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Reports from experts

**Briefing note on the use of UN/FLUX in combatting IUU
fishing, and the relationship between UN/FLUX and fisheries
subsidies**

Summary

The United Nations Economic Commission for Europe (UNECE) Team of Specialists on Sustainable Fisheries has drafted this briefing note to contribute to the ongoing negotiations at the World Trade Organization (WTO) to prevent subsidies to Illegal, Unreported and Unregulated (IUU) fishing and overfishing. In particular, this briefing note illustrates the scope and potential applications of UN/FLUX standard messages, and how the UN/FLUX standard can help the fight against IUU and can prevent subsidising IUU and overfishing, in support of Sustainable Development Goal 14, of the United Nations Agenda for Sustainable Development.

Document ToSSF/2019/INF.5 is submitted to the second session of the Team of Specialists on Sustainable Fisheries for discussion.

I. Background

1. World fish stocks are being depleted by overfishing and Illegal, Unreported and Unregulated (IUU) fishing, and in many instances, such destructive practices are benefiting from fisheries subsidies. This threatens not only fish stocks but also the coastal communities that rely on fisheries for economic development, livelihood and food security. The international community recognises the importance of protecting and sustainably managing this resource, which is reflected in Sustainable Development Goal (SDG) Target 14.4 of the United Nations: by 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics. SDG 14.4 can be monitored using Indicator 14.4.1: Proportion of fish stocks within biologically sustainable levels.
2. At the World Trade Organization (WTO), intensive work is done in the Negotiating Group on Rules. One of the Negotiation Group's key work areas relates to fisheries subsidies and prohibited subsidies. Subsidies should be prohibited for IUU fishing and overfishing.
3. To fight IUU and to prevent the subsidising of IUU and overfishing, fishing authorities need reliable data about fishing equipment, fishing activities, catches, fish sales and fisheries inspections. The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has developed the United Nations Fisheries Language for Universal Exchange (UN/FLUX) standard. UN/FLUX provides a harmonized message standard that allows Fishery Management Organizations (FMOs) to automatically access electronic data from fishing vessels, such as, amongst others, vessel and trip identification, fishing operations (daily catch or haul-by-haul) or fishing data (catch area, species and quantity, date and time, and gear used).
4. With this standard, FMOs around the world have a communication tool to automate the collection and dissemination of the fishery activity data needed for sustainable fishery management and for detecting and combatting IUU fishing. Additionally, the development of a reliable and up-to-date database on fish catches will improve research for science-based sustainable fishery management.
5. This briefing note aims at contributing to the ongoing negotiations to fight IUU and prevent subsidies of IUU practises and overfishing, at the WTO. It illustrates the scope and possible applications of the UN/FLUX standard messages, and how UN/FLUX can contribute to the fight against IUU and prevent subsidising IUU and overfishing.

II. The WTO working document on fisheries subsidies

6. The WTO working document on fisheries subsidies TN/RL/W/274/rev 6 of 14 November 2018¹, discusses which types of subsidies are prohibited, which measures WTO Member States shall implement, and includes a definition of IUU fishing. In particular: *Article 3* defines which fishing activities are prohibited; *Article 5* provides for special and differential treatment, with a focus on the position of LDCs (Least Developed Countries), and capacity building; *Article 6* defines a detailed list of items to be included in the notifications of fisheries subsidies; and *Annex 1* gives a definition of IUU. For this briefing note the key issues in Articles 3, 5 and 6 are listed below:

¹ Important Disclaimer: it is important to emphasise that the WTO working document on fisheries subsidies TN/RL/W/274/rev 6 of 14 November 2018 is still in draft and that the text is currently under discussion at the WTO negotiating group on rules.

Article 3 states that no Member shall grant or maintain subsidies to:

- Vessels that are engaged in Illegal, Unreported or Unregulated fishing;
- Fishing of fish stocks that are in an overfished condition;
- Fishing beyond fulfil quota or right;
- Increase the fishing capacity of a fishing fleet or vessel of a WTO Member.

