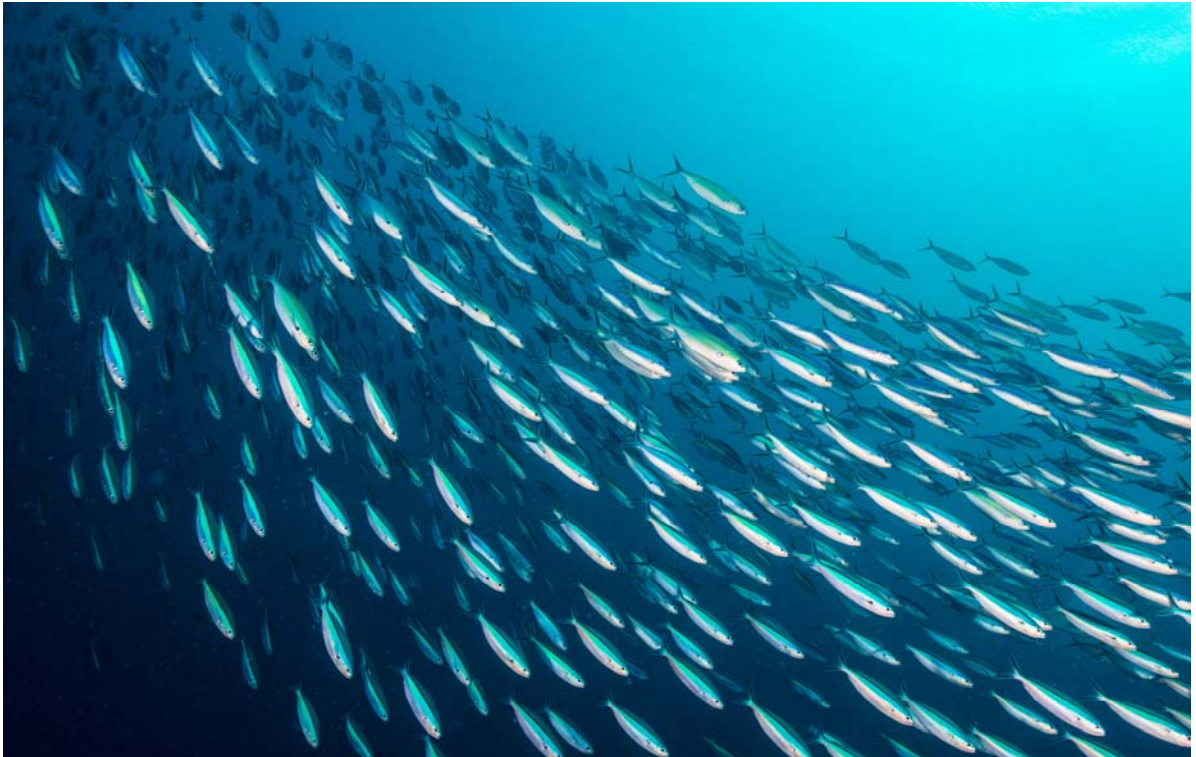# Towards Sustainable Fisheries
Fisheries Language Universal eXchange (FLUX)
The global standard for the exchange of fisheries information

What is FLUX?

The **Fisheries Language for Universal Exchange (FLUX)**, developed by the Centre for Trade Facilitation and e-Business (**UN/CEFACT**), provides a harmonized message standard allowing Fishery Management Organizations (FMOs) to automatically access the electronic data needed for fish stock management. Such data include 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), landing and sales information, license information and inspection data.

Scope

The geographical coverage of this standard is **global**. It can be used within any fishing industry and fishing operation.

Fishing vessels are the primary source for the data that needs to be collected during fishing operation. Using this electronic messaging standard, fishing data can be shared with other stakeholders. FLUX standardizes data reporting from different sources through the electronic reporting system and is therefore not restricted to any specific business process or data model.

Who can use FLUX?

Governments, regional and international organizations, regional FMOs, fishermen, fishery industry groups, research institutions, and control and enforcement authorities.

What are the benefits of FLUX?

- FLUX provides a way to exchange fisheries information in an **effective, transparent** and **efficient manner**.
- FLUX offers a practical alternative to diversified and inefficient **data management** with immediate long-term cost reduction for stakeholders.
- FLUX helps introduce **traceability** for traded fish by tracking them from the fishing vessel to consumer. Traceability systems help prevent illegally caught fish from entering the marketplace, reduce over fishing, and promote sustainable fisheries management.

