ACP-EU TBT Programme

090-16 - Training for Regulatory Authorities, Businesses and Communities of the ARSO Members from EAC and SADC on Risk Management in Regulatory Frameworks: Towards a Better Management of Risks

FLUX PRESENTATION
DG MARE - D4 Integrated Fisher Data Management
(From DG MARE, "FLUX for Dummies")

Gianluigi Negroni

Wilvis Bay, Uganda, EAC   *06-08 November 2016*

Overview

1 - Introduction

2 - What is FLUX (Fisheries Language for Universal eXchange) about

3 - A bit more on the Language Standard

4 - A bit more on the Software Tools

5 - Conclusion

European Commission

What is this presentation about?

To let you understand FLUX

the new standard for exchanging fisheries data

in a NUTSHELL

only the basics, no technical details

and if you want to KNOW MORE

visit our European Commission website

or drop us and e-mail (MARE-D4-IFDM@ec.europa.eu)

3

European Commission

So what's the problem?

Exchanging fisheries data is complex...

- Many parties
- Many reports   logbook VMS AIS licence authorisation COE COX landing sales transfer transhipment catch rep
- Many data formats   NAF
- Many communication systems   https://

... and is growing more complex each year

=> Higher cost

=> Lower quality

4

European Commission

Is there a solution?

Yes, a solution for much of the problem:

- Many parties ($\Rightarrow$ can't be changed)
- Many reports ($\Rightarrow$ simplify the rules ?)
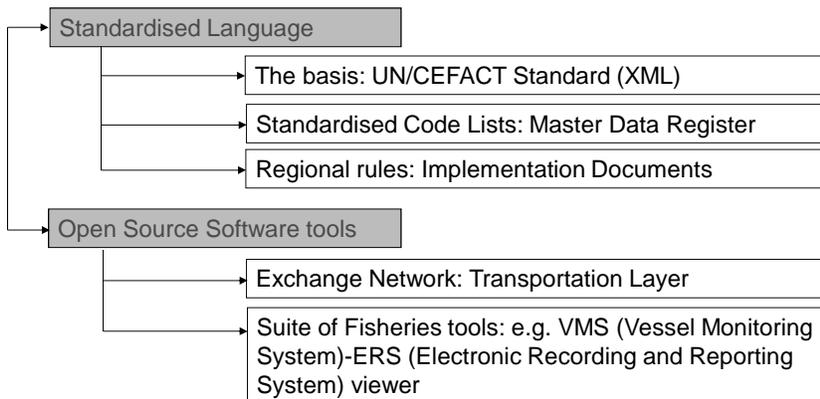- Many data formats
- Many comm. systems ⎤ $\Rightarrow$ **STANDARDISE !**

FLUX aims at standardising both
the data formats and exchange systems
(Fisheries Language for Universal eXchange)

5

European Commission

What is this "FLUX" all about?

FLUX is built on two pillars:

Standardised Language

| The basis: UN/CEFACT Standard (XML) |
| Standardised Code Lists: Master Data Register |
| Regional rules: Implementation Documents |

Open Source Software tools

| Exchange Network: Transportation Layer |
| Suite of Fisheries tools: e.g. VMS (Vessel Monitoring System)-ERS (Electronic Recording and Reporting System) viewer |

Each supported by an active Business Community (3rd pillar)

6

European Commission

A Standardised Language...

- A brand new XML standard
- is one of the UN/CEFACT standards
- applicable for all fisheries reporting
- applicable world-wide

- This language is complemented with
  - Standardised Code Lists for all usages
  - Detailed Implementation Documents

More about all of this in part 3 of this presentation!

7

European Commission

... and Open Source Software tools

- All software developed in the framework of FLUX is Open Source Software

- can be used for free by any party

- all participants will use same technology

- Central element: FLUX Transportation Layer

- But a lot of extra tools are in the pipeline...

About this you can learn more in part 4!