Article 5 of the document pertains to monitoring and reporting fishing activities and fish stocks and requires:

- Establishing reporting mechanisms and regulations to prevent unreported and unregulated fishing;
- Developing the capacity to initiate, implement and enforce compliance with a fishery management plan;
- Conducting stock assessments;
- Conducting monitoring, and control and surveillance of fish stocks; and
- Research and development.

Article 6.1 lists the information items to be included in the fisheries subsidy notification:

- Programme name;
- Level and type of support;
- Type of marine fishing activity;
- Vessels and operators fishing in areas beyond national jurisdiction;
- Name of the recipient, name and identifier of the fishing vessel;
- Catch data in the fishery;
- Status of fish stocks;
- Fleet capacity;
- Conservation and management procedures.

The definition of IUU in Annex 1 is as follows:**A. Illegal fishing refers to activities:**

- (a) Conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations;
- (b) Conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the States are bound, or relevant provisions of the applicable international law; or,

(c) In violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organization.

B. Unreported fishing refers to fishing activities:

- (a) Which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or
- (b) Undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

C. Unregulated fishing refers to fishing activities:

- (a) In the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization; or
- (b) In areas or for fish stocks for which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

D. Notwithstanding paragraph C, certain unregulated fishing may take place in a manner which is not in violation of applicable international law.

III. Information position related to legal fishing activities, IUU and subsidies

7. The WTO Member States shall comply with the above rules and specifications, shall eliminate IUU fishing and stop subsidising IUU and overfishing. To meet the WTO requirements, the Member States need adequate information related to fishing activities in national and international waters, as well as on fishing vessels and operators. Furthermore, it is essential that the Member States have access to information available from RFMOs, other relevant authorities, and other countries.

8. The specifications of the WTO Negotiating Group working document imply that the subsidising authority shall ensure that:

- (a) At the stage of granting or rejecting a fishing subsidy, it has the correct information available about:
 - the fish stocks;
 - the history of the fisheries records of the operator and the vessel, and in particular that the operator and the vessel are not, and have not been, involved in IUU practices;
 - the national fishing fleet capacity and history fishing records.
- (b) Moreover, after granting of the subsidy, the subsidising authority shall monitor the subsidised vessel's fishing activities and verify that the vessel is not involved in IUU practices.

- (c) The Member State shall implement and operate a monitoring system for fish stock management, the fishing activities of their vessels and catches, and to exchange fishery activity information with other authorities.
 - (d) Even Member States without fisheries subsidies are required to implement and operate a monitoring system to prevent IUU and overfishing.
9. The *monitoring system*, the *information exchange system*, the *stock management* and the *monitoring of individual vessels* are three aspects which are strictly interrelated. In fact, with these three aspects in place, an authority is capable of preventing subsidies for IUU activities and overfishing activities.
10. Monitoring fish stocks depends on the recording of fish catches and sales, fishing activities, and research at sea.
11. Recording fish catches depends on recording every vessel's: fishing activities, fishing trips, characteristics (such as gear used), and the vessel's and operator's registration and licences. Proper recording of fishing activities depends on a vessel logbook, inspection at sea, inspection in port and recording fish landings and sales.
12. Data exchanges and cross-checks are crucial for validating data coming from these processes and different sources of information. Cross-checks can eliminate gaps in data records by an actor or can indicate the level of credibility of an actor's recorded data. Gaps can be caused by faulty systems, by errors, or because of falsification and fraud.
13. Open-sea fishing operates in an international context. This implies that the monitored data must be made available to both national and international authorities for physical inspection at sea and in port, and for reporting about catches, quota and fish stocks.
14. Near real-time information exchange systems are required for cross-validation, regardless of the collected data's veracity. These systems must be able to exchange information with each other; in such interconnected systems, all fishing activity information must be recorded and must be retrievable upon request.
15. Based on the available current and historical data from different international systems and registers about vessels and their fishing activities, catches and sales, it is possible to detect errors or fraud in the reporting by the vessel or the operator. It is for these purposes that the UN/FLUX standard has been developed and made available, free of charge, to the global community.

