A comparative study of key data elements in import control schemes aimed at tackling illegal, unreported and unregulated fishing in the top three seafood markets:

the European Union, the United States and Japan

January 2020













Contents

Acronyms and abbreviations	3
1. Executive summary	4
2. Introduction	6
3. Brief overview of current import control schemes in top seafood market States	8
3.1 The European Union	8
3.2 The United States	9
3.3 Japan	9
4. Recommended best practices	11
4.1 Key data elements	11
4.2 Scope and operational best practices	16
5. Results of key data elements comparative analysis	17
5.1 EU KDE analysis	20
5.2 US KDE analysis	21
5.3 Japan KDE analysis	21
5.4 EU and US KDE alignment	22
6. Recommendations	23
Annex	26



Acronyms and abbreviations

ASFIS	Aquatic Sciences and Fisheries Information System
САТСН	European Commission IT system for catch certificates
CCAMLR	Convention for the Conservation of Antarctic Marine Living Resources
CC	Catch certificate
CCS	Catch certification scheme
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CDS	Catch documentation scheme
CMMs	Conservation and management measures
eBCD	Electronic Bluefin Tuna Catch Document
EEZ	Exclusive Economic Zone
EU	European Union
EU IUU Regulation	Council Regulation (EC) No. 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing (OJ L 286, 29. 10.2008)
FAO	Food and Agriculture Organization
ICCAT	International Commission for the Conservation of Atlantic Tunas
IFTP	International Fisheries Trade Permit
ІМО	International Maritime Organization
ISO	International Organization for Standardization
ΙΟΤϹ	Indian Ocean Tuna Commission
IRCS	International Radio Call Sign
IUU	Illegal, unreported and unregulated fishing
KDE	Key data element
ΝΟΑΑ	National Oceanic and Atmospheric Administration
RFMO	Regional Fisheries Management Organisation
SIMP	Seafood Import Monitoring Program
US	United States of America
UNCLOS	United Nations Convention on the Law of the Sea
UVI	Unique Vessel Identifier

1. Executive summary

Import control schemes have been adopted by some market States and Regional Fisheries Management Organisations (RFMOs) to monitor seafood imports and curb illegal, unreported and unregulated (IUU) fishing. These import controls can take the form of Catch Documentation Schemes (CDS), where information on a consignment is recorded throughout the supply chain. However, other types of trade measures exist, including those without a dedicated documentation scheme that instead utilise information available at the point of import to determine the legality of the imported consignment.

Robust import controls are vital for understanding the origin of imported seafood, particularly in the top seafood importing States. This study examines the systems in place in three major markets: the European Union (EU), the United States of America (US) and Japan. In 2016, these three markets together accounted for approximately 64% of the total value of world imports of fish and fish products, or approximately 56% if trade within the EU is excluded.¹

Successfully tracing a seafood product through all relevant stages of a supply chain requires intelligence on the who, what, when, where and how. This information is essential and in this study we present the 17 key data elements (KDEs) that we consider fundamental for achieving a robust baseline. These include, but are not limited to, vessel flag, catch area, International Maritime Organization (IMO) number, fishing authorisations, transshipment declarations, unloading ports and catching method.

The EU introduced a unilateral CDS (known as the Catch Certification Scheme, CCS) in 2008 through the adoption of the EU IUU Regulation.² This CCS covers all marine wild caught fish (with some exemptions)³ traded by non-EU countries into the EU market. In comparison, the US introduced its own import control scheme (known as the Seafood Import Monitoring Program, SIMP) in 2016, which covers 13 types of seafood identified as the most vulnerable to IUU fishing and seafood fraud. Japan currently relies on RFMO CDS requirements, and therefore only monitors southern bluefin tuna (Commission for the Conservation of southern bluefin Tuna, CCSBT), Atlantic bluefin tuna (International Commission for the Conservation of Atlantic Tunas, ICCAT), Patagonian toothfish (Convention for the Conservation of Antarctic Marine Living Resources, CCAMLR), and bigeye tuna (through the statistical document of the Indian Ocean Tuna Commission, IOTC). As more market States consider adopting their own unilateral schemes, most notably Japan, it is important to assess the comprehensiveness and alignment of existing systems.

We first compared the EU and US requirements against our 17 recommended KDEs. The EU currently requests 13 out of these 17 KDEs (76%. There are three KDEs that are not requested are: catch area (distinction between exclusive economic zone, EEZ, and high seas), port of landing and fishing gear type or catching method. A further KDE that needs to be strengthened is the request for an IMO number for all eligible vessels, which currently is only required if issued by the flag State. The US currently asks for 12 out of the 17 KDEs (71%) recommended in this report. There are two KDEs that are not requested by the US international radio call sign (IRCS) and estimated live weight. Three further KDEs are either conditional (requested when the information is legally required) or the application should be strengthened. These are: IMO number (a unique vessel identifier, UVI, is requested when available), transshipment information (vessel master information not requested) and authorisation to fish (the authorisation is only requested when it is provided by the regulation). We also noted that the KDE requirements of ICCAT, CCAMLR, CCSBT and IOTC, of which Japan complies with, are 47, 76, 47 and 41% aligned with our recommendations respectively.

When comparing the alignment of the EU and US systems, our study shows 10 out of the 17 KDEs that we assessed are aligned (59%). The comparison highlights a similarity in 'basic' information requested by both market States. However, it should be noted that although one of these KDEs aligns (unique vessel identifier), this KDE requires strengthening by both the EU and the US. There is a lack of alignment for the remaining seven KDEs. We see opportunities for more KDEs to be better aligned between the EU

3 Please see Annex 1 for the full list of species covered

¹ FAO (2018). The State of the World Fisheries and Aquaculture (SOFIA)..

² Council Regulation (EC) No. 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing (OJ L 286, 29. 10.2008).

and the US, but also to other multilateral schemes set up by RFMOs, thus promoting information sharing between the different systems.⁴

There is a real risk of a proliferation of non-harmonised unilateral trade instruments to combat IUU fishing. A lack of standardisation and harmonisation among systems can lead to a situation where CDS requirements in multiple systems may be poorly understood and design flaws may pass undetected and be repeated in new systems. For fishers and supply chain actors that currently or may in the future seek to sell or process catch for multiple markets, the costs of complying with different systems could be considerable.

It is important to remember that the "standardisation and harmonisation" issue – which fundamentally impacts the ability of the systems to collectively drive change at sea – includes, but is not limited to, the KDEs. In this study, we also outline five operational best practices that any system should incorporate, showing discrepancies in, for example, the species covered and risk assessments of existing schemes. Market States should be adopting import controls which cover all species. KDEs in import control documents should be sufficient to ensure there are no loopholes and should be aligned across market States to facilitate exchanging and cross-checking of data, efficiency and trade, thus limiting technical burden for non-EU countries. This will also enhance a level playing field. There should be stronger risk assessment criteria applied by market States, and electronic-based systems should be developed including as new technology capacities emerge.



