward or make available to a Contracting Party with active inspection presence validated information on fishing activities related to the NEAFC Regulatory Area. • Forward, where relevant, to any Contracting Party validated information on notifications of arrival to port with the intention to land catches taken or on-loaded in the NEAFC Regulatory Area.
Master of the fishing vessel	Report in an accurate and timely manner all fishing activity information to its flag state in accordance to all applicable rules, so that the flag State or Contracting Party can forward the required fishing activity information to the Secretariat.

The importance of a global standard for exchanging fisheries data

- FLUX is only a language
  - Stakeholders are free to develop its own system as long as the systems are able to communicate in the same language
  - For NEAFC the implementation of the standard will apply within the scope of the NEAFC Scheme of Control and Enforcement and will be outlined in the scheme and should be read in conjunction with the Scheme.

- A global standard opens for data exchange between different systems
  - Fishing vessels to FMC
  - FMC to FMC
  - FMC to RFMO
  - RFMO to other relevant RFMO
    - Interest to compare information given on exit from one RFMO area and information given on entry into another RFMO area
  - RFMO to FAO
    - Global record and IUU lists
  - RFMO to science organisations like ICES

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The importance of a global standard for exchanging fisheries data

- Increasingly important that fisheries related reports and messages are in a globalised format
  - The FAO Port State Measures Agreement/NEAFC PSC
    - Port State evaluation before vessels are allowed use of ports
      - Compliance issues evaluated
      - Lack of information may cause delays or even refusal of use of ports
    - Risk based management for inspections
      - Is the vessel compliant
      - What is the compliance history of the vessel

The implementation process, its current status and the way forward

- 2017 AM
    - Rec. 16:2018 to Adopt the UN/CEFACT International Standard for Communications between the NEAFC Secretariat and FMC
- 2018 AM
    - Rec. 19:2019 to introduce an ERS in NEAFC based on FLUX UN/CEFACT International Standard
    - The Commission adopted proposal from PECMAC/AHWG-ERS, where the objective of Rec. 19:2019 was to provide a framework for the implementation of a new ERS based on the FLUX UN/CEFACT Standard by NEAFC, including provisions for a transition period

The implementation process, its current status and the way forward

- Rec. 19:2019
  - The Commission agreed on amendments to the current NEAFC Scheme (Annex 3), articles in a new NEAFC scheme (Annex 1) describing requirements for ERS when introducing the FLUX UN/CEFACT standard and Annexes (Annex 2) to this new Scheme.
  - Establishment of a new ERS Implementation Group to finalise technical documentation such as;
    - Give advice on issues outstanding in Annex IX of the New Scheme – Data Exchange Format and Data Communication Systems, and the NEAFC MDR during the development phase and transition period of the ERS in NEAFC
    - Establish a set of Criteria to assess whether the technical preparations are completed
    - Inform PECMAC about the established criteria
    - After the EU informs the Secretary that they are ready to implement the new ERS, advise the Commission that the technical preparations are completed

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The implementation process, its current status and the way forward

- Rec. 19:2019 cont.
  - The ERS Implementation Group shall function until the end of the transition period
  - Following the advice from the ERS impl group and confirmation of an implementation date from the EU, the Commission shall decide, by written procedure if appropriate, on the implementation date of the ERS.
  - The New Scheme outlined in Annex 1 and 2 of this Recommendation enters into force on the same date, which shall not be before 1 June 2019. This date shall also be the start date of the two year transition period. The Scheme changes outlined in Annex 3 shall enter into force at the start of the two year transition period.

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The implementation process, its current status and the way forward

- The 2019 AM needs to address outstanding issues such as;
    - Proposed changes to Annex IX – FLUX ERS and FLUX VMS
    - Adopt agreed criterias for implementation
    - Other outstanding issues

- The Implementation WG/PECMAC has completed version 1 of the ERS implementation document and there will be continued work on ERS version 2 in 2020