IV. The UN/FLUX standard messages and information exchange

16. The UN/FLUX standard is an electronic message standard for exchanging information on fishery activities and sales. It can be used in a secure messaging system to report on fishing activities and to query and retrieve information about fishing activities.
17. The intended users of the UN/FLUX standard are national fishing authorities and regional fisheries management organizations. By using UN/FLUX, these authorities' fishing monitoring systems can exchange information in a predefined way that can allow data comparisons. This allows fast, real-time information exchange for reporting and inspection purposes (monitor, report, query and retrieve actions).
18. Although private businesses are not the main users of UN/FLUX standard messages, they can implement UN/FLUX messages in their systems, such as in vessel operation systems, systems for product information exchange in the supply chain, fish certification schemas, or systems to track and trace fish products in the supply chain.

19. The UN/FLUX system has several domains defined, as follows:

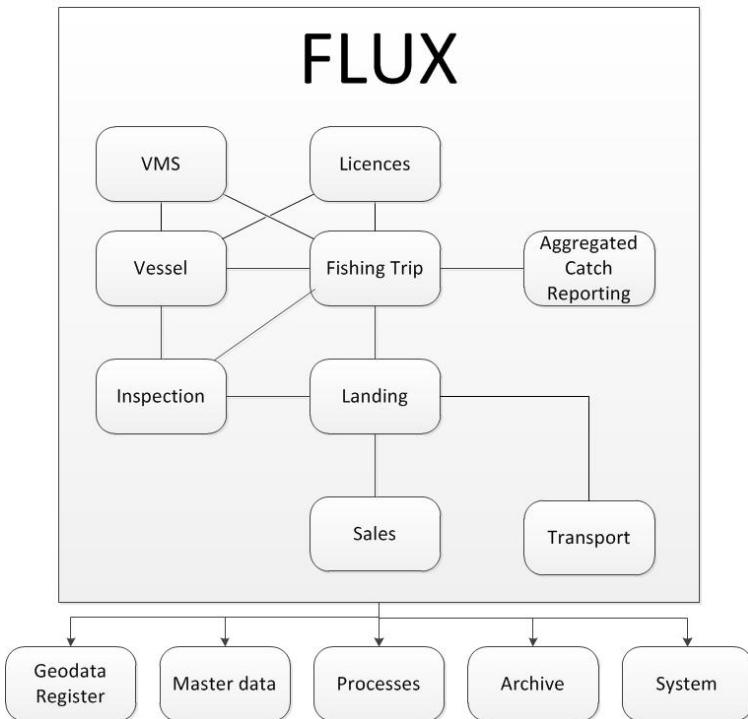


Figure 1: UN/FLUX Domains

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

Vessel Domain

This domain aims to standardise the exchange of fishing fleet data, and more specifically the information directly related to fishing vessels and vessels supporting fishing operations. This domain can utilise a direct link with the FAO Global Vessel Registry.

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 vessel activities, including departure and arrival into ports, entry and exit from fishing areas, and other movements related to a fishing trip. These data also include fishing effort, trans-shipments, relocations and 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 centres.

Fishing licenses, authorisations and permits

The objective of this domain is to standardise the exchange of data between stakeholders in the context of requests for fishing licences, authorisations or permits.

Aggregated catch data reporting

The objective of this domain is to standardise exchanging aggregated catch data between stakeholders.

Electronic inspection reports

The objective of this proposed domain is to standardise the exchange of electronic inspection reports, and moreover, sighting reports.

Sales domain

The objective of this proposed domain is to standardise the exchange of sales data.

21. In addition to the UN/FLUX standard message, the Fisheries Open Source Community Software (FOCUS)² community has developed open source applications which are free to be used by authorities and private business. One of these applications is Union VMS, a vessel monitoring system. With the Union VMS application, it is possible to retrieve information from a node connected to the fishing monitoring registries of flag states and RFMOs, whose registry systems exchange information using the UN/FLUX standard. With Union VMS, it is possible to get detailed key information about the vessels, their positions and their activities. Union VMS can present the information in reports and maps or graphics.