2. Introduction

Illegal, unreported and unregulated (IUU) fishing is prolific in many fisheries worldwide, and it has been shown that the weaker the governance of fisheries imports in a country, the more likely it is that illegal fish and fishery products will enter the market.⁵ Specifically, critical stages in the value chain from the point of capture to the final point of importation are subject to weaknesses.

To avoid IUU fishing products entering the market, traceability systems, also called import control schemes in this study, have been put in place over the last ten years to address inefficiencies and gaps in the chain of custody. Catch certificates (CCs) embedded in import control schemes can be used for reporting and recordkeeping. These tools are market-related measures that help to trace fish and fisheries products from harvesting, unloading, transportation and processing, to the end market.

Key trade-related measures to combat IUU fishing fall into two distinct categories: trade restrictive measures (TREMs) and catch certification schemes (CCS). TREMs are sometimes referred to as 'trade sanctions' and are enacted by one or more market States. Two specific variants of CCS have been developed and implemented to date—trade documentation schemes (TDS) and Catch Documentation Schemes (CDS).

Import control schemes can be unilateral (being adopted by individual market States) or multilateral (implemented at the Regional Fisheries Management Organisation (RFMO) level). The two major unilateral⁶ import control schemes in existence today are the EU CDS (also known as the EU CCS) and the US SIMP. Multilateral RFMO schemes regulate how resources may be extracted from a given fishery, as well as under what conditions they may enter international trade, and must be followed and complied with by any contracting parties fishing, processing or trading resources within the RFMO convention area.

Import control schemes help confirm the legality of products harvested and unloaded from a fishing vessel, ensuring that the seafood was harvested in a manner consistent with relevant national, regional and international conservation and management measures (CMMs).⁷ With complete and verifiable traceability, such schemes have proven helpful to reduce the trade of illegally caught seafood.⁸

However, as more countries and RFMOs develop their own systems, it is becoming clear that a harmonised, coordinated approach does not currently exist. This raises concerns about future trade burdens, disjointed management and inabilities to share and cross-reference information. In recognition of this, and in response to a request by the thirty-first Committee on Fisheries (COFI31) (Rome, 9 to 13 June 2014), the Food and Agriculture Organization (FAO) developed Voluntary Guidelines for Catch Documentation Schemes Guidelines which were officially adopted by the FAO Conference at its Fortieth Session in July 2017. The guidelines include an annex with a limited set of eight proposed core information elements (unique and secure identification of document; information on catch and landing such as fishing vessel or vessel group, species, catch area, landing information etc.; information on transshipment at sea or in port such as donor and receiving vessel, area, date; description of exported product(s) such as product type, weight; issuing validating authority, including contact details; exporter identity and contact details; importer identity and contact details; export and transport details) and four additional ones unique to re-export and processing (link to originating CC, description of imported, re-exported or processed products, issuing authority validating the re-export or processing statement, including contact details).⁹

The Environmental Justice Foundation, Oceana, The Nature Conservancy, The Pew Charitable Trusts and WWF are working together in a coalition (the 'EU IUU Coalition') to improve global fisheries governance and transparency to end IUU fishing, including through the adoption and implementation of ambitious and harmonised import control schemes.

- 6 Established by a single country or union of countries, which regulate and track catches entering the market.
- 7 Report of the Expert Consultation on Catch Documentation Schemes, FAO Fisheries and Aquaculture Report No. 1120, July 2015.

9 FAO (2017). Voluntary Guidelines for Catch Documentation Schemes.

⁵ Hosch, G. & Blaha, F. (2017). Seafood traceability for fisheries compliance: Country-level support for the effective implementation of catch documentation schemes. FAO Fisheries and Aquaculture Technical Paper No. 619. Rome, FAO. 102 pp.

⁸ Hosch, G. (2016). Trade Measures to Combat IUU Fishing: Comparative Analysis of Unilateral and Multilateral Approaches. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

The objective of this study is to identify areas of convergence, as well as gaps that should be addressed by increased data consistency at a technical level, in order to facilitate trade and improve information exchange and cooperation between key market States. In this context, the study focuses on existing unilateral import control schemes and requirements already in place for the top three seafood market States – the EU, the US and Japan. After providing a brief introduction of existing import control schemes in these markets, the EU IUU Coalition presents a set of best practices based on the FAO guidelines, existing sources, including peer-reviewed literature, technical documents, and research papers. A comparative analysis of data requirements in existing import control schemes is then provided followed by conclusions and recommendations.



3. Brief overview of current import control schemes in top seafood market States

3.1 The European Union

The EU is the largest importer of seafood in the world. In 2017, the EU imported fisheries and aquaculture products with a value of EUR 25.3 billion, mainly consisting of salmon, cod, shrimp and tuna. The main EU suppliers are Norway, Russia, Ecuador, Vietnam, India and Argentina.¹⁰

The EU introduced a CCS with a CC in 2008 through the so-called EU IUU Regulation, which entered into force in January 2010. The EU CCS aims to ensure that products originating from IUU fishing activities are prevented from entering the EU market. Under this CCS, all marine wild caught fish (with some exemptions, Annex 1) traded by non-EU countries into the EU market must be accompanied by CCs.¹¹ Catches from EU fishing vessels – except for the products listed in Annex 1 – are also subject to the validation of catch certificates by competent EU Member State authorities prior to exportation, if required by the non-EU country of destination.

The scheme applies to all unprocessed and processed products imported into the EU irrespective of the nationality of the fishing vessel responsible for the catch. Information on import documents are provided by the operators responsible for activities of fishing vessels (e.g. master of fishing vessel), processing and export or by their representative. It then must be validated by the competent authority/ies of the flag State (i.e. the country under which the vessel is registered), certifying that the products imported were caught in compliance with national and international fishing laws and CMMs. At the point of import into the EU, Member States are required to verify that fish and seafood products accompanied by CCs are of legal origin according to a risk-based approach.



10 European Market Observatory for Fisheries and Aquaculture, The EU Fish Market 2018 Edition.

11 EU vessels landing product directly into EU ports are only required to produce a certificate if the product is destined for re-importation following a period in a non-EU country (e.g. for processing). The EU IUU Coalition has been advocating for digitisation of the catch certification process for some time, also in accordance with articles 12.4 and 20.4 of the EU IUU Regulation.¹² In May 2019, the European Commission announced the launch of its new voluntary IT system for CCs, called 'CATCH'.¹³ At the time of writing, this system will be used on a voluntary basis by EU Member States and their national operators and is foreseen to become legally binding in 2020/2021.¹⁴ CATCH aims to provide a single database for EU Member States to use, allowing real-time monitoring of import documentation controls. The first version of this system will include the CC, the processing statement, and the importer declaration. CATCH should help Member States detect suspected fraud and abuse of the paper-based version, simplifying and speeding-up controls at the EU border by reducing the administrative burden of import authorities. It also intends to promote fairness and consistency between Member States in their efforts to keep the EU market free of IUU fisheries products, by ensuring that what is rejected in one entry point cannot enter the EU in another.