8

European Commission

What is UN/CEFACT?

UNECE

UN/CEFACT is the division within UNECE creating
world standards for electronic reporting

- They manage already hundreds of XML standards for different purposes:
  customs, traceability, food safety, e-signatures, ...

- All standards are based on the same toolbox
  "Core Components Library"

- There is flexibility to add new components

- Main elements of a standard:
  - XSD (XML Schema Definition - the "template")
  - BRS document (Business Requirement Specifications - the "rules")

- Inside the European Commission also other DGs make use of UN/CEFACT
  standards (TAXUD, AGRI, SANTE,...) but worldwide also commercial
 companies, governments, ...

9

European
Commission

What is one of the main advantages of
the UN/CEFACT standard?

All UN/CEFACT standards use the same base components ("Core
Components")

=> data from different standards
   are harmonised and inter-operable

Example: a "vessel object" is the same in the fisheries standard or trade
standard

Fisheries	Trade
Vessel Identification	Vessel Identification
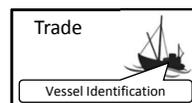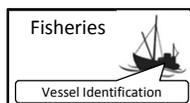
As a result, the vessel identification in a file from one standard can be
"understood" by the other standard

10

European
Commission

What is the UN/CEFACT – P1000 standard?

- The World XML Standard for Fisheries Data
  - FLUX - Fisheries Language for Universal eXchange

  - Adopted 27 April 2016 (press release)

  - Standard Number UN/CEFACT-P1000

  - EU and UN/CEFACT in the lead, but also input
    from the USA, Thailand, Japan, FAO, NEAFC and others

  - Ensures interoperability between parties
    - No more double ERS systems for different areas
    - Simplification for Monitoring Stastistic and industry
    - Improves control

  - HOW the standard is used depends on the rules in the regional/coastal party

    This is described in the Implementation Documents

11

European Commission

What are the components of P1000?

| Standard	Name	Description	BRS ver.
P1000-1	General Principles (GP)	Basics entities & behaviour of all FLUX standards	v2.1.2
P1000-2	Fishing Vessel	Information for fleet register	v3.1.0
P1000-3	Fishing Activity	Fishing Vessel Logbook	v1.0.1
P1000-5	Sales	Sales note; Take-over note & Transport document.	v1.0.1
P1000-7	Vessel Position	VMS data	v2.0.3
P1000-8	Inspection Report	Electronic inspection reports	draft
P1000-9	Fishing Licence Authorization & Permit (FLAP)	Fishing Licenses; Authorisations & Permits	v1.0.1
P1000-10	Master Data Management (MDM)	For retrieving Codes Lists from a Master Data Register	v2.0.2
P1000-12	ACDR	Aggregated Catch Data Report	v2.0.2

12

European Commission

How do these components interact?

- These components are related domains which reuse data from each other

  Example: when sending data about a <u>fishing authorisation</u>, these data could rely on information sent earlier via the <u>fishing vessel</u> component

13

European Commission
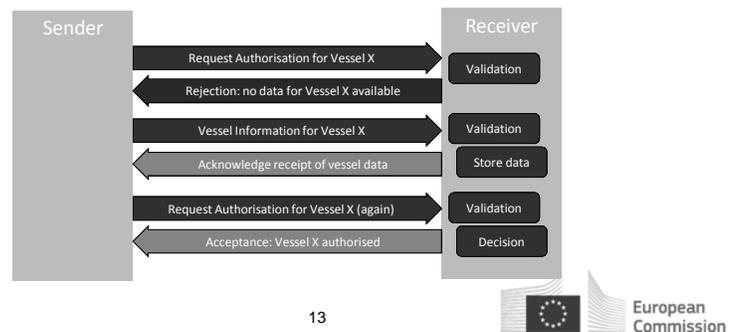
What about the Master Data and Implementation Documents?

- These are not directly part of the UN/CEFACT standard, but they are essential!