- Through FLUX, FMOs around the world have access to a **free, open and global standard** to automate the collection and dissemination of the fishery catch data needed for sustainable fishery management.
- FLUX provides a common approach towards electronic logbooks for fishing vessels, **interoperability** between IT systems, and **easy exchange** of data between parties.
- An extra advantage is that UN/CEFACT **ensures compatibility** with similar standardisation exercises taking place in other business areas, which may influence the data requested from the fisheries sector, like customs, food traceability and trade.

Why is FLUX required?

More than 3.1 billion people depend upon fish for almost 20 percent of their animal protein intake. Overfishing and illegal, unreported, and unregulated Fishing (IUU) have a negative impact on fisheries, livelihoods, and world fish stocks. In 2016, illicit fishing was reported to account for up to 26 million tons of fish per year, which represents approximately 25 percent

of fish harvested annually from the oceans, and worth billions of dollars. Overfishing depletes fish stocks and lead to lower yields from the fishery, which may negatively affect livelihoods and economic stability of fishing communities. In addition to economic damage, illegal and overfishing can affect **ocean biodiversity**. **Food security** can also be at risk in many countries, especially those which depend upon fish as a source of protein, including Small Island States.

While FLUX does not offer an immediate solution to these challenges, it provides a starting place to begin to address them by providing accurate and reliable fishing data. Improved access and application of real-time fishery information management is a prerequisite for enabling **sustainable fisheries management**.

Use of the FLUX Standard

Standard implementations have been defined for the following data exchange domains:

Vessel Domain
This domain aims to standardize the exchange of fishing fleet data, and more specifically the information directly related to fishing vessels and vessels supporting fishing operations.

Fishing Activities Domain
The fishing activities domain refers to data exchanges on fishing activities performed by vessels during a fishing voyage. They include data on all vessels activities, including departure and arrival into ports, entry and exit from fishing areas, and other movement related to a fishing trip. These data also include fishing effort, transshipments, relocations and total landings.

Vessel positions domain
The objective of this domain is to provide a standard for the communication of vessel position information (e.g. VMS or AIS) between monitoring centers.

Fishing licenses, authorizations and permits
The objective of this domain is to standardize the exchange of data between stakeholders in the context of requests for fishing licenses, authorizations or permits.

Aggregated catch data reporting
The objective of this domain is to standardize exchanging aggregated catch data between stakeholders.

Electronic inspection reports
The objective of this (future) domain is to standardize the exchange of electronic inspection and sighting reports.

Master data management
The domain concentrates on data exchanges from a Master Data Register to any requester of Fisheries information registered in it.

Link to SDGs

The FLUX standard is directly linked to **Sustainable Development Goal (SDG) 14** of the 2030 Agenda on Sustainable Development. FLUX supports the achievement of **Target 14.4**, which focuses on ending illegal and unreported fishing and overfishing, and destructive fishing practices and implementing science-based management plans by 2030. FLUX also contributes to ensure sustainable production (**SDG 12**) in the fishing industry, through fisheries management based on reliable database of fishing data, which will help efforts to preserve biodiversity and support sustainable use of fish stocks and overall fishing practices.

Furthermore, by supporting sustainable management and exploitation of fish stocks, FLUX helps to ensure that adequate animal protein will be available for the current and future generations, thus contributing to end hunger, achieve food security and improve nutrition (**SDG 2**).

Who developed FLUX?

FLUX is developed, maintained and promoted by UN/CEFACT, an intergovernmental body of the United Nations Economic Commission for Europe (UNECE). Within the United Nations framework of the Economic and Social Council, UNECE serves as the focal point for trade facilitation recommendations and electronic business standards, covering both commercial and government business processes that can foster growth in international trade and related services.

Other Related Standards by UNECE

Within UN/CEFACT, a group of experts develops messages for the simplification and automation of trade in agriculture and fishery products. The group has already developed, *inter alia*, the standards for:

- the electronic Sanitary and Phytosanitary certificate (eCERT);
- Electronic management and exchange of laboratory messages (eLAB);
- Tracking and Tracing of animals, animal products and fish (TT);
- Certificates to control the trade of protected and endangered species (eCITES toolkit).

Download FLUX

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