3.2 The United States

The US is the second largest seafood importer in the world, having imported more than 2.7 million tonnes of seafood valued at more than USD 21.5 billion in 2017,¹⁵ with popular imports including shrimp, salmon, and tuna (steak and canned) often originating from East Asia.¹⁶ The US introduced its own import control scheme, the SIMP, in 2016. SIMP establishes reporting and record-keeping requirements¹⁷ for imports of seafood products for the 13 types of seafood identified as the most vulnerable to IUU fishing and/or seafood fraud.¹⁸ The National Oceanic and Atmospheric Administration (NOAA) Fisheries requires importers to hold an annually-renewable International Fisheries Trade Permit (IFTP), and gather and retain specific data and information for covered fish and fish products as a condition of import. Mandatory reporting for 11 of the species covered under SIMP began on 1 January 2018. Reporting and recordkeeping for shrimp and abalone became effective on 31 December 2018.

The collection of catch and landing documentation for these priority seafood species is accomplished through the International Trade Data System, the US government's single data portal for all import and export reporting. The importer of a consignment is required to keep records regarding the chain of custody of the fish or fish product from harvest to point of entry into the US, to be able to verify whether it was lawfully harvested or produced. The National Marine Fisheries Service carries out random and targeted audits on IFTP holders to verify harvest and landing information. If a SIMP audit finds that an import shipment contained IUU or misrepresented seafood, the NOAA will provide the auditee with the finding. The information will also be referred to the NOAA Fisheries Office of Law Enforcement for further action as appropriate.¹⁹ The US SIMP system does not require validation of the information submitted by exporters by either, flag, coastal, port or processing States prior to an auditing. The responsibility to check the validity of the information lies with the importer.

3.3 Japan

Japan is the third largest seafood importer in the world, importing approximately USD 15 billion worth of seafood in 2017.²⁰ The main suppliers to the Japanese market are China, the US, Chile and Russia.²¹ High-value seafood imported by Japan includes fresh and frozen tuna, eels, shrimp, crabs and salmon.

17 US fishers are already required to report catch information at landing.

¹² EU IUU Coalition (2016). Modernisation of the EU IUU Regulation Catch Certificate System; EU IUU Coalition (2017). Improving performance in the fight against illegal, unreported and unregulated (IUU) fishing.

¹³ Speech by Commissioner Vella: Launch of the EU's electronic Catch Documentation Scheme (CATCH), Seafood Expo, Brussels, 7 May 2019, https://ec.europa.eu/commission/ commissioners/2014-2019/vella/announcements/speech-commissioner-vella-launch-eus-electronic-catch-documentation-scheme-catch-seafood-expo_en.

¹⁴ European Commission, Directorate-General for Maritime Affairs and Fisheries, CATCH information note, https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/catch-it-system_ en.pdf

¹⁵ National Oceanic and Atmospheric Administration (NOAA) Fisheries, Current Fishery Statistics No. 2017-2, Imports and Exports of Fishery Products, Annual Summary, 2017 (revised June 27, 2018).

¹⁶ National Oceanic and Atmospheric Administration (NOAA), Office of Science and Technology, National Marine Fisheries Service, Commercial Fisheries Statistics for 2017, records imports from the ASEAN Member States in excess of USD5.5 billion in 2017, https://www.st.nmfs.noaa.gov/pls/webpls/trade_prdct_cntry_ind. results?qtype=IMP&qyearfrom=2017&qyearto=2017&qprod_name=%25&qcountry=ASEAN&qsort=COUNTRY&qoutput=TABLE.

¹⁸ Abalone, Atlantic Cod, Blue Crab (Atlantic), Dolphinfish (Mahi Mahi), Grouper, King Crab (red), Pacific Cod, Red Snapper, Sea Cucumber, Sharks, Shrimp, Swordfish, Tunas (Albacore, Bigeye, Skipjack, Yellowfin, and Bluefin).

¹⁹ NOAA Fisheries, Guide to audit requirements for the Seafood Import Monitoring Program: Frequently Asked Questions, https://www.iuufishing.noaa.gov/Portals/33/SIMP%20 Audit%20Guidance.pdf?ver=2018-05-03-144502-367, as accessed on 29 July 2019.

²⁰ FAO, GLOBEFISH Highlights, a quarterly update on word seafood markets, April 2018 issue.

²¹ During the financial year 2018, source: Japanese Ministry of Agriculture, Forestry and Fisheries. http://www.maff.go.jp/e/data/publish/attach/pdf/index-166.pdf

As Japan's Prime Minister Abe stated in September 2018, in order to eliminate IUU fishing activities, it is important to prevent the circulation of illicitly sourced seafood.²² In 1996, the Japanese government established the Law of Special Measures for Strengthening Conservation and Management of Tuna Resources.²³ Through this law, and contracting party status in three RFMOs and a conservation organisation which implement a CDS, Japan (as well as the EU and the US because they are contracting parties) is committed to three species-related CDS: (1) Southern bluefin tuna CDS for the Commission for the Conservation of Southern bluefin Tuna (CCSBT; implemented in 2010); (2) Atlantic bluefin tuna eBCD for the International Commission for the Conservation of Atlantic Tunas (ICCAT; implemented in 2008 and transitioned from paper to electronic-based in 2016); and (3) Patagonian toothfish CDS for the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR; implemented in 2000). Japan is also required to comply with the Indian Ocean Tuna Commission (IOTC) statistical documents for bigeye tuna. As of writing, Japan considers developing its own unilateral import control scheme.



22 Speech by Prime Minister Shinzo Abe from the Inaugural Meeting of the High-Level Panel for a Sustainable Ocean Economy, New York, 24th September 2018, https://www.mofa.go.jp/ ic/gic/page4e_000906.html, as accessed on 27 July 2019.

23 Martí, C., Vallerani, M., Ojamaa, P. (2017). Research for PECH Committee – Fisheries in Japan, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

4. Recommended best practices

4.1 Key data elements

In this section, we look at the KDEs that we deem important as a minimum basis for a robust import control scheme, based on literature reviews and analysis of existing schemes. KDEs are defined as critical data that are required to successfully determine product legality and to trace a seafood product through all relevant stages of the supply chain.²⁴ KDEs usually focus on information relating to the who, what, when, where and how of a seafood product as it moves through the different stages.²⁵ This section is a precursor to Section 5, where we compare the EU, US and Japan (RFMO KDE requirements) against the below recommended set of KDEs. In Section 5, we also look at the complementarity of KDEs between the EU and US, inferring whether technical harmonisation of KDEs would assist in the global fight against IUU fishing and trade facilitation.



²⁴ The Oceans and Fisheries Partnership (2017). Data Requirements for Catch Documentation and Traceability in Southeast Asia.
25 Ibid.