- Master Data Register:
  - contains reference code lists for all FLUX codes
  - is currently managed by the European Commission
  - important to keep only one register!

- Implementation Documents
  - contains the detailed rules how to use the standard
  - is specific to the regional situation – hence possible that each RFMO (Regional Fishery Monitoring Organisation) or Agreement creates its own Implementation Document!
  - for EU-related fisheries: created by the European Commission and Member States experts

14

European Commission

What codes does the Master Data Register contain?

- Economic Zones
- Fish Freshness
- Fish Packaging
- Fish Presentation
- Fish Preservation State
- Fish Size Category
- Gear Type
- Location
- Product Destination
- FAO Major Fishing Areas
- ICES Statistical Rectangles
- Species
- Vessel Activity
- Vessel Type
- …

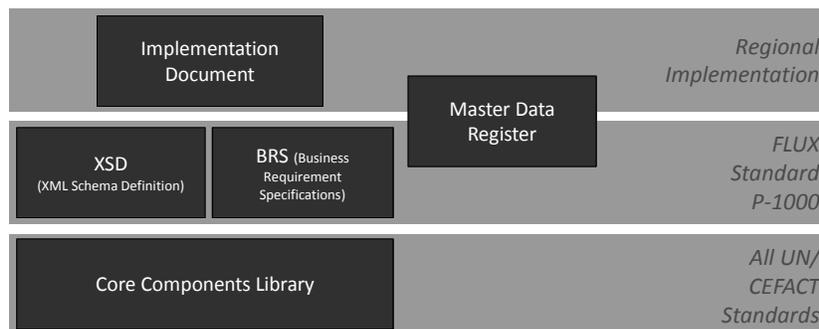Have a look yourself at http://ec.europa.eu/fisheries/cfp/control/codes/index_en.htm !

Code	Description
	SURROUNDING NETS
PS	With purse lines (purse seines)
PS1	- one boat operated purse seines
PS2	- two boats operated purse seines
LA	Without purse lines (lampara)
	SEINE NETS
SB	Beach seines
SV	Boat or vessel seines
SDN	- Danish seines
SSC	- Scottish seines
SPR	- pair seines
SX	Seine nets (not specified)
	TRAWLS
	Bottom trawls
TBB	- beam trawls
OTB	- otter trawls

15

European Commission

Standardised Language: Wrap-up

Implementation Document

Master Data Register

Regional Implementation

XSD (XML Schema Definition)

BRS (Business Requirement Specifications)

FLUX Standard P-1000

Core Components Library

All UN/ CEFACT Standards

16

European Commission

The Software Tools

FLUX is built on two pillars:

Standardised Language

- The basis: UN/CEFACT Standard (XML)
- Standardised Code Lists: Master Data Register
- Regional rules: Implementation Documents

Open Source Software tools

- Exchange Network: Transportation Layer
- Suite of Fisheries tools: e.g. VMS-ERS viewer

17

European Commission
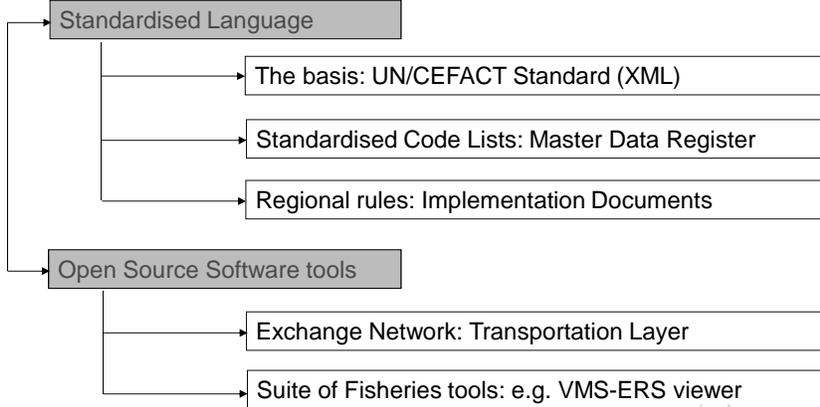
What was the problem with the communication systems?