22. The following figures (Figure 2) shows two examples of map representations of a vessel's fishing trip and information (screen prints). These Union VMS screen prints illustrate the type of data for reports and maps which can be exchanged using UN/FLUX messages and the connected fish monitoring and registrations systems

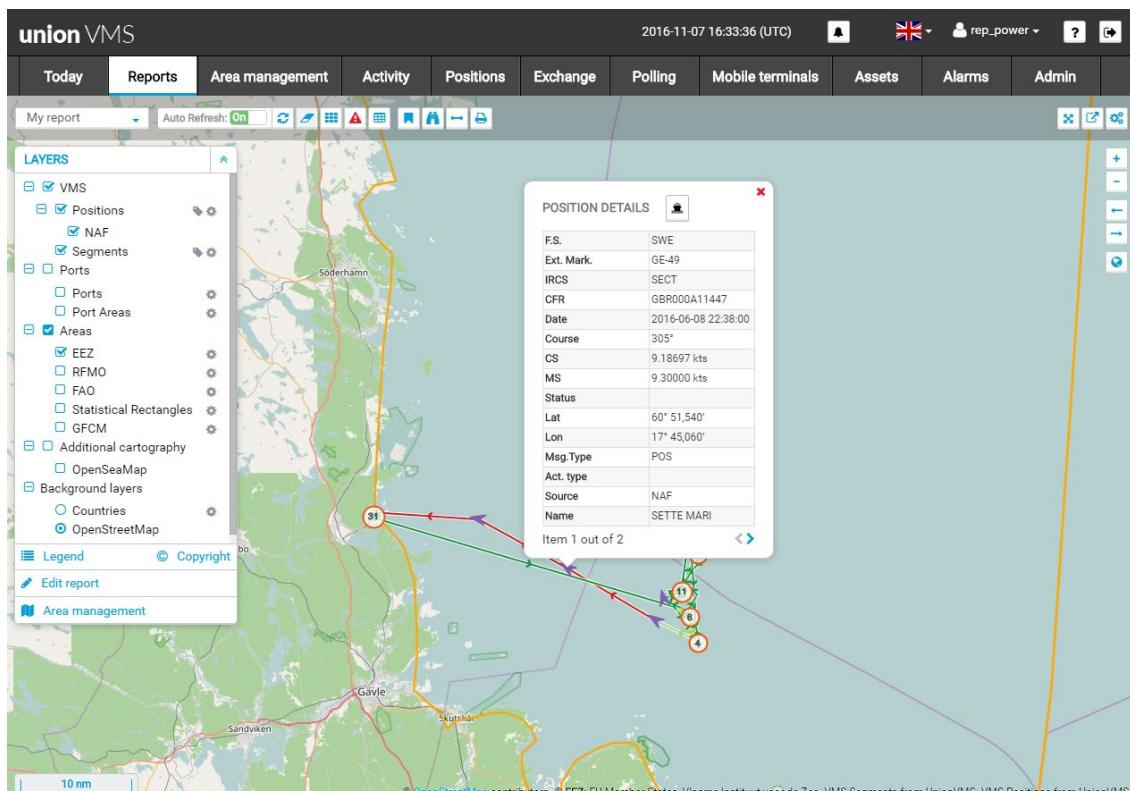


Figure 2: Union VMS screen prints

² For more on FOCUS see: <http://www.focus.fish>

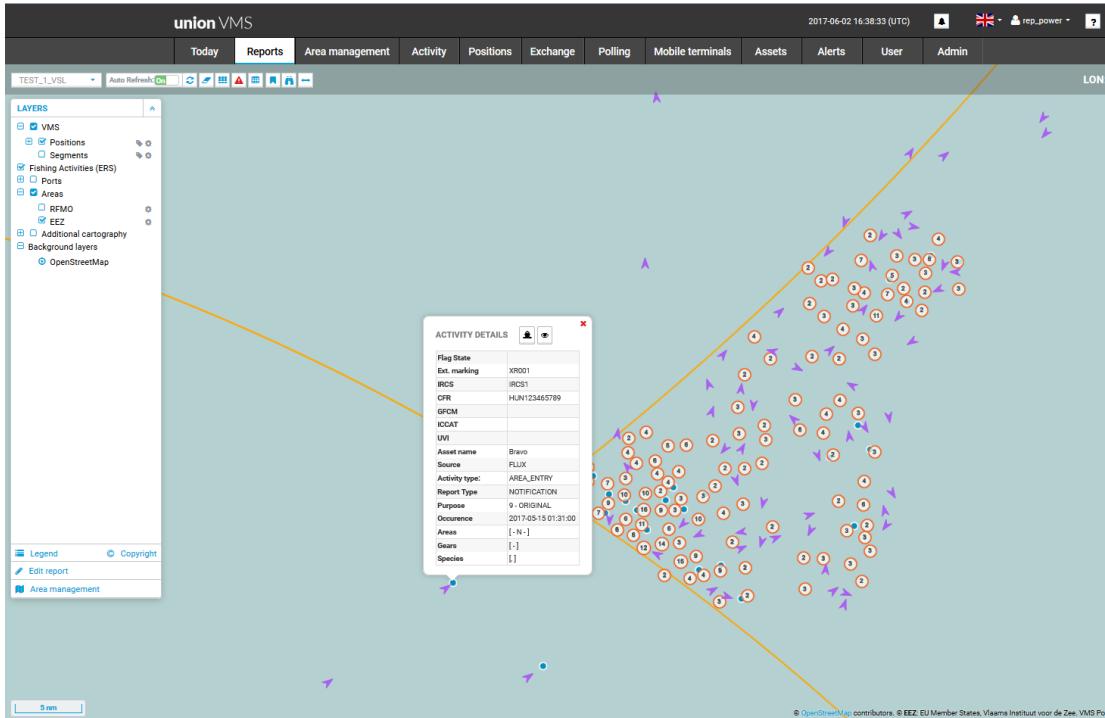


Figure 3: Union VMS screen prints

23. The fishing monitoring and reporting information systems using UN/FLUX messages can provide harmonised detailed near real-time data about fishing activities. This supports:

- At-sea inspection and monitoring;
- Management of quota and stocks;
- Simplified and automatic reporting from national authorities to RFMOs and other authorities;
- Furnishing fish data for research.

24. This also supports:

- The monitoring of subsidised vessels' international activities, for example, fishing trips, catch, landing and sales, fishing gear used;
- Detection of IUU activities of monitored vessels;
- Detection of hidden activities of unmonitored vessels.

IV. Conclusion on UN/FLUX's contribution to the WTO negotiations

25. The UN/FLUX standard only covers the exchange of information between the fishery registration and monitoring systems of the national authorities and RFMOs.

26. UN/FLUX does not define the registration and monitoring systems itself. UN/FLUX provides interface specifications for such systems, to communicate with each other, using UN/FLUX standard messages.

27. Union VMS, managed by the FOCUS community, is an open source application to retrieve and use fisheries information in report or map format, based on data retrieved from a fishery registration and monitoring system.
28. The WTO Member States shall install and operate a fisheries registration and monitoring system of their own choice, design and make.
29. It is recommended that the WTO member state system use communication interfaces based on the UN/FLUX specifications.
30. Any information exchange using UN/FLUX specifications requires a very detailed standardised interface design for the fishery registration and monitoring system.
31. In addition to UN/CEFACT's documentation regarding the UN/FLUX standard, technical handbooks and guidelines to implement and operate the UN/FLUX standard messages have been developed by the Team of Specialists.
32. These handbooks and guidelines are available for free, and on their basis, the Team of Specialists on Sustainable Fisheries is working on a template document for the implementation of UN/FLUX.
33. The Union VMS application, managed by the FOCUS community, and its documentation are available for free.
34. At present, the UN/FLUX standard is in the process of being implemented in the fishery registration and monitoring systems of EU member states, Thailand, Indonesia, Brazil, and the RFMO NEAFC.