I. WHO – Ves	ssel identifications and operators in processing States
Vessel name	Specifying the name of the fishing vessel associated with a consignment enables import control authorities to cross-reference with vessel registers, photographs and other documents, helping to rule out vessel identify fraud. ²⁶ The vessel name should be legally associated with a vessel identification number, and we recommend a unique vessel identifier (UVI) like the IMO number. ²⁷
Unique vessel identifier (IMO number)	A UVI is a unique identifier (usually a series of letters and numbers) that is assigned to a vessel to ensure international traceability. Once given, the UVI is with the vessel for its entire life, regardless of changes in flag, ownership, or name. In addition, it cannot be re-used by any other vessel with a permanent physical marking. Flag States are responsible for mandating and implementing UVIs for fishing vessels, as required by relevant national and regional regulations. IMO numbers ²⁸ are considered the gold standard of international UVI and are also an integral part of the FAO Global Record of Fishing Vessels, Refrigerated Vessels and Supply Vessels. ²⁹ An IMO number is one of the most useful and reliable vessel characteristics for risk analysis purposes. In instances where government registration systems do not exist or are not adequate, we recommend mandatory use of IMO numbers for all eligible vessels. At the time of this study, the latest eligibility criteria are described in IMO's 2017 Assembly Resolution A.1117(30) and include motorised inboard fishing vessels, including wooden ones, of less than 100 gross tonnage down to a size limit of 12 metres in length overall authorised to operate outside waters under the national jurisdiction of the flag State.
Vessel flag	Under the United Nations Convention on the Law of the Sea (UNCLOS), any country has the right to allow a vessel to fly its flag and therefore bestow its nationality upon that vessel. ³⁰ The flag State is legally responsible for ensuring compliance with national and international laws and for providing effective enforcement regardless of where violations occur. ³¹ Flag States have primary prescriptive and enforcement jurisdiction over vessels on their register. In practice, this means that flag States decide both which laws shall apply to the owners and operators of their vessels and whether or not to enforce them. In deciding whether to grant nationality to a vessel, flag States apply varying levels of scrutiny and criteria. Some flag States have comparatively lax criteria concerning the vessels which may be added to their registries. "Flags of convenience" ³² operate open registries, where the beneficial ownership or control of a registered vessel is found to lie outside the vessel's flag State. ³³ Countries that fail to comply with international fisheries laws and do not monitor the vessels that are registered to their flag are referred to as 'flags of non-compliance'. ³⁴ Providing information on a vessel's flag State can therefore highlight to import control authorities whether the seafood is at high-risk of being from IUU origin. An import from a 'flag of non-compliance' for example, can warrant further checks from the import control authority.

28 International Maritime Organization: http://www.imo.org/en/ourw ork/msas/pages/imoidentification-numberscheme.aspx.

33 International Transport Workers Federation https://www.itfglobal.org/en/sector/seafarers/flags-of-convenience.

²⁶ FAO (2017). The Marking and Identification of Fishing Vessels.

²⁷ EU IUU Coalition (2017). PAS 1550:2017 Exercising due diligence in establishing the legal origin of fishery/seafood products and marine ingredients – Importing and processing – Code of practice; https://ec.europa.eu/fisheries/files/docs/body/technical_note_en.pdf.

²⁹ For more information please see The Pew Charitable Trusts, The IMO Number Explained. https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/05/the-imo-number-explained

³⁰ See Article 91 of the United Nations Convention on the Law of the Sea (UNCLOS), 4 December 1982, United Nations (stating that ships possess the nationality of the state in which they are registered and are subsequently subject to the laws of that jurisdiction) available at http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

³¹ Article 217 of UNCLOS.

³² International Transport Workers' Federation (ITF), Current Registries Listed as Flags of Convenience (FOCs), https://www.itfseafarers.org/foc-registries.cfm, as accessed on 29 July 2019.

³⁴ Swan, J. (2002). Fishing Vessels Operating under Open Registries and the Exercise of Flag State Responsibilities. FAO, Rome, 2002: http://www.fao.org/3/a-y3824e.pdf; Miller, D.D. and Sumaila, U.R. (2014). "Flag use behavior and IUU activity within the international fishing fleet: Refining definitions and identifying areas of concern" in Marine Policy 44, 204–211.

International Radio Call Sign	The International Radio Call Sign (IRCS) is a unique alphanumeric identity that belongs to the vessel. It enables two vessels with the same vessel name to be identified separately.
Information of exporter / re-exporter	The "processing State" concept is not yet recognised in international fisheries law – yet it is a significant component of the supply chain. Current CDS cover the entry of product into markets and their exportation, but processing States are treated as "black boxes". There is a need for traceability tools to cover events between entry and exit gates into and out of the country so that regulatory controls can establish where anomalies occur and identify those responsible. ³⁵ The name, address and telephone number of the exporting or re-exporting company should be made available in addition to the point of exportation/departure and State of destination. ³⁶ This information ensures that all actors in the supply chain are named, enabling full traceability of the fish. It allows authorities to check the validity of the company and contact the company if there are any concerns.
ldentity of import company	Identification of the importing company (the name, address and telephone number), whether that be in the destination country or in a processing State, is needed to keep track of fish products along the value chain, whether it is processed or not. When foreign catch is imported first to a processing State, a processing statement must be issued at the time of exportation, linking the source products and foreign catch certificate(s) with the end products in the consignment. In addition, information on the point of importation/destination (city, country, state) is needed.



35 Hosch, G. & Blaha, F. (2017).

³⁶ Regulation (EU) No 640/2010 of the European Parliament and of the Council of 7 July 2010 establishing a catch documentation programme for bluefin tuna Thunnus thynnus and amending Council Regulation (EC) No 1984/2003, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32010R0640&rid=7#d1e35-12-1 (Annex III)

II. WHAT – Ty	pe and quantity of catch
Product type	The import control scheme should clearly specify the product types (e.g. fresh, frozen, fillet, loin, surimi, fish meal etc.).
Species name embedded in the FAO/ASFIS 3-Alpha Code	The FAO collates world capture and aquaculture production statistics at either the species, genus, family or higher taxonomic levels in 2,346 statistical categories (2019 data release) referred to as species items. The Aquatic Sciences and Fisheries Information System (ASFIS) list of species includes 12,771 species items selected according to their interest or relation to fisheries and aquaculture. For each species item stored in a record, codes (ISSCAAP group, taxonomic and 3-alpha) and taxonomic information (scientific name, author(s), family, and higher taxonomic classification) are provided. ³⁷ This is considered the best international and harmonised practice to identify species worldwide. This is essential information to be cross-referenced to ensure that the vessel has caught what it is legally allowed to and to avoid mislabelling fraud.
Estimated live weight (kg)	This information allows for cross-checks in cases where laundering is suspected. When the importation involves processed products, providing the conversion factors ³⁸ that have been used in calculations should be mandatory. This helps to determine whether the weight of the processed product is consistent with the weight of catch used in processing, as indicated in the processing statement. ³⁹ National authorities should hold their own conversion factors ⁴⁰ (which should be revised regularly) or should be adhering to RFMO conversion factors. Additional live weight conversion factors may be consulted in the Handbook of Fishery Statistical Standards from the FAO's Coordinating Working Party on Fisheries Statistics. ⁴¹
Processed weight (kg)	When foreign catch is imported by a processing State for re-export to the final market, processed weight should be clarified linking the source products and catch documentation with the end products in the consignment.
Declaration and authorisation of transshipment at sea	Illegal fishers take advantage of transshipment practices to 'launder' illegally caught fish (by mixing illegal and legal fish, the illegal fish takes on the documentation of the legal catch). Also, because reefers do not fish, they are often exempt from catch documentation and monitoring requirements, creating a missing link in the chain of custody from vessel to plate. It is essential that transshipment is better regulated, facilitating traceability and accountability, by recording information on the vessel's identity, date and area of transshipment, species, estimated weight transhipped, UVI, as well as information about the donor vessel.