EU Comm.

Flag State

RFMO

Coastal State

Other country

FAO

VMS data

but also ERS
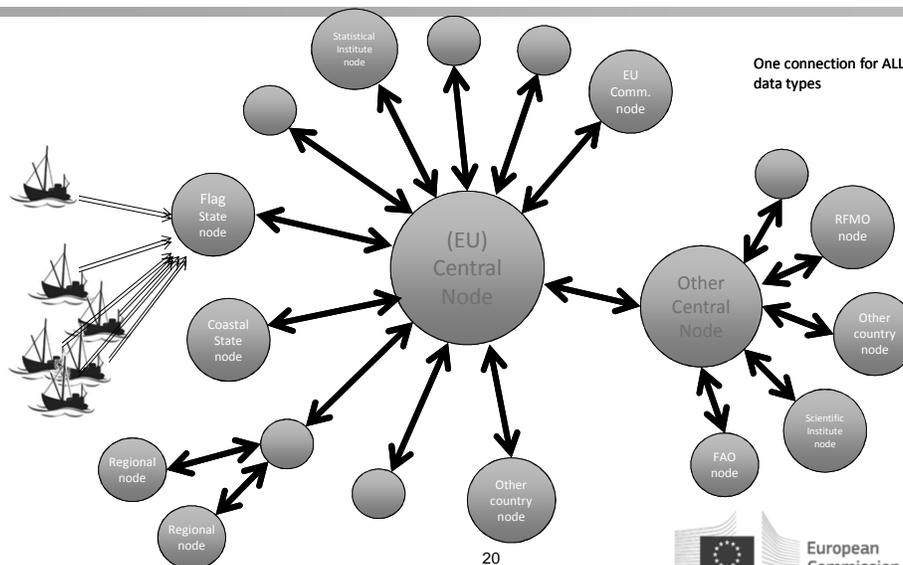
and catch data

and so on...

18

European Commission
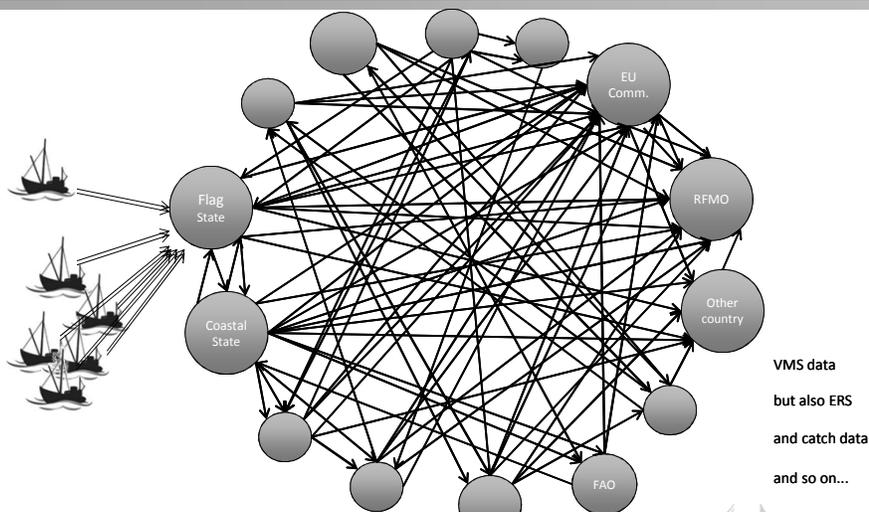
How can this be standardised?

- Standardise the data formats:
  See part 3 on UN/CEFACT FLUX!

- Standardise the exchange technology
  FLUX Transportation Layer
  Software allowing exchange of <u>all</u> report types

- Standardize the connection method
  Each node has only one connection with a central node, allowing data exchange with all other nodes: star-shaped model
  => See next slide!