III. WHEN – Dates of the operation

Event date

The date (day, month, and year) on which the harvest activity occurs. This helps an importing authority to verify that the fisher was legally allowed to carry out such activity at that time, which is also particularly useful for monitoring compliance in the case of closure periods.

- 38 The EU system for fisheries controls, Conversion factors, https://ec.europa.eu/fisheries/cfp/control/conversion_factors/, as accessed on 29 July 2019.
- 39 EU IUU Coalition (November 2016). Risk assessment and verification of catch certificates under the EU IUU Regulation.

³⁷ FAO Fisheries and Aquaculture Statistics and Information Branch (FIAS), http://www.fao.org/fishery/collection/asfis/en, as accessed on 29 July 2019.

⁴⁰ The EU system for fisheries controls, Conversion factors, https://ec.europa.eu/fisheries/cfp/control/conversion_factors/, as accessed on 29 July 2019.

⁴¹ FAO, Coordinating Working Party on Fishery Statistics, Conversion factors, http://www.fao.org/cwp-on-fishery-statistics/handbook/capture-fisheries-statistics/conversion-factors/en/.

IV. WHERE - I	Location
Catch area	 The catch area is the location(s) where capture of seafood has occurred. Catch area for fishing activity should be specific. The following catch area codes currently recommended are: International Organization for Standardization country codes when fishing occurs within a country's exclusive economic zone (EEZ) the RFMO when fishing occurs in an RFMO jurisdiction FAO fishing area codes To improve traceability and achieve proper port controls, better defined catch areas with a clear distinction between the EEZ and the high seas should be mandatory.
Authorisation to fish	This type of authorisation is a unique number associated with a regulatory document from the relevant authority granting permission for wild-capture of seafood by a fisher or fishing vessel. Evidence of authorisation to fish and/or transship should be specified in import documentation. This is needed to confirm that the competent authority has given authorisation for these activities to take place and that harvest is in compliance with any relevant management measures. The authorisation should contain information about duration, area, species, quantity limits, gears and issuing authority.
Port of landing	The port of landing is the location where seafood was first discharged to land. The port where a vessel unloads the catch is key information for traceability purposes as it is the point where products transit from the sea-borne into the land-based supply chain. The date of landing should also be specified.
Processing location	Name and address of the processing plant, approval number of the processing plant, and health certificate number and date.

V. **HOW** – Fishing methods

Fishing gearThe fishing gear is the equipment used to capture seafood. This informationor catchingallows an importing authority to verify that the event owner has carried out such
activity in a lawful way. For example, ICCAT's species-specific Electronic Bluefin
Tuna Catch Document Programme (eBCD)42 has a database of gear codes that
are internationally accepted.43 These descriptions should be aligned with FAO's
International Standard Statistical Classification of Fishing Gear.

43 FAO, International Standard Statistical Classification of Fishing Gear, http://www.fao.org/cwp-on-fishery-statistics/handbook/tools-and-resources/en/

⁴² International Commission for the Conservation of Atlantic Tunas (ICCAT), Data Code System, https://www.iccat.int/en/stat_codes.html, as accessed on 29 July 2019.

4.2 Scope and operational best practices

The following attributes are not KDEs, but are important qualitative characteristics that we deem necessary for creating an effective import control scheme.

VI. Scope	
Species covered by the import control scheme	The significance of an import control scheme depends on the number of species covered. KDEs required may be strong but only limited to a few species hence reducing its effectiveness. An effective import control scheme should cover all species.
Import data captured in digital format	When import information is captured digitally, there is greater scope for information exchange (both internally and externally), data processing as well as reduced risk of frauds and streamlined controls in market States. ⁴⁴
Authorities or stakeholders responsible for verification	Depending on which authorities or stakeholders are responsible for the validation of the import along the value chain, the institutional approach and the philosophy behind import control schemes will differ as well as the capacity needed. There are currently several validation points, including flag State responsibility to approve an authorisation, the port State at the point of landing, and the processing State when it comes to food safety. From this perspective, a market State needs to set up an institutional framework that determines which authorities or industries should have the responsibility to make sure the data and information is legitimate.
Risk assessment to target at-risk imports	It is vital for importing markets to develop a robust risk assessment protocol and/ or system to target at-risk imports. It is not feasible for every consignment to be assessed. Several of the largest importing Member States in the EU – such as Germany, Spain and France – receive between 40,000 and 60,000 paper CCs each year, equating to between 110 and 165 CCs per day. ⁴⁵ Maximising efficiency in the verification of consignments is paramount. Importing markets should have a robust risk assessment procedure to ensure they are carrying out rigorous and stringent verifications on imports most at risk of being products of IUU fishing. Ideally, a central registry of transactions should be in place where all steps from harvest to imports are registered. If information at one step is missing or flagged by the risk-based assessment, the certification process is halted due to a risk assessment alarm warranting further checks.
Data exchange between market States	Relevant data exchange between market States and RFMOs on risky imports (and associated actors in the supply chain) can help to prevent unscrupulous actors working in other regions of the world or 'shopping' for the entry point of least resistance. This practice of data and information sharing already takes place between some RFMOs. A central registry of transactions would significantly facilitate data exchange.

45 Ibid.

5. Results of KDE comparative analysis

In this section, we compare the EU, US and Japan (RFMO requirements) against our recommended KDEs. We also compare the two existing unilateral schemes – EU and US – against each other to determine how aligned the two systems are in relation to the above KDEs. The results of this analysis are displayed in Figure 1.



Figure 1 | A comparative analysis of KDEs in different import schemes

				RFMO & CCAMLR Catch Documentation Schemes				
	Key data element (KDE)	European Union	United States	ICCAT	CCSBT	CCAMLR	IOTC* (Statistical Document)	Additional Information
	Vessel name							
wнo	Unique vessel identifier (IMO number)							EU: IMO number is required "if issued" by the flag State. US: requests a UVI when available. CCAMLR: the option to provide an IMO number is provided, but not mandatory.
	Vessel flag							
	International Radio Call Sign (IRCS)							
	Information on exporter / re-exporter							ICCAT: only requests company name.
	Identity of import company							
	Product type							
	Species name – ASFIS 3-Alpha Code							
WHAT	Estimated live weight (kg)							ICCAT: "weight" is requested without specification. CCSBT: requests the net weight. IOTC: requests the net weight.
	Processed weight (kg)							
	Transshipment: Declaration and authorisation of transhipment at sea, IMO number and vessel master information							EU: bans all transshipment at sea US: does not request vessel master information. CCSBT: does not require IMO number in the declaration.
WHEN	Event date							

	Key data element (KDE)	European Union	United States	RFMO & C				
				ICCAT	CCSBT	CCAMLR	IOTC* (Statistical Document)	Additional Information
WHERE	Catch area (better defined with a clear distinction between the EEZ and the high seas)							CCSBT, ICCAT and IOTC: require the name of their own catch areas, which does not always distinguish between the EEZ and the high seas.
	Authorisation to fish							US: required if available.
	Port of landing							
	Processing location							
HOW	Fishing gear type or catching method							

SCOPE AND OPERATIONAL BEST PRACTICES	Species covered by the import scheme	All catches of marine fishery products, with the exception of aquaculture obtained from fry or larvae, ornamental fish, mussels, snails and other products of minor importance (full list at https://eur-lex. europa.eu/legal-content/EN/ ALL/?uri=CELEX:32010R0086)	Abalone, Atlantic cod, blue crab (Atlantic), dolphinfish (mahi mahi), grouper, king crab (red), Pacific cod, red snapper, sea cucumber, sharks, shrimp, swordfish, tunas (albacore, bigeye, skipjack, yellowfin, and bluefin)	Atlantic Bluefin Tuna	Southern Bluefin Tuna	Toothfish (Dissostichus)	Bigeye Tuna	
	Import data captured in digital format							EU: has developed an IT system for CDS (CATCH) which is currently being trialed.
	Authorities or stakeholders responsible for verification	Coastal and flag States	Importers and NOAA to verify importers' activities	Flag and market States	Flag and market States	Flag and market States	Flag and market States	
	Risk assessment to target at-risk imports			NA	NA	NA	NA	
	Data exchange between market States			NA	NA	NA	NA	



Best practice

Optional or needs to be strengthened/improved

Not required

*For IOTC the KDEs refer to the bigeye tuna statistical document which is required to accompany any shipments of tuna in order to be considered legitimate.

5.1 EU KDE analysis

The EU is currently requesting 13 out of the 17 KDEs (76%) recommended in this report. The one KDE that needs strengthening is:

• IMO number: although an IMO number is currently required "if issued" by the flag State, not all States or RFMOs comply with the latest IMO eligibility criteria for assigning an IMO number to fishing vessels. To reach a level playing field and expand the adoption of the scheme as a vital tool in the fight against IUU fishing, IMO numbers should be a mandatory requirement in line with the 2017 IMO Resolution.

The three KDEs not requested by the EU are:

- Catch area: the EU does not specify the distinction between the EEZ and the high seas
- Port of landing
- Fishing gear type or catching method.





5.2 US KDE analysis

The US currently asks for 12 out of the 17 KDEs (71%) recommended in this report.⁴⁶ Three KDEs are either conditional, referred to as "optional" (in other words, requested when the information is legally required), or the application should be strengthened. These are:

- IMO number: a UVI is requested when available. To reach a level playing field and expand the adoption of the scheme as a vital tool in the fight against IUU fishing, IMO numbers should be a mandatory requirement in line with the 2017 IMO Resolution.
- Transshipment information: vessel master information is not requested for cases of transshipment.
- Authorisation to fish: only required if this is made available by the flag State.

The two KDEs not requested by the US are:

- IRCS
- Estimated live weight.



5.3 Japan KDE analysis

Japan is required to comply with the CDS of ICCAT, CCAMLR, CCSBT and the statistical documentation scheme of IOTC, which means providing information on catches of Patagonian toothfish, southern bluefin tuna, Atlantic bluefin tuna, and bigeye tuna. The KDEs that ICCAT and CCSBT request in their CDS' are 47% aligned with our recommendations. The KDEs that CCAMLR requests are 76% aligned with our recommendations. The KDEs that IOTC statistical document are 41% aligned with our recommendations.



46 For the purposes of this analysis the authors also consulted Elizabeth Havice (June 2017), US Seafood Import Monitoring Program: Briefing and analysis for the Pacific Islands Forum Fisheries Agency.

5.4 EU and US KDE alignment

Despite the EU and the US being two of the world's largest seafood markets with a combined import value in excess of EUR 44/USD 50 billion in 2017, they are applying two different philosophies in the design of their unilateral import control schemes.⁴⁷ This is despite both systems' aim to address what is fundamentally the same problem: determining and/or ensuring the legality of fish imported from abroad. However, when assessing the alignment of the recommended KDEs from each scheme, we can see common ground to exchange information of the same nature.

A total of 10 out of 17 KDEs are aligned between the two systems (59%), highlighting a similarity in 'basic' information requested by the EU and US. These include vessel name, vessel flag, information on exporter/re-exporter, identity of import company, product type, species name, processed weight, event date and processing location. The unique vessel identifier is also part of this alignment, however, this KDE requires strengthening by both the EU and the US. For the EU, an IMO number is only required 'if issued' by the flag State or per an RFMO requirement. The US requests a UVI only when available, and does not specify IMO number.

The remaining seven do not align with the recommended KDEs:

- The EU requires the IRCS, whereas the US does not.
- The EU requires the estimated live weight, whereas the US does not.
- The EU requires information on the vessel master, but the US does not under their respective provisions over transshipment.
- The US requires the FAO fishing area code with an additional note stating whether fishing was within or beyond the EEZ of a coastal State. The EU does not specify the distinction between the EEZ and the high seas for catch area.
- The EU requires proof of authorisation to fish (fishing licence number), whereas the US requests this information if available. This relates to the fact that not all fisheries need an authorisation to fish.
- The US requires port of landing, whereas the EU does not.
- The EU does not request information on the fishing gear type or catching method. In the US, this should be specified per the reporting convention and codes used by the competent authority exercising jurisdiction over the wild capture operation. If no such reporting requirements exist, the FAO fishing gear codes should be used.

The US SIMP establishes what is essentially a reporting and recordkeeping procedure relating to the importation of certain at-risk fish species and fish-derived products.⁴⁸ The US system places liability on the importer of record. The validation or counter-validation of industry-generated information by designated competent authorities along the supply chain is not required.

The EU CCS on the other hand, is of a more prescriptive nature. It requires most wild-caught fish products to be certified to be of legal origin, regardless of the sourced geography or whether they are deemed at-risk. The flag State plays a central role in the issuing and validation of the information present in the CC. Whereas in the US SIMP, the importer needs to hold an annually renewable IFTP, in the EU, the European Commission has to formally approve the competent authority of the non-EU country in charge of validating the CCs if they are to access the EU market.