19

European Commission

How does this star-shaped model work?

One connection for ALL data types

Statistical Institute node

EU Comm. node

Flag State node

Coastal State node

(EU) Central Node

RFMO node

Other Central Node

Other country node

Regional node

Regional node

Other country node

FAO node

Scientific Institute node

20

European Commission

How does the Transportation Layer software work?

- Configurable software
  Based on SOAP
  - Including workflows for handling exceptions
  - "Bridge" to link local IT systems with the TL node
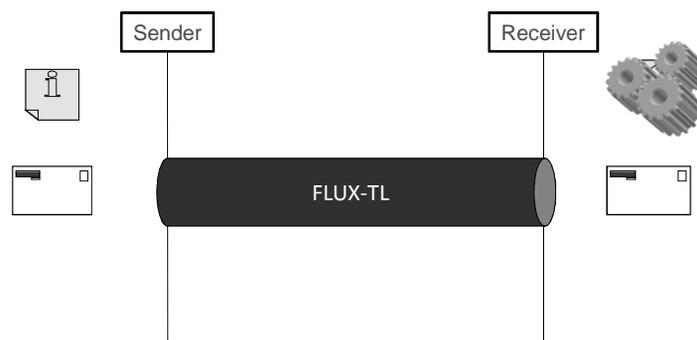
- Protocol called "The envelope"
  Set of parameters determining the behaviour of the software
  - Can contain any well formatted XML business content
  - Content unaware

21

European Commission

How does this "envelope" concept work?

22

European Commission

What are the benefits of FLUX-TL?

Standardised data exchange platform

- Can grow "organically"
- IT decoupled from business
- Cost reduction
- Flexible and configurable
- Simplification
- Available as Open Source Software (GPLv3)
- Is only touching the data *exchange* software: each party can keep its own internal systems

Could become a world standard

23

European Commission

What other software can you provide?

- VMS-ERS Viewer software

  – Integrated view on VMS and ERS data
    - Including maps, reports
    - Add any data source
  – Link with other domains: vessel, license, sales, inspections, export module, IUU …
  – Analysis (spatial/non-spatial) using all available data sources
    - Results shown on map, reports
  – Available for free as Open Source Software
  – First module of a OSS « Fisheries Software Suite »

24

European Commission
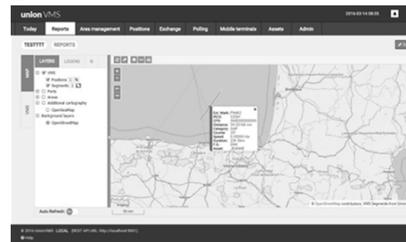
Who is supporting FLUX?

- UN/CEFACT
- The European Union
  – DG MARE, EFCA, synergies with DG SANTE
- All EU Member States
  – Incorporated in EU law: Control Implementing Regulation 2015/1962 of 28 October 2015
- FAO: Global Fleet Register and new working group
- Norway: testing first for EU-NOR data exchange
- NEAFC: testing FLUX-TL
- NAFO: testing FLUX-TL
- The Thailand IUU Team
  in cooperation with AFACT (Asia)

25

European Commission

Why would I join the FLUX program?

- To benefit from the world standard for fisheries data

- To be able to integrate data with other data domains from other UN/CEFACT standards

- To be able to connect to numerous other parties by means of only ONE connection

- To increase your fisheries data quality

- To reduce costs for data exchange

- To get a fisheries software suite for free

- To contribute to more efficient fisheries control

26

European Commission

Thank you...

... for your interest!

Join the FLUX success story...

Questions?
MARE-D4-IFDM@ec.europa.eu

27

European
Commission

TBT PROGRAMME
OVERCOMING TECHNICAL BARRIERS TO TRADE

END

www.acp-eu.tbt.org

Project funded by the EU at the request of the ACP Group