As of writing, Japan is in the process of developing an import control system. In the meantime, their controls rely only on RFMO commitments. Through this analysis, we can see a number of important KDEs missing from RFMO schemes.

In early 2020, the Global Dialogue on Seafood Traceability (GDST), an international, business-to-business platform convened and supported by WWF and the Institute of Food Technologists (Global Food

⁴⁷ Cautious of the different methodologies used for comparing the two schemes, Francisco Blaha's side by side comparison of all data fields provided between the EU CDS and the US SIMP is indicative of the different philosophies (http://www.franciscoblaha.info/blog/2019/4/22/the-modus-operandi-and-data-requirements-of-eu-ccs-vs-the-us-simp).

Traceability Center), released their 'GDST Standards and Guidelines for Interoperable Seafood Traceability 1.0' to track seafood products from point of origin to point of sale. This major business platform comprises more than 60 member companies, including many of the most important retailers, brands and mid-supply chain processors in the sector. The GDST standards identify the minimum data elements that need to be documented and transmitted within GDST-compliant seafood supply chains, covering both wild-capture and aquaculture products. Furthermore, the GDST standards govern the technical formats and nomenclatures for sharing data among interoperable traceability systems. These standards are a critical step forward in the fight against illegal fishing and unethical labour practices. Despite being developed entirely separately from the present analysis, the GDST standards are nearly entirely aligned with the KDE recommendations in this report.⁴⁹

6. Recommendations

In the coming years, we expect more market States to adopt their own import control rules. The NGO community believes that the adoption of import control schemes to improve traceability is key for identifying and therefore stopping IUU-caught seafood from entering markets. However, in order to create a robust system, particular information (KDEs) needs to be gathered. This report presents a suite of 17 KDEs and five operational best practices that we deem essential in any import control scheme. Specifically, we recommend:

The operation:

- Expand unilateral import schemes to cover all species. The vast majority of globally traded species are at significant risk of IUU fishing and/or are overfished. Cherry-picking creates perverse incentives for laundering uncovered products and labelling them as those which are not covered by a given program.
- Adopt electronic systems for more efficient and secure data handling as well as to facilitate data exchange and cross checks. Paper-based systems are inefficient, do not allow for fast processing and cross-referencing and are an easier target for fraudulent activity, including tampering. For example, in the EU, unscrupulous economic operators can use copies of the same CC to export/import multiple consignments of fishery products into different points across the EU, in excess of the full amount stated on the original CC.^{50 51}
- Require verification of information to ensure accuracy and, potentially, trigger additional actions by the competent authorities where instances of IUU fishing are identified during the verification process.
- Improve routine and timely information sharing, including on rejected consignments, which can allow authorities to restrict market access to unscrupulous actors, with an emphasis on beneficial owners. The ratification and implementation of the FAO Port State Measures Agreement can assist in this field.

The who:

- Mandate the use of IMO numbers, the industry's gold standard when it comes to unique vessel identifiers, for all eligible vessels.
- Mandate the use of IRCS, which enables cross-checking of vessel identities. This is particularly useful when two vessels have the same name.

- 50 Clarke, S., Hosch, G., Sasama Consulting, FMO Consulting. Traceability, legal provenance & the EU IUU Regulation, 19 April 2013.
- 51 EU IUU Coalition (2016). Modernisation of the EU IUU Regulation Catch Certificate System.

⁴⁹ This text was added - October 2020.

• Strengthen processing State traceability along the entire chain of events as well as interagency cooperation (e.g. customs, port authorities and food safety services) in order to be able to detect mass balance violations at national level (more product being exported than imported), particularly in cases of complex national supply chains.⁵²

The what:

- Better reflect information on live and processed weights to improve the identification of inconsistencies in catch reporting and documentation within the catch certificate.
- Transshipment should be better regulated through KDEs that facilitate traceability and accountability, for example by including information on IMO numbers and vessel master.

The where:

- Better define catch areas at international or regional level (i.e. in each RFMO) with a clear distinction between the high seas and EEZ in order to improve traceability.
- Include port of landing (where market States are not a signatory to PSMA) as it is a key piece of information for traceability purposes considering it is the point where products transition from the sea-borne into the land-based supply chain.
- Mandate fishing authorisation information to be provided for all species covered by a unilateral import scheme. The authorisation should contain information about duration, area, species, quantity limits, gears and issuing authority as it is essential in confirming that fishing activity for high risk species is closely monitored and regulated.

The how:

• Fishing gear and catching method information should be mandatory information requirements.

By analysing the strengths and weaknesses of existing systems, we can see the similarities and differences in the information requested. KDEs should be aligned between market States to remove loopholes for unscrupulous actors, provide clarity for industry, and enable information exchange, cross-referencing, trade facilitation and interoperability.

This is particularly important for major market States such as the EU and the US with established unilateral import control schemes. Japan, as another major market State, is in the process of developing its own unilateral scheme and is hence encouraged to consider the recommendations put forward in this study, as well as other elements that must be included to achieve conservation, security, and economic objectives. This is because, as the analysis demonstrates, current RFMO certification schemes are by definition of a more limited scope and are seen as less robust when compared to unilateral schemes and the recommended KDEs that should be in place.

⁵² For more information on suggested practices please refer to Hosch, G. & Blaha, F. (2017). Seafood traceability for fisheries compliance: Country-level support for the effective implementation of catch documentation schemes. FAO Fisheries and Aquaculture Technical Paper No. 619. Rome.



Annex

List of products excluded from the EU's catch certification scheme

Aquaculture products obtained from fry or larvae

Livers, roes, tongues, cheeks, heads and wings

Ornamental fish, live

Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster), live, **caught in freshwater**

Eels (Anguilla spp.), live, caught in freshwater

Carp, live

Pacific salmon (*Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou* and *Oncorhynchus rhodurus*), Atlantic salmon (*Salmo salar*) and Danube salmon (*Hucho hucho*), live, **caught in freshwater**

Other freshwater fish, live

Trout (*Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache* and *Oncorhynchus chrysogaster*), fresh or chilled, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Pacific salmon (*Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou* and *Oncorhynchus rhodurus*), Atlantic salmon (*Salmo salar*) and Danube salmon (*Hucho hucho*), fresh or chilled, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Other *Salmonidae*, fresh or chilled, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Eels (*Anguilla* spp.), fresh or chilled, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Carp, fresh or chilled, excluding fish fillets and other fish meat of heading 0304

Tilapia (Oreochromis spp.), fresh or chilled, excluding fish fillets and other fish meat of heading 0304

Other freshwater fish, fresh or chilled, excluding fish fillets and other fish meat of heading 0304

Sockeye salmon (red salmon) (*Oncorhynchus nerka*), excluding livers and roes, frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Other Pacific salmon (*Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou* and *Oncorhynchus rhodurus*), excluding livers and roes, frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Trout (*Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache* and *Oncorhynchus chrysogaster*), excluding livers and roes, frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Atlantic salmon (*Salmo salar*) and Danube salmon (*Hucho hucho*), excluding livers and roes, frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Other *salmonidae*, excluding livers and roes, frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Eels (*Anguilla* spp.), frozen, excluding fish fillets and other fish meat of heading 0304, **caught in freshwater**

Carp, frozen, excluding fish fillets and other fish meat of heading 0304

Other freshwater fish, frozen, excluding fish fillets and other fish meat of heading 0304

Fish fillets, fresh or chilled, of Nile perch (*Lates niloticus*)

Fish fillets, fresh or chilled, of pangasius (*Pangasius* spp.)

Fish fillets, fresh or chilled, of Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho), caught in freshwater

Fish fillets, fresh or chilled, of the species Oncorhynchus mykiss weighing more than 400 g each, caught in freshwater

Fish fillets, fresh or chilled, of trout of the species Salmo trutta, Oncorhynchus mykiss (weighing 400 g or less), Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae, caught in freshwater

Fish fillets, fresh or chilled, of other freshwater fish

Other fish meat (whether or not minced), fresh or chilled, of freshwater fish

Frozen fillets of Nile perch (*Lates niloticus*)

Frozen fillets of pangasius (Pangasius spp.)

Frozen fillets of Tilapia (Oreochromis spp.)

Frozen fillets of Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho), caught in freshwater

Frozen fillets of Oncorhynchus mykiss weighing more than 400 g each, caught in freshwater

Frozen fillets of trout of the species Salmo trutta, Oncorhynchus mykiss (weighing 400 g or less), Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae, caught in freshwater

Frozen fillets of other freshwater fish

Other fish meat (whether or not minced), frozen, of freshwater fish

Flours, meals and pellets of fish, fit for human consumption

Fish fillets, salted or in brine, of Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho), caught in freshwater

Fish fillets, dried, salted or in brine, but not smoked, of other freshwater fish

Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (*Salmo salar*) and Danube salmon (*Hucho hucho*), smoked, including fillets, **caught in** freshwater

Trout (Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster), smoked, including fillets,

caught in freshwater

Eels (Anguilla spp.), smoked, including fillets, caught in freshwater

Other freshwater fish, smoked, including fillets

Other freshwater fish, dried, whether or not salted, but not smoked

Pacific salmon (Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus), Atlantic salmon (Salmo salar) and Danube salmon (Hucho hucho), in brine or salted but not dried or smoked, caught in freshwater

Other freshwater fish, in brine or salted but not dried or smoked

Freshwater crayfish, frozen

Flours, meals and pellets of crustaceans, frozen, fit for human consumption

Rock lobster and other sea crawfish (Palinurus spp., Panulirus spp., Jasus spp.), ornamental

Lobsters (Homarus spp.), ornamental, live

Shrimps and prawns of the family Pandalidae, ornamental, live

Shrimps of the genus Crangon, ornamental, live

Other shrimps and prawns, ornamental, live

Crabs, ornamental, live

Freshwater crayfish, live, fresh, chilled, dried, salted or in brine, in shell, cooked by steaming or by boiling in water, whether or not chilled, dried salted or in brine

Norway lobsters (Nephrops norvegicus), ornamental, live

Other ornamental crustaceans, live

Flours, meals and pellets of crustaceans, not frozen, fit for human consumption

Oysters, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine

Scallops, including queen scallops, of the genera Pecten, Chlamys or Placopecten, live, fresh or chilled

Scallops, including queen scallops, of the genera *Pecten, Chlamys* or *Placopecten*, other than live, fresh or chilled

Mussels (Mytilus spp., Perna spp.), live, fresh or chilled

Mussels (Mytilus spp., Perna spp.), other than live, fresh or chilled

Cuttle fish (*Sepia officinalis, Rossia macrosoma, Sepiola* spp.) and squid (*Ommastrephes* spp., *Loligo* spp., *Nototodarus* spp., *Sepioteuthis* spp.), ornamental

Octopus (Octopus spp.), ornamental

Snails, other than sea snails, live, fresh, chilled, frozen, dried, salted or in brine

Other aquatic invertebrates other than crustaceans and those molluscs specified or included in subheadings 0307 10 10 to 0307 60 00, except *Illex* spp., cuttlefish of the species Sepia pharaonis and sea snails of the species *Strombus*, live (other than ornamental), fresh or chilled

Striped venus and other species of the family Veneridae, frozen

Jellyfish (*Rhopilema* spp.), frozen

Other aquatic invertebrates other than crustaceans and those molluscs specified or included in subheadings 0307 10 10 to 0307 60 00 and 0307 99 11 to 0307 99 15, except cuttlefish of the species *Sepia pharaonis* and sea snails of the species *Strombus*, including flours, meal and pellets of aquatic invertebrates other than crustaceans, fit for human consumption, frozen

Other aquatic invertebrates other than crustaceans and those molluscs specified or included in subheadings 0307 10 10 to 0307 60 00, except *Illex* spp., cuttlefish of the species *Sepia pharaonis* and sea snails of the species *Strombus*, including flours, meal and pellets of aquatic invertebrates other than crustaceans, fit for human consumption, dried, salted or in brine

Salmon, caught in freshwater, prepared or preserved, whole or in pieces, but not minced

Salmonidae, other than salmon, **caught in freshwater**, prepared or preserved, whole or in pieces, but not minced

Salmon, **caught in freshwater**, otherwise prepared or preserved (other than whole or in pieces, but not minced)

Salmonidae, other than salmon, **caught in freshwater**, otherwise prepared or preserved (other than whole or in pieces, but not minced)

Fillets of freshwater fish, raw, merely coated with batter or breadcrumbs, whether or not pre-fried in oil, frozen

Caviar substitutes

Freshwater crayfish, prepared or preserved

Other molluscs and other aquatic invertebrates, prepared or preserved

The Environmental Justice Foundation, Oceana, The Nature Conservancy, The Pew Charitable Trusts and WWF are working together to promote, align and strengthen traceability systems in key seafood markets in order to end illegal, unreported and unregulated (IUU) fishing.

For further information about this report, please contact:

Georg Werner, Environmental Justice Foundation, Tel: +49 40 2286 4929, georg.werner@ejfoundation.org Dana Miller, Oceana, Tel: +353 838 544 809, dmiller@oceana.org Emily Langley, The Nature Conservancy, Tel: +44 203 915 5362, emily.langley@tnc.org Nikolas Evangelides, The Pew Charitable Trusts, Tel: +44 207 535 4232, nevangelides@pewtrusts.org Antonia Leroy, WWF, Tel: +32 485 692 085, aleroy@wwf.eu

For more news, updates and documents supporting the EU to end IUU fishing, visit: www.iuuwatch.eu











